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INTRODUCTION

This appendix includes public comments and Bureau of Land Management (BLM) responses on the draft Environmental Impact Statement (EIS) for the Pinedale Resource Management Plan (RMP). BLM published the Notice of Availability (NOA) for the Pinedale Draft RMP EIS for public review and comment in the *Federal Register* on February 16, 2007. This notice initiated the 90-day public comment period. At the request of the public, the comment period was subsequently extended to 120 days, which concluded on June 18, 2007.

A total of 99,836 letters were received: 95,869 were sent by e-mail, 85 were submitted on the BLM project website, and 3,882 were submitted in hard copy or sent by mail. Comments received at public hearings were considered written comments based on the official public transcript. Of the 99,836 letters received, 95,302 of them were identified as being form letters. Form letters are described as letters containing identical text submitted by more than five individuals.

BLM published a supplemental NOA regarding proposed areas of critical environmental concern (ACECs) that were not included in the NOA for the Pinedale draft RMP EIS. This initiated a 60-day public comment period, which concluded on April 21, 2008. A total of 5 letters were received. Two of the letters were not substantive to the intent of the additional comment period. One letter only restated earlier comments submitted on the RMP draft EIS. The two remaining letters contained substantive comments as well as some comments that were outside the scope of the additional comment period. In some cases, BLM has chosen to respond to specific nonsubstantive comments to clarify for the reader the rationale behind management actions in the Proposed Plan.

In response to ACEC-specific comments, BLM has included the evaluation of relevance and importance criteria for proposed ACECs in Appendix 4 of the proposed RMP and final EIS. All relevance and importance forms are included in the *Evaluation of Relevance and Importance Criteria for Existing and Proposed Areas of Critical Environmental Concern* on the Pinedale RMP website.

According to the National Environmental Policy Act (NEPA), BLM is required to identify and formally respond to all substantive public comments. On the basis of the Council on Environmental Quality's (CEQ) regulations, a substantive comment does one or more of the following:

- Questions, with a reasonable basis, the accuracy of the information in the environmental impact statement
- Questions, with a reasonable basis, the adequacy of environmental analysis as presented
- Presents reasonable alternatives other than those presented in the draft EIS that meet the purpose and need of the proposed action and addresses significant issues
- Causes changes or revisions in the proposal

Nonsubstantive comments simply state a position in favor of, or against, an alternative; merely agree or disagree with BLM policy; or otherwise express an unsupported personal preference or opinion.

BLM is required to respond only to substantive comments to fully inform the public of concerns raised. For this proposed RMP and final EIS comment response appendix, BLM has provided responses to all substantive public concerns identified during comment analysis. Responses to substantive comments are more extensive, complete, and often offer an explanation of why a comment may or may not have resulted in a change to the proposed RMP and final EIS.

BLM read all public response letters in their entirety and identified comments that related to a particular concern or resource consideration or that proposed management actions. Every effort was made to keep each comment within a letter as a standalone comment. BLM looked not only for each action or change requested by the public, but also for any supporting information to capture the comment in its entirety. In doing so, paragraphs within a comment letter may have been divided into several comments because of multiple comments being presented or, alternatively, sections of a letter may have been combined to form one coherent statement.

Once a comment was identified, BLM assigned it to a category associated with the overall premise of the comment. A coding structure served as a tool to sort comments into logical groups by topics. In this case, the coding structure was organized to mirror the sections of the draft RMP EIS; some additional categories were added that included additional classification of comments.

A database was used to organize and compile the large number of comments received on the draft RMP EIS. Comments that were received via web or e-mail were automatically entered in the database. The coding of these letters was also done from the database. Comments identified in hard copy letters and from public hearing transcripts were entered verbatim into the project database. The content analysis process also involved identifying all form letters. The initial course of action in this step was conducted using the database to filter all web-based and e-mail comments to identify all letters containing identical text. Once a form letter was identified, it was given an identification number, copied, and coded. If a hard copy letter matched a form letter, it was given the same identification number. If a form letter included any original comments, the comments were treated as a unique comment, coded, and entered into the database.

It is important to note that during the process of identifying concerns, all comments were treated equally. The comments were not weighted by organizational affiliation or status of respondents, and the number of duplicate comments did not add more bias to one comment than another. The process was not one of counting votes and no effort was made to tabulate the exact number of people for, or against, any given aspect of the draft RMP EIS. Rather, emphasis was placed on the content of a comment.

RESPONSE TO COMMENTS

BLM received multiple comment letters on the RMP/DEIS that shared similar issues and content. For these comments, more general responses, called general comment responses (GCRs), were written to address the similar issues and content represented. In the case of identical or similar comments, each response is preceded by the text of two or three example comments to represent the full range of an issue. These generic comments and associated responses are located at the beginning of the applicable resource section. In the case of unique comments, each response is preceded by the submitted comment.

As previously stated, the comments are organized according to the outline of the Proposed RMP and Final EIS and in no way indicate the significance of any statement. BLM's response to the public concern follows each comment.

General/Miscellaneous

General Comment Responses: *No GCRs are associated with this category.*

Mitigation

Comment: Item: Page 2-13, Section 2.3.16, Compensation (Offsite) Mitigation: Comment - When offsite mitigation is being considered as a design feature of the applicant's submission, BLM's NEPA analysis should: 1) evaluate the need for offsite mitigation, 2) consider the effectiveness of offsite mitigation in reducing, resolving, or eliminating impacts of the proposed project(s), and 3) comparatively analyze the proposal with and without the offsite mitigation. We would also offer that BP has engaged the services of The Nature Conservancy to establish scientific methodologies to determine where the best areas for offsite mitigation could be applied. This process was recently completed for the Jonah Field EIS following issuance of the Record of Decision. It is recommended a statement be included in the FEIS stating that compensation (offsite) mitigation be based upon a science based methodology.

Response: While it is correct that the NEPA analysis should cover these items, it is not an RMP decision to determine this. NEPA analysis for each site-specific project proposal will be tailored to the proposal and the resources potentially impacted by it.

Comment: Page 2-13 Compensation (Offsite) Mitigation Compensatory or offsite mitigation proposed by oil and gas or other operators could be considered and analyzed in future environmental documents as possible mitigation for proposed activities within the planning area. Proposed offsite mitigation would be described and analyzed for effectiveness in detail on a project-specific basis. Planning for offsite mitigation would be performed in coordination with local government agencies.

An example of an instance where compensation or offsite mitigation could be utilized would be oil and gas field developments where wildlife habitat impacts cannot be satisfactorily mitigated through onsite measures. Compensation mitigation would be used as a tool to address loss of habitat effectiveness when reclamation, best management practices (BMP), and onsite mitigation measures are not adequate to mitigate the impacts of proposed actions. Compensation mitigation would be used as a last choice when developing mitigation measures.

Comment–These provisions in the DRMP seem consistent with BLM policy. It is BLM policy that offsite mitigation must be on a voluntary basis: however, the implication is that approval will be denied without it. When offsite mitigation is being considered as a design feature of the applicant's submission, BLM's NEPA analysis should: 1) evaluate the need for offsite mitigation, 2) consider the effectiveness of offsite mitigation in reducing, resolving, or eliminating impacts of the proposed project(s), and 3) comparatively analyze the proposal with and without the offsite mitigation.

Response: The Compensation (offsite) Mitigation discussion on page 2-13 of the draft EIS, neither implies nor states that projects would be approved or denied on the basis of compensation (offsite) mitigation. Projects would be evaluated on all aspects of the proposal, the anticipated impacts, and the mitigation of those impacts; whether the mitigation be onsite operator committed measures, BLM required mitigation, or operator committed offsite measures. The identified processes on page 2-13 and continuing onto page 2-14 of the draft EIS do prescribe measures to evaluate the need for offsite mitigation, to consider the anticipated effectiveness of offsite mitigation, and to analyze the proposed project with and without offsite mitigation.

Comment: Page Number & Issue: 2-13, 2.3.16: "An example of an instance where compensation or offsite mitigation could be utilized would be oil and gas field developments where wildlife habitat

impacts cannot be satisfactorily mitigated through onsite measures. Compensation mitigation would be used as a tool to address loss of habitat effectiveness when reclamation, best management practices (BMP), and onsite mitigation measures are not adequate to mitigate the impacts of proposed actions." Recommendations: Include current BMP agreements and allow for future BMP agreements with U.S. Fish and Wildlife Service.

Response: BLM will comply with the U.S. Fish and Wildlife Service (USFWS) requirements for threatened and endangered (T&E) and sensitive species management.

Comment: Based on our experience with development in the past decade in the Northern Rockies we firmly support having a mitigation approach that is based on science, prior evaluation of the resources that might be affected, and is viewed as a process for the life of the development. No such approaches are proposed in the RMP, nor have they been used to date in the Resource Management Area. There are no transparent methods presented by which BLM will attempt to replace lost public values in the trade-offs to be done in onsite vs off-site mitigation. Without a science-based process we do not see how the broader public interest can be protected during even wider geographic development of the area.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation and the methods to be used must be tied to a specific proposal where specific impacts can be predicted. The action alternatives contemplate the establishment of working groups intended to integrate the decision, implementation, mitigation, evaluation, and response processes.

Comment: Because this RMP is performance-based, it is critical that the BLM provide assurances that the process will work as it is contemplated in the document and as it was understood by state cooperators. With a majority of the decisions set to be decided in the future, it is critical that there be stringent sideboards placed in this document relative to performance objectives, monitoring, adaptive management, reclamation and mitigation and that cooperators be involved throughout the life of the RMP in these processes.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation and the methods to be used must be tied to a specific proposal where specific impacts can be predicted. The action alternatives contemplate the establishment of working groups intended to integrate the decision, implementation, mitigation, evaluation, and response process.

Comment: The PRMP is a performance-based plan and we support the adaptive management components associated with such a title. The PRMP needs to thoroughly describe the framework that the performance-based approach will function, as management decisions are therefore developed in the future based on monitoring, and are not described within the PRMP.

Performance objectives, monitoring, adaptive management and mitigation are issues needing addressed and described in the performance-based process so that the WDA is assured to remain active in the planning process. Without knowledge of the PFO performance-based planning process, it is impossible for us to efficiency and effectively contribute.

Response: The RMP provides the objectives for management and allocates uses that would be allowed in particular areas. Specific mitigation, monitoring, and adaptive measures would be dependent on site-specific projects or proposals and would be determined during the project approval process.

Comment: The DEIS only briefly describes qualitative effects and does not discuss the mitigation of negative effects.

Response: The draft EIS used the best available data to assess the impacts of the alternatives. In areas where BLM has authority to perform or require mitigation, the mitigations were included in the impact analyses.

Comment: Page 2—113 Section 2.5.5 indicates performance-based mitigations to implement adaptive management principles…. However, performance based mitigation must be monitored at all times and properly inspected to make sure that threshold limits outlined in the performance parameters are adhered to and never exceeded. The EIS should have detailed plan on how the performance based mitigation would occur, who monitors it, what are the performance parameters for all categories of environmental impacts (Soil erosion, vegetation reclamation, etc), what are the kinds of reporting that would be done for each category. The EIS should indicate who does the performance based inspection and monitoring, an independent consultant or does the BLM do this.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: There should be a process built into the RMP for a transparent approach to weighing and balancing resource values lost against onsite and offsite replacement.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. The merits of onsite and offsite mitigation must be analyzed in regard to a specific project.

Comment: Unfortunately with the Pinedale Draft RMP, the BLM has not drawn on its own significant experience with adaptive management techniques to craft a credible set of operating standards and mitigation guidelines. BLM has recently incorporated adaptive management into land management plans including the Jack Morrow Hills Coordinated Activity Plan (JMH CAP) and EIS prepared by the Rawlins (WY) Field Office and the Little Snake Resource Management Plan (LS RMP) and EIS prepared by the Little Snake (CO) Field Office. The JMH CAP includes a well-thought out monitoring program, which includes specific management indicators and labeled trigger points that are not to be violated (see: JMH CAP Final EIS, Appendix A17-12 through A17-14). The LS RMP thoughtfully discusses use of the adaptive management process at both the system level and the project level and the steps necessary for successful implementation and follow-through (see LS RMP Draft EIS, Appendix M). Such discussion is notably absent from the Pinedale Draft RMP. Recommendation: If BLM is to include adaptive management techniques for the Pinedale RMP, it must incorporate them in the final ROD and in a way that explicitly describes all of the elements necessary for successful implementation and follow-through necessary to meet the stated resource goals. Anything less is an unacceptable and improper use of adaptive management.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

The action alternatives contemplate the establishment of working groups intended to integrate the decision, implementation, mitigation, evaluation, and response processes. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: The proper implementation process of the performance-based process must be assured. The FEIS and eventual ROD must explicitly outline a required process for land allocation changes, for monitoring and mitigation needs, and specifically for involvement of state agencies in implementation of the plan.

Response: Land allocation changes can only be achieved through amendment of the RMP, with appropriate accompanying NEPA analysis. It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale. See the text in Section 2.3.17 of the draft EIS, Activity Plan Working Groups, for information on the involvement of state agencies and other potential cooperators in future site-specific project planning.

Comment: Chapter 2 Page 13 Commentor WGFD Section Headed, Compensation (offsite) Mitigation "Compensation mitigation would be used as a tool to address loss of habitat effectiveness when reclamation, best management practices (BMP) and onsite mitigation measures are not adequate to mitigate the impacts of proposed actions." Under performance-based planning, it is necessary to describe how this will be measured, the triggers that will be used to initiate order of use of mitigation methods, and how the process of consultation with affected agencies will be implemented. We recommend wildlife trends be used to measure habitat effectiveness and reclamation success.

Response: The appropriate types and amount of mitigation to be used would be determined at the project-specific level, such as is being done for the Pinedale Anticline Supplemental EIS. It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: A floating adaptive management approach coupled with non-specific performance-based objectives is a recipe for disaster-again. It is bad enough that this ineffective approach to monitoring and mitigation has been implemented in project-specific decisions. To embrace such an approach in a management plan with no set objectives, no defined criteria, not even specified outcomes, is an abdication of authority and a violation of NEPA and FLPMA. In essence, there is no monitoring or mitigation plan in the DEIS.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. Monitoring is addressed in Appendix 11, which is the monitoring and evaluation appendix. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: 2. In the DEIS, the Bureau emphasizes the importance of monitoring under a "performance-based" approach, stating "monitoring would ensure that adaptive management principles are adhered to

and that necessary changes to operating standards can be made in a timely and efficient manner." The Service encourages the Bureau to ensure that intensive monitoring of the effectiveness of operating standards is employed during the life of the Pinedale RMP.

Response: To assess the impacts of the alternatives, it must be assumed that implementation of the alternatives would be carried out. It is not possible to predict the actual availability of funding and personnel to carry out implementation; however, BLM intends to implement the plan as written.

Comment: EPA recommends the Final EIS include a detailed adaptive management strategy, framework, measurable indicators and monitoring plan.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. Appendix 11 includes indicators for monitoring.

Comment: BLM's Preferred Alternative includes a series of proposed performance-based objectives and standards are presented in Appendix 3 of the Draft EIS. Adaptive management and performance-based objectives can be important tools in mitigating and minimizing impacts to the environment. However for these tools to be effective, it is important that the management strategy and framework, measures, monitoring, and funding be clearly identified at the onset. To ensure that these standards and BLM's management goals for the resource area are being met, EPA recommends this section be expanded to include: - Measures. Each outcome should be linked to a clear and measurable indicator. For example, how will BLM monitor soil and watershed impacts? What will the indicators be and at what level is the impact considered detrimental? The Final EIS should describe the consequences and action triggers should an objective fail to be met. - A monitoring timeframe. In order to identify whether detrimental Impacts are occurring and whether adaptive management is necessary, a monitoring timeframe and strategy should be determined. This would include when the monitoring will occur, how often, and by whom. As BLM indicates in Appendix 3, "Monitoring would ensure that adaptive management principles are adhered to and that necessary changes to operating standards can be made in a timely and efficient manner." - Funding. EPA believes that the funding to implement the performance-based objectives is critical. - Stakeholder Involvement. EPA recommends the Final EIS include how BLM will document the progress and report to stakeholders.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. The action alternatives contemplate the establishment of working groups intended to integrate the decision, implementation, mitigation, evaluation, and response process. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: The DEIS states, "To address the changing conditions and provide management flexibility that uses best management practices (BMP), the Pinedale Field Office (PFO) conducts monitoring and evaluation, which measures the effectiveness of existing actions through monitoring and application of new scientific research. Monitoring and evaluation analyzes the current resource conditions as a result of implemented actions and identifies and recommends alternatives or modified actions, as necessary, to reach established objectives and goals. This process provides the optimum means to check the effectiveness of management actions." Comment: It is important that monitoring and evaluation be done in cooperation with other government and private partners so that it can be done economically and meet multiple needs. We have found, however, that when the data collected from this monitoring is submitted

to the respective agency for analysis, the process falls apart. BLM is under-staffed and does not have the manpower to perform the analysis. With the additional staff and manpower allocated to the Pinedale Field Office, this problem should be eliminated. Monitoring data should be appropriately analyzed and the results should be made available to industry on a regular basis. Also, information must be provided regarding results from past monitoring and how BLM will use that data to help determine the parameters of future monitoring.

Response: In order to assess the impacts of the alternatives, it must be assumed that implementation of the alternatives would be carried out. It is not possible to predict the actual availability of funding and personnel to carry out implementation; however, BLM intends to implement the plan as written.

Comment: Item: Page 2-14, Section 2.3-17, Monitoring and Evaluation Plan and Activity Plan Working Groups Comment: BLM should: • Use the most practical and cost effective means to acquire data where gaps exist • Use cooperative ventures between federal, local, and state agencies and companies • BLM should publish/make available all data collected under these plans unless collected voluntarily by companies and provided to BLM for internal use only. • Establish data collection priorities, standards and objectives • Review the data on a regular basis and make changes in management strategy based upon the results of the monitoring efforts.

Response: This comment is outside the scope of the RMP.

Comment: Item: Page A3-4, Appendix 3, Performance-Based Stipulations and Mitigation **Comment:** This section discusses adaptive management and the role of management, research and monitoring. Operators currently monitor various resources and submit that information to the BLM. The BLM, however, is under staffed and cannot always analyze that data. For adaptive management to be successful, the data must be analyzed and this should be stated in the FEIS.

Response: In order to assess the impacts of the alternatives, it must be assumed that implementation of the alternatives would be carried out. It is not possible to predict the actual availability of funding and personnel to carry out implementation; however, BLM intends to implement the plan as written.

Comment: The BLM's preference for so-called "performance-based management" and adaptive management gives no indication of when a "performance" would be deemed successful. The agency is on record refusing to use tools available to prevent the loss of half the Pinedale Anticline mule deer herds. We urge the BLM to include specifics on management objectives, intended outcomes, measures of success, monitoring timeframes, costs and funding mechanisms, personnel needs, and mitigation triggers with clear consequences should an objective fail to be met. Also, the RMP should describe how progress will be documented and reported to various stakeholders, including the American public.

Response: Performance would be determined successful when the RMP management objective is met. It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: Outcome based or performance based management, as described in this document, comes with no indication of a time line and at what point in time the outcome will be evaluated and declared successful. The outcome should come in five years -- could come in five years or 75 years. None of us here today may ever see success. BLM provides us with no implementation plan to explain how all these programs will be carried out.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, appropriate timeframes, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: With mitigation, the biggest buzz word in the western U.S., and with one Pinedale BLM interagency mitigation office already operating and another proposed, the public should expect to see a comprehensive mitigation plan outlining -- outlined with clear objectives, long-term, operator-assisted funding mechanisms and dedicated personnel for both off-site and on-site mitigation.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

Comment: The proposed activity plan working groups cannot function without these plans in place and cannot assess future options without both baseline and data and analysis. Inventory and monitoring data must be analyzed regularly and transparent recording be made available to the public in one publicly accessible data base with inter-disciplinary structure and capabilities.

Response: This suggestion is outside the scope of the RMP.

Comment: Outcome based or performance based management as described in this document comes with no indication of a time line, and at what point in time the outcome will be evaluated and declared successful. The outcome would come in five years or 7 years. None of us here today may even see success.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, appropriate timeframes, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: The BLM is relying heavily in BMPs and other proposed mitigation to claim the agency can avoid or correct any environmental damage caused by implementing activities under the new RMP. The failure to present this mitigation an for public review and comment is therefore a fatal flaw in the NEPA process. Without undergoing scrutiny by citizens, scientists and other expert agencies, there is no assurance the BLM's mitigation is appropriate, workable, or sufficient to prevent or correct environmental harm. For these reasons, I am requesting that BLM prepare a revised or supplemental Draft EIS to fully disclose all management direction for the new RMP and each alternative evaluated in the EIS. This new DEIS should be circulated for public review and comment in accordance with 40 C.F.R. §§ 1502.9(a) and 1503.1.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

Comment: Although BLM is relying heavily on BMPs and other proposed mitigation for the new RMP, the DEIS does not demonstrate that any of these measures would be effective at preventing or correcting environmental harm. This includes the water quality direction. For example, to meet Objective 3 of Alternative 4 – "Control water runoff ... and maintain soil erosion at appropriate rates for natural

conditions" - BLM proposes the following actions: a. "BMPs would be applied to mitigate surface disturbance and control non-point source erosion (Appendix 5)." * * * f. "Where threats to Class I waters are identified from federal lands or management actions... BMPs that address the threat would be implemented on all contributing federal lands." g. "Salt loading in the Colorado River System would be controlled by applying BMPs on all highly erodible soils potentially affected by management activities." DEIS at 2-141. Beyond the failure to actually describe these mitigation measures, the RMP DEIS provides no basis for concluding the measures would actually be effective at preventing or correcting the impacts in question. The same is true of other proposed management direction. Concerning bioremediation, for instance, there is no evidence this measure has been proven to work on spills in the past - on the types of chemicals (e.g., benzene) that may contaminate waters in the PRA. Courts have repeatedly held that where a federal agency relies on mitigation measures to avoid or minimize potential environmental impacts, the agency must demonstrate the measures would be effective. See, e.g., LaFlamme v. F.E.R. C., 842 F.2d 1063, 1071 (9th Cir. 1988) citing Jones v. Gordon, 792 F.2d 821, 829 (9th Cir. 1986) (NEPA document must explain how mitigation measures will mitigate impacts);

Response: The effectiveness of individual BMPs would have to be determined at the project implementation stage. Appendices 3 and 5 include BMPs that may be appropriate to implement, depending on the timing, size, location, and other characteristics of each particular proposed project.

Comment: To comport with these requirements, I am asking BLM to fully describe any proposed mitigation measures and demonstrate why they would be effective. This should include a convincing statement of reasons for why mitigation will prevent or reduce impacts, with citations to peer-reviewed studies and, where available, analytical data supporting the proposed mitigation measures. 40 C.F.R. § 1502.24. It would also be appropriate to explain the conditions under which proposed mitigation could fail and the consequences that would result during such failure. As an example, BLM should describe the various BMPs designed to address salt loading from highly erodible soils, cite studies showing these measures are effective at controlling salt loading, and explain why no measures are needed to prevent salt loading from other soils.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following: The number of corrective actions - prompted by "action triggers" in the monitoring plan - that BLM carries out each year.

Response: This suggestion is outside the scope of the RMP.

Comment: To correct these errors, I am asking BLM to prepare a revised or supplemental Draft EIS presenting alternative management direction including the strongest practicable mitigation measures. This should include evaluation of mitigation measures the BLM may feel are outside the agency's jurisdiction (e.g., water conservation measures, requiring disclosure of chemicals in drilling and fracing fluids, regulating NORM, etc.). 40 C.F.R. § 1502.14(c). In particular, I am asking to develop alternatives that contain management direction and mitigation that addresses all of the issues discussed in these comments, both in previous pages and in the next chapter where I outline other management directives I feel axe needed for the PRA. If BLM believes any particular measure (goals, management directives, mitigation, or monitoring) I have proposed would not be practicable, please (i) explain why the agency believes that measure is not practicable, citing the sources and authorities that support the agency's position, 40 C.F.R. § 1502.24, and (ii) develop a refined measure, as close as possible to the measure I have proposed, which the agency believes is practicable. To comport with NEPA's purpose, the RMP EIS should not only

evaluate alternatives based on the strongest possible set of management direction, the agency should select an alternative that is based on this direction.

Response: BLM analyzed a reasonable range of alternatives in the draft EIS and provided an appropriate analysis of the potential impacts of those alternatives. No supplemental document is necessary.

Comment: Beyond rigorously exploring alternative mitigation measures, an EIS must also include discussions of the (i) "energy requirements and conservation potential of various alternatives and mitigation measures," (ii) "natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures," and (iii) "the reuse and conservation potential of various alternatives and mitigation measures." 40 C.F.R. § 1502.16(e), (f) and (g). The DEIS does not include such discussions.

Response: NEPA and the Code of Federal Regulations (CFR) do not require that this information appear in discrete sections with these headings. To the extent possible, this information is included in the draft EIS.

Comment: PAGE: 2-151, RECOMMENDED CHANGE: Objective 6 Collaborate with state and local governments to identify areas for off-site or compensatory mitigation in accordance with BLM guidance, IM 2005-69.

Response: BLM guidance and Instruction Memoranda (IMs) can change over time. It would be unwise to tie the RMP to a specific IM that could expire. It is also not necessary to restate policy in the RMP.

Comment: PAGE: G-13 CHANGE: MITIGATION - A method or process by which impacts from actions may be avoided, minimized, rectifying, reduced or eliminated over time, or compensated for by providing substitute resources or environments. [made less injurious to the environment through appropriate protective measures.](STRIKEOUT) Also called mitigative measure. EXPLANATION: Definition needs to be revised to identify the five mitigation measures providing for by CEQ rules. 40 C.F.R. § 1508.20.

Response: The five mitigation categories at 40 CFR 1508.20 are: (a) Avoiding the impact altogether by not taking a certain action or parts of an action; (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action' (e) Compensating for the impact by replacing or providing substitute resources or environments. BLM contends that the definition provided captures the essence of 40 CFR 1508.20 as well as 40 CFR 1500.2(e).

Comment: PAGE: G-13 CHANGE: On-site. [To mitigate a disturbance or removal of a resources such as a wetland, where the resource originally occurred.](STRIKEOUT) Mitigation of the actual area affected by the action causing the impact, such as the reclamation of an abandoned well pad. Off-site. [To mitigate a disturbance or removal of a resources such as a wetland, in an area removed from the original site.](STRIKEOUT) Compensating for the impact by replacing or providing substitute resources or environments in an area immediately adjacent to the impacted area or within the same general geographic area. EXPLANATION: Definition must conform to bureau-wide definitions adopted in IM No. 2005-069 which is still in effect and binding on BLM.

Response: IM 2005-069 does not define offsite mitigation. However, onsite and compensatory mitigation are defined as follows: compensatory mitigation, as defined by CEQ, means compensating for the impact by replacement or by providing substitute resources or environments. The offsite mitigation can be

immediately adjacent to the area impacted, or it may also be located anywhere in the same general geographic area. It does not have to be juxtaposed. Onsite mitigation is mitigation of the actual area affected by the action causing the impact. For example, the reclamation of an abandoned well pad is onsite mitigation; whereas compensatory mitigation in another area to offset the loss of vegetation during the life of that same well pad is defined as offsite mitigation. The definitions provided in the text capture the essence and add clarity to those definitions from IM 2005-069.

Oil and Gas

Comment: It is far easier to think first and drill later, than it is the reverse. The BLM is here to make sure that our lands are protected from overdrilling, and overdevelopment. The BLM needs to stay free from the influence and pressure of the oil lobbyists who want nothing more than to drill, drill, drill. Our lands are not here to be a playground for the oil and gas industry. Someone must think of what is BEST for our lands. I, for one, am hopeful that the BLM will think of the animals, trees, and environment when making such an important decision. Please don't let me down.

Response: Oil and gas leaseholders have rights BLM is bound to honor. BLM does not have the authority to prohibit drilling in areas where valid leases exist.

Comment: I'm worried about actions including drilling in wilderness areas. Alternative 3 seems like a possibility to protect these areas. Therefore, I would urge this to be a consideration as the BLM considers a management plan for the Upper Green River Valley. The other three alternatives under consideration would allow rapid expansion of natural gas drilling in the region. I'm worried that this would cause irreversible damage to the area Please pursue Alternative 3, the plan that would protect the Upper Green's most sensitive lands, or some other plan not yet put forward that would work to protect the area.

Response: No Congressionally designated wilderness areas are included within the planning area. No oil and gas leasing or development would be allowed in the two wilderness study areas (WSAs) that are located within the planning area. There would be little difference in the amount of oil and gas drilling under any alternative, including Alternative 3, because of the areas that are currently under lease and the development already occurring in the Jonah and Pinedale Anticline fields.

Comment: PAGE: 2-47 SECTION: 2.5.2 RECOMMENDED CHANGE: ADD Lands covered in the DEIS and depicted as the planning area include those that may affect or be affected by the management on the BLM administered land. However, the planning decisions in the RMP will apply only to the BLM-administered public lands and federal mineral estate in the planning area. No RMP decisions will be made on non-federal land surface or mineral estate, on federal lands administered by other federal agencies or the federal mineral estate underlying federal lands administered by other federal agencies. EXPLANATION: This ¶ is quoted from Appendix B of the MSA, January 2003. The oil and gas management discussion does not identify or distinguish the areas from private lands. This fails to disclose that the areas labeled Minimally developed or large block NSOs are on private land as well. This is also true for the administratively unavailable.

Response: This information is included in Chapter 1 of the draft EIS. Decisions made in the RMP apply only to BLM-administered surface lands and mineral estate.

Comment: I just wanted to add - If you do decide to allow more drilling, I think that it should be done by the army corps of engineers, or some other government group, and then sold for the usual obscene profit, but with the money going directly into the national coffers. I'm not saying that the government should have its own filling stations, only that it be sold by the barrel to the highest bidder. ---

Response: It is not within the authority of BLM to take lease rights from current leaseholders and transfer them to another entity such as the Army Corps of Engineers.

Comment: I am writing regarding the proposed drilling for the Pinedale, WY area. To sacrifice this pristine wilderness for oil and gas makes no sense. These are non-renewable energy resources that would only result in destroying an area abundant in wildlife and unique habitat and scenic vistas for something that is limited in value and quantity. Where is the long term vision, the common sense? Please re-evaluate these proposals.

Response: No Congressionally designated wilderness areas are included within the planning area. No oil and gas leasing or development would be allowed in the two WSAs that are located within the planning area.

Comment: The air over the Upper Green has already been visibly affected by industrial pollution from existing gas rigs. Researchers have noticed significant declines in the mule deer herds and sage grouse populations that winter in the Upper Green. Tripling the number of gas wells over the next 10-15 years would simply make the problems worse.

Response: It is true that additional development will cause additional impacts. Increasing impacts of oil and gas development in the future are discussed in Chapter 4 of the EIS.

Comment: I am writing to protest the proposed opening for gas and oil drilling of 922,880 acres of public land including the Upper Green River Lakes, the New Fork Lakes, the land on either side of the Green River, and the meadows and foothills of the Wind River Range, part of the Rocky Mountains. Already the area just south of Pinedale has been irrevocably damaged with thousands of wells, that have had serious effects on air quality (smog year around) and water quality (wells are contaminated).

Response: The planning area is already open for oil and gas leasing with the exception of two small WSAs. There is no new opening for oil and gas drilling. The Green River Lakes and New Fork Lakes are not in the Pinedale BLM planning area.

Comment: I understand the concept of multiple use, but this proposal leads to one, dominant, inappropriate use: extraction at the cost to all of the Upper Green River Valley's natural resources. As a co-owner of these lands, I object strongly to this unbalanced approach.

Response: The alternatives in the EIS attempt to provide a balance of uses across the planning area. BLM must honor the rights of oil and gas leaseholders. The alternatives present multiple use through providing areas that would not be available for leasing and would not be developed during the life of the plan.

Comment: We ask you to designate the upper Green River, upper New Fork and Hoback Rim areas as Unavailable for Leasing for oil and gas in your RMP. Presently, there is a moratorium on leasing on much of this area. This is a popular recreation, hunting and fishing area not only for the community but for the nation. This area has spectacular pristine landscapes; wildlife corridors, feed grounds, year-round habitat and birthing grounds; fragile headwaters to our rivers; and historic cattle ranches. We have placed a conservation easement on our property for the above reasons. We, as a community, are trying to conserve large portions of private land in the area through the use of conservation easements. For example, the Green River Valley Land Trust worked with nearly 40 families to conserve nearly 20,000 acres to date and hopes to double that this year. Leasing the federal minerals makes this difficult and affects the ability to raise funds to do so.

Response: This area is considered in Alternative 3 as an area that would be unavailable for leasing. BLM has determined that leasing for oil and gas would not be appropriate in this area. The oil and gas management areas have been changed in the final EIS.

Comment: One of the biggest challenges facing public lands in the Pinedale area is growth. If unmanaged, the growth will continue to negatively impact our public lands - the BLM cannot let this happen - they are the only ones who have the power to manage this growth. The natural gas is not going anywhere - there is no reason to continue to lease additional land when current leases are not fully developed.

Response: The EIS considers a range of options for areas that would be available for new leasing for oil and gas. The Mineral Leasing Act of 1920 provides for the Secretary of the Interior to make lands available for oil and gas leasing.

Comment: I am STRONGLY OPPOSED to BLM's plan to lease out all private land not currently leased for oil and gas exploration. I feel this would irreparably damage both the wildlife and lands that make this part of the world so special. Not to mention bring in the tourist dollars that bring both the state and Sublette county financial benefit.

Response: BLM does not have the authority to lease private mineral estate for oil and gas development. Some private lands underlain by federally held mineral estate would be available for oil and gas leasing.

Comment: The BLM's preferred Alternative 4 has some positive points, but it remains fraught with shortcomings that could allow development to sprawl into areas that appear to be designated with No Surface Occupancy stipulations or as "minimally developed areas." In reality, hidden loopholes would allow these designations to be waived, resulting in the potential for drilling in inappropriate areas. With that in mind, I specifically urge you to adopt a plan that: Paces development, including not allowing new major gas fields to be developed until development in existing and expanding fields has been completed; Preserves and enforces seasonal drilling stipulations that protect wildlife, and strengthen those shown to be deficient (especially greater buffer distance around sage grouse leks); Withdraws important wildlife and scenic areas from future oil and gas leasing availability, including all of the Wind River Front and greater Trapper's Point area, the Ryegrass/ Cottonwood area, the Fontenelle elk winter range, and the upper Green area north of Warren Bridge; Mandates the clustering of new infrastructure and the use of directional drilling to minimize industry's footprint on the ground; Removes loopholes that allow areas designated for minimal development to become intensively developed and allow surface drilling in No Surface Occupancy (NSO) areas; Requires use of the cleanest technologies and environmentally protective practices.

Response: Additional language specifying how the oil and gas management areas would work, and how they could be changed over time, has been provided in the final EIS; the Large Block NSO Areas and Unavailable Areas have been revised. Limiting the pace of development by disallowing new fields until existing fields are complete denies lease holders the enjoyment of their oil and gas lease rights. Seasonal stipulations protect wildlife individuals, not habitats. In areas where habitats are compromised by dense drilling or other activities, seasonal stipulations provide diminishing benefits as wildlife abandon the habitats. Oil and gas leasing is a discretionary decision. Withdrawal is not required to make areas unavailable for leasing. The EIS evaluates all the areas suggested for unavailability for oil and gas leasing. The use of clean technologies and environmentally protective practices are included in the EIS as best management practices and would be implemented wherever practical.

Comment: I therefore urge the BLM to Permanently withdraw all areas of the Upper Green north of Cora and the Warren Bridge from any development Permanently withdraw the areas adjacent to and in the

Wyoming Range, Hoback basin, and maintain these pristine areas in their present state Withdraw and/or buy back leases that are already sold in the above areas. Strengthen the requirements within the already existing and adjacent areas that will be leased areas for use of "best available technology" and true mitigation efforts. REQUIRE these – don't just let industry decide whether to do this or not.

Response: Oil and gas leasing is a discretionary action. These areas are considered for unavailability for oil and gas leasing in the alternatives. BLM does not have the authority to take back or buy back existing leases. Best management practices and best available technologies are included in the RMP and would be applied wherever practical. These practices do not necessarily apply to all situations or developments and should not be universally required.

Comment: The process of trying to create a surge in domestic production of energy resources is overshadowing any hint of proper planning for the multi-use ethic that the BLM has preached, about for decades. These restrictions and policies that the Department of the Interior has enforced on every single hunter, rancher, fisherman, hiker, and camper in this valley to protect the public lands, all of these critical habitat areas, all of a sudden don't apply to some of the most destructive impacts that this area has ever seen. The management balancing act of the multi-user policy of the BLM has mysteriously disappeared. And no one in the Department of the Interior is too concerned with figuring out where it went, or why.

Response: Oil and gas leaseholders have rights BLM is legally bound to honor. The EIS attempts to provide balance on a planning-area scale through implementation of areas unavailable for oil and gas leasing, along with restrictions on other activities in those areas. High gas prices, combined with improving technology in gas production and unique gas reservoir geology in the Pinedale Area, have led to the increase in drilling activity in recent years.

Comment: As currently drafted, APC cannot support any of the alternatives proposed in the Draft Pinedale RMP. The currently proposed alternatives place too many restrictions on future oil and gas development and do not adequately protect or address APC's existing lease rights. APC encourages the BLM to develop a new alternative, based on a combination of Alternatives 2 and 4, that strikes a more appropriate balance between oil and gas development and the necessary protection of other resource values and uses within the Pinedale Resource Area.

Response: BLM analyzed a reasonable range of alternatives for oil and gas leasing availability and other resources. As stated in the draft EIS (page 2-8): "Existing oil and gas or other mineral lease rights would be honored."

Comment: There is no conservation alternative. All alternatives declare oil and gas development as the dominant use of the land. Nowhere is wildlife habitat identified in its own right. Where are interdisciplinary habitat management plans mentioned such as the Upper Green River HMP or the East Fork Aquatic HMP? Where are objectives and planned actions to specifically mitigate oil and gas development? I see them in no alternative, only vague promises about working groups which have not been created, scoped or delegated responsibility.

Response: There would be little difference in the amount of oil and gas drilling under any alternative, including Alternative 3, because of the areas that are currently under lease and the development already occurring in the Jonah and Pinedale Anticline fields. Alternative 3 represents the most restrictive alternative BLM could legally implement, given the obligations BLM is under to current oil and gas leaseholders and other authorized users. It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation and the methods to be used would be analyzed for specific proposals where specific impacts can be predicted. Habitat management plans, like grazing allotment management plans, are

implementation-level plans and would be developed following completion of the RMP if necessary to implement RMP decisions.

Comment: The subject RMP document is a product that has become the hallmark of the BLM during the Bush Administration. It is riddled with false premises, faith-based positive-outcome based predictions, unsupported assertions, reliance upon junk science, and obfuscation of serious environmental impact potential via the practice of verbal low-balling. This pattern of behavior is made all the more objectionable by the Statement in section 4.21, page 4-258 of the subject document that the number of wells in the planning area could quadruple. It strains credulity to believe that such a surge would not produce far worse impacts than the document tip toes around using the tactics just mentioned.

Response: Because the vast majority of the new wells would be infill wells in existing fields, many impacts would be limited to those fields. For a variety of reasons, large numbers of new wells outside of existing fields are not anticipated. Impacts of increasing development on wildlife habitats, air quality, and other resources are included in Chapter 4.

Comment: The United States Forest Service as recently as 2002 offered that the Upper Green River Valley is a place of "irreplaceable beauty and worth" and set this area aside for no development. BLM unfortunately believes they can ignore other governmental agencies in the mad dash to extract every vapor of gas and smells of hydrocarbons.

Response: The Bridger-Teton Forest Plan makes the forested areas of the Upper Green River Valley available for oil and gas leasing, with the exception of the established wilderness areas.

Comment: I support the BLM developing a new alternative with an increased review of the positive benefits of oil and gas development.

Response: Analysis of the benefits of oil and gas production can be completed without development of a new alternative. These benefits and impacts are described in Chapter 4.

Comment: Essentially the BLM's initial decision to select Alternative 4 as its preferred alternative comes down to a determination that it is so crucial to increase natural gas production in the Pinedale Field Office by less than 13 percent that this course of action must be pursued even though environmental impacts are greatly increased and environmental protections greatly reduced. The BLM has yet to provide a rational explanation for this decision and we ask that it do so in the final EIS if not sooner. Why is increasing natural gas production by a mere 12.8 percent justified given the admittedly much more severe environmental impacts that would occur pursuant to Alternative 4? How can this decision be sustained in light of national legislative commands to protect the natural environment while pursuing domestic mineral production? What exact and needed benefits will production of 2,438 billion cubic feet of additional natural gas produced over the course of 20 years afford this country and how exactly do those benefits compare to the reduction in environmental services, values, and resources that will be lost as a result of the increased environmental damage that would occur pursuant to Alternative 4? Quite simply, what are the costs and benefits of this tradeoff?

Response: Environmental and land-use issues are central to natural gas production in any region, and particularly so in the Pinedale Management Area, where public lands, federal mineral estates, wildlife, and sensitive environments are pervasive. A portion of public lands containing natural gas resources in the Pinedale Management Area is unavailable for leasing, in order to preserve wilderness, wildlife habitat, and other important societal values. On public lands managed for multiple uses, operators must meet a wide array of environmental protection requirements. Alternative 4 provides the best balance of resource use and resource protection. Impacts are quantified to the extent possible in the document using the best

available data. Where specific data are not available, impacts are presented in a qualitative manner. The alternatives in the EIS attempt to provide a balance of uses across the planning area. BLM must honor the rights of oil and gas leaseholders. The alternatives present multiple use through providing areas that would not be available for leasing and would not be developed during the life of the plan. It is important to note the purpose of impact analysis is to assess the social and economic consequences of implementing the various alternatives identified in the planning process (H-1601-1, BLM Land Use Planning Handbook). This is not a benefit-cost analysis.

Comment: Alternative 3 represents an opportunity for the BLM to uphold its multiple use mandate by providing considerable oil and gas resources for leasing to private companies, while at the same time protecting the other uses and values they are required to provide to the public.

Although BLM has failed to measure non-market values, by it's own admission "It could be possible that under Alternative 4…the societal nonmarket values could decrease more than the value of the oil and gas extracted" (p. 4-129 and 4-130) – in other words a net loss to society. Furthermore, Alternative 3, which will undoubtedly result in a greater level of non-market values than Alternative 4, may also result in a net loss when these values are compared with the considerable oil and gas revenue (p. 4-126). Given the high likelihood of both these alternatives favoring oil and gas drilling over other multiple uses and values, it would seem to be more prudent and equitable for BLM to adopt Alternative 3 as the preferred alternative.

With Alternative 3, the reductions in oil and gas revenue, tax revenue and jobs are small, compared with the potential gains over Alternative 4 in non-market values, ecological values, community stability, the protection of what remains of the lifestyle that drew many residents to the area, protection of other industries such as agriculture and recreation, the long-term economic diversity and prosperity for the area's communities, and the reduction in the already considerable costs to provide social and community services. The table below compares the oil and gas impacts of the two alternatives.

Alternative 3 Alternative 4 Comparison (Alternative 3/Alternative 4)
Acres available for oil and gas leasing
(Source: pages 2-19, 2-20) 487,360 1,024,880 48% *
Acres available (Source: pages 4-61, 4-70)
Intensive development 78,070 175,750 44%
Minimally developed 498,790 672,470 74%
Total 576,860 848,220 68%
Resources (Source: Table 2-34)
Gas (billion cubic feet) 16,730 19,168 87%
Oil (million barrels) 130 150 87%
Value of production (Source: Table 4-13) $57,839,007,476 $61,066,266,144 95%
Tax revenue (Source: Table 4-14) $9,480,559,751 $11,757,942,222 81% *
Total labor earnings (Source: Table 4-13) $6,800,822,205 $8,105,708,898 84%
Wells/year (Source: Table 4-13) 316 372 85%
Total wells (Source: Table 2-34) 6,074 7,863 77%
Jobs/year (Source: Table 4-13)
Drilling jobs 7332 9211 80%
Production jobs 2534 2754 92%
Total jobs 9866 11965 82%
Livestock AUMs (Source: Table 2-25) 84,000 107,907 78%
* See earlier remarks about inconsistencies.

What these numbers tell us is that even if the BLM protects between 32% and 52% of the land from oil and gas development (depending on which acreage figures are accurate) the oil and gas industry can still

extract 87% of the oil and gas resources, reap 95% of the value of these resources, 82% of the jobs will still be created and (here again the accuracy of the numbers is in question) the communities in the area will gain at least 81% of the tax revenues. The tradeoff is clearly a net gain. Recommendations: Given that Alternative 3 would result in a large increase in both economic and ecological benefits and at the same time result in only a small reduction in oil and gas revenues and jobs, Alternative 3 better achieves the agency's multiple use mission. We request that the BLM adopt Alternative 3 as it's preferred alternative for the final RMP.

Response: There are many factors, including stakeholders and economic values, that BLM must consider in choosing a management plan to meet BLM's multiple use mission. BLM agrees that non-market values are significant and important.

Comment: the BLM is engaged in a ruse in the sense that it really doesn't consider a full range of reasonable alternatives, as it is required to do by NEPA. While that is a conservation alternative restricting leasing to the 400,000 acre range, all the remaining alternatives contemplate well over 1,000,000 acres of subsurface estate open to leasing. Most of the differences among the remaining alternatives involve minor details and/or relatively small portions of land.

Response: The alternatives in the EIS attempt to provide a balance of uses across the planning area. BLM must honor the rights of oil and gas leaseholders. Current oil and gas leases cover approximately 61% of the public land and mineral estate in the planning area. BLM analyzed a reasonable range of alternatives.

Comment: A more balanced focus on both mineral and non-mineral resources, current land uses, and the human interface would have revealed the fundamental changes that have occurred in the RMP area in the past 20 years that are unrecognized in the draft document and thus not taken into account. Energy incorporated as one component of a draft Plan is appropriate. Energy as the lynchpin of the plan is not. It skews the alternatives presented for consideration.

Response: The plan and draft EIS must recognize the importance of the changes in oil and gas exploration and production, and the way that those changes impact BLM's management of the planning area. Energy is a central issue in land management in the Pinedale planning area and must be treated as such.

Comment: This means that a significant extension of the principles of Alternative 3 as presented in the DEIS, if greatly improved, could garner significant public and political support. We would like to see in the next DEIS an "Alternative 3 modified" that is far more conservative in its scope. Even better, the amount of land associated with the next edition of a draft PRMP dedicated to mineral development should be largely confined to the Pinedale Anticline and Jonah Field, and other resources such as the proposed grazing allotment shrinkage should not be the penalty for this more conservative approach.

Response: BLM is required to honor the rights of oil and gas leaseholders, and does not have the authority to prohibit oil and gas development of existing valid leases. Alternative 3 represents the most restrictive alternative BLM could legally implement, given the obligations BLM is under to current oil and gas leaseholders and other authorized users.

It was important to consider the impacts of closing grazing allotments in areas of intensive oil and gas development. It was not intended as a "trade-off" for other facets of Alternative 3. BLM can choose individual elements of each alternative in formulating the Proposed Plan; alternatives do not have to be carried forward in their entirety.

Comment: In its discussion of directional drilling on page 4-47, the BLM should also discuss information regarding limitations on the BLM's ability to mandate directional drilling. The IBLA has expressly determined that the BLM does not have the authority to require the movement of proposed operations more than. 200 meters, unless a nondiscretionary statute is implicated. See Colorado Envtl Coal, et al., 169 IBLA 137, 144 (2006) (holding that BLM cannot require relocation of a proposed well by 400 meters); see also 43 C.F.R. § 3101.1-2 (2006). The BLM properly notes that directional drilling increases costs and results in lost resources when casing cannot be brought to the bottom of the hole. See RMP DEIS, pg 4-49. The BLM should also note that directional drilling can lead to increased air emissions by as much as 20% as compared to vertical drilling given the increased drilling times and load factors on drilling rig engines. See, e.g., ,JIDP ROD, pg. 13.

Response: BLM does not mandate directional drilling. Directional drilling is included as a viable method of reducing impacts of oil and gas development on surface resources, where appropriate.

Comment: The BLM's Reasonably Foreseeable Development (RFD) Scenario for the Pinedale Resource Area is out-of-date and inaccurate. The BLM needs to include information explaining the purpose of the RFD Scenario and its role in the planning process. The BLM must also significantly update and revise the RFD Scenario in light of approved and proposed oil and gas development within the resource area. The BLM should first include specific information in the Final EIS, the Record of Decision and the actual Resource Management Plan for the Pinedale Resource Area itself confirming the fact that the RFD Scenario is not a planning decision or limitation on the level of development authorized within the Pinedale Resource Area. The RFD is defined by the BLM "baseline scenario of activity assuming all potentially as a productive areas can be open under standard lease terms and conditions, except those areas designated as closed to leasing by law, regulation or executive order." BLM Instruction Memorandum 2004-089, Attachment 1-1 (January 16, 2004).

Response: BLM's Wyoming State Office Reservoir Management Group (RMG) conducted a review of the RFD on June 28, 2007, and concluded that the number presented in the draft EIS is current, valid, and applicable. You are correct in your statement that an RFD is neither a planning decision nor a NEPA alternative. It is, however, an estimate of activity from which the impact analysis is developed. The definition for the term "Reasonable Foreseeable Development" has been added to the glossary for the final EIS. As stated in Chapter 1, BLM is bound by its governing regulations, including current and valid Instruction Memoranda; consequently it is not necessary to repeat or state their contents in the final EIS.

Comment: Given the vast quantities of hazardous materials being used in the PRA for oil and gas development, BLM needs to do more than simply come up with "response plans." The agency needs to proactively avoid potential contamination by adopting management standards to: (i) prohibit the use of particularly problematic chemicals (e.g., prohibit carcinogens and mutagens that cannot be easily removed from ground or surface waters), (ii) restrict and regulate the use of other hazardous materials to prevent ground and surface water contamination (e.g., prohibit the use of hazardous materials on surfaces overlying highly sensitive aquifers), and (iii) ensure adequate bonding for full remediation of all potential hazmat releases and associated contamination (including contamination that may not be discovered for many years). The proposed RMP direction does none of these things.

Response: Like many industries, oil and gas operators use specific chemicals in their manufacturing process. Unfortunately, "green" alternative products are not available for all chemicals that are used for drilling and development of oil and natural gas wells. Thus, the focus is for the operators to minimize potential environmental impacts by properly storing, transporting, using, and disposing of hazardous materials. Various policies and requirements address environmental impacts. They may include, but are not limited to, operators having Spill Prevention, Control and Countermeasure Plans, where applicable; operations having spill response plans; lining reserve pits with impervious material; and installing

monitor wells on locations with shallow ground water. Bonding specifically to address hazardous substance remediation is unnecessary since Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) authority allows BLM to hold responsible parties liable for all cleanup costs.

Comment: • The RMP should require BLM's annual monitoring and evaluation report to summarize all hazmat releases in the PRA. This summary should state the types and quantities of materials released and also evaluate remediation progress (e.g., fully successful, unsuccessful, in progress, etc.). If ground or surface waters are contaminated, the summary should disclose the volumes of water affected and whether contaminants have been fully removed. The RMP should also require BLM to interview oil and gas industry employees about unreported spills, and any information gained from this process should also be disclosed in the annual monitoring and evaluation report.

Response: Information for hazardous material and petroleum releases can be requested through the Freedom of Information Act process.

Document/NEPA/Alternatives/Process

Comment: Please provide me with notice that your final Plan an FEIS/ROD is complete. Also please indicate the link so I might read the both electronically. If I do not see significant wildlife mitigation built into your ROD (which will legally bind you to implement it) your final Pinedale Resource Area Plan and FEIS/ROD will be mailed to the following people who do care about public land: Senators Bingaman and Wyden and Rep. Rahall

Response: Notice of availability of the final EIS and record of decision (ROD) will be published in the *Federal Register* and local media when those documents are available. Everyone on the mailing list will receive a copy of the documents as they become available.

Comment: A proper DEIS, supposedly for the purpose of future planning guidance for the entire Pinedale RMP, cannot ignore these facts and their implications; the Draft before us does just that. Thus this DEIS should be completely redone, based on a new, appropriately comprehensive framework, and actual current data based on the current state of mineral sprawl in the region, and subjected to a new comment period.

Response: The draft EIS/RMP was developed on the best available inventories and data at the time, see page 4-2 of the draft EIS. Data are continually accruing and changing. It is neither practical nor reasonable to re-initiate a plan or EIS every time a new piece of data becomes available. The RMP/EIS would never be completed were BLM to operate in this fashion.

Comment: We desperately need an alternative 5, no further destruction of our environment. Please try to put that rational alternative into the running before making the final decision. The decisions we make in the next 10 years will decide the fate of all life on our planet, including our own. And there won't be a second chance if we do it wrong.

Response: Alternative 3 represents the most restrictive alternative BLM could legally implement, given the obligations BLM is under to current oil and gas leaseholders and other authorized users. Also, Section 2.2.2 discusses more restrictive alternatives, including full closure of the planning area to further oil and gas leasing, which were considered but eliminated from detailed analysis.

Comment: As someone who's deeply concerned about the future of America's wild places and unspoiled lands, I DO NOT support this whole wild life corridor mumbo jumbo if the mule deer numbers are down cut back on the hunting licenses for a while we need more fuel resources from home the animals have

adapted for years and will be fine how about the human people extinct from using the forest for jobs homes fuel and motorized recreation. do what you need to

Response: The presence of wildlife migration corridors is well documented through studies of collared animals. Migration corridors provide connection between summer and winter ranges and are vital for the survival of the species. Reducing hunting pressure is not within the authority of BLM; however, reducing hunting pressure will not preserve a herd that cannot access its winter range. Very little of the planning area is forested (about 70,000 acres, or 7% of BLM-administered surface lands). Social and economic impacts of the alternatives are discussed in Section 4.10.

Comment: Per federal law, the process of drafting a new RMP is supposed to be subject to public comment. However, BLM only posted a very small and uninformative blurb in the local papers informing the public where an open house would be so the public could see the plan they might want to comment on. The blurbs were only 1 week prior to the actual meetings, which just happened to occur during spring break, calving and tax season. The document detailing the proposal on paper can be measured by weight (about 5 lbs I have heard) and on computer is 117 files, most containing multiple pages (one file has 204 pages). To expect the public to be able to respond in an educated manner to these highly technical documents in little over a month (comment deadline was originally May 18th, but was later revised to June 18th due to public outcry), while still tending to their jobs, family, sleep, etc. is ludicrous and clearly demonstrates BLM's will to exclude the public from the process. Also, the RMP public meetings occurred within a week of other major BLM meetings, so most of the public was confused as to whether these RMP meetings were just a repeat of previous Pinedale anticline SEIS meetings, which I understand were also exhausting and complex. The BLM mission statement is as follows, pasted from their website: "The Bureau of Land Management sustains the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations." By allowing large corporations to drill thousands of wells with little or no monitoring or mitigation, BLM has already blatantly and irreparably neglected their mission during the last several years in the Pinedale management area. The plan they are currently proposing is an even further dereliction of their duty as stewards of federal land. In order for BLM to start following their mission statement, they should do the following: Have the public comment period for the draft RMP extended further to allow for more accurate and informative public meetings to take place. Make the entire Wind River Front (NE corner of the plan area) be permanently unavailable to drilling, possibly by simply making current leasing moratoriums permanent. Ensure that unbiased, scientifically proven air and water quality monitoring takes place, and that industrial activity is immediately stopped when pollutants reach unacceptable levels in this area or surrounding areas, including the adjacent wilderness. Ensure that wildlife is also monitored and that industrial activity negatively impacting it is stopped immediately until a way to definitively mitigate impacts is adopted.

Response: The notice of public meetings and hearings was published at least 15 days before the hearings occurred. The public comment period ran from February 16 through June 18, 2007, a total of 122 days, an addition of 32 days to the required 90-day public comment period. Unfortunately, whenever meetings are scheduled, there are individuals who cannot attend. This is why the comment periods extend both prior to and after the meetings so that individual can submit their written comments. It is also unfortunate that planning and other documents have increased in size to the point that they are difficult to read. However, the length is necessary to thoroughly discuss all the issues that BLM is required to address in a planning EIS. Making the Wind River Front Area unavailable to oil and gas leasing and development is considered in the EIS. Air and water quality monitoring and enforcement of air and water quality standards are the authority of the Wyoming Department of Environmental Quality (WDEQ), as delegated by the Environmental Protection Agency (EPA). Monitoring of wildlife populations is conducted by the Wyoming Game and Fish Department (WGFD). It is not possible to design specific mitigation at the RMP level because the RMP will not directly authorize any on-the-ground activities. The appropriateness

of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

Comment: •Employ the spatial analysis techniques described above to carefully evaluate the impacts of existing transportation networks and oil and gas development on wildlife and natural and cultural resources, in order to assess the need for closure and other limitations on the use of existing roads (and other routes) and oil and gas development, and to develop and thoroughly evaluate alternatives. This is crucial to do as a part of resource management planning - key for assessing possible effects, as well as for developing solutions to prevent damage to the values of these areas during the 15-20 year life of the plan. It also insures that an agency will comply with its obligations to fully consider the cumulative effects of decisions made on the many resources and uses in the planning area.

Response: The final EIS considers the impacts of road and right-of-way (ROW) development on wildlife habitats through fragmentation, increased human presence, and direct habitat impacts. The areas unavailable for oil and gas leasing are intended to offset the impacts of road and ROW development in the existing gas fields.

Comment: I therefore strongly oppose this Alternative and support instead Alternative 3 with the following revision included in its final form: • Thresholds will be set for wildlife populations and air quality standards and, if met, will immediately trigger cutbacks in production levels.

Response: The problem with this sort of threshold is that once the population impact is apparent, the habitat damage is done. Cutbacks in production would not mitigate the impact at that point. Even prohibiting the drilling of any new wells would not address the existing fragmentation and human presence issues. This is why other types of mitigation are necessary and why the EIS reveals that some wildlife populations would be impacted during the life of the plan.

Comment: You are doing an unprofessional and unacceptable job of collecting public input. . Contrary to your press release, the RMP Revision website at www.b1m.eovIrmpIvvy/pinedale provides no visible link to submit comments electronically or upload electronic files. I finally found the electronic comments page, (http://www.blm.gov/rmp/wy/pinedale/involved.html) but my comments deal with your fundamental failure to meet the NEPA requirement to assess impacts on the human environment rather than on the arbitrary topics you've listed. The e-mail address repeatedly bounced my attempts to send comments, and you provide no FAX number.

Response: Many individuals were able to submit comments on the website. Approximately 98,000 individuals, including you, were able to submit their comments through the methods provided. It is also unfortunate that incorrect e-mail addresses were advertised by several individuals and groups soliciting comments on the draft EIS. BLM attempted to address this issue by informing the local papers of the correct e-mail address.

Comment: I would also hope that proper funding be provided to allow the BLM to wholly and objectively see to it that the performance based process is appropriately implemented.

Response: In order to analyze the alternatives, BLM assumes that adequate funding and employees would be available to implement them. It is difficult to predict the actual availability of this funding in the future.

Comment: In the wake of the Pinedale Anticline Supplemental EIS and Jonah Infill EIS, two projects of massive scope and implication, the BLM must ensure that the RMP is consistent with the objectives set forth in these documents. It is essential that these projects are not in conflict with the provisions of the

12MP, such that the development contemplated in these documents can continue in a manner that dovetails with the overall management philosophy for the Pinedale Field Office contemplated in the RMP.

Response: The RMP alternatives are designed to work with ongoing development of the Jonah and Anticline fields.

Comment: I found the EIS so vague and short sighted in some sections; it was hard to argue with text containing little substance. Comparing relative impacts of the various options is a poor substitute to difficult task of quantifying actual impacts,

Response: Impacts were quantified to the extent possible using the best available data. Where specific data are not available, impacts are presented in a qualitative manner which may provide a more general comparison between the alternatives.

Comment: Going to the subject of alternatives, this RMP commits the same failure as was cited by EPA regarding the Anticline SEIS, to wit: "Given the magnitude of potential impacts to the environment, EPA recommends the BLM fully analyze at least one additional alter-native ...."15 EPA led up to that recommendation by citing the failure by BLM to consider additional alternatives of either "reduced pace of development" or a "conservative alternative." As EPA noted, "NEPA requires a range of reasonable alternatives to a proposed action"16 and BLM has again seriously failed to implement that law with this RMP.

Response: Alternative 3 represents the most restrictive alternative BLM could legally implement, given the obligations BLM is under to current oil and gas leaseholders and other authorized users. Also, Section 2.2.2 of the draft EIS discusses more restrictive alternatives, including full closure of the planning area to further oil and gas leasing, which was considered but eliminated from detailed analysis.

Comment: Accordingly, given the miniscule differences between the four RMP Alternatives, an additional alternative must be included which contemplates no development outside of a box bounded by Highway 191 on the east, 42° 53' 00" North Latitude on the north, Highway 189 on the west, and 42° 23' 00" North Latitude on the south. This box encompasses all existing development in the Jonah and Anticline fields but excludes all lands in the Upper Green River Valley, the Wyoming Range, and the Wind River Range.

Response: BLM does not have the authority to prohibit development of existing oil and gas leases in these areas; see discussion on page 2-8 of the draft EIS. Also, Section 2.2.2 of the draft EIS discusses more restrictive alternatives, including full closure of the planning area to further oil and gas leasing, which was considered but eliminated from detailed analysis. BLM does not have the authority to prohibit oil and gas leasing on U.S. Department of Agriculture National Forest system lands in the Wyoming and Wind River ranges.

Comment: There are few data citations throughout the document for restrictions and regulations, more data citations should be provided in order to help establish the basis for a new regulation.

Response: BLM does not have the authority to implement new regulations in an RMP. The best available data were used in formulating the alternatives and impact analyses.

Comment: So much of this document seems based on out of date data or no data. Please review the newest data available and revise these sections.

Response: The best available data were used in formulating the alternatives and impact analyses.

Comment: I am, however, concerned that much of the information relating to potential resource areas is out-dated. There are new findings on current field production and well results available, which have not been incorporated. This means that deep potential needs to be updated based on the new data. I also think that all acreage and percentages should be reanalyzed.

Response: The best available data were used in formulating the alternatives and impact analyses.

Comment: Each alternative needs a chart describing the recoverable resource. How can we decide which alternative to support if we do not know how much resources will be lost and never recovered?

Response: This information is found in Section 4.7.1 of the draft EIS, Impact Analysis for Leasable Minerals.

Comment: I specifically urge you to adopt a plan that: * Alleviates air quality impacts, especially on Class I airsheds. * Requires the use of the cleanest technologies and environmentally protective practices. *Paces development to allow proper consideration and application of adaptive management principles. *Withdraws important wildlife and scenic areas from future oil and gas leasing availability.

Response: Air quality monitoring and enforcement of air quality standards is the authority of the Wyoming DEQ, as delegated by EPA. Clean technologies and environmentally protective practices are included in the EIS as best management practices and would be implemented wherever practical. Limiting the pace of development denies lease holders the enjoyment of their oil and gas lease rights. Oil and gas leasing is a discretionary decision. Withdrawal is not required to make areas unavailable for leasing. The EIS considers making areas unavailable for oil and gas leasing.

Comment: Finally, I don’t really understand what all of the potential impacts may be in each of the alternatives. Maybe you should include a series of charts or something in the plan that would show comparisons between the alternatives for all the categories of potential impacts.

Response: A summary comparison of impacts is presented in Table 2-34, which begins on page 2-191 in the draft EIS.

Comment: I fear the should provide a more high level overview of how the land should be managed. Alternative 3 is too prescriptive in regards to particular management practices. Other NEPA documents such as EAs and EISs are more appropriate for detailed land use regulations.

Response: Alternative 3, like the other alternatives analyzed, contains decisions appropriate to the RMP level. Specific field management decisions are included in field development EISs, such as the Jonah EIS and Pinedale Anticline Supplemental EIS.

Comment: I recently heard an advertisement on the radio stating that the mule deer and sage chicken population has decreased by 50% due to the impact of the drilling in the area. I see them all over on the Mesa and in the Jonah. I would like to know where this data was collected. I would be very interested if you could forward this data that was used to come up with these percentages to my office. If there is no such data then I request that it not be advertised as fact on the radio.

Response: Without more information, the source of these percentages is not known. BLM is not aware of these radio broadcasts and cannot be responsible for everything broadcast in various media by various parties. However, recent information provided by the WGFD on the sage grouse population within 1 mile

of the Jonah Project Area has shown sage grouse have declined an average of 67%; and within 1 mile of the Anticline, sage grouse populations have declined an average of 30%.

Comment: This draft resource plan for the Pinedale area seems to be really specific and not a more general guidance document. I'd rather see a planning document, and then make the industry come back with an EIS or EA when they are planning a specific development.

Response: The RMP contains material appropriate for the land use planning level of decisionmaking.

Comment: The gathering of impact data is too far behind the curve of development.

Response: It is true that a lag can exist between the cause of an impact and the detection of that impact. This is one of the things that makes design of mitigation difficult.

Comment: the DRMP should provide a more in-depth analysis of the four management alternatives and the categories of development in some of the alternatives. Specifically, the current maps contained in the alternatives analysis make it difficult to properly analyze the alternatives and make sound recommendations for the FRMP. Accordingly, when BLM provides the public with detailed maps, USQ requests an additional 90-day comment period to use the detailed maps to analyze the impacts of the RMP.

Response: BLM intended to produce adequate maps. The lines on the maps representing variations between categories of development are not intended to be hard and fast boundaries. The establishment of more detailed boundaries will be made in the RMP ROD. Without specific guidance on what is needed to produce "detailed maps", it is not possible for BLM to be responsive to this request. The commenter is welcome to directly contact the BLM office for specific information.

Comment: Nowhere in the DRMP is the intent to recognize the validity of pre-existing authorizations more evident than in the discussion under 4.7.1 Leasable Minerals page 4-46: "Surface use restrictions, including timing limitation stipulations (TLS), NSO stipulations, and controlled surface use (CSU) stipulations, as well as unavailable for leasing designations, cannot be retroactively applied to valid, existing oil and gas leases or to valid, existing use authorizations (e.g., Application for Permit to Drill [APDJ). Postlease actions/authorizations (APDs, road/pipeline ROWs, etc.), however, could be encumbered by TLS and CSU restrictions on a case-by-case basis, as required through project-specific NEPA analysis or other environmental review."

This intent is further clarified a few pages later on page 4-48: Impacts Common to all Alternatives: "In addition to the prescriptions developed through this plan, there are additional in place prescriptions, restrictions, and prohibitions imposed on leasable mineral development by existing oil and gas field development NEPA documents, including but not limited to the ROD for the Jonah Infill Project, the ROD for the Pinedale Anticline, and the ROD for the Big Piney/LaBarge Coordinated Activity Plan (CAP). The decisions in these documents are retained by reference in all alternatives to this RMP."

Despite the passages quoted above, the analogous case law and the RMP regulations, however, there are statements in the DRMP regarding the validity of prior authorizations that have been qualified by the use of the word "immediately." Specifically, on page i of the summary it is stated: "This RMP revision will result in a land use allocation plan for the Pinedale planning area. Previous site specific or project-level implementation decisions, such as those made for the Jonah and Pinedale Anticline gas fields, would not be immediately altered by this RMP revision.

In addition, similar language appears on page 1-2 of Chapter 1: "This RMP revision will result in a land use allocation plan for the Pinedale planning area. Previous site specific or project-level implementation decisions, such as those made for the Jonah and Pinedale Anticline gas fields, would not be immediately altered by this RMP revision. Operators may request, and BLM may consider, revising existing oil and gas leases to conform with new RMP decisions but existing leases and developments will continue to be managed under their respective operating plans unless and until changes are specifically approved."

Inserting the caveat "immediately" before these statements implies that the validity of prior authorizations is transitory and that at some point in the future, authorizations existing before the FRMP would retroactively be altered by the RMP revisions. The word "immediately," or any other qualifying terminology, should be eliminated in these statements and any other statements in the DRMP when referencing a prior authorization, unless, and only if, the scope of a previously authorized project changes beyond the respective prior authorization.

In addition, a definitive statement regarding the validity of prior authorizations needs to be included in the description of all alternatives and carried forth in the FRMP.

Response: The intention of the RMP is for pre-existing field development-level EISs and decisions, such as the Jonah ROD and the Pinedale Anticline Supplemental EIS, to stand. The use of the word "immediately" in these instances was intended to allow that oil and gas operators could request changes in their lease status to recognize the performance-based strategy of the RMP. In retrospect, we find that the use of the term "immediately" is confusing and we have removed it from the final EIS.

Comment: In addition, the various charts and maps need to more accurately show differences between different categories within the Alternatives in order to allow the reader to understand the potential impacts. Charts comparing the Alternatives do not capture the differences between the differently managed fields within the Alternatives and their different restrictions or allowances. Improving both the charts and the maps could rectify this problem. USQ requests that when BLM provides the detailed maps and revised charts to the public that it provide an additional 90-day comment period prior to issuance of the FRMP.

Response: It is not within the scope of the RMP to exhaustively analyze the comparisons between site-specific management actions in the Jonah and Pinedale Anticline fields. The Jonah and Anticline fields, as well as other gas fields in the planning area, would continue to operate under their approved decision documents.

Comment: Although some monitoring has been done, due to the complexity of the situation and general understaffing of involved agencies I do not believe there is an accurate, unbiased, accounting of all the impacts to air, water, wildlife, soil, cultural resources, vegetation and recreation.

Response: The RMP used the best available data in the formulation of the alternatives and analysis of impacts of the various alternatives.

Comment: Throughout the document the BLM uses terms like "objectives, performance based, science and adaptive management." These terms assume that planning can result in implementation of activities which can be measured. I support this sort of notion, but encourage BLM to actually undertake the necessary activity to put these terms into practice. It has been my recent experience that there is little baseline data regarding grazing and wildlife activities in the area. I understand that the BLM budget has been tight, but there is no accountability for the plans or actions without appropriate monitoring over a period of time.

Response: To assess the impacts of the alternatives, it must be assumed that implementation of the alternatives would be carried out. It is not possible to predict the actual availability of funding and personnel to carry out implementation. However, BLM intends to implement the plan as written.

Comment: Communication sites have also been limited to already-existing sites (pg. 2-79). Further, the DRMP states that any tower would be limited to heights not requiring FAA lighting and only self-supporting towers would be allowed. The DRMP has provided no basis for imposing such stringent restrictions that could severely limit field communications and restrain the use of remote telemetry. This restriction should be deleted or justification should be provided.

Response: An adequate range of alternatives is provided for analysis purposes. Alternatives 2 and 4 are less restrictive then Alternative 3, and both provide for looking at communication sites on a case-by-case basis, taking technical specifications into consideration. Self-supporting towers would take up less space and create less surface disturbance. More communication towers could be placed together, and there would be less interference.

Comment: USQ is concerned that these restrictions lack a case-by-case analysis of specific projects, and because of the inadequate maps, there is no means to identify the specific areas with any certainty. As such, BLM should address these deficiencies in the FRMP.

Response: The RMP is a land use planning document, not an analysis or comparison of individual projects. This information is beyond the scope of the RMP.

Comment: The role of the various agencies in regulating air and water quality needs to be clarified. In the case of air and water quality, USQ recommends adding a clarifying statement that the State of Wyoming has primacy on air, water and wildlife. In some chapters of the document the BLM acknowledges state primacy on these issues; however, in other areas such as discussions on discharge permits, the DRMP indicates that BLM would make the final decision. In light of the primacy issue, which is discussed above, this needs to be clarified and corrected.

Response: See draft EIS page 3-9: "The State of Wyoming has primacy with regard to air quality." Also, see draft EIS page 3-110: "The State of Wyoming has primacy with regard to water quality." BLM has management responsibility for wildlife habitats on BLM-administered public lands.

Comment: This RMP, which will set management parameters on public land for 20 years, should not specify specific technologies in the document or presume the implementation of a particular technology across basins. In addition, the RMP should include economic practicability as a standard for consideration of technological implementation. The RMP should note that not all technology applies to all projects. Technology should be applied as appropriate on a site specific basis.

Response: Technologies are included in the best management practices appendix and would be applied as appropriate, allowing for matching of techniques to the situation and providing for cost-effectiveness.

Comment: The DRMP lacks data citations throughout the entire document when issuing definitive statements regarding restrictions and regulations. Data citations should be verified and provided. Some examples are provided in the matrices. In addition, the DRMP should not rely on any research or scientific studies in its analyses unless and until those studies have passed the litmus test of peer review.

Response: The RMP does not have the authority to enact regulations. Management actions are developed to address impacts specific to the planning area and would not appear in literature citations—research

studies are not land management actions. In addition, the best available data were used in formulating the alternatives and impact analyses.

Comment: "Stakeholder groups" noted in the analysis for Alternative 4 (Preferred Alternative) need to be expanded to be accurate. Ranchers, sportsmen, and younger residents are being directly displaced as a direct result of energy activities. Lands will be unavailable for grazing as a result of some intensive natural gas development on some allotments, hunting grounds, (for instance in the Jonah field) are no longer available for hunting because of gas drilling activity there, and younger residents cannot afford any real estate to make their home here.

Response: The final EIS has been updated to include more stakeholder groups (see Section 4.10).

Comment: The DRMP on page 2-31 indicates "The Riley Ridge Project Monitoring Program would be continued. Further monitoring would include gathering of geological data in the Deadline Ridge-Graphite Hollow crucial elk winter range to aid in preparation of the proposed activity plan. Monitoring would be coordinated with other resource monitoring programs such as wildlife, surface and ground water quality, grazing, and cultural resources, as appropriate." EM believes it is necessary and important for BLM to explain the tangible benefits that have been achieved. BLM has not provided any information as to the results of the current monitoring program; nor has it been explained why it should be retained. Without this information, it is impossible to justify its retention. BLM needs to provide information supporting the need for the program, including the findings and benefits, in the Final EIS or it should be eliminated.

Response: This management action was part of the 1988 RMP ROD and so must be included in the description of Alternative 1, the continuation of the existing management situation.

Comment: Page Number & Issue: 4-73: "The impacts related to noise reduction would be the same as those described in the mineral development discussion under Alternative 3." Recommendations: Explain and cite source or delete.

Response: Because essentially the same requirements for noise reduction would be applied, the impacts to operators would be similar to Alternative 3.

Comment: The Draft Pinedale RMP does not set forth the recognized requirements for developing a legally and scientifically adequate adaptive management program. Rather BLM relies on vague, non-binding language that may or may not result in appropriate monitoring and evaluation of operating standards and mitigation efforts during implementation. (Examples: "may be specified," "when and where practicable," "may be required," "should meet," "where feasible," "possible and compatible," "provided this requirement is compatible with other needs," "should be avoided when practicable." (All from pages A3-5 through A3-9 of Draft RMP). Adaptive management is not simply a phrase to throw into a planning document when the agency lacks information or resources. Rather, it is a "scientifically based, systematically structured approach that tests and monitors management plan assumptions, predictions and actions, and then uses the resulting information to improve management plans and practices." (Cooperative Forest Ecosystem Research, Ecosystem Management: Science at Work: http://www.fsl.orest.edu/cfer/rschneed /ecomngt.html).

As the BLM has expressly noted elsewhere (see Draft Little Snake Resource Management Plan EIS, Appendix M), specific requirements for effective adaptive management include: *clearly defined measurable outcomes; * indicators used to measure whether outcomes are being reached; * defined trigger points that initiate a change in management; * disclosure of potential risks involved; * specific monitoring and assessment plan describing frequency of monitoring, assessment protocols, and who will conduct and pay for monitoring. NEPA standards regarding adaptive management are quite clear. NEPA

requires that the effectiveness of mitigation measures be described and analyzed in detail in order to justify reliance on mitigation for reducing environmental impacts. Simply identifying mitigation measures, without analyzing the effectiveness of the measures, violates NEPA. Agencies must "analyze the mitigation measures in detail [and] explain how effective the measures would be a mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA." Northwest Indian Cemetery Protective Association v. Peterson, 764 F. 2d 581, 588 (9th Cir. 1985), rev'd on other grounds 485 U.S. 439 (1988). NEPA also directs that the "possibility of mitigation" should not be relied upon as a means to avoid further environmental analysis. Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, Davis v. Mineta, 302 F.3d 1104, 1125 (10th Cir. 2002). Recommendation: The Draft Pinedale RMP must clearly spell out under what circumstances and when adaptive management principles will be applied (not just: "where feasible," "when possible," etc.); the monitoring requirements; the agency's ability to measure outcome attainment; commitment of the agency to fund monitoring and follow through on adaptive measures; and the commitment of regulators and stakeholders to the adaptive management approach. If the Draft Pinedale RMP is not revised to provide these details, it will be contravening CEQ guidance V see: The NEPA Task Force Report to the Council on Environmental Quality: Modernizing NEPA Implementation, p. 46-49 (Sep. 2003), http://www.nepa.gov/ntf/report/pdftoc.html.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. It is not possible to predict the actual availability of funding and personnel to carry out implementation; however, BLM intends to implement the plan as written. The RMP provides the objectives for management and allocates uses that would be allowed in particular areas. Specific mitigation, monitoring, and adaptive measures would be dependent on site-specific projects or proposals and would be determined during the project approval process

Comment: The Upper Green River Valley Coalition has made a responsible energy development proposal which should be seriously considered and adopted.

Response: To the extent that the recommendations of the Upper Green River Valley Coalition fell within the scope of the RMP, they were incorporated into the alternatives in the draft EIS.

Comment: We asked in the scoping comments signed by Wyoming Outdoor Council, Biodiversity Conservation Alliance, and other conservation groups on April 7, 2003, that specific attention be directed to the direct, indirect, and cumulative impacts that leasing, exploration, and development of oil and gas resources will have on air quality, water quality, and wildlife. We stressed that an ecosystem-wide study of impacts was critical, including consideration of connected, cumulative and similar actions. This has not occurred. Although the planning area covers a vast area, it is not isolated. Adjacent planning areas have activities which are having, and will continue to have, significant impacts on the planning area. Shutting one's eyes to these foreseeable impacts now will only compound conflicts and problems in the future. We request that BLM in the FEIS fully address these matters with supplemental environmental analysis.

Response: The cumulative impact analysis in the final EIS is intended to reveal these impacts and interrelations.

Comment: I strongly encourage the BLM to put the RMP on hold until the PAPA SEIS is both finalized by the BLM and also reviewed by the relevant tribunals.

Response: It is not necessary to finalize the Pinedale Anticline Project Area (PAPA) Supplemental EIS prior to completion of the RMP ROD. The PAPA Supplemental EIS is being crafted to comply with the RMP.

Comment: The BLM should ensure that the Final EIS and revised RMP for the Pinedale Resource Area are consistent with the policies of other governmental entities. Section 202 of the FLPMA requires the BLM to "coordinate the land use inventory, planning, and management...with the land use planning and management programs of other Federal departments and agencies and of the States and local governments."93 In its FLPMA regulations and Handbook, the BLM commits to avoiding inconsistencies with the resource-related plans, policies, and programs of other governmental entities.94 Sections 101 and 102 of the National Environmental Policy Act similarly require the BLM to prepare analyses and documentation "in cooperation with State and local governments" and other agencies with jurisdiction by law or special expertise.95 To comply with these statutory requirements, the BLM should join other federal agencies in implementing the national policy toward the deployment of wireless communications infrastructure on federal lands.96

Response: BLM has worked with cooperating agencies at the state and local level throughout the development of the draft EIS. The Federal Land Policy and Management Act (of 1976) (FLPMA) requires that BLM coordinate with and incorporate the land use plans of other federal, state, and local agencies and governments "to the extent consistent with the laws governing and administration of the public lands", "to the extent practical", and "to the extent consistent with Federal law and the purposes of this Act (FLPMA)". BLM considered local and state plans and policies in developing the alternatives.

Comment: The BLM also should coordinate its Final EIS and revised RMP for the Pinedale Resource Area with local governments. As discussed above, Union has received requests for improved coverage, emergency communications, and enhanced 911 service from local governmental entities in several portions of its service area.

Response: BLM has worked with cooperating agencies at the state and local level throughout the development of the draft EIS. FLPMA requires that BLM coordinate with and incorporate the land use plans of other federal, state, and local agencies and governments "to the extent consistent with the laws governing and administration of the public lands", "to the extent practical", and "to the extent consistent with Federal law and the purposes of this Act (FLPMA)". BLM considered local and state plans and policies in developing the alternatives.

Comment: • Electronic filing, processing, and approval of APDs and Sundry Notices should be encouraged in order to reduce the amount of data entry done by BLM staff because it would allow more time to be devoted to processing.

Response: This comment is outside the scope of the RMP.

Comment: The Draft co-mingles the plan and the analysis of its impacts together. While planning may have been done this way in the 80's, given the extent of mineral development and impacts that have already occurred, as well as future mineral sprawl activities already approved and under consideration presently in the PRMP area, this approach is inappropriate.

Response: NEPA requires that the alternatives and impact analyses be contained in the EIS.

Comment: When the last PRMP data was gathered decades ago, there was no energy boom in progress, and that changes everything. Under the current circumstances the approach and the method for this effort should have been quite different. We suggest that the BLM could have presented a draft plan, and then

accepted comments and prepared a revision to the draft plan that reflected the public comments. An appropriately comprehensive DEIS then should have been prepared to assess a set of alternatives that reflected both the actual current conditions and, just as important, the conditions that will accompany the already approved, explosive growth in the number of wells.

Response: BLM used the best available data in formulating the draft EIS. BLM has presented a draft EIS for public comment, of which this is one. BLM has analyzed the public comments and used the input in formulating the final EIS and the Proposed RMP. It would not have been appropriate to present a draft plan without first completing the accompanying impact analysis found in the draft EIS and comparing the draft to other alternatives.

Comment: SDSBT's conclusion is that both this process and this document are flawed. BLM needs to take seriously its multiple use responsibilities under federal law, recognize in this process the impacts that have already taken place and that will occur based on decisions already made, announced and pending, and recast this plan and the process used to develop a new draft of it. A new draft PRMP and separate DEIS is needed. In a rational world, this process would not even be re-started until there was a comprehensive study of the surface and ground-water resources of the entire planning area, particularly of the parts of the area where there has never been any evaluation of the water resource situation by any level of government. (See SDSBT comments DEIS Eagle Prospect, and SDSBT's proposed Surface and Ground Water Study for the Eagle Prospect impact area.)

Response: The alternatives in the EIS provide a balance of uses across the planning area. BLM must honor the rights of oil and gas leaseholders. The alternatives present multiple use through providing areas that would not be available for leasing and would not be developed during the life of the plan. The best available data were used in formulating the alternatives and completing the impact analysis.

Comment: Where is the analysis of the human settlement component of the planning area? The plan does not acknowledge human population, communities and housing growth in the planning area. (See SDSBT comments on the Eagle Prospect DEIS, previously referenced.)

Response: The entire impact analysis considers impact on the human environment, as required by NEPA. Impacts related to population, communities, housing, and other socioeconomic issues are found in Section 4.10, on page 4-109 of the draft EIS.

Comment: Page 4-2, Section 4.1.1 Types of Impacts, sentence two of the first paragraph states that: "Although impacts may be perceived as positive (beneficial) or negative (adverse), those determinations are left for the reader of this document to make." Comment – This statement is absurd. Very few readers have the training and experience to judge whether or not impacts are positive or negative in the context of BLM's mandate to manage multiple resources on their lands. As the land management agency, it is BLM's responsibility to make positive or negative judgment calls on impacts.

Response: On the contrary, each individual can and will determine whether impacts are positive or negative. For example, closure of roads in a certain area would be a negative impact on off-highway vehicle (OHV) operators, but a positive impact on horseback or hiking recreationists.

Comment: There are three statements of very specific facts cited in this paragraph that are not linked to literature citations. These include statements made regarding the results of studies conducted at Riley Ridge, Lake Ridge, and Snider Basin. Not only is this an unprofessional way to represent data, but it also deprives readers of their right to know the sources of BLM's information.

Response: The citation appears on page 4-186 of the draft EIS.

Comment: Also, the Federal Land Policy Management Act (FLPMA), BLM's organic law relative to its mission and purpose, establishes a requirement to fully protect the natural environment. "[I]t is the policy of the United States that—the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; . . . that will provide food and habitat for fish and wildlife and domestic animals . . . ." 43 U.S.C. § 1701(a)(8). BLM is required to manage the public lands under a multiple use mandate, which requires among other things the "harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment . . . ." Id. § 1702(c). And last, "[i]n managing the public lands the Secretary [of the Interior] shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the [public] lands." 43 U.S.C. § 1732(b). (portions of this paragraph appear in comments submitted elsewhere by GYC and others.) Thus the function of big game winter ranges and birthing areas may not be sacrificed by a single, dominant conversion of the landscape to industrial purposes.

Response: The alternatives in the EIS attempt to provide a balance of uses across the planning area. BLM must honor the rights of oil and gas leaseholders. The alternatives present multiple use through providing areas that would not be available for leasing and would not be developed during the life of the plan. BLM cannot prohibit development of existing valid oil and gas leases in areas of big game winter ranges and parturition areas.

Comment: Conclusion: The Pinedale RMP/EIS is fatally flawed in that it lacks meaningful, enforceable ecological analysis and criteria. This failure leaves the public with no confidence that BLM's mandate for accelerated restoration, sustainable management and protection of values will be met. We believe the process has been biased and the RMP will perpetuate a process that will continue to be open to bias and misinformation. Recent reports by the Interior Departments' Inspector General regarding Endangered Species Act listings show political manipulation and abandonment of objective science. Similarly, during the recent preparation of BLM's revised grazing regulations, BLM scientists spoke out about their science being suppressed or altered to change the meaning of their conclusions. BLM must restore integrity to the process and demonstrate an ability to enforce, monitor and manage uses, otherwise those activities that can't be monitored or managed must be ended.

Response: The issues brought up in the comment are outside the scope of the RMP revision.

Comment: This deal, we need about 60 days or more to understand this. I've been plowing through it for the last two weeks. I get irritable. My family doesn't talk to me. I don't understand this stuff. There's a lot going on here. And most people I've talked to can't figure out whether I'm talking about the BLM RMP that we're here for or the Anticline Supplemental Impact Statement that just got done. And in talking to ranchers, our season's about a month early right now, so people I know, they don't have time to even look at this right now. They're calving. They're trying to get water on. We're in drought. So this is a really inconvenient time to get any meaningful kind of input from anybody, I think.

Response: The comment period was open from February 16 through June 18, 2007, a total of 122 days. This included an extension of 32 days beyond the standard 90-day comment period.

Comment: PAGE: I SECTION: Summary RECOMMENDED CHANGE: • Livestock grazing management • Maintaining viable communities and preserving custom and culture EXPLANATION: These are two important planning issues that have been omitted. They are identified in the Management Situation Analysis (MSA) so were part of the original issues raised to BLM.

Response: The MSA was developed prior to the scoping process. The issues mentioned in the comment were not identified as major planning issues during the scoping process.

Comment: I think there's a little bit of a lack of specifics in the RMP, time frames are a little bit -- a little bit uncertain. The winter range stipulation is a little bit uncertain. The re-vegetation reclamation stuff needs to be spelled out exactly before it's delved into. Some of the wildlife things as well are a little bit uncertain.

Response: The winter range stipulation would run from November 15 to April 30 in the Proposed Plan. Specific revegetation and reclamation requirements need to be tied to a specific proposal or project so that specific needs and methods can be assessed.

Comment: For the RMP EIS, the BLM should not limit consideration to effects that may occur under the life of this Plan but should consider long-term effects.

Response: The impact analysis is intended to reveal impacts that may extend beyond the life of the RMP.

Comment: Overall, Alternative 3 is overly restrictive, unnecessarily limits oil and gas development in the Pinedale Resource Area and should be eliminated from further consideration: As discussed in more detail below, oil and gas development is the primary source of employment and tax revenue in southwest Wyoming. The BLM's adoption of Alternative 3 would have devastating economic Impacts upon the region, State of Wyoming, and even the nation. Oil and gas development, even on existing leases, would be significantly hampered by the BLM's Management decisions for Lands and Realty, Minerals, Soils, Transportation, Visual Resumes, and Wildlife Resources Management decisions. Although EnCana understands the importance of having a wide range of alternatives to satisfy the requirements of NEPA, the BLM must not adopt Alternative 3.

Response: As required by NEPA, BLM considered a reasonable range of alternatives in the draft EIS.

Comment: In contravention of 40 C.F.R. § 1502.24, Chapter 4 of the RMP DEIS does not cite a single scientific reference or published study that would support any of the generalized discussion of impacts.6

Response: Impacts were quantified to the extent possible using the best available data. Where specific data are not available, impacts are presented in a qualitative manner which may provide a more general comparison between the alternatives.

Comment: The discrepancy between the RMP DEIS projections and the Jonah and PAPA EIS projections may be due to the fact that the documents used different lifetimes. The former limited consideration to 2020 while the latter two documents included projected development out to 2025. Why has the BLM limited the RMP EIS scope of analysis to 2020? When the new RMP is finally issued it will be 2008 or 2009. This new Plan will almost certainly not be revised until after 2020. The existing RMP was issued in 1988 and it will be at least 20 years old when the new RMP is issued. The forthcoming RMP can therefore be expected to last until sometime around 2030 and possibly beyond.

Response: The analysis was carried through 2020 to avoid continually changing the frame of reference for analysis while the draft EIS was being prepared.

Comment: Mentioned in many parts of this document, BLM coordinates with other federal, state, and local agencies. But a holistic approach to resource management which might be expected in a long-term comprehensive document like this is not mentioned here.

Response: While cooperating agencies are involved in the BLM planning processes, BLM retains decisionmaking authority on BLM-administered public lands.

Comment: The remainder of the RMP DEIS's management direction for waters and watersheds is specific to each alternative. Before proceeding to discuss my concerns with the alternative-specific direction I will address a few concerns about how that direction was presented for public review. During the past 20 years I have reviewed countless EISs and EAs; the total number is certainly in the triple digits. Even so, it was exceedingly difficult for me to compare the proposed management direction for the various alternatives because the RMP Draft EIS does not present any meaningful comparisons of how the management direction for water resources varies between alternatives. The water-related management direction for Alternative 1 is presented on pages 2-34 and 2-35 of the DEIS. The water-related direction for Alternative 2 is presented on pages 2-67 through 2-69. The direction for Alternative 3 is presented on pages 2-96 through 2-98. And the direction for Alternative 4 (BLM's proposed RMP direction) is presented on pages 2-139 through 2-142. One has to flip back and forth between these pages to figure out if water-related management direction embodied in one alternative was also included in other alternatives. It is like trying to read four different sets of fine print without any explanation or table to summarize the differences. If it was difficult for me - a person with years of experience reviewing NEPA documents - to figure what was being proposed for just one narrow set of issues (those related to waters), imagine how difficult it was for members of the general public - people who have never read a NEPA document - to wade through the entire DEIS and try to make sense of the four alternatives. I have no idea why BLM only circulated a DEIS without an actual draft RMP to accompany it, but this approach really is not workable for the public.

Response: A "draft RMP" would presuppose that the preferred alternative would be adopted, which is not the case. BLM can choose management actions from each alternative in formulating the Proposed Plan for the final EIS.

Comment: The CEQ NEPA regulations, which are binding on the BLM, require that the EIS present alternatives in "comparative form" to "sharply define the issues and provide] a clear basis for choice among the options by the decisionmaker and the public." 40 C.F.R. § 1502.14. The DEIS does not meet this requirement. It does not provide a clear basis of choice because the differences between the alternatives are not sharply defined. To address this problem, an in accordance with 40 C.F.R. § 1502.9,. I am hereby petitioning the BLM to prepare a revised or supplemental Draft EIS that presents comparative tables of the management direction differences between the alternatives. Such a table should be prepared for each management issue/resource (e.g., water, wildlife, soils, air quality, visual quality, etc.) and show which goals, objectives, standards and guidelines would be incorporated into each alternative. Actually, I believe the BLM should prepare a separate document that contains the entire proposed RMP (Alternative 4) - just as it would look if selected as the final RMP - with comparative tables for each management issue showing the parallel management direction embodied in each EIS alternative.

Response: BLM analyzed a reasonable range of alternatives in the draft EIS. Because of differences in the format and approach between the alternatives, it was not possible to present them in a tabular form. Such a table would have been well over 100 pages long and could be difficult to comprehend. There is no "Proposed RMP" until at least the final EIS stage of the planning process.

Comment: Based on the language in the RMP DEIS, it seems BLM has decided honoring all the commitments is not worth doing.27 Based on the discretionary language in the RMP. DEIS, it appears BLM's "solution" to the commitment "problem" is not to honor the commitments the agency has made to protect the environment, but to do away with "commitments" altogether and make all management direction in the new RMP discretionary. This is also supported by the fact that BLM has been actively working to undo commitments made in the 1988 RMP and subsequent project decisions (e.g., PAPA ROD) in order to allow greater gas drilling in the PRA. For example, BLM has recently proposed doing away with stipulations to prevent drilling in wildlife crucial winter range during the winter season and has also proposed to allow drilling in the Mesa Breaks area. If the BLM did not honor binding requirements

made in previous decisions, why should the public expect the agency to comply with new direction that is completely discretionary?

Response: The RMP revision does not negate any previous commitments made by BLM.

Comment: These are not the only omissions in the RMP DEIS. There are other major gaps in the management direction needed to protect resources in the PRA. For example, the DEIS states: "As other BMPs for nonpoint sources of water pollution are developed, they would be incorporated into the guidance for this plan where they conform to RMP objectives." RMP DEIS at 2-35. This indicates the current set of BMPs is incomplete and that additional measures would be developed after the public process on the new RMP is concluded. The BLM should make a good-faith effort to present all conceivable management direction for public review before the RMP is finalized.

Response: No matter how complete the current set of BMPs is, there is always room for the advance of science and technology. This statement is intended to allow for improved methods to be added to the BMP list as they are developed.

Comment: The direction in Appendix 25 purports to deal with "contaminant releases (hazardous materials and petroleum) that pose imminent danger to human health and safety or the environment. The Pinedale planning area [sic] maintains an Oil, Gas, and Hazardous Substances Spill Plan that outlines specific guidance for contaminant releases." DEIS, Appendix 25 at A25-1. Beyond the fact that the Spill Plan was not attached to the DEIS for public review and comment, none of the language in Appendix 25 actually requires BLM to take any action in response to hazmat spills.29 In addition, Appendix 25 only deals with catastrophic hazmat releases that pose imminent danger to people or the environment. It does not address long-term low-level releases or even major short-term releases that would pose health risks or other environmental problems in the future. For example, Appendix 25 would not apply to the benzene contamination recently found in ground water wells in the PRA gas fields because, even though the benzene exceeds safe levels for drinking water, it does not pose an immediate danger to human health. Benzene is a carcinogen, and effects of low-level benzene contamination may not show up for many years. The direction in Appendix 25, like the rest of the DEIS, also fails to discuss bonding requirements for contamination clean-up. This is a critical omission.

Response: The purpose of BLM's Hazard Management and Resource Restoration Program is to protect public health and the environment by reducing or eliminating risk associated with environmental and physical hazards. Although the program's responsibilities are broad, site-specific situations dictate BLM's authorities and responsibilities. For ground water contamination, for instance, WDEQ has maintained the authority for directing clean-up activities. BLM does have an active role in cooperating with WDEQ, but would defer clean-up actions and clean-up levels to established state and federal standards.

As listed in Appendix 25, BLM responsibilities are mandated by various laws and regulations. For hazardous substances releases, BLM must follow the procedures outlined in the National Contingency Plan and CERCLA. Thus, BLM is recognized as the lead agency for non-emergency hazmat releases. Also, pursuant to CERCLA, BLM has the authority to hold responsible parties liable for clean-up actions. For spill situations involving permitted actions under the Mineral Leasing Act, 43 CFR Part 3162.5-1(c), BLM requires oil or gas operators to take the "...necessary measures, subject to approval by the authorized officer, to control and remove pollutants...."

Comment: PAGE: SECTION: General RECOMMENDED CHANGE: EXPLANATION: Appendix should add that monitoring will incorporate MOUs with livestock grazing districts and permittees and will be done with coordination with cooperating agencies, such as counties and conservation districts. In addition, RMP needs to commit to detailed monitoring program, so that it is more than an after-thought.

Response: Memoranda of Understanding **(**MOUs**)** for monitoring agreements are outside the scope of the RMP. Detailed monitoring must be designed on a site-specific basis, not at the RMP level.

Comment: • The Hazardous Material Release Response Plan should require adequate equipment and training be available in Sublette County to immediately respond to any hazardous material spill in the PRA, and for private land spills associated with BLM-authorized development. Currently, the Fire Departments in the County have only a few certified hazmat technicians, and to my knowledge no Department has a fully equipped hazmat response unit. If a major spill occurs in a surface water in the County, significant spread of contaminants would occur before the spill could be contained.

Response: Although BLM does not have the authority to dictate county personnel availability, there are hazmat response teams in other counties that could respond, if necessary. Additionally, various operators have trained emergency response personnel. EPA Region 8 (Denver) also has response teams that could be employed for significant releases.

Comment: I am formally requesting that these comments (and those submitted by others) be included in their entirety in an appendix to the Final EIS, as was historically done by the agency. Since the BLM now distributes EIS's primarily by electronic means (e.g., PDF files), publishing public comments in their entirety rather than as summaries or sound-bite interpretations does not cost the agency any more.

Response: Due to the large volume of comments received on BLM planning documents, it is not possible to include them in their entirety in the final EIS. All comments received are available for public review at the Pinedale Field Office. Although BLM has historically included comment letters in their entirety in final EIS documents, there is no requirement to do so.

Comment: PAGE: 4-148, SECTION: 4.12.2, EXPLANATION: EIS discussion omits environmental impacts and instead lists perceived benefits to flow from Alternative 4. Previous subchapters in Chapter 4 focused on adverse environmental impacts. But those chapters where IDT member is an advocate, the focus shifts to benefits to resource. Thus Chapter 4 is quite uneven.

Response: Impacts may be positive or negative. It is legitimate to list benefits as "impacts". To be complete, the document needs to reveal all impacts, not just negative impacts.

Comment: PAGE: 4-180 SECTION: RECOMMENDED CHANGE: General Comments EXPLANATION: Chapter 4 §4.17.1 is fundamentally flawed because impacts assume that land actions are implemented without RMP and provisions found therein. These are theoretical impacts assuming unconstrained land uses and have no place in Chapter 4, which addresses direct, indirect, and cumulative impacts. The same discussion entirely omits the environmental impacts attributed to wildlife and habitat management. As written for impacts common to all alternatives Chapter 4 §4.17.1 does not conform to RMP and must be significantly revised throughout. Bias of authors against all other multiple uses comes through in every page. Chapter 4 discussion does not address RMP impacts in terms of interaction with other multiple uses. If Chapter 4 did then it would need to address habitat capacity and limits; risk of brucellosis transmission from feedgrounds, impacts on maintaining Wyoming Standards for Healthy Rangelands, especially on feedgrounds and adjacent public lands, hunter success in light of limited and closed OHV areas and impacts on game numbers. Rest of EIS does attempt to discuss resource tradeoffs and this section does not. It appears that BLM assumes it must accept WGFD population targets without assessing habitat capability and without disclosing likely conflicts with other resource commitments, e.g. AUMs. FLPMA requires BLM to protect habitat and RMP cannot fail to do so based on commitments made in MOU to accept WGFD target populations and plans. Chapter 4 does not disclose or discuss scientific uncertainty regarding game (elk) sensitivity to nonthreatening versus threatening human activities, factors leading to decline in sage grouse numbers, which grouse are still hunted, and impacts of

VRM classifications on efforts to manage for all resources. The local governments have provided BLM with reports on elk management (Taylor 2005); sage grouse (Taylor 2006) and specific comments to EIS. Ex. B, Taylor, R. Taylor Environmental

Response: The impacts described in Section 4.17.3 of the draft EIS are those that generally can be expected when implementing the types of actions found in the alternatives. This discussion is reasonable and applies to the RMP. The analysis utilizes the best available data. Elk are not the major big game issue on the BLM-administered public lands in the Pinedale planning area. Elk summer on United States Forest Service (USFS) land and, with the exception of native winter range in the South La Barge area, reside on feedgrounds in the winter. Big game most impacted by BLM-authorized actions are mule deer and pronghorn. In addition, greater sage-grouse are a management concern on BLM-administered public lands.

Comment: PAGE: 4-208 to 211 SECTION: 4.17.7 RECOMMENDED CHANGE: EXPLANATION: Local government comments regarding issues raised in §4.17.1 apply here as well.

Response: The impacts described in Section 4.17.3 of the draft EIS are those that generally can be expected when implementing the types of actions found in the alternatives. This discussion is reasonable and applies to the RMP. The analysis utilizes the best available data. Elk are not the major big game issue on the BLM-administered public lands in the Pinedale planning area. Elk summer on USFS land and, with the exception of native winter range in the South La Barge area, reside on feedgrounds in the winter. Big game most impacted by BLM-authorized actions are mule deer and pronghorn. In addition, greater sage-grouse are a management concern on BLM-administered public lands.

Comment: PAGE: 4-219 SECTION: 4.18.3 RECOMMENDED CHANGE: EXPLANATION: Does not document need for NSO.

Response: Analysis of the impacts of not implementing the NSO restriction in other alternatives provides the rationale for including it in this alternative.

Comment: How will the energy companies be able to overcome all the restrictions and stipulations, which have been included in alternatives of this plan? It would have been so much better to write a site-specific EA or EIS later. An RMP needs to be general in nature. Please provide in the final RMP a REASON FOR BEING SO SPECIFIC IN A DOCUMENT THAT IS SUPPOSED TO BE GENERAL

Response: The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document.

Comment: A Resource Management Plan needs to be general in nature. The document you have prepared is way to site-specific. This lends itself to putting in many restrictions and stipulations, which will be hard if not impossible to follow by the energy companies.

Response: The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document.

Comment: Furthermore the numbers you have used in your Reasonable Foreseeable Development are outdated. Please look at new data available and adjust your projections.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: An RMP needs to be general in nature and you have made it site-specific. That should be the job of an EA or EIS! I also think you need to check the numbers of your Reasonable Foreseeable Development section. I am almost certain that they are totally outdated. You need to rework them. I understand that the acreage is much larger than initially thought and the field production and well results are also.

Response: The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document.

Comment: SO IF THE BLM IS GOING TO MAINTAIN THE CURRENT LEVEL OF CONSTITUENT DETAIL IN THE FINAL RMP, I WANT TO SEE MY COMMENT REFERENCED IN THE FINAL AND ADDRESSED SPECIFICALLY. HERE IS THE QUESTION: HOW (SPECIFICALLY) DOES THE BLM JUSTIFY SUCH A LEVEL OF DETAIL IN THE RMP AND IS SUCH A LEVEL OF DETAIL LEGALLY DEFENSIBLE?

Response: The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document.

Comment: Please redo the reasonable foreseeable development plan using updated numbers before you move forward with the RMP.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: Another point to note is that Old information showing projected potential in the resource areas needs to be updated based on new findings and current field production and well results. New data severely affects acreage and percentages. YOU

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: 1. The RMP is supposed to be general and non-prescriptive in nature. Alternative 3 is so prescriptive in some cases that is should be more like an EIS. In the final RMP either fix this issue or explain why so much detail is used in a document that is supposed to be general.

Response: It is an EIS. The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document.

Corrections/Changes to Document

Comment: PAGE: 2-139 SECTION: RECOMMENDED CHANGE: REVISE to add definitions AVOID CLOSURE EXPLANATION: EPCA requires specificity as to impacts on mineral development and energy transportation. RMP needs to define avoid and closure. IM 2003- 233 and IM 2003-234 governing integration of planning with EPCA requires documentation that terms and conditions are the least restrictive.

Response: “Avoidance areas” and “closed” are defined in the Glossary of the draft EIS and final EIS.

Comment: PAGE: 2-15 SECTION:2.3.17 RECOMMENDED CHANGE: REVISE • Instances where two or more resources of interest to cooperating agencies are in conflict. For example, significant surface

disturbance in identified habitat for T&E or State Sensitive Species or livestock grazing allotment. EXPLANATION:

Response: This change has been incorporated in the final EIS.

Comment: For tourists passing through Sublette County, the Hoback Rim, the North Beaver Creek Drainage is either the first or last impression they will get of the Upper Green River Basin. It is not surprising that the highway crosses the Columbia/Colorado River divide at this point. The first white man in Sublette County stopped there to hunt in 1811 on their way to Oregon. They were following the trail of Indians who were following the big game migration trails. This migration still goes on today. Much of the game in the Hoback Basin uses this access. I have photographed the antelope migration and discovered their migration trail across our property. Likewise, we observe the deer, elk, and moose migrating through the area. There's an elk feed ground on the west side of the highway 189, 191 and another at the foot of Black Butte near the Green River. The elk, moose, deer, and antelope all have their young in this locality. There's a newly discovered large sage grouse lek in this area. My wife Jean and I and two neighbors have put conservation easements on 1,100 acres on the Rim to protect the scenic and wildlife values. Jean and I just bought 78 acres more to keep it from being developed. Presently there's a moratorium on oil and gas leasing in this area and the Upper Green. The BLM recommended Resource Management Plan opens this whole area and the Upper Green for oil and gas leaking -- leasing. How much does Sublette County have to sacrifice? Do we have to sacrifice all our wildlife, scenic vistas, water sheds, and air quality for natural gas? There should be no gas and oil leasing on the Rim or Upper Green. No surface occupancy has too many possibilities for disturbance. It appears the only concessions to full gas development the BLM's recommending is to subdivisions and the Wind River front where there isn't any gas. This is a personal comment, but it can and will be backed up by facts, figures, maps, and photographs. I've been told by people that have had experience that these public comments have not affected any BLM plan that's in the draft stage that they've noticed. I hope that's not true. We need to make changes. Thanks.

Response: Updated big game migration and sage-grouse lek data have been incorporated into the final EIS.

Comment: 1. The Bureau has applied a performance-based approach to the implementation of protective measures under some portions of the Pinedale RMP. It is the Service's understanding that by taking this approach the Bureau may or may not apply protective measures in certain circumstances (except those involving resources specifically protected by current laws [e.g., endangered and threatened species, cultural resources, etc.]). The Service is concerned that such an approach could lead to less consistent application of protective measures and management of sensitive resources. The Service encourages the Bureau to carefully evaluate all potential ramifications of implementing a "performance-based" approach prior to approval of the revised Pinedale RMP.

Response: BLM intends to protect raptors to the fullest extent of our management authority in all four of the designated areas to prevent a violation under the Migratory Bird Treaty Act. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: PAGE: 2-13 SECTION: 2.3.16 RECOMMENDED CHANGE: Replace "compensation" with compensatory or off-site. Compensation mitigation is not the correct term.

Response: The term has been changed in the final EIS.

Comment: To summarize, the Upper Green River Valley Coalition would like to see maintenance of seasonal and surface wildlife protections where oil and gas is developed required and proven management

practices that truly mitigate and protect our wildlife, air, and water quality, a comprehensive habitat assessment that maps and categorizes all wildlife habitat, confirmed non-waiveable special management area designations where existing non-developed oil and gas leases will be allowed to expire, be traded, or sold and permanently retired from leasing.

Response: Seasonal stipulations protect individuals, not wildlife habitats. Development permitted in non-critical seasons will be there in the crucial range next year. In areas where development reaches the point that habitats are not functional or are abandoned by wildlife, seasonal stipulations are not effective.

Comment: Whatever BLM's motives, making management direction discretionary will only make problems worse, not prevent them. Therefore, I am requesting that BLM delete any language from the new RMP (and other alternatives evaluated in the EIS) which may state or imply that management direction would be discretionary. There must be a solid base of obligatory resource protection standards, mitigation and monitoring requirements established in the RMP. During project planning, if BLM subsequently decides additional safeguards are needed - to address site-specific hazards - the agency can add them to the project decision.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: For the new RMP, the BLM has decided to shift away from prescriptive-based direction and rely on something called "performance-based" direction. See RMP DEIS, Appendix 3, page A3-1. In fact, all of the alternative RMPs the BLM evaluated in the DEIS -except for the "no action" alternative (continuing management under the '88 RMP direction) - rely on performance-based management direction. What does "performance-based" management mean? The DEIS is cloudy on this issue, perhaps deliberately so. Although the discussion is ambiguous, it seems BLM is 'proposing' not to set limits on activities, but to merely "emphasize the intent or outcome of mitigation." Id. at A3-2. "If it can be shown that the outcome is achieved, then the land use plan goal is achieved." Id. at A3-1.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: The DEIS asserts the "addition of performance-based stipulations and standards will provide the BLM with greater flexibility in protecting physical, environmental and cultural resources." Id. Actually, discretionary performance-based stipulations will provide BLM with greater flexibility to harm the environment. Indeed, the DEIS concedes: "the greater flexibility afforded by the proposed performance-based lease stipulations and operating standards ... should result in the need for fewer exceptions." RMP DEIS, Appendix A3, page A3-3. Fewer exceptions means there would be fewer actual limitations on ground disturbing activities. Furthermore, the DEIS asserts the "modification from prescriptive-based stipulations toward performance-based stipulations will allow consistent application across the field office...." Id. This is absurd. Having greater flexibility to ignore or adjust standards and mitigation requirements from project to project won't result in greater consistency; it will result in greater chaos.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: The DEIS also, suggests this "flexible" performance-based approach is needed to "help BLM make decisions effectively by using a rigorous combination of management, research, and monitoring so that credible information is gained and management activities can be modified, over time, based on continuous experience." Id. at A3-4. This is also absurd. The BLM has always had this ability - and has

had the discretion to amend the 1988 RMP at any time - when any new information or experiences revealed a need to change. The BLM just never exercised this discretion. Prescription-based management is just as "adaptive" as performance-based management; the only difference is prescription-based management actually sets measurable and enforceable restrictions on activities, while performance-based management does not.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: For the foregoing reasons - and because BLM has already demonstrated it cannot be trusted with the greater flexibility associated with performance-based management - I am asking the agency to (i) abandon the performance-based approach and (ii) ensure the new RMP is based on prescriptive-based management direction that is measurable and not discretionary. In the next chapter of these comments (starting on page 81), I present some prescriptive management direction that, in my professional opinion, is needed to protect water resources in the PRA.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: Appendix 3 (page A3-3) contains the following "guideline": 1. Surface Disturbance Mitigation Guideline Surface disturbance would be prohibited in any of the following areas or conditions, unless or until a permittee or his designated representative and the surface management agency (SMA), prior to development, arrive at an acceptable plan for mitigation of anticipated impacts: a. Construction with frozen material or during periods when the soil material is saturated or when watershed damage is likely to occur. Because this is just a guideline, it carries no weight; BLM would be free to ignore it. Further more, it does not prohibit impacts; it only requires the permittee to come up with a "plan for mitigation of anticipated impacts" which presumably would not be subject to public comment.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: PAGE: SECTION: RECOMMENDED CHANGE: General Comment Disclose effects on mountain bike use. EXPLANATION: Definition of all-terrain vehicle in Glossary includes mountain bikes. BLM must disclose the closures of trails to mountain biking and this is not done.

Response: Impacts on OHV use have been expanded to discuss impacts on mountain bike use.

Comment: PAGE: G-2 CHANGE: AVOIDANCE AREA – Areas with sensitive resource values where rights-of-way and Section 302 permits, leases and easements would be strongly discouraged. Authorizations made in avoidance areas would have to be compatible with the purpose for which the area was designated and not be otherwise feasible on lands outside the avoidance area. This term does not connote an absolute situation, but rather, a whenever-reasonably possible circumstance. EXPLANATION: Sentence taken from draft statewide public land surface use definitions should be added to clarify the term does not impose blanket restriction. CEQ rules identify avoidance as one of five mitigation measures. 40 C.F.R. § 1508.20.

Response: The definition has been amended in the final EIS.

Comment: PAGE: G-4 CHANGE: COMPENSATORY[ION](STRIKEOUT) MITIGATION - EXPLANATION: Per BLM IM No. 2005-069, proper term is compensatory mitigation.

Response: The term has been changed in the final EIS.

Comment: PAGE: G-6 CHANGE: DESIRED FUTURE CONDITION – [A vegetation community objective usually dominated by a mix of native shrubs and grasses. This vegetative state is usually mid to late seral.](STRIKEOUT) A future land or resource condition that achieves a set of compatible multiresource goals and objectives. EXPLANATION: Desired future condition applies to soil, water and air quality as well and should not be limited to a specific vegetation objective without taking into account an ecological site's capability.

Response: The definition has been updated in the final EIS, as suggested in the comment.

Comment: PAGE: G-7 CHANGE: [DISRUPTIVE ACTIVITY – See SURFACE (HUMAN) DISRUPTIVE ACTIVITY](STRIKEOUT) EXPLANATION: Per ACTIVITIES DISRUPTIVE TO WILDLIFE (above) and SURFACE (HUMAN) DISRUPTIVE ACTIVITY (below)

Response: The comment is unclear regarding the specific suggestion for document change.

Comment: PAGE: G-8 CHANGE: FEDERAL LAND[S](STRIKEOUT) POLICY AND MANAGEMENT OF 1976 EXPLANATION: Typographical error

Response: This change has been made in the final EIS.

Comment: PAGE: G-8 CHANGE: Federal [A](STRIKEOUT)agency documents EXPLANATION: Typographical error

Response: This typographical error has been corrected in the final EIS.

Comment: PAGE: G-10 CHANGE: IMPLEMENTATION PLAN - A site specific plan written to implement decisions made in a land use plan. [An implementation plan usually selects and applies best management practices to meet land use plan objectives.](STRIKEOUT) EXPLANATION: BLM policy only requires integration of best management practices (BMPs) Application for onshore oil and gas and geothermal operations. IM 2004-194; IM 2004-110, Change 1. Even in those circumstances, applications of BMPs are not a "one size fits all approach" but depend on circumstances of specific project. Id. The definition should be revised to remove reference to BMPs because it is a term of art, that is advisory, not regulatory, which may or may not be integrated into a proposed action..

Response: BLM feels this definition is adequate.

Comment: PAGE: G-11 CHANGE: [INTENSIVE MANAGEMENT – Intensive management includes the use of proper distance restrictions, seasonal or timing restrictions, rehabilitation standards, and the application of the Wyoming Mitigation Guidelines for Surface Disturbing and Disruptive Activities to adequately protect the resources for which intensive management is applied. Intensive management actions would be applied with the goal of maintaining or enhancing sensitive resources (plant communities, wildlife habitats, archeological or paleontological resources, etc.).](STRIKEOUT) EXPLANATION: Intensive management practices are activity level decisions made on a site specific basis such as in allotment management plans or oil and gas permitting. As defined, the term provides no measurable objectives or criteria and does not belong at the plan level. BLM Manual H-1601-1 states plainly that a "land use plan must express desired outcomes in terms of specific goals, standards and objectives."

Response: BLM feels this definition is adequate.

Comment: PAGE: G-13 CHANGE: MANAGEMENT SITUATION ANALYSIS (MSA) – [Assessment of the current management direction. It includes a consolidation of existing data needed to analyze and resolve identified issues, a description of current BLM management guidance, and a discussion of existing problems and opportunities for solving them.](STRIKEOUT) In collaboration with any cooperating agencies, an analysis of the inventory data and other information available to determine the ability of the resource area to respond to identified issues and opportunities. The analysis of the management situation provides, consistent with multiple use principles, the basis for formulating reasonable alternatives, including the types of resources for development or protection. EXPLANATION: Definition should be revised to conform to regulation which clearly states purpose of MSA requirement and provides for collaboration with cooperating agencies. 43 C.F.R. § 1610.4-4.

Response: BLM believes this definition is adequate.

Comment: PAGE: G-13 CHANGE: MONITORING - A program designed to measure changes over time with respect to [in](STRIKEOUT) vegetation, watershed health, climate, animal populations and other resources on BLM administered land. EXPLANATION: Monitoring evaluates the status of resources and effectiveness of management practices over time. Wyoming BLM Land Use Planning, www.wy.blm.gov/planning/aboutplan.htm. See also 43 C.F.R. §4100.0-5 (periodic observation).

Response: This change has been made in the final EIS

Comment: PAGE: G-16 CHANGE: [OFF-SITE MITIGATION. See Compensation Mitigation] (STRIKEOUT) EXPLANATION: Term already defined under Mitigation definition

Response: It is appropriate to include this reference here.

Comment: PAGE: G-16 CHANGE: [OTHER ACTIVITIES. Seismic activities, maintenance actions exceeding eight hours on existing equipment and facilities, repair or reconditioning of rangeland improvements that exceed eight hours in duration, or any activity that requires more than eight hours on the site. Maintenance actions related to Other Activities: • Leasable, Locatable, and Saleable Mineral Activities: • Work over rig • Pipeline repair • Reclamation activities • Range Management: • Fence Repair • Stock pond maintenance • Pipeline repair • Reclamation of habitat](STRIKEOUT) EXPLANATION: As distinguished from land use plan decisions, activity level decisions are site-specific decisions that depend on the circumstances of each case. BLM IM 2004-079. There is no basis to pigeon-hole seismic, range and maintenance activities exceeding eight hours to a particular RMP classification.

Response: This definition is not intended to apply to activity level decisions, but to activities other than oil and gas exploration and development.

Comment: PAGE: G-18 CHANGE: [PRIME RANCHLAND – AFT defines “prime” ranchland as high quality land with desirable wildlife characteristics including proximity to publicly owned lands, year-round water availability, mixed grass and tree cover, and a variety of vegetation.](STRIKEOUT) EXPLANATION: Definition created by policy advocacy group American Farmland Trust for 2002 study to estimate prime ranchlands (i.e., classic elk wintering ranges) at risk for conversion to residential development. The subjective and unproven definition does not fall within the RMP’s purpose and need.

Response: This definition is not needed in the EIS and has been deleted.

Comment: PAGE: G-19 CHANGE: [RECREATION OPPORTUNITY SPECTRUM (ROS) – A planning process that provides a framework for defining classes of outdoor recreation environments, activities, and experience opportunities. The settings, activities, and opportunities for experiences are

arranged along a continuum or spectrum of six classes: primitive, semiprimitive non-motorized, semi-primitive motorized, roaded natural, rural and urban. The resulting analysis defines geographic areas on the ground, each of which encompasses one of the six classes.](STRIKEOUT) EXPLANATION: ROS is not a BLM planning process but a Forest Service approach to resource planning. The Recreation Opportunity Spectrum (ROS) was developed by the Forest Service to provide a framework for classifying and defining segments of outdoor recreation environments, activities, and experience opportunities. 36 C.F.R. § 219.21 (2000); Forest Service Manual 2310.

Response: It is not necessary to strike use of the term Recreation Opportunity Spectrum (ROS) from the EIS. Use of the ROS is common throughout BLM to aid in determining recreation uses and needed management.

Policy/NEPA

General Comment Responses

Comments:

- Page 1-15 "The Energy Policy Act of 2005 encourages energy efficiency and conservation; promotes alternative and renewable energy sources; reduces dependence on foreign sources of energy; increases domestic production; modernizes the electrical grid; and encourages the expansion of nuclear energy." Discussion of the categorical exclusions contained in the Energy Policy Act as applied to subsequent oil and gas drilling and development is missing from the analysis and discussion in the RMP. In reviewing an Application for Permit to Drill (APD), Surface Use Plan of Operations, or pipeline application involving a proposed activity that fits into one of the five categories, the appropriate CX is to be applied; and it may be presumed that no further NEPA analysis is required.

- In the Energy Policy Act of 2005 (Act), Section 390(b)(3) allows for a categorical exclusion from NEPA analysis for the "drilling an oil or gas well within a developed field for which an approved land use plan or any environmental document prepared pursuant to NEPA analyzed such drilling as a reasonably foreseeable activity, so long as such plan or document was approved within 5 years prior to the date of spudding the well." I have made my objections to this provision known to Congress and others, in no small part due to representations made by Pinedale Field Office personnel regarding their intent to use the provision to clear full-field development projects. (Please see my attached letters to the Congressional committees of proper jurisdiction regarding this concern.) I remain convinced that land use plan level analysis is wholly inappropriate for the authorization of a categorical exclusion, especially since the impacts to wildlife habitat and air quality, two resource areas already under significant pressure, would not be fully evaluated if categorical exclusions are granted under the cited provision of the Act.

Response: BLM will comply with all laws and regulations. However, noting your concern in using the Section 390 categorical exclusions, air quality and wildlife impacts will be evaluated in addition to cultural resources and paleontological resources among others.

Unique Comments:

Compliance with Laws and Regulations

Comment: The Record of Decision must comply with the Energy Policy Act of 2005.

Response: As stated on page 1-14 of the draft EIS, the document was written to comply with energy policy including the Energy Policy Act of 2005.

Comment: 2. What is the optimal Resource Management Plan for oil and gas development?
3. Is the record of Decisions acomplaiment with the Mineral Leasing Act?
a. For NSO designations?
b. For minimal development areas?
4. Is the Record of Decision compliant with the Energy Policy Act?

Response: The ROD will be in compliance with all laws and regulations.

Comment: The Preferred Alternative is not consistent with the mineral leasing act especially in the areas designated for "minimal development". The Record of Decision must comply with the Energy Policy Act of 2005.

Response: The ROD will be in compliance with all laws and regulations.

Comment: Is this RMP compliant with the 2005 Energy Policy Act? I remember reading about some forest plans and other planning documents getting hung up for not being compliant with that act.

Response: All RMP action alternatives are in compliance with the Energy Policy Act of 2005.

Comment: 3. Is the record of Decision compliment with the Mineral Leasing Act?
a. For NSO designations?
b. For minimal development areas?
4. Is the Record of Decision compliant with the Energy Policy Act?

Response: The ROD will be in compliance with all laws and regulations.

Comment: A new alternative supporting the new RFD with appropriate resource recovery should be developed. A new alternative should be consistent with the Mineral Leasing Act and the Energy Policy Act of 2005.

Response: As stated on page 1-14 of the draft EIS, the document was written to comply with energy policy including the Energy Policy Act of 2005.

Comment: I would like to register my comments on the RMP regarding compliance with the Federal Mineral Leasing Act. In compliance with the act, I support: - authorizing the leasing of lands that are known or believed to contain oil or gas deposits. - If valuable deposits of oil or gas have been discovered within the Pinedale BLM District, the company engaged in the prospecting process is entitled to a lease. - Each alternative under consideration for adoption must be in compliance with the Mineral Leasing Act.

Response: Leasing of minerals is a discretionary action. “The Secretary of the Interior is vested by the Mineral Leasing Act of 1920, 30 USC 181 et seq. (2000) as amended, with discretionary authority to lease or not to lease Federal public land which is otherwise available for oil and gas leasing” (162 IBLA 2). “An exercise of discretion must be supported by a rational and defensible basis which is set forth in the decision, or it will be found to be arbitrary and capricious” (162 IBLA 2). In determining whether or not to issue a lease (exercise of discretion), other resource values must be taken into account. The ROD will provide a rational and defensible basis for the decision whether or not to lease areas based upon the analysis of the alternatives in the EIS. Some resource values can be adequately protected from impacts associated with oil and gas development with timing restrictions, some require surface use restrictions, and other resource values can only be adequately protected through no leasing. It is BLM policy to utilize the least restrictive measure needed to adequately protect the other resources.

Comment: The Federal Mineral Leasing Act allows the Secretary of the Interior to authorize the lease to companies who want to develop the area, if they can prove that the Pinedale Anticline are know or believed to contain oil or gas deposits. Compliance with this act ensures that the document is legal and it also provide for greater degree of environmental protection.

Response: Leasing of minerals is a discretionary action. “The Secretary of the Interior is vested by the Mineral Leasing Act of 1920, 30 USC 181 et seq. (2000) as amended, with discretionary authority to lease or not to lease Federal public land which is otherwise available for oil and gas leasing” (162 IBLA

2). "An exercise of discretion must be supported by a rational and defensible basis which is set forth in the decision, or it will be found to be arbitrary and capricious" (162 IBLA 2). In determining whether or not to issue a lease (exercise of discretion), other resource values must be taken into account. The ROD will provide a rational and defensible basis for the decision whether or not to lease areas based upon the analysis of the alternatives in the EIS. Some resource values can be adequately protected from impacts associated with oil and gas development with timing restrictions, some require surface use restrictions, and other resource values can only be adequately protected through no leasing. It is BLM policy to utilize the least restrictive measure needed to adequately protect the other resources.

Comment: The Preferred Alternative must be brought into compliance with the Minerals Leasing Act.

Response: All alternatives considered in the draft EIS are reasonable alternatives that comply with all mineral policy, including the Mineral Leasing Act.

Comment: The BLM must insure the NSO stipulations and the minimal development designations are compliant with the Mineral Lease Act.

Response: All alternatives considered in the draft EIS are reasonable alternatives that comply with all mineral policy, including the Mineral Leasing Act.

Comment: Ensure the RMP is compliant with the Mineral Leasing Act and the Energy Policy Act of 2005.

Response: All alternatives considered in the draft EIS are reasonable alternatives that comply with all mineral policy, including the Mineral Leasing Act and the Energy Policy Act of 2005.

Comment: What is the optimal Resource Management Plan for oil and gas development?

Is the record of Decision compliment with the Mineral Leasing Act?
a. For NSO designations?
b. For minimal development areas?
Is the Record of Decision compliant with the Energy Policy Act?

Response: All alternatives considered in the draft EIS are reasonable alternatives that comply with all mineral policy, including the Mineral Leasing Act and the Energy Policy Act of 2005. BLM is not required to select an alternative that optimizes oil and gas development, but one that provides a balance of uses within the planning area.

Comment: I would like to submit my comments on the RMP regarding compliance with the Federal Mineral Leasing Act. According to the act, the Secretary is authorized to lease lands that are known or believed to contain oil or gas deposits. The Act states that if the permittee establishes to the Secretary's satisfaction that valuable deposits of oil or gas have been discovered within the land embraced in a prospecting permit is entitled to a lease of the land. The language in the minimal development section of the RMP does comply; by creating the caveat in the minimal development section, the section does meet the standards of the Mineral Leasing Act. Ensuring compliance with the act is twofold: it ensures the legality of the document and provides for a greater degree of environmental protection.

Response: Leasing of minerals is a discretionary action. "The Secretary of the Interior is vested by the Mineral Leasing Act of 1920, 30 USC 181 et seq. (2000) as amended, with discretionary authority to lease or not to lease Federal public land which is otherwise available for oil and gas leasing" (162 IBLA 2). "An exercise of discretion must be supported by a rational and defensible basis which is set forth in

the decision, or it will be found to be arbitrary and capricious" (162 IBLA 2). In determining whether or not to issue a lease (exercise of discretion), other resource values must be taken into account. The ROD will provide a rational and defensible basis for the decision whether or not to lease areas based upon the analysis of the alternatives in the EIS. Some resource values can be adequately protected from impacts associated with oil and gas development with timing restrictions, some require surface use restrictions, and other resource values can only be adequately protected through no leasing. It is BLM policy to utilize the least restrictive measure needed to adequately protect the other resources.

Comment: The National Park Service has reviewed this project in relation to any possible conflicts with the Land and Water Conservation Fund (L&WCF) and the Urban Park and Recreation Recovery programs. The following projects are located in the Pinedale area so the possibility of impacting such properties is real:

- 56-00138 & 368, Pinedale Municipal Park
- 56-00433; Pinedale Tennis Courts
- 56-00525, Pinedale Community School Pool
- 56-00677 & 745, Pinedale Ballfields
- 56-00810, Pinedale American Legion Park
- 56-00528 & 639, Marbleton Town Park

We recommend you consult directly with the official who administers the L&WCF program in the State of Wyoming to determine any potential conflicts with section 6(f)(3) of the L&WCF Act (Public Law 88-578, as amended).

Response: These facilities are all located within the towns of Pinedale and Marbleton and are not subject to BLM management. In general, socioeconomic impacts to local communities can be assumed to also apply to these facilities located within the communities.

Comment: In developing the Pinedale RMP, the BLM must provide for and allow itself sufficient flexibility to utilize the categorical exclusions developed by Congress to streamline oil and gas permitting on federal lands. In Title III of the Energy Policy Act of 2005, Congress developed five separate categorical exclusions intended to facilitate the production of domestic energy sources, without compromising the necessary protection for other resources. See Energy Policy Act of 2005, Pub. L. No. 109-58, § 390(b) 119 Stat. 594, 748 (2005). As the BLM is aware, categorical exclusions are actions which are considered so insignificant and routine that they do not individually or cumulatively have a significant impact on the human environment. See 40 C.F.R. § 1508.4 (2006). After carefully studying the issue, Congress determined that certain oil and gas activities, such as drilling individual infill wells in an area where a site-specific EIS or EA has previously been prepared, are so inconsequential that additional NEPA documentation is not required. Although the use of categorical exclusion is not required, Congress expressed a clear preference for the BLM to utilize categorical exclusions by creating a rebuttable presumption for their use. See Energy Policy Act of 2005, Pub. L. No. 109-58, § 390(b) 119 Stat. 594, 747-48 (2005). In order to avoid potential litigation from those opposed to the use of categorical exclusions, and in order to comply with Congress' unequivocal directive, the BLM must incorporate the Energy Policy Act of 2005 categorical exclusions into the Pinedale RMP and develop an overall management goal encouraging their use.

Response: BLM will comply with all laws and regulations. However, noting your concern in using the Section 390 CXs, air quality and wildlife impacts will be evaluated in addition to cultural resources and paleontological resources, among others.

Comment: PAGE: G-19 CHANGE: RECREATION AND PUBLIC PURPOSES ACT OF 1926 (R&PP) – R& PP (43 U.S.C. § 869 to 869-4) is administered by BLM and authorizes the lease or patent of public lands for recreational or public purposes to State and local governments, and to qualified non-profit organizations at a reduced cost. [refers to both the Recreation and Public Purposes Act [(43 USC 869(a)] and the uses to be made of public land transferred under the act. The objective of the R&PP Act is to meet the needs of state and local government agencies and nonprofit organizations by leasing or conveying public land required for recreation and public purpose uses.](STRIKEOUT)Examples of uses made of R&PP lands are parks, [and](STRIKEOUT)greenbelts, sanitary landfills, schools, [religious] (STRIKEOUT) municipal facilities, [and](STRIKEOUT) camps for youth groups. [The act provides substantial cost benefits for land acquisition](STRIKEOUT) and [provides for recreation facilities or](STRIKEOUT) historical monuments [at no cost](STRIKEOUT). EXPLANATION: Definition to needs to be modified to accurately represent statutory and regulatory objectives and requirements, 43 C.F.R. Part 2470, as well as recognized examples of R&PP uses.

Response: The definition has been revised in the final EIS.

Comment: We can anticipate that, even though the RMP is not a project-level environmental analysis and this supposedly will be completed at the project level, BLM will use categorical exclusions to the extent possible under the Energy Policy Act of 2005 to exempt oil and gas projects from project-level environmental analysis, tiering such exemptions to the RMP. Thus, project-level analysis would never occur, in violation of NEPA and FLPMA. BLM must establish in the RMP specific monitoring objectives and criteria and the outcomes it expects to achieve.

Response: BLM will comply with all applicable laws, including the Energy Policy Act, in determining whether a Categorical Exclusion can be applied in any case.

It is not possible to design specific mitigation at the RMP level because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation and the methods to be used must be tied to a specific proposal where specific impacts can be predicted. The action alternatives contemplate the establishment of working groups that are intended to integrate the decision, implementation, mitigation, evaluation, and response process.

Comment: A BLM RMP should not be the basis for any Categorical Exclusions, as the RMP structure is not site specific or detailed enough to exclude activities from analysis. The proper analysis is to occur under the Implementation Strategy between the BLM and the Cooperating Agencies. Please include the following paragraph within the PRMP, as it is suggested and approved by the Wyoming State BLM Office.

After issuing the Approved Plan and ROD, an Implementation Strategy will be developed. The Implementation Strategy will include an annual coordination meeting between BLM and the Cooperating Agencies in the RMP revision. The annual coordination meeting will include an update on implementation of the plan, foreseeable activities for the upcoming year, and opportunities for continued collaboration with the RMP cooperators. Additional coordination meetings could be held as needed.

Response: BLM will comply with all applicable laws, including the Energy Policy Act, in determining whether a Categorical Exclusion can be applied in any case. The suggested paragraph has been added to the Final EIS.

Comment: We can anticipate that, even though the RMP is not a project-level environmental analysis and this supposedly will be completed at the project level, BLM will use categorical exclusions to the extent possible under the Energy Policy Act of 2005 to exempt oil and gas projects from project-level

environmental analysis, tiering such exemptions to the RMP. Thus project-level analysis would never occur, in violation of NEPA and FLPMA. BLM must establish in the RMP specific monitoring objectives and criteria and the outcomes it expects to achieve.

Response: BLM will comply with all laws, including the Energy Policy Act of 2005, in determining whether a categorical exclusion is applicable in any case. Please also see language in the actions common to all alternatives, Section 2.3 in the final EIS, regarding assessments to be completed when processing Energy Policy Act, Section 390, categorical exclusions.

Comment: Chapter 2 Page 9 Commentor WGFD Ensure that such mitigation is either statutorily required or scientifically justifiable and is the least restrictive measure necessary to accomplish the desired level of resource protection." The term "desired level" must be clearly defined. Plan should identify who/what determines what this level is.

Response: This language is taken from EPCA, and BLM is unable to change it. EPCA does not provide a definition.

Comment: Page: 2-20, Section: 2.4.4. Recommended Change: Unavailable Areas would be withdrawn and managed for protection of wildlife habitats through indefinitely postponing the availability of lands for oil and gas leasing. Explanation: FLPMA requires BLM to withdraw the area from mineral leasing in this situation. BLM Energy and Non-Energy Mineral Policy (April 21, 2006) (formally adopted through IM 2006-197). See also MSLF v. Hodel, 668 F. Supp. 1466, 1474 (D. Wyo. 1987); MSLF v. Andrus, 499 F. Supp. 383 (D. Wyo. 1980).

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: Page: 2-21, Section: 2.4.4. Recommended Change: Redo the Wild & Scenic Rivers Act assessment to conform to BLM manual direction. Explanation: BLM must follow the manual. DM 8351, Wild and Scenic Rivers - Policy and Program Direction for Identification, Evaluation, and Management. Because the 2003 report does not conform to manual criteria, BLM must redo the report. Specifically, the report does not identify existing water rights or the effect of classification on the exercise of the water rights.

Response: The Final EIS has been updated to include a discussion of existing water rights. BLM believes that the EIS follows manual direction for analysis of potential wild and Scenic River segments.

Comment: Energy Policy Act of 2005: This Act allowed NEPA categorical exclusions of projects for which a land use plan (RMP) had been completed within the previous 5 years. Once this RMP is approved, this could result in avoidance of project-level planning and consequent safeguards for other resources if that development occurred in a previously established gas field, which is defined as a single well. RMP-level planning, and in particular this performance-based RMP that does not rely on defined impact limits, cannot adequately provide project-level planning information that is detailed enough to determine needed permit conditions of approval.

In order to avoid unintentional impacts to other resources, we and other State Cooperators have developed language with the State BLM office to require an annual meeting between BLM and State Cooperators for the purpose of informally reviewing the upcoming year's permits, for the purpose of assessing impacts and recommending conditions of approval. This would be done outside the NEPA process. The specific language for implementing this annual meeting is available from the State BLM office, and as agreed, will be part of every RMP in Wyoming. We recommend obtaining that language from your State Office and inserting it into this RMP as well.

Response: BLM will comply with all applicable laws, including the Energy Policy Act, in determining whether a Categorical Exclusion can be applied in any case.

Comment: NEPA implementing regulations require that an EIS include discussions of the "Energy requirements and conservation potential of various alternatives and mitigation measures", and also of the 'Natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures. [Sec. 1502.16 (e) and (f)]. Please provide the required analysis and disclosure.

Response: This information is generally contained throughout Chapter 4 of the draft EIS, including the cumulative impact analysis in Section 4.19. Because the RMP is a planning-level document that does not directly authorize any on the ground activities, it is not possible to quantify the specific energy requirements or conservation potential among the alternatives. Similarly, it is difficult to design specific mitigation at the RMP level. The analysis of energy requirements and conservation potential and the appropriate employment of mitigation measures must be tied to a specific proposal where specific impacts can be predicted.

Comment: The BLM must bear in mind that the "primary purpose" of an EIS is to "insure that the policies and goals defined in [the National Environmental Policy Act—NEPA] are infused into the ongoing programs and actions of the Federal Government." 40 C.F.R. § 1502.1. The policies and goals of NEPA include, • Encouraging a "productive and enjoyable harmony between man and his environment", • Promoting "efforts which will prevent or eliminate damage to the environment and biosphere", • Using "all practicable means and measures . . .to create and maintain conditions under which man and nature can exist in productive harmony . . .", • Fulfilling "the responsibilities of each generation as trustee of the environment for succeeding generations", • Assuring "all Americans safe, healthful, productive and esthetically and culturally pleasing surroundings", • Allowing beneficial use of the environment "without degradation . . . or other undesirable or unintended consequences", • Preserving "important historic, cultural and natural aspects of our national heritage . . .", • Achieving a "balance between population and resource use . . .", and • Enhancing "the quality of renewable resources" and maximizing recycling of depletable resources. (42 U.S.C. §§ 4321-4331). Thus, the needs that BLM must identify for analysis in its environmental analysis include the above goals and policies, and we ask the BLM to "insure" that these goals and policies are "infused" into an appropriate analysis of elk feedgrounds and that native winter ranges and birthing areas for big game are protected.

Response: Retention and elimination of elk feedgrounds on BLM-administered public lands are analyzed in the alternatives. Relevant impacts of these actions are included in the Chapter 4 discussion. The impact analysis of elk feedground decisions has been expanded in the FEIS.

Comment: In the absence of Congressional action on this issue, I request that the Categorical Exclusion Annual Meeting document that was accepted by the Wyoming BLM State Office be incorporated into this RMP, to provide some regulatory oversight over the process of granting categorical exclusions under Section 390(b)(3) of the Act.

Response: BLM will comply with all applicable laws, including the Energy Policy Act, in determining whether a Categorical Exclusion can be applied in any case.

Alternatives

Comment: The description of Alternative 3 understates the amount of emphasis put on "environmental protection". In a word, it is extreme. Alternative 3 removes so much land from even limited development as to make it politically unpallatable. It even removes land that is not critical habitat for any major species. I surmise that its real reason for existance is to make Alternative 4 look good,

Response: The range of alternatives was developed to provide an overview of a wide range of management options. BLM analyzed a reasonable range of alternatives in the draft EIS.

Comment: - Alternative 2 provides virtually no protection for the environment whatsoever. It stands no chance of approval, so it shouldn't even be in the document. Alternative 2 which, by comparison, makes Alternative 4 look like it was drafted by 'tree huggers'.

Response: BLM analyzed a reasonable range of alternatives in the draft EIS. It is important to analyze a wide range of options to provide the decisionmaker with adequate basis for the RMP that is ultimately chosen.

Comment: VII. BLM Should Consider A No Leasing Alternative In The Pinedale RMP EIS. BLM's no action alternative in the RMP DEIS is continuation of the existing 1988 Pinedale RMP. We request that in addition to this alternative, a no future oil and gas leasing alternative be considered in the RMP. Consideration of such an alternative would provide a better and more accurate picture of baseline environmental conditions and environmental impacts than the existing "no action" alternative does. Providing an analysis of the consequences of such a no action alternative would provide BLM with a far truer picture of many baseline conditions, allowing for a far more useful analysis of the environmental consequences of the various "action alternatives." Consideration of such an alternative is certainly envisioned by both NEPA and the Council on Environmental Quality regulations implementing NEPA, and is demanded by various court decisions.

Response: BLM considered this alternative, but eliminated it from detailed analysis for the reasons stated on pages 2-3 of the draft EIS.

Comment: The DEIS Failed to Consider a Reasonable Range of Alternatives NEPA requires that federal agencies provide a detailed evaluation of alternatives to the proposed action in every EIS. 42 U.S.C. § 4332(C)(iii); 40 C.F.R. § 1502.14(a). This discussion of alternatives is essential to the purpose of NEPA:

NEPA's requirement that alternatives be studied, developed, and described both guides the substance of environmental decision-making and provides evidence that the mandated decision-making process has actually taken place. Informed and meaningful consideration of alternatives -- including the no action alternative-- is thus an integral part of the statutory scheme.

Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988), cert. denied, 489 U.S. 1066 (1989) (citations and emphasis omitted). NEPA requires agencies to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources." 42 U.S.C. §4332(E); 40 C.F.R. § 1508.9(b) "An agency must look at every reasonable alternative, with the range dictated by the nature and scope of the proposed action." Northwest Envt'l Defense Center v. Bonneville Power Admin., 117 F.3d 1520, 1538 (9th Cir. 1997). An agency violates NEPA by failing to "rigorously explore and objectively evaluate all reasonable alternatives" to the proposed action. City of Tenakee Springs v. Clough, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14).

Response: The draft EIS analyzed a reasonable range of alternatives. The commenter failed to provide an alternative that was not considered.

Comment: The draft EIS fails to meet these requirements because the four alternatives considered have few differences among them relative to several of their most important components. The EIS recognizes that the most significant impact likely to occur in the PFO is oil and gas development. Given the dominant influences of the oil and gas development on the environment, BLM had a responsibility to

consider real alternatives for managing these factors. Yet it did not do this. The number of oil and gas wells is only marginally different among the four alternatives. Under Alternative 4 it is estimated 19,168 billion cubic feet of natural gas has and will be produced between 2001 and 2020, while under Alternative 3 16,730 billion cubic feet of natural gas would be produced in this period.

Response: The RMP will be unable to influence the existing environment in the short term. The plan must be based upon realistic alternatives, and large areas of the affected environment are already developed and leased. Given these constraints, BLM and cooperators identified heavily developed areas and areas that are not heavily developed. The designation of these areas is a critical part of the alternative. The fact that the recovery of oil and gas resources does not change substantially does not mean that the range of alternatives analyzed was inadequate.

General NEPA

Comment: Page 2-2 NEPA Activity plans can be tiered to the RMP. Yates disagrees with BLM's assumption that another EIS will be needed. Geographic Area Plans or other small scale NEPA should be tiered to the existing NEPA analysis for the RMP t how that operations and impacts remain within the scope of the analysis.

Response: The RMP/EIS provides the framework for the management of resources within the planning area. It does not provide project-level or site-specific analysis. Therefore, project-level and/or site-specific NEPA analysis will be necessary for many projects.

Comment: We believe that the NEPA process to date has been hindered through deficiencies in the scoping process. Additionally, social and economic impacts, particularly cumulative impacts, have not been adequately analyzed and/or disclosed. As we continue to work towards a Record of Decision (ROD), we request that these issues be rectified and that the decision criteria that the BLM proposes to use in selecting an Alternative be available for review and comment.

Response: BLM conducted an adequate scoping period at the initiation of the RMP revision process. In recognition of the complexity of issues involved in this RMP, BLM took 5 years to produce a draft EIS with four reasonable alternatives. The planning criteria can be found in Chapter 1. BLM feels that the socioeconomic impact analysis is appropriate.

Comment: From a NEPA standpoint, the BLM has developed and analyzed an appropriate range of alternatives in the Pinedale RMP DEIS. By including alternatives that are likely to have either more significant or less significant environmental impacts than the No Action Alternative, the BLM has provided a basis for informed comparison between various management scenarios for the public and the agencies. Further, the BLM properly considered, but did not analyze in detail, various alternatives that do not meet the purpose and need of the proposed RMP Revision, or the BLM's obligation to foster the development of domestic energy sources under the Mineral Leasing Act ("MLA"), FLPMA, or the Energy Policy Act of 2005. For example, the BLM properly eliminated from detailed study a proposed alternative that would have closed the entire Pinedale Resource Area to oil and gas leasing. In addition to the reasons identified on pages 2-3 of the RMP DEIS, the BLM should inform the public that only the Secretary of the Interior could withdraw the entire planning area from oil and gas leasing under FLPMA, and that withdrawals can only be made using specific procedures mandated by FLPMA. 43 U.S.C. § 1714(a), (b) (2006) (requiring withdrawals to be made by the Secretary of the Interior, or a person in the Secretary's office who has been appointed by the President with the advice and consent of the Senate and listing the requirements necessary for the Secretary to withdraw public lands).

Response: Oil and gas leasing is a discretionary federal action and does not require a withdrawal.

Comment: The changes proposed in Appendix 3 concern us for three reasons. First, because as noted above, mitigation guidelines (bad as they are) are subject to change by BLM at any time without public involvement; second, because waivers or exceptions to mitigation requirements can be granted without environmental analysis; and third, and most importantly, restrictions which have been in place for many years are now being proposed for elimination. For instance, while under the current management plan oil and gas drilling was prohibited on slopes in excess of 25%, under the DEIS this restriction will be eliminated. We point out emphatically that there was good reason for adoption of this and the other mitigation restrictions in the current plan--to prevent unnecessary, or undue degradation from adverse environmental impacts before they occur. Those specific criteria were adopted based on the best information available at the time and they are just as necessary for the next 15 years as they were for the past 15 years. BLM has even more information available today which demonstrates that these specific restrictions should be a minimal level of mitigation guidance, not be eliminated. Elimination of the other mitigation restrictions which are in the current plan is equally egregious and would violate FLPMA and NEPA.

Response: The exception process and criteria are developed through the NEPA process in documents, such as the draft EIS and project-level EAs or EISs. As stated in Appendix 7 of the draft EIS and 43 CFR 3101.1-4, BLM can solicit public review if the authorized officer determines a modification or waiver is substantial. While the mitigation prescribed for Alternatives 2, 3, and 4 may not carry the same language as that in Alternative 1, it does carry the same objective. Specifically, the 25% slope restriction has an objective of preventing excessive erosion from surface-disturbing activities on such slopes. Alternatives 2, 3, and 4 have the same objective, but through performance-based guidelines, mitigation allows project proponents an opportunity to develop measures that would meet the objective. Should BLM determine that the proponent's measure would not meet the objective, BLM has the authority to impose more stringent measures, such as the slopes restriction. FLPMA directs BLM's management of the various public lands and resources under its jurisdiction, and NEPA specifies that major federal actions must undergo environmental analysis. Neither law prescribed specific mitigation measures; therefore, carrying forward or not carrying forward measures from the 1988 RMP (i.e., draft EIS Alternative 1) does not violate either of these statutes.

Comment: NEPA requires that all federal agencies "recognize the worldwide and long-range character of environmental problems" that they support "initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment." 42 U.S.C. § 4332(F). There is no discussion whatever of the environmental impacts to the world environment and how the RMP will contribute to prevention of a decline in the quality of mankind's world environment. It is obvious that ongoing and future activities under the RMP will have impacts that affect the world environment, such as impacts to air quality. The FEIS must address this in its environmental analysis.

Response: The draft EIS analyzes impacts on the environment where they would occur. NEPA directs federal agencies to analyze the effects of proposed actions to the extent they are reasonably foreseeable consequences of the proposed action, regardless of where those impacts might occur.

A majority of the impacts analyzed in the draft EIS are limited to the Pinedale planning area. However, some impacts would extend outside the planning area and would combine with impacts from other actions implemented outside the planning area. These cumulative impacts are discussed in Section 4.19 of Chapter 4 in the draft EIS. The extent of the impacts is identified for each resource in a defined cumulative impact analysis area (CIAA). For example, the CIAA for air quality extends outside the planning area to cover areas within Wyoming, Idaho, Utah, and Colorado.

Comment: NEPA limits actions an agency may take during the RMP revision process (a NEPA process). Specifically, NEPA requires that, Until an agency issues a record of decision . . . no action concerning the proposal shall be taken which would: (1) Have an adverse environmental impact; or (2) Limit the choice of reasonable alternatives. 40 C.F.R. § 1506.1(a)(1)-(2).

It is patently obvious that the scope and intensity of oil and gas drilling which will be permitted under the Pinedale Anticline Final EIS and ROD will have significant adverse impacts to the environment and will clearly limit the choice of reasonable alternatives for the RMP Final EIS. Furthermore, issuance of the South Piney Development Project and the Jonah Infill Drilling Project Records of Decision during the RMP revision process have violated the same NEPA prohibition. While the latter two projects are already being implemented, the Pinedale Anticline FEIS and ROD have not been issued and it is not too late to halt this project until the RMP FEIS and ROD are issued.

Issuing new leases in the planning area also violates NEPA. Additionally, BLM Instruction Memorandum No. 2001-146 states that, For lands on which oil and gas leases have not been issued, leasing decisions should be withheld pending completion of the planning decision associated with and EA or EIS for and RMP amendment or revision that is being undertaken where oil and gas is the primary issue being considered. This policy applies even though lands may be open to oil and gas leasing under the existing RMP.

In addition, Instruction Memorandum 2004-110 Change 1 provides that State Offices "are to consider temporarily deferring oil, gas and geothermal leasing on federal lands with land use plans that are currently being revised or amended." Specific consideration for deferral is to be given to certain categories of land "that are designated in the preferred alternative or draft or final RMP revisions or amendments as: (1) lands closed to leasing; (2) lands open to leasing under no surface occupancy; (3) lands open to leasing under seasonal or other constraints with an emphasis on wildlife concerns; or (4) other potentially restricted lands." There are parcels in the planning area which fall into one of these categories and which have nonetheless been leased during the RMP revision process. This violated BLM's own internal guidance. It also violated NEPA, the Endangered Species Act, and FLPMA's multiple use mandate. Should BLM choose to continue to violate federal statutes and BLM guidance by issuing new leases in the planning area, at the minimum NSO stipulations must be placed on all new lease parcels. We again request that the Pinedale Anticline Oil and Gas Exploration and Development SEIS and other major projects in the planning area, not be authorized or finalized until the RMP FEIS and ROD are issued. We also request that no new leases be auctioned or issued in the planning area until the RMP FEIS and ROD are issued.

Response: Because the BLM Pinedale planning area is currently managed under an existing RMP, which was approved in 1988, management actions can be taken during the RMP revision process and prior to issuance of the new RMP ROD. However, the Pinedale Field Office is conducting current management with cognizance of the alternatives being considered in the RMP revision process. Because the Jonah and South Piney areas contain existing valid oil and gas leases, it is not a violation of NEPA to conduct analysis of developments in those areas. BLM does not have the authority to prohibit development of existing valid leases.

Comment: The BLM is charged with "tak[ing] any action necessary to prevent unnecessary or undue degradation of the lands." 43 U.S.C. § 1732(b). BLM's UUD responsibilities are intertwined with the agency's NEPA duties. Under NEPA, BLM must identify impacts a proposed action will have to the environment; married to this obligation are the duties imposed by FLPMA to identify the thresholds of acceptable impact and then determine whether the impacts are unnecessary or undue. If the impacts are determined to be necessary and unavoidable, BLM must then analyze whether the impacts are undue. NEPA then reasserts itself in the process by mandating that alternatives be considered to ensure that

unnecessary or undue actions shall not be undertaken and to ensure that methodologies used to prevent UUD are supported and verified. Ecology Center, Inc. v. Austin, 430 F.3d 1057, 1065 (9th Cir. 2005).

Should any of the four alternatives in the DEIS be implemented in a Record of Decision, BLM will violate FLPMA by failing at the planning stage to "take any action necessary to prevent unnecessary or undue degradation of the [public] lands." FLPMA doesn't just require that UUD be addressed at the project level of analysis; rather, the statute requires that UUD be addressed at the planning stage as well. BLM has failed to engage in the analysis needed to ensure that under the RMP unnecessary actions cannot be undertaken, by failing to establish thresholds in the plan for acceptable levels of impact beyond which degradation is undue, and by failing to articulate methodologies to be used to prevent UUD and that they are reliable and verified. FLPMA requires that, the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; . . . that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use; 43 U.S.C. § 1701(a)(8). At the same time, FLPMA directs that these uses be balanced with mineral extraction by requiring that, the public lands be managed in a manner which recognizes the nation's need for domestic sources of minerals . . . from the public lands including implementation of the Mining and Minerals Policy Act of 1970.. . 43 U.S.C. § 1701(a) (12). The key here is for BLM to balance these opposing needs. The alternatives do not do this. The alternatives are weighted in favor of industrial uses of these public lands, with little regard for the other multiple uses of the lands and the impacts on the resources and environment. The DEIS discloses that there will be significant impacts to wildlife and fish habitat through reasonably foreseeable development

The BLM has not promulgated regulations implementing the "unnecessary or undue degradation" standard in the context of oil and gas development; nevertheless, the "unnecessary or undue degradation" standard is not undermined or diminished by the lack of implementing regulations. Indeed, given that section 1732(b) constitutes the "heart of FLPMA," it suggests an acute - and commonsense - need for the agency to take the "unnecessary or undue degradation" standard seriously. Mineral Policy Center at 5. This is especially so in the context of the management plan for this area where full-field gas development is occurring at a density and degree of habitat destruction never before seen in the United States since the passage of FLPMA.

Preventing UUD by requirement of directional drilling, clustered wellpads, central gathering systems, buried lines, remote monitoring, BACT, phased development, lease buyouts, NSO on everything not leased, more ACECs, and meaningful protections for wildlife including mandatory stipulations is imperative. BLM can and should require these. Industry will do what is required because they stand to lose billions if they don't. The burden should be on industry to demonstrate by convincing documentation why they should not be held to these standards.

Response: BLM has disclosed that impacts are expected to be significant, but BLM has not determined that any of these impacts are unnecessary and undue. BLM retains authority to prevent unnecessary and undue degradation on a site-specific and case-by-case basis through the application of site-specific COAs and stipulations.

A finding of no significant impact through NEPA analysis does not imply a project has been reviewed for unnecessary or undue degradation or that unnecessary or undue degradation will not occur. Likewise, a finding of significant impact does not imply that unnecessary and undue degradation would occur.

The fact that a proposal would not cause unnecessary or undue degradation of public lands does not preclude the possibility that it would cause significant environmental impacts that would require preparation of an EIS. If there are significant environmental impacts that cannot be mitigated, an EIS

must be prepared even if there is no unnecessary or undue degradation of the public lands, as BLM has done with this EIS. If there is unnecessary or undue degradation, it must be mitigated.

If unnecessary or undue degradation cannot be prevented by mitigating measures, BLM is required to deny approval of the action.

Unnecessary and undue degradation for fluid minerals is not defined by FLPMA, therefore this standard is somewhat subjective.

IBLA presented its opinion as to what constitutes an action that results in unnecessary and undue degradation at 165 IBLA 229. IBLA stated undue degradation occurs when "...a lessee's operations are or were conducted in a manner that does not comply with applicable law or regulations, prudent management and practice, or reasonably available technology such that the lessee could not undertake that action pursuant to a valid existing right". Further, the board held that a NSO could not be applied post lease (see 165 IBLA 221).

However, the Surface Management Regulations define unnecessary and undue degradation and can provide insight into standards for determination of unnecessary an undue. The Surface Management Regulations, where unnecessary and undue degradation is defined, "requires BLM to consider, in relation to operations of similar character, the extent of surface disturbance and the effects on resources and land uses both within and outside the area of operations." Kendall's Concerned Area Residents, 129 IBLA 130, 140 (1994).

BLM utilized the NEPA process to evaluate both whether a proposal would result in significant impacts on the environment and whether mitigation measures are required to prevent unnecessary or undue degradation of the public lands.

Comment: Purely from a NEPA perspective, there are many omissions. Where is the section on the hydrogeology (ground water), both quality and quantity, in the planning area? Clean water is a most valuable resource, without which the carrying capacity of the land would degrade, and human, wildlife, fisheries and domestic animal habitation would cease to exist. How much ground water would be required for each of the alternatives? And how much ground water is that in addition to the water requirements for the proposed 4,000 new wells in the Pinedale Anticline? Furthermore, how much water will the residents, agriculture and wildlife require of the supporting aquifers in the next six decades? Where are the critical recharge areas and will they be respected in this energy development plan?

Response: The impact analysis is appropriate for the scope of the draft EIS. Because the RMP will not authorize any on-the-ground activities, it is not possible to predict and quantify specific impacts on water quantity and quality. The analysis of such specific impacts must be tied to a specific proposal where specific impacts can be predicted.

Groundwater monitoring and studies are underway but will not produce significant results for some time. WDEQ has primacy in water matters within the State of Wyoming. BLM works in cooperation with WDEQ to maintain the health of the land and the water that flows off it, but WDEQ has final authority with regard to water.

Comment: NEPA requires a realistic assessment of economic impacts, and it is not realistic to assume that 100% of the technically recoverable oil and gas will ever be recovered The potential cost of protecting the environment and the possible benefits of drilling must all be based on estimates of economically recoverable resources. As the management plan and Reasonably Foreseeable Development

scenario are developed, we formally request that they be based on economically recoverable amounts of oil and gas, not technically recoverable oil and gas.)

Response: BLM made assumptions, and disclosed those assumptions. The disclosure of such assumptions is all NEPA requires in taking a "hard look" at the consequences of an action on the human environment.

Comment: This basic, fundamental requirement is the "heart" of every EIS and has not gone unnoticed by the federal judiciary, which has rejected EISs that fail to meet it. See e.g., Calvert Cliffs, Coordinating Comm., Inc. v. United States Atomic Energy Comm'n, 449 F.2d 1109, 1114 (D.C. Cir. 1971) (detailed EIS required to ensure that each agency decision maker has before him and takes into account all possible approaches to a particular project . . . which would alter the environmental impact and the cost-benefit balance); Natural Resource Defense Council v. Callaway, 524 F.2d 79, 93 (2d Cir. 1975) ("The duty to consider reasonable alternatives is independent from and of wider scope than the duty to file an environmental statement."); Alaska Wilderness Recreation & Tourism v. Morrison, 67 F.3d 723, 729 (9th Cir. 1995) ("The existence of a viable but unexamined alternative renders an environmental impact statement inadequate.");

Northwest Envt'l Defense Center v. Bonneville Power Admin., 117 F.3d 1520, 1538 (9th Cir. 1997) ("An agency must look at every reasonable alternative, with the range dictated by the nature and scope of the proposed action."); Kootenai Tribe of Idaho v. Veneman, 313 F.3d 1094,1122-1123 (9th Cir. 2002) (and cases cited therein) (stating that agencies must develop and analyze environmentally protective alternatives in order to comply with NEPA).

Response: The draft EIS analyzed a reasonable range of alternatives. The commenter failed to provide an alternative that was not considered.

Comment: PAGE: 2-13 SECTION: 2.3.16 RECOMMENDED CHANGE: • [Compensation](strikeout) Compensatory mitigation through the use of proponent-generated funds to a third party for use on to mitigate the impacts to the same, or related resources., [or tangible benefits.](strikeout) EXPLANATION: Third party funds for use on benefits, same, related or tangible is not authorized under NEPA case law or IM 2005-69. Mitigation is to reduce or compensate for impact, not to create new benefits.

Response: BLM disagrees with the suggested text change. Section 2.3.16 of the draft EIS complies with BLM policy on offsite mitigation.

Comment: PAGE: G-14 CHANGE: NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) - NEPA [is the basic national law for protection of the environment,](STRIKEOUT)(passed by Congress in 1969), establishes analytical and public involvement procedures to disclose and evaluate the impacts of every major federal action. (EXPLANATION: The definition misrepresents Congress' intent in enacting NEPA, and needs to be revised to state that NEPA only imposes procedural requirements on a federal agency, 42 U.S.C. § 4332. N Valley Citizen's Alliance, 490 U.S. 332 (1989).

Response: The definition has been revised in the final EIS.

FLPMA/L and Management

Comment: My primary concern is that the Pinedale RMP does not assure the state of Wyoming that resources will be managed as described in the draft document. As the Preferred Alternative is currently written, I am not confident that there that will be long-term protection of resources other than oil and gas development throughout the life of this RMP. Given the intense level of such in areas administered by the Pinedale Field Office, there needs to be a high level of assurance that the very limited remaining unleased

portions of the management area remain unavailable to leasing in order to maintain a functional landscape for wildlife habitat, recreational opportunities, grazing, cultural resources and open space.

Response: The draft EIS/RMP was not intended to give concrete assurances. It was designed to provide the public with a reasonable range of alternatives to consider and comment on. Those comments would be taken in to consideration in development of the final EIS. The final EIS will provide stronger direction and assurances with regard to how the public lands and minerals within the planning area will be managed. The ROD promulgated from the final EIS-proposed RMP will give finite management direction and is legally binding.

Comment: It is time that The Bureau of Land Management balance their policies on the side of the ecosystems of the land they are charged to manage.

Response: A range of alternatives is presented to reach this balance within the rules the American people, through Congress, have provided for the management of the public lands.

Comment: If you are interested in maintaining the "Multiple Use" philosophy then please consider our use of these lands as well. Please find the attached map which was documented on a GPS to be considered left open for OHV use if the rest of the open areas are restricted. We would like the opportunity to be involved in further discussions of area restrictions.

Response: The map has been reviewed and this use of the public land has been considered. BLM has determined that open OHV use is not appropriate in this area, which will be limited to existing roads and trails (Map 2-35 of the draft EIS).

Comment: We do not support the proposed "performance based" management approach to evaluating industry actions. Recent experience with the PAWG and the unwillingness by BLM to enforce its own management requirements to guide field development, makes this proposal look like BLM is giving away its management responsibilities to industry. This is unacceptable and will not protect our public interests.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land-use planning scale.

Comment: Pursuant to the Federal Land Policy Management Act of 1976 ("FLPMA"), the BLM is required to develop land use plans to guide the agencies management of federal lands under its administration. 43 U.S.C. § 1711 (2006). The Supreme Court of the United States in a recent unanimous decision recognized that under FLPMA land use plans are not an appropriate medium for making affirmative decisions. Norton v. Southern Utah Wilderness Alliance, 542 U.S. 55, 69 (2004). The BLM's Land Use Planning Handbook also specifies that RMPs are not normally used to make site-specific implementation decisions. See BLM Handbook H-1601-1, II.B.2.a, pg. 13 (Rel. 1-1693 3/11/05). Despite the clear instruction from the Supreme Court of the United States and the BLM's own planning manual, the draft version of the Pinedale RMP appears to make several management decisions that are most appropriately left to site-specific authorizations. For example, under both Alternatives 3 and 4, the BLM appears to impose specific operational limitations on oil and gas development, including the prohibition of on-lease water disposal pits (Alternatives 3 and 4) and the mandatory imposition of best management practices (BMPs) regardless of their applicability or feasibility. See RMP DEIS, pgs. 2-81 - 2-83, 2-120. The BLM must not utilize the land use planning process to impose site-specific conditions of approval or unreasonably limit future management actions.

Response: Along with land use allocations, development and reclamation standards are presented to provide a range of alternatives. An adequate range of alternatives is given for analysis purposes.

Appendix 3 is a compilation of practices and stipulations BLM already employs to mitigate impacts that could be applied on a site-specific basis. Others, such as water disposal pits, are provided for in one alternative but not in another alternative to allow the analysis to show whether the restriction is warranted or not.

Comment: The agency's stated Preferred Alternative abandons the FLPMA multiple-use mandate to favor a single dominant-use. The proposed policy objective is to, °Provide opportunities for mineral extraction and energy exploration and development to provide resources to meet national and local needs while providing appropriate level of environmental protection for all competing resources° (PRMP DEIS p. 2-119). I am wholly opposed to this proposal change which appears to violate not only FLPMA but also the intent and stated policy of NEPA (NEPA Title 1, Sec. 101(b). Minimally, please elaborate and justify the legality of shifting from the BLM's traditional multiple-use management principle to a dominant single-use management policy. I urge you to reconsider your proposed decision to favor economic exploitation over biologic resources.

Response: BLM does not intend to change its multiple-use management policy. The goal to provide the "appropriate" level of environmental protection for resources, other than mineral extraction, demonstrates this. It is reasonable to emphasize minerals in the management goal for minerals management.

Comment: The Preferred Alternative relies heavily on proposed 'performance-based' approaches and mitigations. °Performance-based mitigations would allow the BLM to implement adaptive management principles, recognizing that knowledge about natural resource systems and Mum technology is sometimes uncertain and changing° (PRMP DEIS p. 2-113). All too familiar with the Pinedale Field Office's most recent Adaptive Management effort (PAWG), I have seen that BLM fails to perform under these circumstances. Continuation of this approach is a farce and will not meet agency objectives. Further, in deferring decisionmaking, note that the 'performance-based' approach serves to insure on-going public and special-interest pressures on the Field Office, something you may wish to avoid for the long-term sake of the agency. Authority for sufficient flexibility already existed in past BLM decision documents as well as in regulation. I urge you to adhere to the established approach rather than muddy policy and leave it open to political subversion.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: The Supreme Court further recognized that the development of RMPs is only the "preliminary step in the overall process of managing public lands." Norton v. Southern Utah Wilderness Alliance, 542 at 69. Finally, the BLM's Land Use Planning Handbook specifies that RMPs are not normally used to make site-specific implementation decisions. See BLM Handbook 11-1601-1, II.B.2.a, pg. 13 (Rel. 1-1693 3/11/05).

Despite the clear instruction from the Supreme Court of the United States and the BLM's own planning manual, the Pinedale RMP appears to make several management decisions that are most appropriately left to site-specific authorizations. For example, under both Alternatives 3 and 4, the BLM appears to impose specific operational limitations on oil and gas development including the use of on-lease water disposal pits (Alternatives 3 and 4) and the mandatory imposition of best management practices ("BMPs") regardless of their applicability or feasibility (Alternative 3, pgs. 2-81 - 2-83 compare Alternative 4, pg. 2-120 (BMPs will be applied to the extent possible and practicable). The BLM should not utilize the land use planning process to impose site-specific conditions of approval or unreasonably limit future management actions with limiting language in the Pinedale RMP.

Response: Mitigation is only applied to individual permits or applications for approval of operations on existing leases after it has been determined by site-specific NEPA to be necessary and reasonable and its effect on the lessee's economically beneficial use of its lease has been considered.

Comment: Because, the authority conferred in FLPMA is expressly made subject to valid existing rights, 43 U.S.C. § 1701, an RMP prepared pursuant to FLPMA, after lease execution and after drilling and production has commenced, is likewise subject to existing rights. See Colorado Environmental Coal., et al., 165 IBLA 221, 228 (2005). The Pinedale RMP, when revised, cannot defeat or materially restrain EOG's valid and existing rights to exploit its leases through conditions of approval or other means. See Colorado Environmental Coal., et al., 165 IBLA 221, 228 (2005) (citing Colorado Environmental Coal., 135 IBLA 356, 360 (1996) aff'd, Colorado Environmental Coal. v. Bureau of Land Management, 932 F.Supp. 1247 (D.Colo. 1996).

Response: All valid existing rights would be honored consistent with law, regulation, and policy.

Comment: Under either Alternative 3 or 4 the Department of the Interior would be required to comply with the formal withdrawal requirements imposed by FLPMA. Under FLPMA a withdrawal is defined as: withholding an area of Federal land from settlement, sale, location, or entry, under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of Federal land, other than "property" governed by the Federal Property and Administrative Services Act, as amended (40 U.S.C. 472) from one department, bureau or agency to another department, bureau or agency.

43 U.S.C. 1702(j) (2006). If Alternative 3 is selected, the BLM would make a total of 711,920 acres unavailable to oil and gas leasing and, under Alternative 4, a total of 174,410 acres unavailable for oil and gas leasing. Because such decisions constitute a withdrawal, the Department of the Interior will be required to comply with the procedural provisions of Section 204 FLPMA. 43 U.S.C. § 1714 (2006). Among the other requirements imposed on the Department of the Interior is the requirement for the Secretary of the Interior, as compared to the Director of the BLM or a State Director, to make all withdrawals of federal lands. 43 U.S.C. § 1714(a) (2006). The Secretary-or a designee in the Secretary's office appointed by the President and confirmed by the Senate-alone is authorized to make withdrawals under FLPMA. The Secretary is also required to provide notice of the proposed withdrawal in the Federal Register and conduct hearings regarding the withdrawal. 43 U.S.C. § 1714(b)(1) and (h) (2006). Finally, the Secretary is required to notify both houses of Congress of the proposed withdrawal. See 43 C.F.R. § 1610.6 (2006). The notice must include information: (1) regarding the proposed use of the land; (2) an inventory and evaluation of the current natural resource uses and value of the land and adjacent public and private land which may be affected; (3) an identification of present users and how they will be affected; (4) an analysis of the manner in which the existing and potential uses are incompatible with or in conflict with the proposed uses; (5) an analysis of the manner in which such lands will be used in relation to the specific requirements for the proposed uses; (6) a statement as to whether suitable alternative sites are available; (7) a statement of the consultation which has been or will be had with other federal, regional, state, and local government bodies; (8) a statement regarding the potential effects of the withdrawal on the state, local, and regional economy; (9) a statement of the length of time needed for the withdrawal; (10) the time and place of the hearings regarding the withdrawal; (11) the place where the records of the withdrawal can be examined; and (12) a report prepared by a qualified mining engineer, engineering geologist, or geologist, which shall include information on mineral deposits, mineral production, existing mining claims, and an evaluation of future mineral potential. 43 U.S.C. § 1714(c)(2) (2006). To date, the BLM and Department of the Interior have not complied with these requirements.

Response: Not making lands available for leasing is not the same as withdrawal. Withdrawal pertains to mining law administration and, in some cases, lands and realty, not fluid minerals. Lease issuance is a discretionary action. Public lands are available for oil and gas leasing only after they have been evaluated through BLM's multiple-use planning process, this RMP revision process. In areas where development of oil and gas resources would conflict with the protection or management of other resources or public land uses, the decision to not offer leases, or to offer leases mitigating measures are identified and may appear on leases as either stipulations to uses or as restrictions on surface occupancy. It is BLM policy to utilize the least restrictive measure to protect the other resource values.

Comment: PAGE: G-3 CHANGE: CLASSIFICATION AND MULTIPLE USE - Refers to both the Classification and Multiple Use Act of 1964 (expired 1970) and the classifications that were placed on lands. . . EXPLANATION: Act expired in 1970 by its own terms, 43 U.S.C. § 1418, and expiration date should be added to remove any ambiguity as to its continued application.

Response: The definition has been revised in the final EIS.

Comment: PAGE: G-11 CHANGE: INTERIM MANAGEMENT POLICY (IMP) An interim measure governing lands under wilderness review. This policy protects Wilderness Study Areas from impairment of their suitability as wilderness, subject to grandfathered uses. EXPLANATION: The IMP does not apply to the continuation of existing mining and grazing uses and mineral leasing in the manner and degree conducted as of its passage. 43 U.S.C. § 1782(c).

Response: The definition has been revised in the final EIS.

Comment: PAGE: G-14 CHANGE: MULTIPLE USE - Coordinated management of [various surface and subsurface resources so that they are used in the](STRIKEOUT) balanced and diverse resource uses including but not limited, recreation, range, timber, minerals, watershed, wildlife and fish, and uses serving natural scenic, scientific and historical values, [so that they are used](STRIKEOUT) utilized in the combination that will best meet present and future needs. EXPLANATION: The multiple use definition is incomplete and does not identify the resources to be balanced as specified under FLPMA, 43 U.S.C. § 1702(c). See SUWA v. Norton, 542 U.S. 55, 58 (2004) (multiple use means the task of striking a balance among competing uses, including but not limited, recreation, range, timber, minerals, watershed, wildlife and fish, and uses serving natural scenic, scientific and historical values).

Response: The definition has been revised in the final EIS.

Oil and Gas

Comment: Courts have similarly recognized that once the BLM has issued an oil and gas lease conveying the right to access and develop the leasehold, the BLM cannot later impose unreasonable mitigation measures that take away those rights. See Conner v. Burford, 84 F.2d 1441, 1449-50 (9th Cir. 1988); 43 C.F.R. § 3101.1-2 (2006) (BLM can impose only "reasonable mitigation measures . . . to minimize adverse impacts . . . to the extent consistent with lease rights granted"). EOG has serious concerns that under both Alternatives 3 and 4 the BLM will adopt management directives that will attempt to either preclude or limit EOG's rights under its existing leases, or will later adopt COAs that are inconsistent with EOG's rights. Should the BLM deny or unreasonably delay EOG's ability to develop its leases, the BLM's action may constitute a taking in violation of the Fifth Amendment to the U.S. Constitution. The Federal Court of Claims has recognized that a temporary taking occurs when the BLM prohibits oil and gas development on a lease for a substantial period of time. Bass Enterprise Prod. Co. v. United States, 45 Fed.Cl. 120, 123 (Fed.Cl. 1999). A lessee who can demonstrate a taking of an oil and gas lease is entitled to damages in the fair market rental value of the leasehold. See Bass Enterprise Prod. Co. v. United States, 48 Fed.Cl. 621, 625 (Fed.Cl. 2001). If the BLM denies all development

opportunities on EOG's leases, EOG will be able to demonstrate a taking. The BLM must not adopt an alternative that unconstitutionally takes EOG's property and contract rights.

Response: BLM does not disagree with the comment that it does not have the authority, once a lease is issued, to impose new stipulations or new restrictions on a lease that exceed the terms and conditions of existing leases. Sufficient case law exists to clearly demonstrate that BLM does have the authority and responsibility to impose new restrictions once a lease has been issued, as long as BLM does not deny development of the lease or totally preclude surface disturbing activities. Therefore, our position and policy is to take a "hard look" at the environmental consequences of a proposed action at the field development and application for permit to drill (APD) stage, and, if necessary, require mitigation measures as means of reducing impacts.

The Secretary of the Interior has the authority and responsibility to protect the environment of public lands within federal oil and gas leases, Copper Valley Mach. Works, Inc. V. Andrus, 474 F. Supp. 189, 191 (D.D.C. 1979). The Secretary may impose restrictions on lease terms in fulfillment of this responsibility, Natural Resources Defense Counsel V. Bergland, 458 F. Supp 925, 937 (D.D.C. 1978).

In various oil and gas lease forms, the Secretary reserves the right to incorporate general standards into the lease aimed at mitigating environmental damage. However, mitigation must be reasonable. Such post-lease restrictions cannot directly or indirectly preclude the development of the lease, absent a no surface occupancy stipulation on the lease. Sierra Club V. Peterson, 717 F. 2d 1409 (1983) provides, "On lands leased without a No Surface Occupancy Stipulation, the Department cannot deny the permit to drill; it can only impose 'reasonable' conditions which are designed to mitigate the environmental impacts of the drilling operation" (p. 1411). It continues, "Once the land is leased the Department no longer has the authority to preclude surface disturbing activities even if the environmental impact of that activity is significant…"

What is reasonable will vary with each individual APD. A "taking" would occur if after a lease, without an NSO stipulation, is issued, the lessee is prohibited from conducting development activities on the leased lands. A "taking" could also occur if COAs imposed at the APD stage are so stringent that it is not practical to conduct operations. It is not BLM policy to use unjustified stipulations or COAs.

Comment: In the Final EIS, the BLM should discuss the fact that an oil and gas lease is a contract between the federal government and the lessee, and that the lessee has certain rights thereunder.

Response: This discussion can be found in the draft EIS on page 2-8 and has been retained in the final EIS.

Comment: Without data on reasonably foreseeable oil and gas development for the Bridger-Teton NF responsibilities cannot be fulfilled in accordance with the statute. The RMP process should be extended or delayed until this information is available. The oil and gas companies should provide information on their assessments of the area and what the total build out looks like. A qualitative discussion of the potential build out does not allow the public to assess the quantitative impacts associated with any of the alternatives.

Response: NEPA requires the use of best available information. Existing information was used and this was disclosed in the analysis. Having this information may more adequately inform the reader, but is unlikely to result in a change to or addition of an alternative.

Comment: The Western Governors Association recently adopted a resolution urging more environmental analysis before companies are allowed to drill in wildlife corridors or sensitive habitat on public lands.

Wyoming Governor Dave Freudenthal who sponsored the resolution, cautioned that we must continue to balance development with environmental and wildlife protections. It is squarely within BLM's purview and mandate to protect habitat and there is no better opportunity to do so than in the management plan revision process. Yet BLM has abdicated its obligation in favor of intense and fast-paced industrial development. We urge BLM to reconsider its ill-advised policy in the RMP and to adopt the more moderate policy recommended by the resolution.

Response: Measures such as the Trapper's Point ACEC were developed in part or in whole to address these concerns.

Comment: It is crucial that the RMP make clear that conversion to an Intensely Developed Field could only occur with future NEPA analysis, particularly since this conversion would not be in conformity with the specifically stated management direction for these areas, which is environmental protection. See 43 U.S.C. § 1732(a) (management of the public lands must be in accordance with the provisions in an RMP); 43 C.F.R. § 1610.5-3(a) (management actions must conform to the RMP).

Response: Clarifying language on this point has been added to the final EIS.

Comment: PAGE:2-143 SECTION: RECOMMENDED CHANGE: Revise a. Permitted OHV activities would be allowed for the purposes of oil and gas development activities and other permitted land uses, including livestock grazing. EXPLANATION: The division into intensively developed, minimally developed and no development areas excludes other land uses, especially livestock grazing. It inaccurately portrays the RMP decisions as oil and gas versus wildlife and ignores the other valid multiple uses.

Response: Intensive development would impact uses such as livestock grazing, but would not exclude them. The impacts of intensive oil and gas development are presented in Chapter 4.

Maps

General Comment Responses: *No GCRs are associated with this category.*

Comment: I also have found Numerous discrepancies in the draft RMP, such as maps in the draft don't "jive" with the numbers of acres you say that will be set aside or drilled, is this meant to confuse people, thus deceive people? The terms and descriptions are not the same from one Alternative to another, was this meant to confuse and deceive people? It does make one wonder. The NSO term is just word play to confuse and deceive once again, as the average person would think that the area will not be drilled because they will not be able to occupy the surface but you and I both know this is not true. Plus, once categorized as an NSO area, it then can be amended and bastardized just the same way the "NO WINTER DRILLING" on the Mesa was permitted.

Response: The numbers of acres in the text were calculated from the areas depicted on the maps. In some cases, polygons on the maps may look larger than they should because RMP decisions do not apply to private or state-owned lands that may fall within the areas. BLM believes all terms and descriptions are consistent throughout the draft EIS. Without specific examples where such inconsistencies exist, BLM is unable to provide further response. The NSO term is intended to provide protection of surface resources by prohibiting surface disturbance. Changing the classification to allow across-the-board surface access would require an RMP amendment and appropriate NEPA and public participation. However, for existing leases or adjacent leases on state or private lands, it could become necessary to allow an off-setting well on the federal lease to address a drainage situation.

Comment: there are instances in the DRMP where detailed data are lacking. For example, the maps showing areas of development intensity are not adequately detailed to enable determination of these development areas and analysis of the four management alternatives. More detailed maps and overlays should be included in the plan, and once the detailed maps are provided, an additional comment period should ensue.

Response: These levels of development intensity occur in the existing developed fields, as described in the draft EIS text. They are a description of where the development already exists, with provisions for expansion of the areas if necessary for development of those fields or other discoveries on existing leases. The maps provided in the draft EIS are adequate to convey to the public information regarding oil and gas management areas. No additional comment period is planned.

Comment: Alternative 4 has different areas of development intensity. "Intensively Developed Fields" criteria fits the DRMP, but the limitation to where it may be applied may be problematic. As mentioned earlier, the maps included in the DRMP lack sufficient detail and, therefore, make it difficult to determine exactly where these levels of development intensity occur. These maps will need clarification from BLM so that the reader can understand where development occurs. USQ requests that BLM prepare and include more detailed maps and and/or overlays in the FRMP so that the effects of the various alternatives can be properly analyzed.

Response: These levels of development intensity occur in the existing developed fields, as described in the draft EIS text. They are a description of where the development already exists, with provisions for expansion of the areas if necessary for development of those fields or other discoveries on existing leases. The maps provided in the draft EIS are adequate to convey to the public information regarding oil and gas management areas.

Comment: Maps Commentor WGFD Volume 2 of 2: We recommend including a map of CRC conservation population - by drainage or watersheds. Recommend including a map of the distribution of the 3 species within the management plan area.

Response: This information has been added to Chapter 3 in the final EIS.

Air Quality

General Comment Responses:

Comments:

- I'm not sure what all the hullabaloo with air quality is about on the Pinedale resource plan. First of all, your document very clearly says that under all of the alternative, the air quality remains very good. Secondly, it is not the BLM's job to make decisions on air quality issues. The EPA and Wyoming department of environment take care of those issues and permits.
- To protect the air quality of the Valley, the resource management plan needs to mandate air emission controls, establish a stringent emissions cap, eliminate loopholes to waive surface protections, and strictly define management objectives and monitoring and mitigation measures.
- The BLM does not have authority to regulate emissions in Wyoming. With respect to actual oil and gas drilling and development operations, this fact was confirmed by the Pinedale BLM Field Office in a letter to EnCana and other oil and gas operators in December of 2006. In reversing an attempt by BLM to "implement drill rig emission reduction measures," the BLM noted that it "has been administratively determined that BLM does not have the authority to regulate air quality. That authority rests with the Wyoming Department of Environmental Quality." See Letter from Associate Field Manager Roger Bankert, dated December 1, 2005 (sic).

Response: The WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis.

Comments:

- Visibility modeling completed for the recent Pinedale Anticline SEIS, indicates potential adverse impacts to the Bridger, Fitzpatrick, Washakie, and Teton Wilderness Areas are already occurring. To allow for further degradation would not be consistent with the resource protection provisions in CAA or the Wilderness Act. Further, in order to meet the national visibility goal (CAA §169a, 42 U.S.C. § 7491) of preventing any future and remedying any existing visibility impairment, we must work together to attain existing and predicted visibility impairment below Forest Service visibility impairment thresholds.
- If a Pinedale seventh grader is able to detect increased levels of air pollution associated with drilling rigs for her science fair project, I would say the pollution is significant. There is no way that drilling is in the best interests in the surrounding ecosystems.
- Your preferred alternative will also likely result in increased pollution of an air shed deemed by Congress to remain the most pristine in America. This alternative is not acceptable.

Response: BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

Comments:

- Appendix F F-6 Figure 3-10 WDEQ-AQD The closest comprehensive wind measurements for the Pinedale RMP area were collected in the Jonah Field from 1999 – 2003. Please utilize the

monitoring conducted in the Jonah Field for dispersion, wind speed and direction, which is currently being utilized for the Pinedale Anticline Draft SEIS and can be obtained from Matt Anderson, BLM Pinedale Field Office.

- 3.2.3 3-6 Visibility WDEQ-AQD The visibility data do not appear to be up to date with the most currently available data. Please update the text and figures.
- The agencies' discussion of the recent elevated ozone concentrations near the Jonah Field. is not accurate. Table 3-1 on page 3-4 and the text on 3-5 indicates that ozone concentrations were already at 97% of the NAAQS1WAAQ5 standard based on a partial year of measurement from Jonah Field in 2005. The agencies should review and assess the more complete data that has been gathered since that time, which contradicts the suggestion that the area is in danger of exceeding the AAQS for ozone based on this limited data. As the BLM is aware, the NAAQS for ozone is violated only when the 3-year average of the 4th highest maximum daily concentration exceeds the NAAQS standard. 40 C.F.R. 50 10(b) (2006).1 The isolated elevated ozone measurements observed on only a few days do not constitute a NAAQS or WAAQS violation, and the agencies should revise Table 3-1 to reflect this fact. As currently included, Table 3-1 is inaccurate and misleading.

Response: Air quality monitoring data were updated in the final EIS as they were available.

Comments:

- Drilling has already destroyed the area just south of Pinedale with 1000's of wells, that has had serious effects on air quality (with smog year around)
- We have directly observed the major deterioration of air quality in the last four years, losses of important wildlife, loss of important habitats that sustained wildlife and allowed public use, and a progression of development from a prognosis of a few hundred wells to many thousands. Leaving areas looking like they are protected but open to change essentially says "We will protect this area unless it proves to be too lucrative for development". This equals no protection that we can count on.
- With respect to visibility, the information in the RMP DEIS, as well as the information from the PAPA SDEIS, indicates that visibility in the area is improving. Visibility in the Bridger Wilderness Area, North Absaroka Wilderness Area, and Yellowstone National Park has improved on the 20% cleanest days and 20% middle days since the early 1990s. See PAPA SDEIS, pgs. 3-58 - 3-59. The monitoring data indicate significant improvements in visibility on the cleanest and middle days in the last 2-3 years despite increased oil and gas development in PAPA. Id

Response: While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comments:

- I believe that the BLM could impose more strict air quality requirements than Wyoming DEQ but could not allow lesser standards to be used. This means that drill rig air quality could be improved and production operations could be entirely enclosed without Wyoming DEQ involvement.
- With respect to potential visibility impacts, the BLM's authority is equally limited. Under the Federal Clean Air Act ("CAA"), a federal land manager's authority is strictly limited to considering whether a "proposed major emitting facility will have an adverse impact" on

visibility within designated Class I areas. 42 U.S.C. § 7475(d)(2)(B) (2006). Under the CAA, the regulation of potential impacts to visibility, and authority over air quality in general, rests with the WDEQ. 42 U.S.C. § 7407(a) (2006). The goal of preventing impairment of visibility in Class I areas will be achieved through the regional haze state implementation plans ("SIPs") that are being developed. 42 U.S.C. § 7410(a)(2)(J). Although generally, federal land managers with jurisdiction over Class I areas may participate in the development of regional haze SIPs, as noted above, the BLM has no such jurisdiction in Wyoming. 42 U.S.C: .§ 7491 (2006). Accordingly, the BLM has no authority over air quality, and cannot impose emissions restrictions, either directly or indirectly, on natural gas operations in southwest Wyoming, particularly if the overall goal is to reduce potential visibility impacts.

- Don't just "acknowledge" increases in air pollutants; specifically address accountability... through acceptance of scientific information, monitoring, full disclosures, and methods of enforcement!
- As numerous conservation organizations and members of the public have maintained throughout this process, the BLM, instead of merely asking industry to use low-emission drill rigs, must mandate their use and set stringent emission caps. If these caps are breached, industry must be required to scale back its activities. The only sure-fire way to reduce emissions is to ease the pace of development. Also, BLM must implement a coordinated and thorough monitoring program that would provide a comprehensive picture of the quality of the Upper Green's air with an eye toward determining how energy development affects it. Moreover, the BLM must assure that on-going and future energy development does not compromise the air quality of Class I air sheds associated with nearby wilderness areas, national parks and other areas.

Response: WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

Unique Comments

Comments on Document/Suggested Changes

Comment: PAGE: 4-148, SECTION: 4.12.2, RECOMMENDED CHANGE: ADD Current construction and transportation access restrictions during summer and fall result in significant amounts of increased traffic, dust, and particulates that coincide with the fire season, which already loads the air with unhealthy levels of particulates. EXPLANATION: Policy puts construction traffic during fire season, so air is clouded with dust and fire emissions that may travel as far as Oregon and Idaho. Haze also detracts from the tourism industry.

Response: BLM agrees that construction and fire emissions can occur during the same time period. However, BLM does not feel that the inclusion of the recommended statement is appropriate because (1) fire emissions from prescribed burning was taken into account in the calculation of emissions, and (2) there is no evidence that the emissions from prescribed fire and construction will cause any increase in levels above the air quality standards.

Comment: 2-6 2.3.1, last paragraph. Please provide examples of lease stipulations that the BLM might include to alleviate air quality impacts.

Response: Please refer to the revised Pinedale supplemental EIS (SEIS) Section 4.9.3.5 and Appendix 11 for details.

Comment: 2-22 2.5.1 3rd paragraph. Please define the scope of the BLMs authority for minimizing emissions that could cause acid rain or violations of air quality standards.

Response: BLM will work cooperatively with other agencies to encourage industry to adopt measures to reduce emissions. WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis.

Comment: 2-50 2.5.3 AQ objective 3. Which of the action items help you reach this objective? 2-75 2.5.4 AQ objective 3. Which of the action items help you reach this objective? 2-113 2.5.5 AQ objective 3. Which of the action items help you reach this objective?

Response: BLM believes all actions will help Objective 3, but that action c will be the most significant in achieving this objective (c. Special requirements such as best available control technologies [BACT], dust abatement, alternative power sources, and BMPs to alleviate air quality impacts would be included on a case-by-case basis in use authorizations [including oil and gas lease stipulations] within the scope of BLM's authority).

Comment: 2-197 Table2-34. Well numbers under Impacts on Minerals – leasable minerals does not agree with numbers provided on pages 2-196 and 197 under impacts on watershed and water quality.

Response: The well numbers stated in Table 2-34 of the draft EIS have been revised to be consistent in the final EIS.

Comment: 2-202 Table 2-34 Wind river front. There appears to be a wide range between alt 1 and alt 2, could you better describe expected impacts for alt 4?

Response: Table 2-34 provides only a summary of the impacts. Please refer to Chapter 4, Section 4.18 for a detailed discussion of impacts to Special Management Areas, including the Wind River Front.

Comment: 3-3 3.2.3 1st paragraph. This paragraph says air quality concentrations are in compliance with standards and that air quality is very good. Table 3-1 however shows that SO2 is at 100% of the standard and ozone is at 97% of the standard. This should not be rated as very good. Also, Table 3-1 shows that PM2.5 and SO2 are measured at the Jonah Field. The Jonah monitoring station has neither of these types of monitors. Please validate your data source. 3-5 Sulfur Dioxide As stated above this was not measured at the Jonah site.

Response: This was an error in the draft EIS that has been corrected in the final EIS. The concentrations of SO_2 are 10% and 19% of the NAAQS and WAAQS, respectively. BLM defers to WDEQ for background air quality data.

Comment: 3-5 Ozone, 2nd paragraph. Would this paragraph better fit in chapter 3?

Response: This paragraph is indeed included in Chapter 3.

Comment: 3-5 Ozone, 3rd paragraph. Why are you comparing the Pinedale and Yellowstone sites to the FS standards, but not the Jonah readings? In the spirit of full disclosure, that number should also be plotted on figure 3-11.

Response: Figure 3-11 has been updated with the data from Boulder and Jonah.

Comment: 3-6 Particulate Matter. As stated above this was not measured at the Jonah site.

13-6 Visibility, 3rd paragraph. BLM needs to note that the IMPROVE monitor was not placed to monitor impacts from ongoing nearby developments. And, it is likely not receiving all Due to the location it is likely that the monitor would pick up impacts only on the worst days, this supports fig. 3-13.impacts from those developments.

Response: BLM defers to WDEQ for background air quality data.

Comment: 3-6 Visibility, 4th paragraph. In fig.3-13, it looks as though the worst days are getting worse. It would be beneficial if you provided additional explanation that these 3 grouping should all be getting better. 3-6 Atmospheric Deposition Please change to be: ....is reported as the mass of material deposited on an area over a given segment of time (kilogram per hectare per year).

Response: Your comment has been noted. Even though visibility conditions appear to be getting worse, monitored data do not indicate this.

Comment: 3-8 Total Deposition. Please either delete the description of the Fox thresholds. Or add a comment that the FS does not believe these to be protective. The Fox document was a guidance document and was not intended to establish “thresholds” for N or S. With recent science available, the FS believes these numbers are set way to high to be protective of resources.

13-9 Table 3-2 Precipitation pH. Is there a reason South Pass data was not addressed here? It generally appears to have a lower pH compared to the other sites.

3-9 Table 3-2 Total Deposition. Is there a reason FS Bulk Deposition data was not included as a data source?

Response: BLM defers to WDEQ for background air quality data.

Comment: 4-238 2nd paragraph. Is the statement here true when Table 3-1 shows SO2 at 100% of the standard?

Response: This was an error in the draft EIS that has been corrected in the final EIS. The concentrations of SO_2 are 10% and 19% of the NAAQS and WAAQS, respectively.

Comment: 4-239 Table 4-19. The BLM should provide the number of days the Jonah project modeled over the 1.0 dv threshold. 4-239 Table 4-18. This table should also provide information on modeled cumulative impacts to visibility for the Pinedale Anticline.

Response: The data from Jonah are dated. The final EIS has been revised to include updated data from the Pinedale Anticline SEIS.

Comment: 4-240 2nd paragraph. The FS would recommend that the BLM conduct the modeling for the project area using the State of the Atmosphere model prior to finalizing the RMP revision. This would provide much more detailed and quantifiable information to the public and the decision makers.

Response: The State of the Atmosphere model will not be ready in time to incorporate it into the RMP analysis.

Comment: Item: Page A19-30, Qualitative Analysis Approach "CONCLUSIONS AND RECOMMENDATIONS A qualitative emission comparison approach was selected for analysis of impacts on air quality." Comment: There is merit in conducting a qualitative analysis based on emission growth, however, some quantitative information is available from previous EISs in the area. We suggest BLM should incorporate that information into the RMP document.

Response: Summaries of the emissions inventory are presented in both the Jonah and Pinedale EISs.

Comment: Item: Page A19-29, Ozone "Given the low ambient concentrations that exist in the planning area for all of the pollutants except O3, it is expected that, for any alternative, the increase in emissions of CO, NO2, SO2, PM10, and PM2.5 will not cause any exceedance of state or federal ambient air quality standards." Comment: It is recommended that the above paragraph be changed as follows: "Given the low ambient concentrations that exist in the planning area for all of the pollutants except O3, it is expected that, for any alternative, the increase in emissions of CO, NO2, SO2, PM10, and PM2.5 will not cause any exceedance of state or federal ambient air quality standards. A more complete understanding of ozone formation is required to understand elevated ozone levels that have been observed in the winter in Pinedale. Wyoming DEQ is currently investigating the relationship between emissions in the area and winter time meteorological stagnation conditions."

Item: Page A19-29, Quantitative Relationships "Because a quantitative relationship between the expected air emissions calculated above and the subsequent potential impacts on ambient criteria pollutant concentrations, visibility, atmospheric deposition, or ozone are not known, it is not possible to draw any conclusions regarding potential impacts on these air quality values from any alternative. BLM intends to make quantitative estimates of these impacts for project-specific EISs and in the statewide air quality analysis." Comment: It is recommended that the above paragraph be changed as follows: "Because a quantitative relationship between the expected air emissions calculated above and the subsequent potential impacts on ambient criteria pollutant concentrations, visibility, atmospheric deposition, or ozone are not known, it is not possible to draw any conclusions regarding potential impacts on these air quality values from any alternative. BLM intends to make quantitative estimates of these impacts for project-specific EIS's."

Item: Page A19-29, IMPROVE data analysis "Because a quantitative relationship between the expected air emissions calculated above and the subsequent potential cumulative impacts on the air quality values of visibility, atmospheric deposition, or ozone are not known, it is not possible to quantify potential impacts on these air quality values from the sources in the ROI. However, because air quality analyses from recent energy development projects, such as the Pinedale Anticline EIS (1999), estimate potential impacts on visibility, emissions described in Section 4.2 may contribute to significant impacts on visibility." Comment: It is recommended that BLM provide an analysis of the IMPROVE monitoring data in the region. That data indicates that there has been no change in visibility or nitrate concentrations even though there has been substantial growth in emissions. This finding is not consistent with the modeling data referenced above in the quote from the RMP.

Response: BLM believes the document states/indicates the same thing.

Comment: Item: Page A19-31, Table A19-16. Comment: Not all of the mitigation measures listed in Table A19-16 are appropriate for consideration. As indicated in the following, some of these technologies are not technically feasible, unproven or may result in unsafe operations. It is important to stress that WDEQ has a very aggressive New Source Review (NSR) program that will ensure that new sources achieve the maximum cost effective reduction possible. It is inappropriate for BLM to suggest that such mitigation options should be considered in the planning assessment. It is true that advances in technology may result in lower emissions during the time covered by the RMP.

Response: BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

Comment: The BLM must also delete its Management Objectives under Alternatives 2, 3, and 4 because they are beyond the BLM's authority. For example, the BLM's first Management Objective is to "maintain concentrations of criteria pollutants associated with management action in compliance with applicable state and federal Ambient Air Quality Standards (AAQS)." See RMP DEIS, pgs. 2-50, 2-75, 2-113. Both the BLM and the IBLA have recognized that the WDEQ, with oversight from the EPA, has the authority to enforce AAQS in Wyoming. See RMP DEIS, pg. 3-9; Wyoming Outdoor Council, et al., IBLA No. 2006-155, at 12 (June 28, 2006).

Response: BLM has made it clear that WDEQ has regulatory authority. It is reasonable for BLM to coordinate with WDEQ, a cooperating agency in this RMP effort, to align BLM management goals with WDEQ monitoring and enforcement responsibilities.

Comment: Additionally, because only the WDEQ has the authority to enforce PSD Increments in Wyoming, BLM's second Management Objective to "maintain concentrations of Prevention of Significant Deterioration (PSD) pollutants" is entirely inappropriate. Opponents to oil and gas development could use these Management Objectives to argue the BLM cannot authorize actions that may increase emissions or have potential visibility impacts in the planning area. The BLM must remove all four of its inappropriate Management Objectives under Alternatives 2, 3, and 4.

Response: It is reasonable for BLM's goal to be compliance with WDEQ-administered standards.

Comment: Section 3.2.3 Ambient Air Quality Concentrations The analysis in the RMP DEIS demonstrates that air quality in southwest Wyoming is very good. See RMP DEIS, pg. 3-3 ("air quality in the planning area is considered very good"). Emissions data collected near the PAPA demonstrate compliance with all National and Wyoming Ambient Air Quality Standards ("NAAQS/WAAQS"). See RMP DEIS, pgs. 3-3 - 3-4, 3-8. The BLM should more clearly explain this information in order to correct the public's perception that air quality in the area has declined significantly.

Response: It is possible for air quality to decline in the southwest Wyoming region and still be considered "very good" in comparison with the rest of the nation. Data indicate that, for some pollutants, air quality has declined, although generally not to the point of violating WDEQ standards.

While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: Section 4.2 - Air Quality The BLM incorrectly states on page 4-6 of the DEIS that oil and gas exploration and development will have the greatest impact on air quality within the planning area. Previous modeling performed by the State of Wyoming, EPA, and the Forest Service indicated that 90% of the air quality impact at the Bridger Wilderness area is attributable to distant sources outside of Wyoming, not local sources within the Pinedale Resource Area. See The Southwest Wyoming Regional

CALPUFF Air Quality Modeling Study: Final Report (SWWYTAF) (February 2001). Oil and gas development may contribute to emissions in the region, but the SWWYTAF study demonstrated the overwhelming majority of emissions impacting air quality in Wyoming, and particularly the Pinedale Resource Area, are outside of Wyoming. The statement on page 4-6 must be revised to reflect the information from the SWWYTAF study.

Response: The emission inventory was designed to focus on potential impacts from BLM activities.

Comment: The BLM must also delete Management Action c. under each of the proposed alternatives that would supposedly authorize the BLM to impose special requirements, including lease stipulations, to eliminate emissions.

Response: Management action c. clearly states that only mitigations within BLM's authority to require would be included.

Comment: In Section 3.2.1 is a paragraph on wind velocity history in the planning area. It correctly cites the effect of local topography upon speed and direction.) However, it fails to cite more critical variables, namely meteorological phenomena associated with the jet stream's influence upon weather system movements through the area and the highly changing nature of this history on a yearly, monthly and even weekly basis.

Response: Refer to Figure 3-10 in the draft EIS, which shows a wind rose for the Pinedale area. At the present time, such a figure really is the best representation of wind speed and direction over an extended period of time because air pollutant concentrations are more dependent on local, smaller-scale meteorology.

Comment: These influences call into question the validity of the implied meaning of Figure 3-10 that it represents "typical" conditions. This figure invokes data for 2001 and is averaged over the entire year. This is highly misleading and it can be argued that any single past year represents antiquated information which cannot be relied upon in isolation to depict In Section 3.2.1 is a paragraph on wind velocity history in the planning area. It correctly cites the effect of local topography upon speed and direction.) However, it fails to cite more critical variables, namely meteorological phenomena associated with the jet stream's influence upon weather system movements through the area and the highly changing nature of this history on a yearly, monthly and even weekly basis, what can be expected in the future. The same is true month to month within any year. Thus, this paragraph appears to lay a foundation for implied but dubious arguments that the influence of winds upon the planning area are predictable regarding their transport of industry pollutants.

Response: Refer to Figure 3-10 in the draft EIS, which shows a wind rose for the Pinedale area. At the present time such a figure is the best representation of wind speed and direction over an extended period of time because air pollutant concentrations are more dependent on local, smaller-scale meteorology.

Comment: Section 3.2.3 alludes to data collected from nearest applicable monitoring stations as20 "indicating" that current concentrations of pollutants are in compliance and that air ~~ £T quality in the planning area is considered very good.2 It then admits to a fundamental weakness in the assertion. ...that current and complete data are not available. It is an inconvenient truth that the very nature of the monitoring network is inadequate both for reasons of its sparsely sited nature and for the fact that data from the network requires on the order of one year to be collected analyzed and disseminated. By that time the gas industry has completed at least an additional 1000 new wells with their characteristic forms and volumes of emissions. It is therefore irrelevant to assert that the State of Wyoming has determined that the Pinedale Region is in compliance. The fact is, federal statutory guidance containing standards and

PSD stipulations are inadequate because they were developed in an environment apart from the high plains and mountainous surroundings that are the Pinedale Region and are too slow to allow timely response to the rate of well development.

Response: BLM relied on the State of Wyoming for the data. WDEQ provided BLM the air quality monitoring data. Although some of the data are outdated, it reflects the state's opinion of the best available data to characterize the background.

Comment: Section 3.2.3 alludes to sulfur dioxide data collected from the Jonah field in 2005.3 This appears to be a fabrication. The section refers to the SO2 data in the context of monitoring stations operated by WAAQS. At that time there was one station located in the south central portion of Jonah and one station located off Paradise Road west of Boulder. Neither are equipped with SO2 monitors. The R P authors would do well to check their facts rather than falsify their arguments for minimal air quality impacts.

Response: BLM relied on the State of Wyoming for the data. WDEQ provided BLM the air quality monitoring data. Although some of the data are outdated, it reflects the state's opinion of the best available data to characterize the background.

Comment: The "Visibility" subsection of Section 3.2.3 cites IMPROVE aerosol monitoring stations, one of which is described as being located in the Bridger Wilderness near Pinedale. There follows the declaration that Bridger Wilderness Area visibility data reveal no evidence of worsening conditions.4 This statement is a falsehood by omission of the fact that this station cannot assess Jonah impacts. Both I and an air quality scientist for the U.S. Forest Service have determined that this station is improperly positioned to assess impacts from the Jonah or the Anticline. I conducted a study of transmissometer data under contract in 2005 from this station and found this to be true primarily because of regional wind patterns, the latter being a topic I have studied since 2003.

Response: BLM believes that the Bridger Station is the best available location to determine potential impacts from Pinedale RMP activities on visibility at the Bridger Wilderness Area. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: Section 3.2.5 contains the statement that BLM "cooperates" in the operation of NADP/National Trends Network and collection of basic remote weather station data. This is essentially a false statement.5 BLM has consistently broken its commitments and limited its cooperation to words that remain unfulfilled. Furthermore, not only has BLM not contributed a single dollar to the effort, it even dropped the funding line item from its budget in 2006 and failed to include it in previous years. A glaring example is its commitment to "cooperate" in the effort to track NOx and other pollutants as the Jonah and Anticline projects have gathered momentum. The NOx report was not produced beginning in the very year that NOx exceedances were discovered and the report was not reinstated until pressure from the PAWG Air Quality Task Group forced the issue in 2006. As for the other air pollutants, no reporting has been initiated by BLM proper.

Response: BLM pays for three NADP stations in Wyoming: Newcastle, Sinks Canyons, and Pinedale; and one Wyoming Air Resources Monitoring System station in Pinedale.

Comment: Section 4.2.2 states that a qualitative approach was used to access air quality impacts and that a quantitative approach will be applied to specific future development proposals but then proceeds to present a quantitative analysis of each alternative. As the baseline for comparison, it uses an inventory of

7,724 tons per year derived from 2001 information, citing that as the "best available information" thus ceding the fact that the information is dubious. The results are as follows:

- Alternative 1 No Action (continue development as is): 23,524 tons per year, 3 times baseline
- Alternative 2 Maximize Oil & Gas Recovery: 25,050 tons per year, 3 1/4 times baseline
- Alternative 3 Maximize Environmental Protection: 18,877 tons per year, 21/2 times baseline

There is no significant difference between alternatives 1, 2, and 4. The difference between alternatives 3 and the others is minor. BLM states that these calculations are based upon "accepted" emission factors recognized by State and federal regulators. These factors were developed on the basis of studies conducted at sea level conditions and are highly doubtful for our altitude and climate.

- Alternative 4 Preferred Alternative: 23,170 tons per year, 3 times baseline

Response: Tables A19-6, A19-7, and A19-8 in the draft EIS Appendix 19 quantify potential emissions from BLM activities in the Pinedale RMP planning area for each alternative and year. Potential impacts are described by including as an example the cumulative impacts from the Jonah and Pinedale Supplemental EIS analyses.

The range of alternatives was based on surface disturbance and magnitude of oil and gas development rather than on emissions or air quality. Because infill of the Jonah and Anticline fields would continue under all alternatives, differences in emissions between the alternatives are small. The emission factors used do indeed apply to the Pinedale area and altitude.

Comment: All predicted quantities are derived from computer modeling which has failed dismally for the Jonah and Anticline. Those model results predicted levels that have been exceeded by five times. This was stated explicitly in the Anticline SETS as follows: "... NEPA analysis (BLM, 2004a) disclosed that the NOx emissions from all sources in the PAPA had exceeded the 693.50 tpy analysis threshold specified in the PAPA ROD, mostly due to the increased number of drilling rigs." [Section 2.3.1.3]

BLM states that these calculations "assume" emission growth will be constant and linear with time. This assumption has been proven false in the Jonah and on the Mesa by BLM's approval to operators in those fields to far exceed their originally declared rates of drilling and development. The Anticline SEIS contains explicit admissions that refute the above quoted assumption:

- "Since the PAPA ROD (BLM, 2000b) was issued, natural gas development within the PAPA has occurred at a faster pace than was analyzed in the PAPA DEIS (BLM, 1999a)." [Sections 2.3.1.3, 3.11.2]

- "Restrictions on numbers of drilling rigs, present at any time within the PAPA were not carried forward from the PAPA DEIS (BLM, 1999a) and the PAPA FEIS (BLM, 2000a) to the PAPA SOD (BLM, 2000b). BLM concluded that limiting the number of rigs (on federal and nonfederal ands and minerals, combined) would be difficult to manage." [Section 2.3.3]

- "Subsequent NEPA analysis (BLM, 2004a) disclosed that the NOx emissions from all sources in the PAPA had exceeded the 693.50 tpy analysis threshold specified in the PAPA ROD, mostly due to the increased number of drilling rigs." [Section 2.3.1.3]

- "Since the PAPA rod (BLM, 2000b) was issued, natural gas development within the PAPA has occurred at a pace greater than was analyzed inn the PAPA EIS. Assumptions of drill rig emissions and NO, emissions from the combination of construction/drilling, well production, and compression have been exceeded." Section 2.4.2.2)

There is therefore no reason for the public to expect BLM to hold clown future increases in rates of drilling which industry regularly seeks.

Response: Lower atmosphere modeling is appropriate.

Comment: Section 4.19.3 refers to a statewide inventory of emissions-conducted by '1'KC Mariah and asserts that there will be only an "increase" in future emissions.8 Here again is a quantitative effort to divine the future based upon dubious data. The bland statement that "emissions will increase" is a typical BLM tactic of "low-balling" that cannot be relied upon. Furthermore, reliance upon TRC Mariah has become unacceptable m light of the fact that this firm has been effectively a sole source contractor, selected and paid by industry for EIS assessments and relied upon exclusively by BLM and D Q. The time has long past for an additional contractor to be brought on board to conduct an independent analysis for the purpose of nullifying potential dogmatic thinking that can result from too close a relationship between a sole source contractor and its customer.

Response: The emissions from the permitted sources in the statewide emission inventory are included only to describe current emissions in the planning area and in Wyoming. It is BLM practice to estimate emissions using assumptions that are reasonable but conservative or most likely.

BLM uses several air quality contractors. BLM pays for the contractor to develop the emissions inventories for any RMP. Although industry pays the air quality contractor for a project-specific air quality analysis, BLM oversees and manages the contract.

Comment: Section 4.19.3 goes on to make an oxymoronic assertion. It states that BLM concludes that increases in certain criteria pollutants in the planning area "would be unlikely to cause exceedance of ...air quality standards." It then reverses this observation by declaring that "a quantitative relationship" (here we again see contradiction of the earlier claim of a qualitative approach only) between "expected...calculated" emissions and impacts on ozone, visibility, and atmospheric deposition are not known, so it is not possible to quantify impacts upon those air quality values.9

Response: The suggested change has been included in the final EIS.

Comment: The paragraph, Section 4.19.3 concludes by rightly observing that quantification cannot be achieved because of the complexity of the formation mechanism for ozone,-visibility impairment, and atmospheric deposition? This paragraph and especially the last statement offers conclusive evidence that BLM must cease its positive outcome based fortune telling of the future of the local atmosphere. BLM must implement an immediate slow-down of oil and gas development in the planning area until operators can demonstrate convincing capabilities to conduct business using vastly improved state-of-the-art in drilling and production that will result in reduction of all emissions to year 2000 levels plus ten percent.

Response: BLM does not have the authority to prohibit development of valid existing oil and gas leases. WDEQ is responsible for regulating air emissions due to drilling.

Comment: Section 4.19.3 concludes with a completely false statement that it would be inappropriate to infer planning area impacts directly from impacts due to the Jonah and Anticline projects. This is classic BLM "eyes wide shut" logic that denies a host of empirical geographic and meteorological lines of evidence. It is a fact that the Wyoming and Wind River mountain ranges constitute a barrier to the planning area. This bather controls the behavior of wind and weather systems' movement into, within, and out of the planning area. My recent years of study of surface wind behavior in the area has shown that emissions from the projects will be transported into the surrounding Class I and Class II regions in varying amounts, depending upon the year and the month of observation. Upper level winds are an

unknown because there are no upper level sounding stations within the planning area. Furthermore, the mountain barrier makes the planning area a large bowl which traps air masses in both winter and summer. This results in episodes of concentration of project pollutants which are transported into the mountains in a manner, indicative of a fluid seeking its common level....which the air mass in the planning area essentially becomes.

Response: The potential impacts from Jonah and Pinedale Anticline Supplemental EIS are included as examples. Potential impacts from activities within the planning area would likely be similar to the Jonah or Pinedale Anticline Supplemental EIS impacts, but would probably not be exactly the same.

Comment: Finally, BLM states an excellent reason for why the above cited inference statement is false, although BLM attempts to apply the reason in a reverse fashion. It observes that energy project information is out of date because it fails to include projects authorized after 2003.11 This is in fact an additional and compelling reason why the project sub-area must be seen to directly impact the planning area. The impacts already documented on the Class I and Class II regions and being experienced by communities in the area (notwithstanding BLM refusal to recognize same) will be inevitably amplified by further unregulated growth of oil and gas development.

Response: The air quality analysis has been updated in the final EIS.

Comment: Within the Draft RMP, the only mitigation efforts suggested to improve air quality are:

- "Use water and dust suppressant on roads to achieve 50% control of road dust on 90% of BLM resource roads
- Consider air quality levels in the approval of current actions
- Post speed limits on roads
- Implement transportation planning to reduce vehicle traffic"

(p. A5-2) There is no mention of putting a cap on diesel exhaust or limiting particulate matter, which may be significant contributors to the obscuring "gray haze." It is unlikely that this haze is due solely to truck traffic on dirt roads. The increase in diesel exhaust and particulate matter from truck traffic that services wells, from the construction equipment that grades and improves roads to new well pads, from powerful drilling rigs, and from producing wells, contributes to diminishing air quality. These emissions need to be more stringently regulated, and the RMP is the appropriate document to address potential regulations.

Response: Additional mitigations are suggested on page 2-120 of the draft EIS. BLM does not have authority to regulate diesel exhaust or particulate matter.

Comment: Surprisingly, the perception of backpackers and mountaineers who have noticed a deterioration in air quality is not reflected in the analysis of the BLM. According to Figure 3-12, which measures the annual visibility in Bridger Wilderness, the average has remained fairly consistent, staying between 6 and 8 deciviews of visibility on average between 1989 and 2003. It appears that the annual visibility reported by the "Inter-Agency Monitoring or Protected Visual Environments Bridger station BRID" is inconsistent with on-the-ground observations. NOLS would like to see this inconsistency addressed in the Final EIS. Assessing more recent data might be helpful in light of the increase in development since 2003.

Response: The monitoring data have been updated in the final EIS. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: The DRMP references tier 4 emission requirements, in particular on page 2-120, where it is stated: "Exceptions would be considered to allow year-round drilling and development operations on new and existing leases in the Jonah, Pinedale Anticline, Big Piney-La Barge, Deer Hills, and Castle Creek oil and gas fields that are currently encumbered by seasonal restrictions. Such exceptions would be subject to additional environmental analysis and the leaseholder/operator implementing offsetting mitigation such as, but not limited to: habitat enhancement; development of a liquids (condensate and produced water) gathering system to reduce truck traffic; remote telemetry; drilling of multiple wells from new and existing pads; directional drilling; noise reduction for drilling and completion operations; flareless completion; tier 4 or better emission equipment; bussing of crews; concentration of development; closed drilling systems; use of transportation plan that reduces road density; compensation mitigation; and monitoring of wildlife populations."

While this statement properly articulates commitments that USQ has already made in the proposed action of the draft SEIS, the requirement to tier 4 emission technology is inappropriate on several fronts. The technology for tier 4 emission standards is not yet available and, therefore, its efficacy has not been technically proven. In addition, tier 4 engines will not be required to be manufactured until 2010. USQ recommends that reference to tier 4 standards be deleted due to these reasons and be replaced with a statement that specific technology will be omitted from the RMP ROD to allow for technological advances and that the agency with air quality primacy, Wyoming Department of Environmental Quality (WDEQ), will monitor and ensure a reduction in NOx emissions in order to meet established visibility goals.

Response: The text does not require Tier 4 technology. It is provided as an example of mitigation that might be appropriate in future oil and gas development projects. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

Comment: Page Number & Issue: 3-9: Statements in DRMP support the fact that the State of Wyoming has primacy on air. Recommendations: USQ recommends that the state primacy over air issues be reinforced throughout the entire DRMP.

Response: BLM finds the emphasis adequate.

Comment: Page 2-113: "Objective 4 Reduce atmospheric deposition pollutants to levels below generally accepted LOCs and LACs." Recommendations: Define acronyms "LOCs and LACs" Number & Issue:

Response: Level of concern (LOC) and level of acceptable change (LAC) have been added to the list of acronyms in the final EIS.

Comment: The current level of gas well development in the Jonah Field/ Pinedale Anticline area has resulted in unacceptable impacts to air quality to a Class I wilderness air shed (protected under the Wilderness Act of 1964). Table 4-18 shows that regional haze standards have been violated and that conditions will continue to deteriorate with additional oil and gas development.

The RMP, which allows further oil and gas development, should not be considered until compliance with federal law can be better demonstrated.

Under Cumulative Impacts Table 4-18 shows that PM10 and NO2 levels will exceed that increments allowed under EPA's PSD regulations. However it seems clear that the actual exceedances could be far greater than modeled. The document states that reasonably foreseeable development was estimated using qualitative means.

The RMP cannot proceed until it has been demonstrated that it will comply with federal air quality laws. BLM has a statutory responsibility and moral duty to comply with these laws.

Response: BLM does not have the authority to prohibit development of valid existing oil and gas leases. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern. NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology. WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis.

Comment: 3.2.3 3-4 Table 3-1; SO2 section WDEQ-AQD The Sulfur Dioxide Data was footnoted incorrectly in the Pinedale Anticline DSEIS, and was in fact collected at the La Barge Study Area/Northwest Pipeline craven Creek site in 1982-1983. No Sulfur Dioxide data was collected in the Jonah Field. Please revise table and relevant text accordingly.

Response: This has been corrected in the final EIS.

Comment: 3.2.3 3-7 thru 3-8 Deposition (Wet & Dry) WDEQ-AQD Yellowstone is too far removed from the Pinedale RMP area and thus should be removed from the text and figures.

Response: BLM includes air quality monitoring data located within the potentially affected environment, as required by NEPA.

Comment: Appendix F F-7 thru F-14 Figures 3-11, 3-13, 3-17, 3-20, 3-22, 3-26 WDEQ-AQD Yellowstone is too far removed from the Pinedale RMP area and thus should be removed from the text and figures.

Response: BLM includes air quality monitoring data located within the potentially affected environment, as required by NEPA.

Comment: 3.2.3 3-5 Ozone WDEQ-AQD Please include discussion of the elevated ozone episodes, which is also utilized for the Pinedale Anticline Draft SEIS and can be obtained from Matt Anderson, BLM Pinedale Field Office.

Response: This has been updated in the final EIS.

Comment: 3.2.3 3-5 Ozone WDEQ-AQD Yellowstone is too far removed from the Pinedale RMP area and thus should be removed from the text and figures.

Response: BLM includes air quality monitoring data located within the potentially affected environment, as required by NEPA.

Comment: 3.2.3 3-5 Sulfur Dioxide WDEQ-AQD When the ambient air background concentrations in Table 3-1 are updated, the corresponding text also needs to be updated for Sulfur Dioxide.

Response: This has been updated in the final EIS.

Comment: 3.2.4 3-8 thru 3-6 Table 3-2 WDEQ-AQD There is adequate data from the Pinedale area. It is not necessary to use Yellowstone, which is far removed from the RMP area. Yellowstone should be removed from the text and figures.

Response: BLM includes air quality monitoring data located within the potentially affected environment, as required by NEPA.

Comment: 4.19.3 4-238 Last Full Par. WDEQ-AQD It appears that references to the Desolation Flats and Atlantic Rim projects are an artifact of copying and pasting from the Rawlins RMP. This text should reference the most up to date air quality analyses for projects within the Pinedale RMP area, i.e., Pinedale Anticline SEIS (as a DSEIS was published before the RMP DEIS) and Jonah Infill.

Response: This has been updated in the final EIS.

Comment: 4.19.3 4-238 thru 4-239 Table 4-18 WDEQ-AQD As the Pinedale Anticline Draft SEIS was published before the Pinedale RMP DEIS, this table should reference the most up to date air quality analyses results. This table should summarize potential impacts as disclosed in the Pinedale Anticline SEIS, and not 2005 air quality impacts.

Response: This has been updated in the final EIS.

Comment: 4.19.3 4-240 1st Full Paragraph WDEQ-AQD Discussion of the elevated ozone episodes is to be utilized for the Pinedale Anticline Draft SEIS and can be obtained from Matt Anderson, BLM Pinedale Field Office.

Response: This has been updated in the final EIS.

Comment: Appendix F F-24 WDEQ-AQD Figure 4-22 This figure should be deleted. Each pollutant has unique effects on air quality and the environment, and therefore is addressed separately when managing air quality. To truly evaluate the differences between the various alternatives and how they will affect air quality, the changes in emissions should be represented by pollutant - not summed.

Response: Although BLM understands the concern about total emissions, the presentation of the total emissions is appropriate and gives a general comparison of emissions for each alternative for each year. In fact, the total emissions approach has been used before in the Wyoming Climate Atlas (Curtis and Grimes http://www.wrds.uwyo.edu/wrds/wsc/climateatlas/quality.html). However, BLM has addressed this concern by breaking down each pollutant's contribution to the total values in both Table A19-11 and Figure 4-1 of the draft EIS.

Comment: Appendix 19 A19-10 Table A19-3 WDEQ-AQD On September 21, 2006, EPA announced final revisions to the National Ambient Air Quality Standards for particulate matter. The revision strengthens the 24-hour PM2.5 standard from 65 to 35 ug/m3 and revokes the annual PM10 standard of 50 ug/m3. EPA retained the existing annual PM2.5 standard of 15 ug/m3 and the 24-hour PM10 standard of 150 ug/m3. The final rule has not yet been published in the Federal Register and is not effective until 60 days after publication in the Federal Register. After the final rule becomes effective, the State of Wyoming will enter into rulemaking to revise the Wyoming Ambient Air Quality Standards. Therefore, the NAAQS and WAAQS percent of standards data should be revised accordingly.

Response: This has been updated in the final EIS.

Comment: Appendix 19 A19-11 Table A19-3 WDEQ-AQD The Sulfur Dioxide Data was footnoted incorrectly in the Pinedale Anticline DSEIS, and was in fact collected at the La Barge Study Area/Northwest Pipeline craven Creek site in 1982-1983. No Sulfur Dioxide data was collected in the Jonah Field. Please revise table and relevant text accordingly.

Response: This has been updated in the final EIS.

Comment: Appendix 19 A19-11 Table A19-3 WDEQ-AQD Table is duplicated within itself. That is, all pollutant information is listed twice.

Response: This has been updated in the final EIS.

Comment: Appendix 19 A19-14 Air Quality Impact Assessment, End 2nd full para. WDEQ-AQD Flaring during well completion is limited in the Jonah and Pinedale Anticline Fields in association with permits issued by the WDEQ-AQD. This would be an appropriate place to reference that permitting. A reference to that permitting is to be utilized for the Pinedale Anticline Draft SEIS and can be obtained from Matt Anderson, BLM Pinedale Field Office.

Response: This has been updated in the final EIS.

Comment: Appendix 19 A19-27 Table A19-10 WDEQ-AQD This table should be deleted. Each pollutant has unique effects on air quality and the environment, and therefore is addressed separately when managing air quality. To truly evaluate the differences between the various alternatives and how they will affect air quality, the changes in emissions should be represented by pollutant - not summed.

Response: Although we understand the concern about total emissions, we feel that the presentation of the total emissions is appropriate and gives a general comparison of emissions for each alternative for each year. In fact, the total emissions approach has been used before in the Wyoming Climate Atlas (Curtis and Grimes http://www.wrds.uwyo.edu/wrds/wsc/climateatlas/quality.html). However, BLM has addressed this concern by breaking down each pollutant's contribution to the total values in both Table A19-11 and Figure 4-1 of the draft EIS.

Comment: Appendix 19 A19-29 Last Paragraph WDEQ-AQD As the Pinedale Anticline Draft SEIS was published before the Pinedale RMP DEIS, the RMP DEIS text should directly incorporate the most up to date air quality analyses results which can be obtained from Matt Anderson, BLM Pinedale Field Office.

Response: This has been updated in the final EIS.

Comment: All Alternatives analyzed for the proposed RMP have large increases in emissions (193% to 260%) predicted between now and 2021. It is a reasonable assumption that selection of any of these alternatives without additional mitigation will exacerbate current conditions.

The BLM conducted a qualitative analysis of air quality for the RMP revision and determined that "...emissions described in section 4.2 may contribute to significant impacts on visibility" (pg.A19-29).

Response: BLM analyzed an appropriate range of alternatives in the draft EIS. Specific mitigations for air quality impacts due to the Jonah and Anticline developments are provided in the EIS and ROD for those fields. BLM is committed to supporting the State of the Atmosphere program (unfortunately we do not have results at the present time) and air quality monitoring. Further commitments will be in the ROD. At the present time, the BLM Casper Field Office is entering the implementation phase of the Casper RMP. Implementation for the Pinedale RMP could be similar.

Comment: The BLM conducted a qualitative analysis of air quality for the RMP revision and determined that "...emissions described in section 4.2 may contribute to significant impacts on visibility" (pg.A19-29).

The BLM also states, "Development of the additional oil and gas wells predicted on BLM surface and federal mineral estate, potentially quadrupling the number of wells in the planning area, would cause air quality related impacts" (pg. 4-258).

The document states that though this analysis is qualitative, "...In the near future, the BLM plans to analyze RMP cumulative far-field air quality impacts quantitatively with screening dispersion modeling. This would be part of a statewide analysis BLM refers to as the "State of the Atmosphere" study (pg. 4-240

Though Table 3.1 states that phased development strategies are included in Alternatives 3 and 4, it is unclear how these strategies work to reduce emissions and potential impacts since emission levels for these alternatives increase by 193% and 260% by 2021 respectively.

Response: BLM analyzed an appropriate range of alternatives in the draft EIS. Specific mitigations for air quality impacts due to the Jonah and Anticline developments are provided in the EIS and ROD for those fields. BLM is committed to supporting the State of the Atmosphere program (unfortunately we do not have results at the present time) and air quality monitoring. Further commitments will be in the ROD. At the present time, the BLM Casper Field Office is entering the implementation phase of the Casper RMP. Implementation for the Pinedale RMP could be similar.

Comment: Air quality in southwestern Wyoming continues to be an important issue for oil and gas operators, the public, and regulatory agencies. Fortunately, according to the analysis in the RMP DEIS, air quality in southwest Wyoming is very good. See RMP DEIS, pg. 3-3 ("air quality in the planning area is considered very good"). Emissions data collected near Jonah Field demonstrate compliance with all National and Wyoming Ambient Air Quality Standards ("NAAQS/WAAQS"). See RMP DEIS, pgs. 3-3 - 3-4, 3-8. Unfortunately, the BLM does not adequately explain this information.

Response: Current air quality information is given appropriate emphasis in the draft EIS.

Comment: The BLM suggests on page 4-6 that oil and gas exploration and development will have the greatest impact on air quality within the planning area. In fact, previous modeling performed by the State of Wyoming, EPA, and the Forest Service suggest that 90% of the air quality impact at the Bridger Wilderness area is attributable to distant sources outside of Wyoming, and not local sources within the Pinedale Resource Area. See The Southwest Wyoming Regional CALPUFF Air Quality Modeling Study: Final Report (SWWYTAF) (February 2001). Oil and gas development may contribute to emissions in the region, but the SWWYTAF study indicates that the overwhelming majority of sources impacting air quality in Wyoming, and particularly the Pinedale Resource Area, are outside of Wyoming. The statement on page 4-6 should be revised to reflect the information from the SWWYTAF study.

Response: The emission inventory was designed to focus on potential impacts from BLM activities.

Comment: The FS recommends the BLM analyze another alternative, looking at phased development, keeping emission levels at current levels or lower, by extending the timeframe for development. We believe that by slowing the pace of development and using the best available technology we can eliminate any air quality related impacts. The FS believes that significant impacts to air quality are avoidable.

The FS recommends the BLM use the "State of the Atmosphere" model now, to model far field impacts of the RMP alternatives. This will provide quantitative information and better disclosure of potential impacts for the public and the decision maker to base decisions regarding this RMP.

The FS recommends that the BLM include in the final EIS a comprehensive discussion and description of how future monitoring and compliance examinations will occur. This should also include a commitment from the BLM to annually track and report existing, approved, and projected source emissions in the planning area.

Response: BLM analyzed an appropriate range of alternatives in the draft EIS. Specific mitigations for air quality impacts due to the Jonah and Anticline developments are provided in the EIS and ROD for those fields. BLM is committed to supporting the State of the Atmosphere program (unfortunately we do not have results at the present time) and air quality monitoring. Further commitments will be in the ROD. At the present time, the BLM Casper Field Office is entering the implementation phase of the Casper RMP. Implementation for the Pinedale RMP could be similar.

Comment: EPA also recommends the Final EIS include the latest data and modeling of visibility impacts to the Class I Bridger Wilderness Area, the Fitzpatrick Wilderness and other neighboring sensitive areas. This information and discussion should be included in Chapter 3, Affected Environment, and in Chapter 4, Environmental Consequences and Cumulative Impacts. Modeling conducted for the Pinedale Anticline SEIS predicted 45 days of visibility impairment over 1.0 dv at the Bridger Wilderness Area for 2005 (Draft SETS Pinedale Anticline, Table 3.11-5, page 3-64). EPA notes that a similar table is included in the cumulative impacts section, however, this may be a more appropriate discussion for Chapter 3, Affected Environment, since the analysis is for 2005. The Final EIS should also include a discussion of visibility in Chapter 4, Environmental Consequences, and a discussion of how BLM will address and mitigate future visibility impacts.

Response: The most recent data available from the IMPROVE website were used. BLM does not feel that it is possible to discuss mitigation for visibility beyond that identified in Appendix 19 of the draft EIS. However, please refer to the revised Pinedale Anticline supplemental EIS Section 4.9.3.5 and Appendix 11 for more details.

Comment: EPA also recommends the Final EIS incorporate the latest data and discussion on ozone monitoring and formation in the area. To EPA's knowledge, the latest ozone analysis was completed in February, 2007 as supplemental information for the Pinedale Anticline Draft Supplemental EIS. This analysis became available following the release of the Pinedale RMP draft EIS. Elevated ozone levels have been recorded during the winter months at several ambient air monitoring stations in the area. The air quality modeling also predicted elevated levels of ozone in summer months. While the area remains in compliance with National and Wyoming Ambient Air Quality Standards (NAAQS and WAAQS), this issue clearly demands close observation. EPA recommends the ozone discussion be expanded in Chapter 3, Affected Environment, and included in Chapter 4, Environmental Consequences.

Response: Air quality monitoring data were updated in the final EIS as they were available. The information regarding ozone has been updated in the final EIS.

Comment: The second argument the BLM puts forth here is that, "The cumulative impacts for the energy projects do not distinguish between BLM and non-BLM sources."6 Despite this rationale, cumulative air quality impacts do not distinguish between sources, whether BLM or otherwise. The human health and environmental impacts in a particular area are to be considered on the whole, regardless of the source. The BLM should be sensitive to this and should fully consider the impacts of any projects occurring on their land, together with any other air pollution sources.

Response: The cumulative impacts from the Jonah EIS are included as an example. The summary of cumulative impacts from the Pinedale Anticline Supplemental EIS will be included in the Pinedale RMP final EIS in the form of a table.

Comment: Lastly, the BLM argues that, "The energy project information is out of date (for example, the Jonah Infill does not take into account any projects authorized after 2003)."7 The BLM must update the information and use it to evaluate the impacts from the development that has already occurred in the area and must use the latest information available to predict future impacts from sources in the planning area. The previous EISs were supposed to have included all the planned oil and gas development for many years into the future, so, unless BLM grossly underestimated the number of wells it would allow on its land, this information must be used as part of the inputs for this analysis. It must be noted here that although the previous analyses for the Pinedale and Jonah EISs should be used in this draft EIS/RMP, they should be used only as a starting point for calculating air quality emissions and associated impacts because those analyses were flawed and likely underpredicted the impacts to the environment. For details on the flawed portions of the previous draft EISs, please see our March 26, 2007 comment letter concerning the Pinedale draft EIS and Vicki Stamper's October 5, 2005 comment letter regarding the Jonah Infill draft EIS.

Response: The cumulative impacts from the Jonah EIS are included as an example. The summary of cumulative impacts from the Pinedale Anticline Supplemental EIS will be included in the Pinedale RMP final EIS in the form of a table.

Comment: Despite the importance of the PSD increments to the protection of air quality, Table A19- 9 in the AQTSD, which summarizes the existing conditions in regard to air quality does not even include PSD increment consumption information. This information must be provided here in order for the public to fully understand the current state of the environment.

Response: An RMP is not a prevention of significant deterioration (PSD) increment consumption analysis.

Comment: Chapter 4 of this draft EIS/RMP states, "It would be inappropriate to infer planning area impacts directly from impacts estimated for the Pinedale Anticline or Jonah Infill projects…"4 and then provides three arguments explaining this difficulty. The first argument explains that, "The geographic extent of the project area is smaller for the energy projects than for the Pinedale RMP, although the energy project areas are subsets of the Pinedale planning area."5 In fact, air pollution levels would only increase if a comprehensive modeling analysis were to be conducted for the entire Pinedale RMP area. If the Big Piney-La Barge oil and gas field were added to the analysis, then most of the relevant air pollution sources would be included. See Map 3-5 (showing locations of major oil and gas fields), and page 3-40 (Big Piney-La Barge field currently has more than 1500 wells). The predicted impacts from the Pinedale Anticline and Jonah Infill development projects must be acknowledged and assessed in this Draft EIS/RMP. We can only assume that a comprehensive look at the impacts from all sources affecting the planning area would result in impacts that are at least as significant, and likely more so, than the those already predicted from the individual energy development projects. So, for example, the BLM must address the visibility impacts, PSD increment violations and near-violations of NAAQS in the area that were predicted in the BLM's analyses for the 2 BLM, Pinedale Field Office, Draft Environmental Impact Statement for the Pinedale Resource Management Plan, "Appendix 10-Surface Disturbance Associated with Oil and Gas Activities," February 2007, 1. 3 BLM, "Land Use Planning Handbook," H-1601-1, March 11, 2005, 22. 4 BLM, Draft EIS/RMP, 4-239. 5 BLM, Draft EIS/RMP, 4-240. Pinedale Anticline and Jonah Infill projects and the BLM must provide adequate mitigation measures to address these impacts in this Draft EIS/RMP.

Response: The cumulative impacts from the Jonah EIS are included as an example. The summary of cumulative impacts from the Pinedale Anticline Supplemental EIS will be included in the Pinedale RMP final EIS in the form of a table.

Comment: The BLM has in fact completed modeling analyses for other draft RMPs, including the Farmington, New Mexico,8 Vernal, Utah and Roan Plateau, Colorado resource management plans. While there were flaws in the content of these analyses, the fact that air quality modeling was performed sets a precedent for the inclusion of quantitative analyses in RMPs. And since the BLM went so far as to quantify, in detail, the emissions from oil and gas development in the planning area, is seems clear that a quantitative modeling analysis is achievable and therefore must be completed as part of this RMP.

Response: The determination of whether quantitative modeling is conducted for an RMP is decided on a case-by-case basis. Policy and guidance on this issue are being discussed at the present time.

Comment: Item: Page A19-4, Calculation of Total Deposition Comment: The following calculations are confusing and need clarification. It is recommended that they be deleted and instead the RMP document should state that total deposition (wet and dry) should be determined through accurate photochemical modeling and the modeling results should be compared to accepted levels of concern.

- "Calculation of Total Deposition: Total N deposition = N/NO3 dry + N/NH4 dry + N/HNO3 dry + N/NO3 wet + N/NH4 wet
- Where: • N/NO3 dry = NO3 * (7/31) • N/NH4 dry = NH4 * (7/11) • N/HNO3 dry = HNO3 * (7/32) • N/NO3 wet = NO3 * (7/31) • N/NH4 wet = NH4 * (7/11) Total S deposition = S/SO2 dry + S/SO4 dry + S/SO4 wet
- Where: • S/SO2 dry = SO2 * (16/32) • S/SO4 dry = SO4 * (16/48) • S/SO4 wet = SO4 * (16/48)"

Response: This will be updated in the final EIS.

Comment: Item: Page A19-5, Discussion of PSD Class I Areas "• PSD Class I Areas: Areas with pristine air quality, such as wilderness areas, national parks, and some Indian reservations, are accorded the strictest protection. Only very small incremental increases in concentration are allowed in order to maintain the very clean air quality in these areas." Comment: The discussion of PSD Class I Areas in the above paragraph needs to be modified as suggested below: "• PSD Class I Areas: Congressional mandated PSD Class I Areas with pristine air quality, such as wilderness areas, national parks, and some Indian reservations, are accorded the strictest protection. Only very small incremental increases in concentration are allowed in order to maintain the air quality in these areas." Item: Page A19-5, Table A19-2 Comment: "Table A19-2 PSD Increments" should only reference concentrations in ug/m3 and not present concentrations in ppm or ppb. Concentrations in ug/m3 are the regulatory form of these standards. Item: Page A19-5, PSD Increment Comment: BP supports the position that BLM has taken regarding conducting PSD increment analyses in RMP's or EIS's. Item: Page A19-7, Preconstruction permitting applicability "Air pollution impacts are limited by local, state, tribal, and federal air quality regulations, standards, and implementation plans established under the CAA and administered by the WDEQ-AQD with oversight from the EPA. Air quality regulations require proposed new, or modified existing, air pollutant emission stationary sources (including oil and gas compression facilities) to undergo a permitting review before their construction can begin. Therefore, the WDEQ-AQD has the primary authority and responsibility to review permit applications and to require emission permits, fees, and control devices, before construction and/or operation." Comment: Preconstruction permitting is not limited to compressor facilities but rather all oil and gas facilities. It is also important to note that Wyoming requires the application of emission controls as part of the permitting process. It is recommended that the paragraph be changed as suggested in the following:

APPLICABILITY TO THE PINEDALE AREA: Air pollution impacts are limited by local, state, tribal, and federal air quality regulations, standards, and implementation plans established under the CAA and administered by the WDEQ-AQD with oversight from the EPA. Air quality regulations require proposed new, or modified existing, air pollutant emission stationary sources (including oil and gas facilities) to undergo a permitting review before their construction can begin. Therefore, the WDEQ-AQD has the primary authority and responsibility to review permit applications and to require emission permits, fees, and control devices, before construction and/or operation. It is important to note that part of this preconstruction permitting is the application of Wyoming minor source Best Available Control Technology (BACT).

Item: Page A19-9, Table A19-3 Comment: The reference to PSD increments in Table A19-3 should be deleted. Background monitoring data has no correlation to PSD increments. PSD increments cannot be measured, and compliance can only be determined through modeling. In addition, the table should note the ranking of the referenced ambient concentrations. The percent of the standard should also be consistent with the ranking of the monitored data. Also, there are duplicate entries in the table. "Table A19-3. Assumed Background Concentrations, Applicable Ambient Air Quality Standards (in ug/m3)" Item: Page A19-14, Visibility Levels of Concern "It should be noted that a 1.0-dv change is not a "just noticeable change" in all cases for all scenes. Visibility changes of less than 1.0 dv are likely to be perceptible in some cases, especially when the scene being viewed is highly sensitive to small amounts of pollution, such as that caused by preferential forward light scattering." Comment: BP has previously submitted extensive comments on levels of concern for visibility impairment as well as assumptions that are integral to the specified levels of concern , . There is considerable speculation whether a 1 dv change will produce an actual noticeable change in visibility. The suggestion that less than a 1 dv change could result in a noticeable change in visibility is not supported and to date, there is no peer reviewed scientific information to support this claim. It is recommended that this reference (quoted above) be eliminated.

Response: The best available data were used in preparing the draft EIS and final EIS. The emission inventory was designed to focus on potential impacts from BLM activities. Detailed information on sources, emissions inventory, etc., were included in the final EIS as they were available. BLM considers the use of the units ppm and/or ppb appropriate in considering and comparing source concentrations across a large area. Table A19-3 of the draft EIS has been updated in the final EIS. Page A19-14 of the draft EIS has been updated in the final EIS.

Comment: Item: Page A19-15, Estimation of Emission Factors "Estimation of Emission Factors For natural gas compressor engines, the emissions of nitrogen oxides, CO, and formaldehyde are determined by the average (emphasis added) permitted emission rate allowed by the state under BACT processes" Comment: The RMP document, as well as the associated spreadsheets, needs to contain detailed information on how emissions were calculated. The suggested use of average emission based on the minor source WYDEQ BACT program adds conservatism to the emission growth calculation. Since BACT is a technology forcing regulation, it is more appropriate to base growth emissions on the most stringent emission limits rather than the average. Again, emission growth estimates need to be consistent with ongoing EISs and such information must be included in the RMP.

Item: Page A19-27 Table A 19-10 Comment: Table A 19-10 should be deleted because a summation of pollutant totals is meaningless from a technical perspective.

Item: Page A19-29, Compilation of Emission Inventories "It is expected that these data will someday be integrated with the BLM emissions data to depict all emissions in the planning area and can be used for cumulative analysis. Also, this information will be needed if air dispersion modeling is performed in the area." Comment: We suggest that WDEQ rather than BLM should be responsible for compiling emission

inventories for existing and future emissions. In addition, WDEQ should be responsible if modeling is conducted.

Response: It is BLM practice to estimate emissions using assumptions that are reasonable but conservative or most likely. Although we understand the concern about total emissions, we feel that the presentation of the total emissions is appropriate and gives a general comparison of emissions for each alternative for each year. In fact, the total emissions approach has been used before in the Wyoming Climate Atlas (Curtis and Grimes http://www.wrds.uwyo.edu/wrds/wsc/climateatlas/quality.html). However, BLM has addressed this concern in the final EIS by breaking down each pollutant's contribution to the total values in both Table A19-11 and Figure 4-1 of the draft EIS.

Comment: Table 1 Incremental Cost-Effectiveness Estimates for ICE Control Techniques and Technologies Engine Type: Lean Burn. Control Comparison: From Low-Emission Combustion to SCR (96%) Horsepower 50-150 0.4 58,900 Incremental NOX Combustion to SCR 150-300 0.8 3,500 (96%) 300-500 3.3 8,800 500-1000 6.6 10,300.

There are several concerns regarding this information. First, it is not known if the emission reductions are based on actual performance tests or theoretical emission calculations. It is also not known what the reference basis is for the emission reduction of 6.6 tons per year of NOx .

What is important is that it is purely speculative and unlikely that this technology could achieve an emission rate of 0.1 g/hp-hr on a continuous basis. In addition, this technology is very expensive and EPA has rejected it in the proposed NSPS for engines. BLM states that the installation of this technology would reduce visibility impairment. This statement is without foundation and is based on the assumption of visibility impairment in the Bridger Class I Area using solely the CALPUFF model. BP has previously submitted extensive comments to BLM that the recent BLM CALPUFF modeling does not reflect actual IMPROVE measurements at Bridger. Those measurements indicate that there has been no change in visibility at Bridger even though there has been growth in emissions. In addition, there has been no change in NO3 levels at the Class I Area

2) Installation of Electric Compression

In evaluating the changes in emissions for shifting from natural gas to electric (coal) powered compression, it is necessary to examine the emissions for each power source on an equivalent energy basis. Thus, for the same amount of energy consumption, the change in emissions from natural gas versus electricity must be considered.

An analysis of shifting from natural gas fired compressors to electric was conducted for the Four Corners Area. Table 2 presents a summary of emissions from PNM, Xcel and Tri-State generation stations in the 4-Corners Region. This mix of facilities is assumed to reflect the "grid" average for the 4-Corners Region.

Response: Data were provided by EPA (AP-42) and WDEQ. Assumptions are given in the document and inventory spreadsheet.

Comment: Table 2. Summary of Emissions from Coal-Fired Generating Plants in 4-Corners Area Generation (MWhs) Emissions in Tons Emission Rates (lbs/MWh)

Owner All Sources Fossil Fuel Plants Coal Plants

- Total Fossil Fuel Coal SO2 NOx CO2 Hg SO2 NOx CO2 SO2 NOx CO2 SO2 NOx CO2 Hg

- PNM Resources 10,301,726 7,434,239 7,235,445 9,504 16,581 7,684,272 0.21 1.8 3.2 1,492 2.6 4.5 2,067 2.6 4.5 2,088 0.06
- Tri-State 10,928,949 10,927,196 10,858,096 8,194 19,446 12,485,729 0.13 1.5 3.6 2,285 1.5 3.6 2,285 1.5 3.6 2,297 0.02
- Xcel 81,283,493 66,604,435 54,673,970 157,324 124,237 69,809,043 1.09 3.9 3.1 1,718 4.7 3.7 2,096 5.7 4.3 2,320 0.04
- Total or Average 102,514,168 84,965,870 72,767,511 175,022 160,264 89,979,044 1 3.41 3.13 1,755 -- -- -- -- -- -- --

In this analysis, it was assumed that for visibility SO2 and NOx emissions are equivalent in terms of impacts because they cause approximately the same amount of visibility impairment. This is because the dry scattering coefficients for converting SO4 and NO3 concentrations into visual range are approximately equivalent.

As a first order approximation, 1 ton per year of SO2 emissions will result in the same amount of potential visibility impairment as 1 ton per year of NOx. In reality, because of the more complex and competitive reactions involving both SO4 and NO3, SO2 emissions may result in more visibility impairment than NOx emissions.

From an economic basis, conversion of natural gas-fired engines to electric compression is only practical for large engines and only in areas where electricity is already available within close proximity. This is because most locations do not currently have electrical power and it would not be cost effective to install power for small engines.

The energy consumption of a typical lean burn engine was calculated, converted into pounds per mega watt-hour and was compared to SO2 and NOx emissions from existing coal-fired power plants (Table 3). This was done assuming an emission factor between 1 g/hp-hr and 5 g/hp-hr. It was then assumed that the computed emissions per mega watt of power represented emissions for 1-hour and were converted into tons per year by multiplying by 8760 hours per year and dividing by 2000 pounds per ton.

As indicated in Table 3, a shift from natural gas to electric (coal) for an engine of 1 MWhr capacity (approximately 1,342) hp with an emission factor of 1 g/hp-hr would result in an increase of 117 tons per year of SO2 + NOx. With engine emissions of approximately 2.5 g/hp-hr there is no net change in overall emissions by shifting from natural gas to electric. For all cases, the shift from natural gas to electricity results in higher greenhouse gas emissions.

Table 3. Change in SO2, NOx and Greenhouse Gas Emissions by shifting from Natural Gas Compression to Electricity

4 Corners Grid Average Emissions:

- lbs/MWh tons/MWh/yr
- SO2 3.41 14.9
- NOx 3.13 13.7
- NOx + SO2 6.54 28.6
- CO2 1,755 7686.9
- Caterpillar 3608 LE Average Emissions:
- lbs/MWh (equivalent) Other NOx Emission Rates (gr/hp-hr)
- SO2 0 0 0 0 0 0

- hp/kw-hr 1.342 1.342 1.342 1.342 1.342 1.342
- hp/mw-hr 1,342 1,342 1,342 1,342 1,342 1,342
- Cubic feet gas/mw-hr 9,815 9,815 9,815 9,815 9,815 9,815
- Caterpillar 3608 LE Average Emissions:
- lbs/MWh (equivalent) Other NOx Emission Rates (gr/hp-hr)
- NOx Emission Rate gr/hp-hr 1 2 3 4 5 16
- SO2 lbs/mw-hr 0 0 0 0 0 0
- NOx lbs/mw-hr 3.0 5.9 8.9 11.8 14.8 47.3
- CO2 lbs/mw-hr 1,138 1,138 1,138 1,138 1,138 1,138
- SO2 tons/MWh/yr 0.0 0.0 0.0 0.0 0.0 0.0
- NOx tons/MWh/yr 13.0 25.9 38.9 51.8 64.8 207.4
- CO2 tons/MWh/yr 4985 4985 4985 4985 4985 4985
- Delta SO2 tons/Mwh/yr 14.9 14.9 14.9 14.9 14.9 14.9
- Delta NOx tons/Mwh/yr 0.7 -12.2 -25.2 -38.1 -51.1 -193.7
- Delta NOx +SO2 tons/MWh/yr 15.7 2.7 -10.2 -23.2 -36.2 -178.7
- Delta CO2 tons/Mwh/yr 2702 2702 2702 2702 2702 2702
- Delta SO2 tons/yr 15 15 15 15 15 15
- Delta NOx tons/yr -83 -180 -276 -373 -469 -1,533
- Delta NOx +SO2 tons/yr 117 20 -76 -173 -270 -1,333
- Delta CO2 tons/yr 20,149 20,149 20,149 20,149 20,149 20,149
- Cat. 3608 Assumptions:
- 9815 Btu/kw-hr
- “Sweet” Natural Gas
- NOx - 1 gr/hp-hr
- 1 cu ft gas = 1,000 btu
- 2285 hp

While this example was for the Four Corners Area and not Wyoming, it does demonstrate that shifting from natural gas to electricity does not guarantee a reduction in emissions and based on previous comments regarding visibility impairment may not result in any change in visibility in the Class I Area

3) Activated Carbon on Condensate Storage Tanks

The suggestion of using activated carbon as a control measure for condensate storage is not a viable mitigation option because there are considerable safety concerns using this control technology. Since condensate storage tanks operate at a maximum of 0.5 ounces of pressure, any plugging of the carbon canister could result in over pressuring the tank and result in a catastrophic failure. In addition, because of the high volume flow such controls may require frequent regeneration and maintenance. Rather, use of a combustion chamber will result in lower emissions, less maintenance and safety concerns and a lower cost than activated carbon.

Response: BLM does not understand what D. Brown is referring to. There is no Table 2 in the document for emissions from power plants. BLM requests clarification in this regard.

Comment: Air quality in southwestern Wyoming continues to be an important issue for oil and gas operators, the public, and regulatory agencies. Fortunately, according to the analysis in the RMP DEIS, air quality in southwest Wyoming is very good. See RMP DEIS, pg. 3-3 (“air quality in the planning area is considered very good”). Emissions data collected near Jonah Field demonstrate compliance with all National and Wyoming Ambient Air Quality Standards (“NAAQS/WAAQS”). See RMP DEIS, pgs. 3-3 -- 3-4, 3-8. Unfortunately, the BLM does not adequately explain this information.

Response: BLM believes that air quality has been adequately characterized in this document.

Comment: The BLM suggests on page 4-6 that oil and gas exploration and development will have the greatest impact on air quality within the planning area. In fact, previous modeling performed by the State of Wyoming, EPA, and the Forest Service suggest that 90% of the air quality impact at. the Bridger Wilderness area: is attributable to distant sources outside of Wyoming, and not local sources within the Pinedale Resource Area. See The Southwest Wyoming Regional CALPUFF Air Quality Modeling Study: Final. Report (SWWYTAF) (February 2001). Oil and gas development may contribute to emissions in the region, but the SWWYTAF study indicates that the. overwhelming majority of sources impacting air quality in Wyoming, and particularly the Pinedale Resource Area, are outside of Wyoming. The statement on page 4-6 should be revised to reflect the information from the SWWYTAF study.

As discussed in more detail below, the RFD Scenarios for each of the alternatives used to qualitatively analyze potential air quality impacts in Appendix A19 conflict with the RFD Scenarios expressed in Table 4-2, page 4-48, and Appendix A10. In each case, the RFD Scenarios utilized in the BLM's air analysis are higher than the scenarios in Table 4-2 and Appendix A10. For example, the air quality RFD Scenario anticipates 6,456 wells under Alternative 3, while the RFD Scenario for Alternative 3 in Table 4-2 and Appendix A10 is only 5,924 wells. The BLM must explain and correct this inconsistency.)

Response: BLM does not believe that this is inconsistent.

Comment: PAGE: 2-113 SECTION: 2.5.5 Air Quality RECOMMENDED CHANGE: Add the following to Actions: Roads that provide access to more than 3 wells will be treated with magnesium chloride or paved; roads that serve more than 50 wells will be paved. EXPLANATION: The local governments agree with the objective of reducing particulate pollution but none of the actions listed supports that goal. Dust in the area is a serious issue both in terms of community health and aesthetics. While dust theoretically dissipates and levels may reach acceptable WY NAAQ levels with 24 hour and monthly time periods, they still represent a significant deterioration in air quality. BLM needs to address the fact directly by reducing dust levels in the oil fields by paving the dirt roads.

Response: BLM does not have the regulatory authority to force this kind of mitigation. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

Comment: Appendix 19 discusses production of NOx and SO2 air pollutants that can cause acid deposition in surface waters downwind from the PRA. However, it merely "describes the processes used to conduct the air quality impact assessment." It does not include any proposed management direction to avoid, minimize or mitigate impacts to water quality from air pollution deposition. Nor does this Technical Support Document evaluate impacts associated with deposition of air pollutants into surface waters. Appendix 19 (page A19-11) does show SO2 emissions reached or exceeded National Ambient Air Quality Standards over 3-hour intervals, but no attempt was made to correlate emissions of that pollutant or other depositional pollutants that are produced by NOx and SO2 emissions (e.g., nitric acid, nitrate, ammonium). Even if these pollutants do not exceed NAAQS limits, they can still adversely impact surface waters and aquatic communities. The BLM must adopt strong management direction to address this problem.

Response: Levels of concern (LOCs) of deposition do exist for high elevation lakes in the Bridger Wilderness (3 kg/ha/yr for N and 5 kg/ha/yr for S). These LOCs are monitored regularly. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern. Appendix 19 of the draft EIS will be updated in the final EIS.

Comment: PAGE: 4-6, SECTION: 4.2.3, RECOMMENDED CHANGE; REVISE Several of the resource areas listed below (air quality monitoring, cultural management, paleontology, special management areas [SMA], livestock grazing, wild horses, wildlife and fish, socioeconomics) would have minimal impacts on air quality (refer to Figure 4-1 and Tables A19-6, A19-7, and A19-8 in Appendix 19). EXPLANATION: If wildlife with hunting and vegetation management has minimal impacts on air quality then so does livestock grazing. The related activities, such as vehicle trips, are very similar.

Response: It is BLM's practice to estimate emissions using assumptions that are reasonable but conservative or most likely. The tables will be updated in the final EIS.

Comment: PAGE: 4-6 TO 4-7, SECTION: 4.2.3, RECOMMENDED CHANGE: 4-7 Revise Section Entirely to Distinguish between point source pollution and nonpoint sources. This section mixes the two, omits other equally significant sources of dust and emissions, such as short term air quality impacts for wildlife habitat management and recreation use, such as hunting or fishing. EXPLANATION: The FEIS needs to treat wildlife habitat management equally with logging, and construction and vehicular travel associated with livestock grazing. The limited travel with livestock grazing is similar to WGFD management and enforcement and less than recreation use for hunting and fishing. WGFD travel throughout the planning area to monitor management, and enforce fish and game laws. This section would be more accurate and less biased, if it followed the distinctions between nonpoint and point sources of air pollution. DEIS mixes activities regulated as a new source, with activities regulated under ambient air quality rules. The latter are not considered sources but rather contributors. Moreover, the section treats the impacts between vehicular use for livestock grazing as equally significant to fire emissions, when they are not.

Response: It is BLM's practice to estimate emissions using assumptions that are reasonable but conservative or most likely. The emission inventory was designed to focus on potential impacts from BLM activities.

Pinedale Area Air Quality

Comment: The air quality in the Denver-Julesburg basin, near here has recently undergone a dramatic decline because of accelerated existing gas production, as has a significant portion of the Green River plateau/valley area. Research documents a significant decline in the both mule deer herds and sage grouse populations that winter in the Upper Green. The predicted increase in new gas production over the next 10-15 years denies America's responsibility for the stewardship of our land.

Response: BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: The air over the Upper Green has already been visibly affected by industrial pollution from existing gas rigs. Researchers have noticed significant declines in the mule deer herds and sage grouse populations that winter in the Upper Green. Tripling the number of gas wells over the next 10-15 years would simply make the problems worse.

Response: BLM will continue to comply with all air quality laws, rules, and regulations. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

It is important to note that current concentrations of criteria pollutants are in compliance with the WAAQS and NAAQS (with the exception of ozone). Therefore an increase in the concentration of a

particular pollutant is not necessarily a significant impact. Provided that concentrations remain in compliance with the standards, significant impacts would not occur.

Comment: It would be a travesty if the BLM allows the air quality to continue to deteriorate in and around the Pinedale area. What will it take - smog over Yellowstone perhaps? - to moderate drilling or impose emissions standards on the drilling in Sublette County? There are already published studies documenting the deteriorating air quality in the region. Again - if the BLM is not going to be concerned and take a stand for the air quality in the region who will? It is the BLM's job to safe-guard and protect our public lands and natural resources.

Response: WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: The air quality of the region must be protected, as there has already been a significant decrease in air quality over the past few years. (Snow mobiles in the USNPS lands is another issue!) In order to sufficiently protect the air quality of the Upper Green River Valley, the resource management plan should mandate air emission controls and establish a stringent emissions cap. It should also eliminate loopholes to waive surface protections, and strictly define management objectives and monitoring and mitigation measures.

Response: WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: If drilling is so safe, ask yourself why the signs by the gas rigs on the Jonah field and Anticline say, "Warning Benzine, Cancer Hazard. Respirator Required". This is the air we are breathing. I invite you all to come to the Rim and see the brown sunrise as I look towards Pinedale.

Response: BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern. Occupational Safety and Health Administration regulations will apply to all drilling operations.While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: Of the nine wilderness regions and two national parks that lie within the area of, or are in danger of effects from, the gas development (Upper Green and Greater Yellowstone Ecosystem), seven are designated Class 1 Air Sheds under the Federal Clean Air Act. The areas could be affected by prevailing winds at different times of the year. Most importantly, the summer months when drilling activity is highest is also the period when winds travel most often toward the Wind River Class 1 Air Shed and the other Class 1 regions further north. Already local residents of and visitors to the Upper Green River Valley have noticed a particulate haze or smoke-like air conditions at certain times, directly attributable to the huge uptick in drilling activities seen in the past few years in the region. Moreover, we read in an environmental publication not too many months ago that residents of both Dakotas have

observed air pollution that had not previously been present, believed to be the result of certain patterns of winds carrying pollution from the rapidly-expanding oil and gas development in western Wyoming.

Response: BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: I would also ask that the BLM reconsider their monitoring and enforcement of the air and water quality. These standards have not even been a part of the BLM management strategy yet the air and water quality of Sublette county has undeniably declined with the ever-increasing free emissions of carbon dioxide and methane gases.

Response: WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: Air quality in Sublette County has been degraded, largely by mineral development. The BLM has not accepted responsibility for halting this problem. Nor is anyone else halted this problem. What is your solution? This has had an especially adverse effect on visibility and water quality in the lakes in the Bridger Wilderness,

Response: WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: As the largest community in Sublette County, the Town remains concerned about further degradation to our air quality. If the RMP does not provide for stringent air quality protections (which the draft EIS doesn't), and our county's air quality is found in violation of the Clean Air Act, it could affect other development (non-energy type of development) in the town. We understand from air quality experts that the county is very close to exceeding NAAQS for Ozone. If Sublette County is declared in non-attainment for Ozone, it could restrict our ability to grow through development activities and provide services to our residents. Because air quality has a direct affect on public health, we ask that the BLM meet all the analysis required under the National Environmental Policy Act and the Federal Land Policy Management Act.

We ask also that the BLM acknowledge and address the already existing and predicted air pollution impacts in the Pinedale RMP area. The BLM also must analyze the cumulative affects of RMP development in our area. The BLM also should make plans to protect and restore air quality degradation that has already occurred.

Response: WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis.

BLM recognizes that ozone concentrations are a serious concern. WDEQ-Air Quality Division (AQD) is currently conducting a monitoring and modeling study of ozone in the Green River Basin. NO_x and volatile organic compound (VOC) mitigation measures applied to reduce visibility impacts may also help reduce ozone concentrations. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

Comment: Regional Haze: The Pinedale DSEIS showed extensive, existing visibility impairment as well as predicted visibility problems due to the planned development in the area, both of which were largely ignored in the document. Under current plans, the visibility degradation that has already taken place, especially in the Bridger Wilderness Area, will not be reversed. Despite flawed emission inventories that likely underpredicted impacts, the Jonah and Pinedale EISs both predicted additional visibility impacts under most of the development scenarios but these EISs failed to present any type of enforceable plan that would reverse these trends. Please see our March 26, 2007 comments on the draft Pinedale SEIS for a detailed review of the current and predicted visibility problems in the area. This Draft EIS/RMP should not follow that same pattern by continuing to ignore the troubling visibility problems that are already occurring in the Class I and II areas in Wyoming. Under the section heading "Air Quality Impact Assessment" of the Air Quality TSD, the BLM explains the use of a 1.0 deciview (dv) change in visibility analyses. Although mention was made that perceptible changes in visibility could occur at levels lower than 1.0 dv, we would like to reiterate past comments to the BLM on the importance of the 0.5 dv threshold for determining visibility impairment. The BLM has used a change of 1.0 dv to denote visibility impairment in EIS documents (see the Jonah Infill and Pinedale EISs), a threshold of 0.5 dv is much more protective of visibility in Class I areas. The Clean Air Act and subsequent EPA regulations also point to the importance of a 0.5 dv threshold. "Visibility impairment" is defined by the Clean Air Act as a reduction in visual range and atmospheric discoloration.15 Under the regional haze regulations states are required to consider a change of 0.5 dv for determining Best Available Retrofit Technology (BART) eligibility for stationary sources.16 Furthermore, the BART rulemaking stated that "changes in light extinction of 5% will evoke a just noticeable change in most landscapes."17 Please see our March 26, 2007 comments on the Pinedale Anticline DSEIS for more detailed comments on this issue.

Response: Comparisons of potential visibility impacts are included in both the Jonah EIS and the Pinedale Anticline Supplemental EIS. Please refer to these documents. It is BLM practice to estimate emissions using assumptions that are reasonable but conservative or most likely. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

Legal Compliance

Comment: It is clear to me that they should not be pushing this process forward without first demonstrating that the development to date has been in compliance with federal law. Table 4-18 in the Cumulative Impacts section is particularly damning. It says that that the area currently exceeds particulate and nitrogen dioxide limits under the Prevention of Significant Deterioration (PSD) air permit. That is federal law and they must meet it - not optional. Bottom line - if the area doesn't meet the air quality standard today and they are still infilling down at Jonah then why should they be allow to even talk about future development?

Response: WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

Comment: With respect to potential visibility impacts, the BLM's authority is particularly limited. Under the Clean Air Act ("CAA"), a federal land manager, like the BLM, has only minimal authority to consider whether a "proposed major emitting facility will have an adverse impact" on visibility within designated Class I areas. 42 U.S.C. § 7475(d)(2)(B) (2006). Oil and gas fields are not major emitting facilities as defined by the CAA and therefore do not trigger the BLM's limited authority. See 42 U.S.C. § 7479(1); 40 C.F.R. §§ 51.166(b)(1), 52.21(b)(1) (2006). Under the CAA, the regulation of potential impacts to visibility, and authority over air quality in general, rests with the Wyoming Department of Environmental Quality ("WDEQ"). 42 U.S.C. § 7407(a) (2006). The goal of preventing impairment of visibility in Class I areas will be achieved through the regional haze state implementation plans ("SIPs") that are being developed under regulations issued by the EPA. See 42 U.S.C. § 7410(a)(2)(J) (2006). Although federal land managers with jurisdiction over Class I areas may participate in the development of regional haze SIPs, the BLM has no such jurisdiction in Wyoming because it does not have management authority over Class I areas. See 42 U.S.C. § 7491 (2006). Accordingly, the BLM has no authority over air quality or visibility, and cannot directly or indirectly impose emissions restrictions on natural gas operations in southwest Wyoming, particularly with the intent to reduce potential visibility impacts.

Given these limitations, the BLM must revise its air quality management objectives in Section 2.3.1 and must eliminate or substantially review its air quality management goals and objectives under Alternatives 2, 3, and 4. One of the BLM's proposed Management Goals under Alternatives 2, 3, and 4, is to "minimize the impact of management actions in the planning area on air quality by complying with all applicable air quality laws, rules, and regulations. Implement management actions in the planning area to improve air quality as practicable." See RMP DEIS, pgs. 2-50, 2-75 - 76, 2-113 - 114. Because the BLM cannot regulate air emissions, this goal is inappropriate and potentially illegal. The BLM cannot attempt to impose air emission regulations through its normal management responsibilities. Further, even assuming the Management Goal is within the BLM's authority, the Management Goal is poorly worded and could lead to increased litigation. Opponents to natural gas development could, and likely would, suggest the Management Goal precludes the BLM from authorizing any actions that may lead to increased emissions within the planning area. Opponents to natural gas development have relied on similar language in the Pinedale RMP and Buffalo RMP to suggest that BLM has an affirmative duty to protect air quality and therefore is entitled to regulate emissions from oil and gas projects. The BLM must revise its Management Goal under Alternatives 2, 3, and 4. The BLM should include clear language in the RMP disavowing any attempt to regulate air emissions or air quality in the planning area.

Response: BLM has made it clear that WDEQ has regulatory authority. It is reasonable for BLM to coordinate with WDEQ, a cooperating agency in this RMP effort, to align BLM management goals with WDEQ monitoring and enforcement responsibilities.

Comment: In many cases the data do not reflect observed shifts in air quality. The lack of measurable data that permeates the Draft EIS apparently stems from an inability to measure quantitatively. The BLM opted to use a qualitative emission approach as opposed to a quantitative approach regarding impacts on air quality, with several reasons: "(1) sufficient specific data were not available on future projects, (2) there was limited time available to complete the analysis, (3) quantitative analysis will be required as development projects are defined in the future, and (4) WDEQ-AQD will require demonstration of compliance with federal and state air quality regulations and standards for any future development projects" (DEIS A19-29). In order to comply with the Clean Air Act, however, the BLM must conduct a quantitative analysis of the air quality impacts. FLPMA requires that quantitative impacts be incorporated into the RMP, requiring that, "In the development and revision of land use plans, the Secretary shall… provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans…" (43 U.S.C. §1712(c)(8)). It would appear that, without doing the necessary quantitative air quality analysis, the BLM is out of compliance with both FLPMA and the Clean Air Act.

Response: The RMP will not authorize any on-the-ground activity. Site-specific NEPA analysis of development projects such as the Jonah and Anticline gas fields provide specific air quality and emission analyses. NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: There are means to prevent such air degradation and pollution and cost should not be a problem since the companies involved in the development and production of the gas and oil are making a ton of money. And it now appears that information indicates further deterioration of air quality will occur if the Jonah Infill Expansion Project is approved. There will be such bad air that the public will be excluded because of health threats. How can this be when there are laws on the books to prevent this kind of degradation? The BLM may not be responsible for air quality regulation but it certainly controls the extent and pacing of development which leads to the serious deterioration of air quality.

Response: WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: During development of the RMP, the DEQ Air Quality Division (AQD) agreed with BLM that quantifying emissions and qualitatively addressing potential air quality impacts was appropriate to provide the basis for alternative comparison within the RMP, so long as quantitative air quality impact analyses would be performed at the project level prior to project approval. Since that time, it has become evident that project-specific air quality impact analyses would be eliminated if oil and gas wells are authorized through Categorical Exclusion 3 under Section 390 of the 2005 Energy Policy Act upon approval of the RMP.

The AQD finds that the RMP air quality analysis is not specific enough in the absence of quantitative air quality impact analyses to adequately address air quality impacts from oil and gas development. The AQD is raising this issue with respect to the Pinedale RMP where individual oil and gas development projects within the Pinedale Field Office area are likely to be concentrated and of greater intensity. The AQD will also be raising this issue with respect to other RMP revisions where individual oil and gas development projects are likely to be both widely separated throughout the planning area as well as concentrated and of greater intensity. While the level of reasonably foreseeable oil and gas development varies for each RMP, potential air quality impacts are of concern to the AQD for each RMP revision.

Response: Under the Energy Policy Act of 2005, the U.S. Congress granted federal agencies the ability to use a "Categorical Exclusion" to eliminate further NEPA analyses for the purpose of exploration or development of oil or gas for the following activities:

1. Individual surface disturbance less than 5 acres *and* total lease surface disturbance is less than 150 acres *and* a site-specific NEPA analysis has previously been completed;
2. Drilling a well at a location where drilling has already occurred less than 5 years previously;
3. Drilling a well within a developed field where it was included as a reasonable foreseeable activity in a previous NEPA analysis less than 5 years previously;

4. Placement of a pipeline in an approved right-of-way corridor, IF the corridor was approved less than 5 years previously; or

5. Minor maintenance (*not* construction, major renovations, buildings, or facilities).

None of these "exclusions" apply to ancillary facilities such as well pumps, separators/dehydrators, tanks, haul trucks, or compressors. In addition, the U.S. Congress did not require the use of these "Categorical Exclusions."

In most cases, existing Council of Environmental Quality (CEQ) regulations allow these activities to proceed without additional NEPA analysis through the use of "tiering" and/or "referencing." This is clearly the case for activities 1 and 3 — an existing analysis is likely to be sufficient for similar future proposals. Under activity 2, the first well on site would have been subject to a full NEPA analysis, which could be "referenced" by similar future well drilling. Under activity 4, the original right-of-way approval would have been subject to a full NEPA analysis, which would have included potential construction and operation impacts. Finally, minor maintenance (activity 5) is likely to have been included in the previous relevant NEPA analysis and record of decision.

Comment: When specific oil and gas development is identified at the implementation stage, the AQD expects the BLM to conduct quantitative air quality impact analyses that are proportional to the type (e.g., coalbed natural gas, oil or gas) and intensity (i.e., development pace and scale) of the project based on the locations and emission levels of proposed project sources, surrounding geographical and topographical characteristics, and the site-specific meteorology. The quantitative air quality impact analyses should be conducted to estimate impacts to air quality (e.g., ambient air quality standards) and air quality related values (e.g., visibility, atmospheric deposition). If the quantitative air quality impact analysis shows that significant impacts are possible, air quality mitigation measures must be considered. If such a need becomes evident during the life of the RMP, the AQD expects the BLM to consult with AQD on the necessary air quality impact analyses and mitigation measures. Without the above quantitative air quality analysis, it is the AQD's position that a RMP could be in violation of the National Environmental Policy Act and the associated Council on Environmental Quality regulations.

Response: Under the Energy Policy Act of 2005, the U.S. Congress granted federal agencies the ability to use a "Categorical Exclusion" to eliminate further NEPA analyses for the purpose of exploration or development of oil or gas for the following activities:

1. Individual surface disturbance less than 5 acres *and* total lease surface disturbance is less than 150 acres *and* a site-specific NEPA analysis has previously been completed;

2. Drilling a well at a location where drilling has already occurred less than 5 years previously;

3. Drilling a well within a developed field where it was included as a reasonably foreseeable activity in a previous NEPA analysis less than 5 years previously;

4. Placement of a pipeline in an approved right-of-way corridor, IF the corridor was approved less than 5 years previously; or

5. Minor maintenance (*not* construction, major renovations, buildings, or facilities).

None of these "exclusions" apply to ancillary facilities such as well pumps, separators/dehydrators, tanks, haul trucks, or compressors. In addition, the U.S. Congress did not require the use of these "Categorical Exclusions".

In most cases, existing CEQ regulations allow these activities to proceed without additional NEPA analysis through the use of "tiering" and/or "referencing." This is clearly the case for activities 1 and 3 — an existing analysis is likely to be sufficient for similar future proposals. Under activity 2, the first well on site would have been subject to a full NEPA analysis, which could be "referenced" by similar future well drilling. Under activity 4, the original right-of-way approval would have been subject to a full NEPA analysis, which would have included potential construction and operation impacts. Finally, minor maintenance (activity 5) is likely to have been included in the previous relevant NEPA analysis and record of decision.

Comment: The BLM has put forth four proposed alternatives as part of this draft EIS/RMP. The preferred alternative (4) does not come close to satisfying the BLM's responsibility to ensure no significant environmental impacts and to "provide for compliance" with the Clean Air Act. Even alternative 3, which is the most protective of the environment, is not close to being adequate because it allows for continued growth in emissions when there are existing visibility problems, predicted PSD increment violations, exceedances of the ozone standard and values approaching the national ambient air quality standards (NAAQS). The BLM must put forth an alternative that ensures no significant impacts and full compliance with the Clean Air Act. This would include one that reverses the impacts on visibility that are already occurring in most of the nearby Class I areas, including the Bridger Wilderness and Fitzpatrick Wilderness areas, and Grand Teton National Park. An acceptable alternative should also prevent significant deterioration of air quality in the planning area and ensure no violations of the ozone NAAQS. Attached are more detailed comments on the important elements of air quality protection, which this Draft EIS/RMP is lacking.

Response: BLM believes that the alternatives have been rigorously explored given the level of information that was available. BLM has taken the initiative to evaluate cumulative BLM activities on a larger scale. Also, BLM quantifies impacts for site-specific projects where data on specific activities are known. NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology.

Comment: Under NEPA, the BLM has obligations to assess and report the cumulative impacts of expected emissions in the Pinedale area on the National Ambient Air Quality Standards (NAAQS), prevention of significant deterioration (PSD) increments, and air quality related values (AQRVs), and to identify alternatives or other mitigation measures sufficient to prevent expected violations of NAAQS, PSD increments and adverse impacts on AQRVs (e.g., visibility impairment). NEPA also mandates that the preparation of an environmental impact statement be done with "scientific integrity" and requires that information be collected as needed unless the costs would be exorbitant or the means to do so are unknown. Furthermore, the Federal Land Policy and Management Act (FLPMA) mandates that, "In the development and revision of land use plans, the Secretary shall . . . (8) provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans…" (43 U.S.C. § 1712(c)(8); See also 43 CFR § 2920.7(b)(3) (requiring the same for land use authorizations). In order to meet its obligation under FLPMA to "provide for compliance" with the requirements of the Clean Air Act (CAA), the BLM must conduct a quantitative analysis of the air quality impacts in the Pinedale area.

Furthermore, the language in NEPA requires that the federal government "(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on -- (i) the environmental impact of the proposed action,…" (42 USC § 4332) To provide further details for this requirement, the BLM's planning regulations in the Code of Federal Regulations (CFR) mandate that the analysis of the effects of alternatives "will estimate and display the physical, biological, economic, and social effects of implementing each alternative considered in detail." Although the regulation later

concedes that, "The estimate may be stated in terms of probable ranges where effects cannot be precisely determined,"1 the BLM actually can determine the air quality impacts of the alternatives in the Pinedale Draft EIS/RMP. Full analyses have already been conducted for the Jonah and Pinedale Anticline Fields, which together make up two-thirds of the planned oil and gas development for the entire Pinedale RMP area.2

Response: BLM believes that the alternatives have been rigorously explored given the level of information that was available. BLM has taken the initiative to evaluate cumulative BLM activities on a larger scale. Also, BLM quantifies impacts for site-specific projects where data on specific activities are known. NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology.

Wildlife and Wilderness

Comment: The Wyoming Wilderness Association is also very concerned about the air quality impacts on adjacent designated and future Wilderness Areas. The acidification of our lakes and streams is happening along with the decline in visibility—all directly related to the industrialization of the Green River Valley. It is evident that certain mitigations are taking place, such as paving or treating roads to keep the dust down, but the enforcement and continuation of treatments must be monitored and acted upon. Compressor stations, construction, venting, fires/flares, auto and truck emissions plus more are all contributors in an industrialized landscape. Industry must use cleaner vehicles, put scrubbers on any generator stack, not be allowed to vent gases or flare off wells, no dust tolerance policy in place and other mitigations must be implemented, or the Wilderness Act and Clean Air Act will be enforced legally.

Response: BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: The Wind River Wilderness, as I understand, is federally classified as a Class 1 Air Shed, and therefore must legally be maintained in a pristine state. The extent of drilling allowed under the so- called preferred alternative would clearly impact the air negatively. If any of BLM's data collection practices in the past are indicative of the quality of information gathering on air quality, the air shed is in trouble. Some of the maps they use at their public presentations are inaccurate, as some of the BLM people admitted to me. And they don't even have an air quality map showing how and to what degree the air of surrounding areas will be affected. I've previously encountered several blatant inaccuracies on some of their other resource mapping. A plan as far reaching and long lasting as this one cannot be allowed to be done based on inaccurate, poor information or trickery of the public at large. The BLM needs to get good information on every resource and how they will be affected by oil and gas drilling prior to finalizing any new RMP. They will be seriously neglecting their Jobs and our Federal land which we ALL own if they don't.

Response: The best available data were used to prepare the draft EIS and final EIS. Visibility impact maps do not exist. However, visibility information on the Bridger Wilderness is in Table 3-2 of the draft EIS. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

Comment: The preferred alternative certainly does not protect the longest wildlife migration corridor in the continental U.S., that of the pronghorns. It's a bad management plan for the Upper Green, that would have devastating effects on migrating herds, on native wildlife, and on the local communities already threatened by increasingly polluted air, ruined landscapes, and unchecked sprawl. That is simply not acceptable. Following we cite facts and scientific research that give credence to our concerns. Of the nine

wilderness regions and two national parks that lie within the area of, or are in danger of effects from, the gas development (Upper Green and Greater Yellowstone Ecosystem), seven are designated Class I Air Sheds under the Federal Clean Air Act. The areas could be affected by prevailing winds at different times of the year. Most importantly, the summer months when drilling activity is highest is also the period when winds travel most often toward the Wind River Class I Air Shed and the other Class I regions further north. Already local residents of and visitors to the Upper Green River Valley have noticed a particulate haze or smoke-like air conditions at certain times, directly attributable to the huge uptick in drilling activities seen in the past few years in the region. Moreover, we read in an environmental publication not too many months ago that residents of both Dakotas have observed air pollution that had not previously been present, believed to be the result of certain patterns of winds carrying pollution from the rapidly-expanding oil and gas development in western Wyoming.

Response: BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern. BLM believes the alternatives have been rigorously explored given the level of information that was available.

BLM has taken the initiative to evaluate cumulative BLM activities on a larger scale through the State of the Atmosphere model. This quantification will be performed annually; with the first report due by mid 2008. Also, BLM quantifies impacts for site-specific projects where data on specific activities are known.

Adequacy of Analysis

Comment: • BLM can and should conduct a quantitative analysis of air quality impacts and issues as a component of the RMP revision process.• BLM has failed to adequately consider and utilize existing air quality analyses applicable to the Pinedale Field Office, including the Pinedale Anticline Draft Supplemental EIS and the Jonah Infill EIS. • The numerous severe impacts to air quality, such as exceedances of the ozone standard and modeled violations of Class II increments, that are occurring in the Pinedale Field Office are not adequately considered or addressed in the RMP DEIS.

Response: NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology.

Modeling is more appropriately conducted at the project implementation level, such as for the Jonah and Anticline EISs, where BLM has a specific proposal and information on well numbers, placement, and methods to conduct the modeling. BLM has included air quality information from the Pinedale Anticline Draft Supplemental EIS and Jonah EIS, as appropriate, in the final EIS. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Comment: • The BLM's air quality emissions inventory is inadequate.

Response: In concert with the air quality advisory group, the emissions inventory used best available data and accepted emissions factors.

Comment: This Draft EIS/RMP does not adequately analyze the air quality impacts that could occur as a result of the actions authorized under the Pinedale RMP, therefore, failing to comply with the National Environmental Policy Act (NEPA) and the Federal Land Policy Management Act (FLPMA). The air emissions estimates included in the Draft EIS/RMP are not an acceptable replacement for a quantitative assessment of the environmental and public health impacts resulting from an increase in air pollution in an area already heavily impacted by the adverse effects of increasing development. The BLM states throughout this document that specific information on air pollution and impacts analyses is not available and consequently the analysis is only qualitative. However, because the BLM is in the process of

approving several specific development projects in the Pinedale RMP area the BLM already has exact data as to where the oil and gas fields (the primary air pollution source in the area) are as well as expected emissions information for these projects.

Response: NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology. The RMP will not authorize any on-the-ground activity. Specific analysis of air quality impacts, including modeling, is conducted at the field development or project EIS stage, as in the Jonah and Pinedale Anticline EISs.

Comment: Providing even more detail, the BLM's own Land Use Planning Handbook explains that the analysis of alternatives in the draft EIS/RMP must …provide adequate information to evaluate the direct, indirect, and cumulative impacts of each alternative in order to determine the best mix of potential planning decisions to achieve the identified goals and objectives (the analysis should also specifically address the attainment, or nonattainment, of Land Health Standards expressed as goals). The assumptions and timeframes used for analysis purposes (such as reasonably foreseeable development scenarios) should be documented.3 The BLM has not evaluated the air quality impacts in the Pinedale area as described in the Land Use Planning Handbook because they have only evaluated emissions. The only way to evaluate actual air quality impacts is to conduct an air quality modeling analysis for the area. The draft EIS/RMP should show predicted concentrations (not just predicted emissions) in order to determine compliance with CAA requirements. This is the only way in which the BLM can show compliance with air quality standards as decreed by FLPMA in 43 U.S.C. § 1712(c)(8), as cited above.

Response: BLM believes that the alternatives have been rigorously explored given the level of information that was available. BLM has taken the initiative to evaluate cumulative BLM activities on a larger scale. Also, BLM quantifies impacts for site-specific projects where data on specific activities are known. NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology.

Comment: Fine Particles: Chapter 3 of the Draft EIS/RMP and the Air Quality TSD reference the recent changes to the federal standard for fine particles (PM2.5) and state that the rule is not yet final, (see Chapter 3, 3-4 and the Air Quality TSD at A19-5). This rule is now final; EPA 15 42 U.S.C. § 7491(g)(6). 16 70 Fed. Reg. 39104, 39120. 17 69 Fed. Reg. 25184, 25194. 8 published a final rule on October 17, 2006 with an effective date of December 18, 2006 (see 71 FR 61144). Therefore, the language in this RMP should be changed to reflect the new, more stringent PM2.5 rule that lowered the 24-hour PM2.5 standard from 65 ìg/m3 to 35 ìg/m3. Additionally, Tables 3-1 of Chapter 3 and A19-3 in the Air Quality TSD, which cover the background concentrations used in the Draft EIS/RMP, should be revised to show the percentage of the new PM2.5 standard achieved in the Pinedale area. The EPA revised the PM2.5 standard because scientific information showed that the pollutant is a health concern at levels lower than what the previous standard allowed. Fine particles of 2.5 microns in size or smaller (PM2.5) are inhalable and can be lodged in the lungs or can enter the blood stream, worsening the health of asthmatics and even causing premature death in people with heart and lung disease. Fine particles are also the major contributor to visibility impairment. Please see EPA's staff paper on particulate matter (see EPA-452/R-05-005a, December 2005) as well as their Air Quality Criteria Document for Particulate Matter (see EPA/600/P-99/002aF and EPA/600/P-99/002bF, October 2004) for detailed information on health effects.

The background concentrations for PM2.5 for this Draft EIS/RMP are from data collected in the Jonah Infill development area, 40 miles northwest of Farson, Wyoming. The 24-hour average concentration used by the BLM is 18 ìg/m3, a concentration that is over 50% of the revised 24-hour NAAQS. The annual average concentration used by the BLM is 6.5 ìg/m3, a concentration that is 43% of the annual NAAQS. In fact, the monitoring site in Pinedale, Wyoming has recorded even higher PM2.5 concentrations. Specifically, the 98th percentile 24-hour average at this site in 2005 was 24 ìg/m3, a

concentration that is 69% of the 24-hour NAAQS. Unless the BLM can demonstrate why this higher concentration does not represent typical background concentrations in the area, the BLM must use the higher concentration as a more conservative background concentration when determining compliance with the NAAQS. Since the area has already experienced ambient concentrations that are 69% of the short-term PM2.5 NAAQS it is imperative that the BLM not allow for growth in the planning area that will result in significant fine particle emissions. Major sources of fine particles include fugitive dust from construction activities and travel on unpaved roads and combustion emissions (e.g., compressor engines and drill rig engines used during oil and gas development). Even if the BLM assumes that background concentrations in the area are already at 50% of the short-term PM2.5 NAAQS, the amount of growth allowed under any of the alternatives in this Draft EIS/RMP are cause for great concern with respect to potential future violations of the PM2.5 NAAQS unless the BLM can drastically reduce the amount of fine particle emissions from oil and gas development. The BLM is proposing to allow for a 242% increase in annual average PM2.5 emissions between the base year (2001) and 2021. See Draft EIS Appendix 19 Table A19-11, Alternative 4 (preferred alternative). If the ambient PM2.5 levels in the area are already almost 70% of the 24-hour PM2.5 NAAQS and over 40% of the annual PM2.5 NAAQS this plan has the potential to cause 9 future violations of the PM2.5 NAAQS, depending on where the growth in emissions occur. And in fact, even Alternative 3 allows for significant increases in annual average PM2.5 emissions (178%) for the same time period. The only way to know for sure if there is the potential for NAAQS violations is for the BLM to model these proposed increases in emissions and assess their impacts on ambient air concentrations in the planning area. Only then can the public be assured that the air quality in the planning area will continue to meet air standards. If the BLM is going to allow growth in oil and gas development in the area it must also establish strict and enforceable measures to control fine particle emissions from these sources so that the area continues to be in compliance with the PM2.5 NAAQS.

Response: This typographical error has been corrected in the final EIS. WDEQ determines which data set to consider as background, based on a quality assurance (QA) review, period of record, etc. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern. NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology.

Comment: Hazardous Air Pollutants-- The Draft EIS/RMP Air Quality TSD includes language stating that, “Because this analysis is qualitative, no specific impact analyses of either short- or long-term hazardous air pollutant (HAP) impacts are conducted,” (Appendix 19, A19-3). As explained above, the Pinedale Draft EIS/RMP should include a quantitative analysis of all air quality issues, and specifically, HAPs should be analyzed quantitatively in the Draft EIS/RMP. This section goes further to explain that, “HAPs emissions are expected to be similar to those found in other EISs and to be composed of benzene, toluene, ethylbenzene, xylene, n-hexane, and formaldehyde,” (Appendix 19, A19-4). Relying on analyses from past EIS documents for HAPs analysis is a flawed approach for a number of reasons, one reason being that previous EISs did not even include all the important pollutants in their analyses. While HAP emissions will be similar in the area covered by the RMP as previous EISs for the Pinedale area, previous comments on draft EISs for the Pinedale Anticline and the Jonah Infill Project commented that 1,3-butadiene, secondary formaldehyde and diesel exhaust were left out of the analyses. These HAPs are important pollutants, with their own suite of concerns to human health and should indeed be included in air quality analyses for this Draft EIS/RMP. 1,3 butadiene is recognized as a known human carcinogen18 and is a product of the combustion of gasoline and diesel oil, among other things,19 so it is likely to be present in the Pinedale area from oil and gas development. In addition, the BLM seems to have only quantified primary formaldehyde emissions in previous EISs and not the contribution of other VOCs emitted from oil and gas development projects to the formation of secondary formaldehyde in the atmosphere downwind from the points of emission. Additionally, the BLM’s previous EISs for oil and gas development in the Pinedale area have entirely neglected the cancer risk associated with diesel

exhaust emissions from oil and gas development, which may be highly significant. EPA's health assessment for 18 U.S. Environmental Protection Agency, Integrated Risk Information System, http://www.epa.gov/iris/subst/0139.htm 19 U.S. Environmental Protection Agency, OAQPS, Locating and Estimating Air Emissions from Sources of 1,3-Butadiene, EPA-454/R-96-008, November 1996. 10 diesel exhaust found that long-term exposure poses lung cancer risks while short-term exposures can cause lung irritation and inflammation.20 Hundreds of heavy diesel trucks will be required to develop and operate in the fields, and well drilling will likely be done by large diesel powered drilling rigs. The BLM must disclose these potential impacts in association with the risks presented by formaldehyde and benzene emissions. Another problem with relying on HAP analyses conducted for previous EISs in the Pinedale area is that cumulative impact analyses were likely not conducted for these projects. Under NEPA, the BLM must disclose the cumulative impacts of the proposed project. Thus the Draft EIS/RMP, which is supposed to provide a cumulative assessment of current and future air quality for the Pinedale area does not include an accurate account of HAP impacts on the area. From past EIS documents, it appears that most of the BLM's estimates are only for incremental risk associated with the oil and gas projects, and would be imposed on top of existing health risks.

Response: BLM believes that a qualitative analysis of hazardous air pollutant (HAP) emissions is appropriate for a management plan of this scale. A detailed HAP analysis is conducted for project-specific EISs. NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology.

Comment: The various impacts to air quality, water quality, environmental quality, and wildlife the EIS uses current data to state that the current conditions and have not been exceeded by a certain percentage, but have these numbers appear that they have not been extrapolated out to the current proposal of over 3000 plus Wells. The EIS should provide extrapolation data of the current proposal to obtain a picture of the scale of impact that 3000 plus wells will do. With the current proposal, the environmental conditions of air and water quality should be properly modeled using computer software done by an outside private consulting firm who has experience at modeling ground water and air quality using current data and extrapolating the data to model future impacts and conditions. The modeling will help establish the true impacts more closely and address them at this time rather than take a wait-and-see and manage it and mitigate when it happens. For example, if one had a breach, in any one of the lagoons, how the plume and groundwater conditions would behave and if such an event happened, what kind of emergency action plan can be implemented to contain and mitigate the breach. Air monitoring can also be examined over a regional area to examine ht effects of the dynamics of weather, drilling and particulate matter from the current proposal.

Response: The RMP does not analyze any specific proposal or authorize any drilling activity. The RMP is an allocation document that establishes allowable uses over the Pinedale planning area. BLM can estimate the approximate impacts of a predicted number of wells, which the impact analysis in Chapter 4 does. NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology.

Comment: The BLM Must Prepare a More Thorough Emissions Inventory and Then Use the Inventory in a Dispersion Modeling Analysis to Evaluate the Potential Air Quality Impacts of the Proposed Management Plan-- As described in detail below, the BLM has failed to include all relevant sources in its inventories and has under-predicted emissions from sources it did include. --The Pinedale Anticline Emissions Inventories Assume Certain Emissions Controls That are Not Identified as Enforceable Mitigation Measures in the Draft EIS/RMP-- The BLM's emissions estimates for oil and gas development are based on a number of assumptions on emissions controls that must be made enforceable if they are to be the basis for the BLM's resource management plan. It is not a reasonable assumption that the emissions will be controlled to the extent indicated, unless the BLM will be imposing these reduction

requirements as enforceable mitigation measures in this Draft EIS/RMP. No commitment to establish federally enforceable limits has been made in the draft EIS/RMP. In Section 2.3.1 of the Draft EIS/RMP the BLM describes what air quality management measures the BLM will implement to meet the goals of the RMP.

Mostly, the BLM discusses its intent to cooperate with various agencies in the monitoring and collection of data. The last paragraph indicates that any "[s]pecial requirements to alleviate air quality impacts would be included on a case-by-case basis in use authorizations (including lease stipulations) within the scope of BLM's authority." Draft EIS/RMP at 2-6. Instead, as part of this Draft EIS/RMP the BLM must assess the direct, indirect and cumulative air quality impacts of all emissions sources affecting the planning area (i.e., model all relevant emissions to determine air quality concentrations throughout the planning area). If the emissions characterization from these sources is based on assumed controls then those controls must be established as enforceable mitigation 20 U.S. Environmental Protection Agency (U.S. EPA), Health Assessment Document for Diesel Engine Exhaust, May 2002, 1-3, available at http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=29060. 11 measures in the Draft EIS/RMP.

Only by modeling the impacts of emissions levels on air quality in the planning area will the BLM be able to establish mitigation measures that ensure air quality is protected. The following assumptions are not justified without being identified as mitigation measures and made enforceable by the BLM when finalizing this Draft EIS/RMP (one that is based on a quantitative modeling assessment of the impacts of these emissions on air quality in the planning area). Specifically, the emissions inventories presented in the Air Quality TSD assumed 50% control of all fugitive dust emissions from well pad construction and roads due to watering. See, for example, "Pinedale NG Gas Well 2001 Base Year 8-06.xls". A requirement to cut fugitive dust emissions in half through watering of construction sites and roads should clearly be specified in the Draft EIS/RMP if the BLM plans to base all planning decisions for resource development in the area on such a broad and ambitious assumption. In fact, it does not even appear to be a realistic assumption that all fugitive dust from construction and roads will be controlled by 50%. The Air Quality TSD admits that "[m]itigation measures are included in the emissions inventory that may not be achievable in all circumstances" and that "50% reduction in fugitive emissions is assumed based on construction road wetting on the unimproved access road to the pad and at the pad, but this level of effectiveness is characterized as the maximum possible." Air Quality TSD at A19-16. This apparently unrealistic assumption results in a significant under-prediction of PM emissions (up to 50%) and places an even greater emphasis on the importance of ensuring future compliance with the PM2.5 NAAQS. (See our previous discussion about possible future PM2.5 NAAQS violations under Fine Particles). The VOC inventories assume that 70% of condensate tanks will operate with a combustion chamber emission control device and that all well condensate production comes from "wells with BACT". See "Pinedale NG Gas Well 2001 Base Year 8-06.xls", "Assumptions" Worksheet. Furthermore, the NOx emissions from compression are based on the assumption that all gas compressors are equipped with BACT with an emission rate of 1 gram of NOx per horsepower-hour (g/hp-hr). See Assumptions in the emission inventory - "Pinedale NG Gas Well 2001 Base Year 8-06.xls".

There should be a discussion of Wyoming Department of Air Quality's BACT requirements and whether BACT would apply to all compressor engines under current state rules. Because BACT determinations are made on a case-by-case basis, there is no guarantee that similar BACT emission limits will necessarily be required for every compressor engine. Therefore, the BLM needs to provide justification that the emission limits assumed for compressor engines will be similar to, and not less stringent, than those assumed for the BLM's Pinedale Draft EIS/RMP inventory. Again, these low emission rates must be clearly documented in the Draft EIS/RMP if they are the basis for the BLM's analysis. If in fact these assumptions for emissions controls are not realistic, the resultant under-prediction of NOx and VOC emissions places an even greater emphasis on the importance of ensuring compliance with the ozone NAAQS through strict controls on NOx and VOC emissions sources. (See our previous discussion about

likely ozone NAAQS violations above). 12 All of the assumptions considered as mitigation from uncontrolled air emissions should be clearly detailed in the Draft EIS/RMP, so that government officials that will subsequently be authorizing actions under the resource management plan and issuing air quality permits for the air pollution sources will incorporate those mitigations into permits and other requirements to make sure the mitigations actually occur. Implementation of these measures will not be assured otherwise.

Response: NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology. WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

It is BLM practice to estimate emissions using assumptions that are reasonable but conservative or most likely. A BACT discussion has been added to the final EIS. However, applying BACT requirements is the prerogative of the WDEQ.

Comment: --The Pinedale DEIS/RMP Emissions Inventories Likely Underestimate NOx Emissions From Drill Rigs During Oil and Gas Development-- The 2001 Base Year inventory and the Alternative 1-4 inventories all calculate NOx emissions from drilling operations based on the use of 2 drill rigs per well pad, each 1,000 horsepower (hp). However, a single drill rig in the Pinedale Anticline area ranges in size from 3,000 to 5,000 hp (see the Pinedale Anticline DSEIS Air Quality Impact Analysis Technical Support Document, Appendix F, December 2006). For the Jonah II EIS, the drill rig size was assumed to be 1,000 hp but in practice, drill rig sizes have been 2.5 times that size. (See also, Greater Yellowstone Area Air Quality Assessment Update, prepared by the Greater Yellowstone Clean Air Partnership, April 2005, page 5). The BLM's assumptions about the number and size of drill rigs in the area appear to grossly underestimate emissions from this source. The BLM must use data for the size and number of drill rigs that are consistent with actual data from the Pinedale Anticline and Jonah Infill development areas, or other sources readily available to the BLM. Furthermore, the inventories are based on an average number of operating days, per well, of 16. This number appears to also be a gross underestimate of the kinds of drilling duration times currently occurring in the Pinedale Anticline and Jonah Infill development areas. In fact, in our comments to the BLM on the Pinedale Anticline Draft SEIS, we said that the proposed action emissions inventory does not appear to be based on long enough drilling activity duration times (i.e., the number of days it is predicted to take to drill one well) – and those drilling duration times were, on average 46 days per well. The drill rig inventories for the DSEIS were based on information provided by the operators for the number and type of drill rigs proposed for each year of development, power requirements (hp) and drilling activity duration (e.g., estimates for the number of drilling days per well and the number of hours per day of drill rig operation). We commented that the duration rate would need to average out to more like 57 days per well, instead of the 46 days per well, on average, that was modeled. This average number of drilling days is significantly higher than the 16 used in the Draft EIS/RMP. The BLM must use data that are more in line with what is actually occurring in the fields. NOx emissions from drill rigs accounts for about 40% of all NOx emissions in oil and gas development. The potential underestimation of NOx emissions from this source indicates that the potential for ozone impacts could be even higher. As stated previously, we believe that the development proposed in this Draft EIS/RMP does not ensure compliance with the ozone NAAQS. Higher potential NOx emissions make it all the more important that the BLM consider enforceable and meaningful ways to ensure the ozone NAAQS is protected.

Response: BLM agrees but believes that the emissions are still on the high side because tier 0 drill rig technology was assumed in the analysis, whereas tier 1-4 will be employed.

Comment: The Pinedale Draft EIS/RMP Does Not Include A Comprehensive Regional Inventory for Use in Determining Cumulative Air Quality Impacts In addition to the inventory of oil and gas activities, the Air Quality TSD includes a Wyoming Statewide Emission Inventory of state-permitted sources, Wyoming Oil and Gas Conservation Commission (WOGCC) permitted oil and gas wells and "RFD" 14 sources (authorized NEPA projects and NEPA projects not yet authorized but for which air emissions have been quantified). The inventory for these sources is summarized in Table A19-13. The BLM states that "[i]t is expected that these data will someday be integrated with the BLM emissions data to depict all emissions in the planning area and can be used for cumulative analysis. Also, this information will be needed if air dispersion modeling is performed in the area." This "Complete Inventory", as it is titled in the BLM's table, however, does not include anywhere near all of the sources with the potential to impact air quality in the same areas impacted by the planning area, as explained below:

State-Permitted Inventory – The state-permitted source inventory (WDEQ-AQD permitted sources) does not consider any sources operating prior to January 1, 2001, unless such sources obtained permits to modify between January 1, 2001 and June 30, 2003. The BLM must include all existing sources (including those in existence prior to January 1, 2001 as well as those in existence since June 30, 2003) that have the potential to impact the same area impacted by the Pinedale planning area. There are no details on the WDEQ-AQD permitted sources (i.e., which ones were included, etc.). However, assuming the same criteria were used as for the Pinedale Anticline DSEIS and the Jonah Infill DEIS then the state-permitted source emission inventory for Wyoming probably does not include any production sites with increases in emissions of less than 3 tons per year (TPY). In addition, it is likely that only production sites with emissions increases greater than 3 TPY where a single piece of combustion equipment emitted more than 2 TPY were included in the inventory. All other production sites were probably assumed to be included in WOGCC production estimates. And as with the other EIS inventories for southwest Wyoming, all other facility types (besides production sites) with emissions less than 1 TPY were probably also excluded from the Wyoming state-permitted source inventory. Collectively, these sources can represent significant emissions of NOx and, therefore, must be properly accounted for in the BLM's inventory. As described in our next comment, the WOGCC inventory does not appear to adequately account for these sources.

WOGCC Inventory – The WOGCC inventory only includes new sources since from January 1, 2002 to June 30, 2003 and only includes emissions of NOx (i.e., no PM, VOC or HAP emissions are quantified). An emission factor of 0.045 tons of NOx per year per was used to estimate NOx emissions from producing natural gas or coalbed natural gas wells. This factor is equivalent to the well emission rates calculated for the Jonah Infill Project in 2004. Air Quality TSD at A19-28. As mentioned above, the state-permitted source emission inventory for Wyoming probably does not include any production sites with increases in emissions of less than 3 TPY. However, it does not seem possible that these sources were included in the WOGCC inventory based on the number of wells permitted in the area during the inventory period. For example, according to the WOGCC website, there were 686 permits to drill issued in Sublette and Teton counties between January 1, 2002 and June 30, 2003. According to Table A19-12 WOGCC's total NOx emissions for these two counties are 2 TPY, which would mean that each well emitted, on average, 0.0029 TPY. Using an emission rate of 0.045 TPY per well for the 686 wells that received permits to drill would result in 15 times more NOx emissions than the inventory estimate. The BLM must make sure that all sources that were potentially excluded from the state-permitted inventory are adequately accounted for in the WOGCC inventory. It does not appear that this is the case. It appears that the regional inventory under-predicts NOx emissions from these sources. This limitation must be corrected, or at least explained. Furthermore, the WOGCC inventory did not include any estimates of PM,

VOC or HAP emissions from these production sites. This is a significant oversight to not include these emissions in the regional inventory.

RFD Inventory - The RFD inventory only includes NEPA-authorized and other quantifiable emissions since June 30, 2003. The BLM must include all reasonably foreseeable sources that could impact the same area impacted by the Pinedale planning area. The reasonably foreseeable development inventory only included NEPA-authorized projects and not-yet-authorized NEPA projects for which air emissions have been quantified and only includes data since June 30, 2003. Air Quality TSD at A19-28. The reasonably foreseeable projects inventory should have included all sources recently permitted or which have recently submitted complete PSD permit applications but which are not yet operating, that will have an impact on the same areas impacted by the Pinedale planning area. For example, several PSD permit applications have been submitted, and some permits have been issued, for coal-fired power plants to be located in areas that could impact the same areas as the Pinedale planning area. Coal-fired power plants can often have significant impacts on a Class I area even when located 200-300 km or more away from that area. Specifically, the following power plants were recently permitted or are proposed in the region: • The Wygen 2 and the recently permitted 100 MW Wygen 3 power plants near Gillette, Wyoming • The permitted 280 MW Two Elk power plant to be located in the Powder River Basin of Wyoming23 • The 385 MW Dry Fork power plant near Gillette, Wyoming (permit application submitted) • The permitted 780 MW Roundup power plant in southeastern Montana • The permitted 160 MW Hardin Generating Station, also in southeastern Montana • The permitted 250 MW Highwood Generating Station near Great Falls, Montana • The 110 MW Unit 2 at the Bonanza Power Plant in Uintah County in northeast Utah (EPA has recently proposed issuance of a permit) • The proposed 600 MW power plant in southern Idaho (Jerome County) 22 All permitted wells (oil & gas and coal bed), 1/1/02 – 6/30/03, see http://wogcc.state.wy.us/ 23 Although the Two Elk permit expired due to lack of construction, it was reissued in May 2003• The proposed 520 MW power plant in southeastern Idaho near Pocatello All of these power plants have the potential to impact the same Class I areas that are impacted by the Pinedale planning area and, therefore, must be included in the BLM's regional inventory. In addition, the BLM must include in the regional inventory any other new or modified sources, other than power plants, proposed in the region.

The regional inventory must also include any emissions from NEPA projects in other states that could be impacting the same area as the Pinedale planning area. There are several NEPA-approved projects in the area with remaining emissions that should be included in the RFD inventory. These include Vernal (Utah) sources, Price (Utah) RMP sources, Roan Plateau (Colorado) RMP sources, projects in Moffat County, Colorado (Little Snake Field Office) such as the Vermillion Basin Project, and the Powder River Basin (Montana) coalbed methane sources. The remaining development in the many NEPA-approved projects in these areas should be included in the RFD inventory. Finally, VOC emissions estimates were not quantified for any of the sources in the regional inventory and those emissions can be quite significant and are extremely important considering how close the area is to violating the ozone NAAQS. Thus, the reasonably foreseeable development inventory is incomplete and therefore would result in an underestimate of cumulative air quality impacts in the region, it was reissued in May 2003

Response: The emission inventory was designed to focus on potential impacts from BLM activities. A full RFD inventory is provided in the Pinedale Anticline Supplemental Draft EIS and Jonah EIS. The sources referred to in the comment—Vernal (Utah) sources, Price (Utah) RMP sources, Roan Plateau (Colorado) RMP sources, projects in Moffat County, Colorado (Little Snake Field Office) such as the Vermillion Basin Project, and the Powder River Basin (Montana)—are well outside the Pinedale RMP planning area.

Comment: --The Pinedale DRMP/EIS Fails to Include An Analysis of Air Quality Impacts-- As discussed above, the Draft EIS/RMP does not include an analysis of the impacts on air quality that could

occur under the various alternatives of the Pinedale Draft EIS/RMP. A comprehensive emission inventory of all air pollution sources should have been used in an air quality dispersion modeling analyses to assess the impacts on air quality from the alternatives of the Pinedale Draft EIS/RMP. In order to comply with 40 C.F.R. §1502.24 (to ensure the professional and scientific integrity of the air quality analysis), the air quality analysis should have included the following components: 1. A Near-Field Modeling Analysis to Assess Local Air Quality Impacts A near-field modeling analysis of localized maximum ambient air impacts should be performed to assess whether the activities allowed under the Pinedale Draft EIS/RMP alternatives would comply with the NAAQS and the PSD Class II increments. The inputs for this analysis should include all of the air pollution source categories allowed under the alternatives of the Pinedale Draft EIS/RMP – e.g., gas development (roads and natural gas engines), coalbed natural gas development, increased vehicular traffic, prescribed burning, etc. The maximum emission rates from sources over the averaging times of the standard for which compliance is being assessed should be modeled. The modeling analysis should be based on at least one year of quality-assured, on-site, representative meteorological data or, if no on-site data is available, five years of meteorological data from the closest meteorological station representative of the area. See, e.g., Sections 9.3.a., 9.3.1.2., and 9.3.3.2. of EPA's Guidelines on Air Quality Models at 40 C.F.R. Part 51, Appendix W. For the NAAQS analysis, appropriate background concentrations reflective of current air quality in the area should be added to the modeling results. It is not appropriate to rely on monitoring data to reflect existing source emissions, unless such monitoring data has been demonstrated to truly reflect maximum concentrations in the area due to all existing sources that are impacting the area. If the sources being modeled are not isolated, as is the case in this modeling assessment, then modeling of existing sources is necessary to determine the potential contribution of background sources. See Section 9.2.1 of 40 C.F.R. Part 51, Appendix W. A Far-Field Modeling Analysis to Assess Air Quality Impacts on the Nearby Class I Areas

The BLM must perform a far-field modeling analysis to assess whether the activities allowed under the various alternatives of the Pinedale Draft EIS/RMP would adversely impact air quality in nearby Class I areas. The analysis should include all of the Wyoming Class I areas, as well as Class I areas in other States such as Wind Cave National Park, Badlands National Park, the Northern Cheyenne Indian Reservation Class I area, Rocky Mountain National Park, the Rawah Wilderness, Mt. Zirkel Wilderness, Flat Tops Wilderness and the Eagle's Nest Wilderness. The maximum emission rates from sources over the averaging times of the standard for which compliance is being assessed should be modeled. For visibility impacts, this requires modeling of the maximum 24-hour average emission rates. The modeling analysis should be based on three years of mesoscale meteorological data, pursuant to Section 9.3.1.2.d. of 40 C.F.R. Part 51, Appendix W. The far-field analysis should assess the impacts of the alternatives of the Pinedale Draft EIS/RMP on the Class I increments and on air quality related values, including visibility. 3. A Cumulative Air Quality Impacts Analysis The BLM must also perform a cumulative analysis of air quality impacts that could occur under the various alternatives of the Pinedale Draft EIS/RMP. Specifically, both near-field and far-field analyses with sufficient emissions and meteorological data inputs as discussed above should be completed to assess compliance with the NAAQS and Class II increments as well as to determine impacts on air quality related values and the Class I increments in all potentially affected Class I areas. The analysis must include all existing sources and reasonably foreseeable sources of air emissions that could impact the same area impacted by the Pinedale planning area. For the Class I and Class II increment analyses, an evaluation of all increment consuming emissions from the existing sources must be developed, which would include all increases in emissions since the applicable minor source baseline date that have occurred at existing sources, as well as all new sources of emissions that came into existence after the applicable minor source baseline date and reasonably foreseeable sources not yet operating. Because only those emissions that are new after the baseline date consume the available PSD increment, it is not acceptable or appropriate to use monitoring data as reflective of existing source emissions 18 even, if as stated above, the monitoring data could be shown to be reflective of the maximum concentrations of all sources impacting the area. Instead, a separate emissions inventory must be developed to reflect those emission changes since the applicable

baseline date, and those emissions must be modeled to demonstrate compliance with the increment. These impact analyses should be performed for the Pinedale Draft EIS/RMP to provide the public with information on the air quality impacts of the various alternatives proposed and so that state government officials would be aware of any conflicts that could occur with the objectives of Federal, State, and local laws regarding protection of air quality. Such analyses must also be performed so that appropriate mitigations can be developed and put into place. The BLM failed to conduct any impact analyses for the various alternatives in the Pinedale Draft EIS/RMP and, therefore, is not fulfilling its obligations under NEPA. In addition to the air impact analyses described above, the BLM must complete an analysis of impacts on ground level ozone concentrations. Ozone precursor emissions (NOx and VOCs) could have a significant impact on the region's compliance with ambient ozone standards in the near future. Considering the exceedances of the ozone standard it is extremely important that the impact of the Pinedale Draft EIS/RMP on ozone concentrations along with all other existing and expected growth of ozone precursor emissions in the region be evaluated. Considering the recent studies on the ozone potential of oil and gas development emissions, the elevated ozone concentrations in the region, and the health and environmental impacts that can occur, it is imperative that the DRMP/EIS disclose to the public the environmental impacts that could occur due to ozone formation from the various alternatives of the Pinedale Draft EIS/RMP.24

Response: NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology.

Comment: Section 4 the admission that in the current air quality analysis, a qualitative approach was used, and that a quantitative approach will be used only in the future. That simply is not acceptable. First, why has BLM not required, or caused the companies to acquire, adequate air pollution data from the existing development over the last several years? Second, given the unfortunate situation that actual site monitoring data is not now adequate enough to determine what the impacts already are from existing fields, then the only correct scientific approach is not to present qualitative information as enough science-based data. Instead, this is the time for a proper Draft to present a series of steps to acquire the needed data, and to not proceed with a new RMP until that data is in hand, properly peer-reviewed, and analyzed. It is not as though the BLM did not know until a few months ago that it had the responsibility to do revise the plan; it was incumbent upon the agency to see to it that the State and Federal agencies responsible for air quality monitoring, for example, did so in advance of this plan preparation so that accurate monitoring data could have be used to plan effectively.

Response: The best available data were used in preparing the draft EIS and final EIS. NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern. WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis.

Comment: The Pinedale Draft EIS/RMP Emissions Inventories Likely Underestimate PM Emissions From Oil and Gas Development As previously mentioned, the BLM assumes all fugitive dust emissions from construction and from travel on unpaved roads are controlled by 50% due to watering, yet the BLM does not specify in the Draft EIS/RMP that this level of control will be implemented. If this level of control does not occur as assumed then the BLM's estimates for PM10 and PM2.5 emissions from these sources underestimate what will actually occur in the planning area. In addition, the Pinedale Draft EIS/RMP emissions inventories assume certain conversion factors for particulate matter that likely result in an underestimate of PM emissions from construction activities. The 2001 Base Year inventory and the

Alternative 1-4 inventories all calculate fugitive dust emissions from construction using an emission factor for total suspended particulate matter (TSP) from Heavy Construction Operations of 1.2 tons per acre-month (EPA, AP-42, Vol 1, Sec 13.2.3, 1995) and then assume 26% of the TSP emissions are PM10 emissions and 15% of the PM10 emissions are PM2.5 emissions. See, for example, "Pinedale NG Gas Well 2001 Base Year 8-06.xls" under "ng-pad const.-fug dust". In fact, the 26% PM10 fraction may result in an underestimate of both PM10 and PM2.5 emissions, especially from road construction, which is a significant part of the construction process for oil and gas development. Road construction generally involves extensive earthmoving and heavy construction vehicle travel resulting in higher emissions than for other construction activities. More commonly, PM10 calculations are estimated assuming 35% of TSP emissions fall in the PM10 size range for road construction emissions (as opposed to 26%).21 The use of a higher emission factor would result in higher PM10 and PM2.5 emissions (since PM2.5 emissions are calculated as a percentage of PM10 emissions) from construction-related fugitive dust. Fugitive dust from construction and roads accounts for about 60% of all PM emissions in oil and gas development. Therefore, the potential underestimation of PM emissions from these sources indicates that the potential for PM10 and PM2.5 impacts could be even more significant. As stated previously, it is unclear whether the increases in PM2.5 emissions allowed in this Draft EIS/RMP will provide for compliance with PM2.5 NAAQS in the longterm. Higher potential PM emissions make it all the more important that the BLM consider enforceable and meaningful ways to reduce particulate matter emissions.

Response: It is BLM's practice to estimate emissions using assumptions that are reasonable but conservative or most likely.

Comment: In the Pinedale RMP analysis, BLM selected the year 2001 as a base year. In that year, BLM reported that NOx emissions were only 226 tons per year. Given the amount of development including production, compressors and drilling that occurred in the region at that time, the level of 2001 emissions appears to be understated. Since 2001 is the year used as the basis for estimating emission growth in the RMP, BLM needs to include detailed information in the RMP document that supports the 2001 base level emissions. This documentation should also be included in the ancillary spreadsheets.

BLM estimated growth in emissions for the periods of 2001 through 2011 and 2011 through 2021. For the first 10 year period, six years have already elapsed and much of the estimated growth in oil and gas emissions has occurred. It is recommended that BLM provide a listing of equipment and emissions that have been installed between 2001 and the present. For the remaining 4 years of the initial 10 year period, BLM needs to provide detailed information in the RMP document that indicates how potential growth was estimated. These estimates should correlate with recent EISs (well count, compression, construction and drilling) in the region as well as other anticipated oil and gas development. The same approach should be taken for the 2011 through 2021 period and estimates of equipment growth should be included in the RMP document.

Item: Page A19-1, Regulatory Framework "The basic framework for controlling air pollutants in the United States is mandated by the 1970 Clean Air Act (CAA) and its amendments, and the 1999 Regional Haze Regulations. The CAA addresses criteria air pollutants, state and national ambient air quality standards for criteria air pollutants, and the Prevention of Significant Deterioration program. The Regional Haze Regulations address visibility impairment."

Comment–It is suggested that the paragraph on regulatory framework be changed as suggested in the following. As written in the RMP, the paragraph is incomplete and does not accurately reflect the current regulatory framework.

Regulatory Framework The basic framework for controlling air pollutants in the United States is mandated by the 1970 Clean Air Act (CAA) and its amendments, EPA regulations and State and local air

quality regulations. The CAA addresses criteria air pollutants, state and national ambient air quality standards for criteria air pollutants, and the Prevention of Significant Deterioration program. EPA regulations address ambient air quality standards, emission control technology, modeling and monitoring and AQRV impacts including regional haze. State and local agencies can impose more stringent regulations than federal standards. In addition, a section should be added that discusses current emission control requirements. There are substantial new regulations being proposed by EPA that will ultimately reduce emissions and a discussion of these is needed in the document (i.e., NSPS for Reciprocating Internal Combustion Engines).

Item: Page A19-2-3, Discussion on Criteria Pollutants "• Nitrogen Dioxide. NO2 is a red-brown gas formed during operation of internal combustion engines. Such engines emit a mixture of nitrogen gases, collectively called nitrogen oxides (NOx). NOx can contribute to brown cloud conditions and can convert to ammonium nitrate particles and nitric acid, which can cause visibility impairment and acid rain. Bacterial action in soil can be a natural source of nitrogen compounds. • Sulfur Dioxide. SO2 forms during combustion from trace levels of sulfur in coal or diesel fuel. It can convert to ammonium sulfate ((NH4)2SO4) and sulfuric acid (H2SO4), which can cause visibility impairment and acid rain. Volcanoes are natural sources of SO2. Anthropogenic sources include refineries and power plants. • Ozone. O3 is a faint blue gas that is generally not emitted directly into the atmosphere but is formed from NOx and volatile reactive organic compound (VOC) emissions. Internal combustion engines are the main source of NOx. Volatile organic compounds, like terpenes, are very reactive. Sources of VOCs include, but are not limited to, paint, varnish, and some types of vegetation. The faint acrid smell common after thunderstorms is caused by ozone formation by lightning. O3 is a strong oxidizing chemical that can burn lungs and eyes, and damage plants. • Particulate Matter. Particulate matter (e.g., soil particles, hair, pollen, etc.) is essentially small particles suspended in the air that settle to the ground slowly and may be resuspended if disturbed. Separate allowable concentration levels for particulate matter are based on the relative size of the particle: – PM10 particles with diameters smaller than 10 micrometers are small enough to be inhaled and can cause adverse health effects. – PM2.5 particles with diameters smaller than 2.5 micrometers are so small that they can be drawn deeply into the lungs and cause serious health problems. Particles in this size range are also the main cause of visibility impairment." Comment: It is suggested that the discussion on pollutants be modified as indicated in the following: Nitrogen Dioxide. NO2 is a highly reactive compound formed at high temperatures during operation of fossil fuel combustion, At high concentrations, it can form a red-brown gas. At concentrations in excess of the EPA air quality standard, it is a respiratory irritant, however, all areas of the United States are in compliance with this air quality standard. During fossil fuel combustion, NO is released into the air which reacts in the atmosphere to form NO2. NO plus NO2 is a mixture of nitrogen gases, collectively called nitrogen oxides (NOx). NOx emissions can convert to ammonium nitrate particles and nitric acid which can cause visibility impairment and acid rain.

Sulfur Dioxide. SO2 forms during combustion from trace levels of sulfur compounds in fuels (i.e, coal, sour gas or diesel fuel). At concentrations in excess of national air quality standards, it is a severe respiratory irritant. SO2 can convert to ammonium sulfate ((NH4)2SO4) and sulfuric acid (H2SO4), which can cause visibility impairment and acid rain. Volcanoes are natural sources of SO2. Anthropogenic sources include refineries and power plants.

Response: The emission inventory was designed to focus on potential impacts from BLM activities. The best available data for BLM sources on BLM-administered lands were used. Further, the emissions inventory was updated in 2006; therefore, BLM believes the emissions inventory is adequate. Base emissions will be recalculated for project-specific proposals.

Comment: Ozone. O3 is a faint blue gas that is generally not emitted directly into the atmosphere but is formed in the atmosphere from complex photochemical reactions involving NO2 and volatile reactive

organic compounds (VOC) Internal combustion engines are one source of NOx. However, typically coal fired power plants have the highest NOx emissions although any combustion source will produce NOx. . Sources of VOCs include, but are not limited to, automotive emissions, paint, varnish, oil and gas operations and some types of vegetation. The faint acrid smell common after thunderstorms is caused by ozone formation by lightning. O3 is a strong oxidizing chemical that can burn lungs and eyes, and damage plants. Ozone is a severe respiratory irritant at concentrations in excess of the federal standards. EPA is currently in the process of revising the ozone standard as part of its statutory requirements under the CAA. • Particulate Matter. Particulate matter (e.g., soil particles, hair, pollen, etc.) is essentially small particles suspended in the air that settle to the ground slowly and may be resuspended if disturbed. Separate allowable concentration levels for particulate matter are based on the relative size of the particle: – PM10 particles with diameters smaller than 10 micrometers are small enough to be inhaled and can cause adverse health effects at concentrations in excess of the standard. – PM2.5 particles with diameters smaller than 2.5 micrometers are so small that they can be drawn deeply into the lungs and cause serious health problems at concentrations in excess of the standard. Particles in this size range are also the main cause of visibility impairment."

Response: The best available data were used in preparing the draft EIS and final EIS. The emission inventory was designed to focus on potential impacts from BLM activities. Detailed information on sources, emissions inventory, etc., were included in the final EIS as they were available.

Collaboration with Other Agencies

Comment: we urge continued work with partners to evaluate and consider implementation of other potential emission mitigation solutions, such as electrification of the well field, slower paced development, voluntary emission offsets from existing sources (in-field or otherwise), and energy conservation and efficiency measures.

Response: BLM is committed to working together.

Comment: • TU suggests that the BLM strengthen the objectives to work more closely with EPA and the Department of Environmental Quality (DEQ) to decrease air emissions and seek alternative technologies to reduce air quality impacts. Collaborating with these agencies in a proactive manner (prior to granting APD's) on a landscape scale instead of just offering to cooperate where required would help formulate advancements in strengthening the goal of minimizing impacts on air quality.

Response: BLM will continue to work closely and cooperatively with EPA and WDEQ to assess air quality impacts in the project area.

Climate Change

Comment: The key word is "photosynthesis!" This of course in nature's way of removing CO2 from the air and converting it into plant material, the stuff of all animal life. The problem is that the present level of photosynthesis in no way can handle the billions (yes, BILLIONS) of tons of CO2 that we dump into the air annually. We have cut down practically all of our forests and are busy paving over all of the fields which have replaced them. But there is an active research program to develop ARTIFICIAL photosynthesis. This activity should be pushed hard and advanced into an Apollo-type program to put this into being. Look it up on Google or Yahoo to see the thousands of entries on this, then e-mail me at wafelt@verizon.net. As someone who's deeply concerned about the future of America's wild places and unspoiled lands, I support Alternative 3 as the BLM considers a management plan for the Upper Green River Valley.

Response: Artificial photosynthesis policy is outside the scope of this RMP.

Other Issues

Comment: However, there are some effects that need to be considered with a dramatic increase in airborne particulates that enter into our snow pack in layer upon layer: increased early season runoff. You see these partides that accumulate in our snow, layer upon layer, retain heat just like a rock in the snow and melt the snow around it faster than the surrounding pack. CSU, in Ft. Collins has done extensive studies surrounding their own complicated water issues that proved this effect on their runoff from the pollution in the Front Range of Colorado. Once these airborne partides are released into a density that's considered pollution in our area, it is likely that what little snow we have anymore will runoff a bit quicker and will have a bit less at the tale end of our irrigation run.

Response: BLM is aware that this may be an issue and it is working on it. Please see enclosed URL and reference: http://climatesci.colorado.edu/ Painter T. H., A. P. Barrett, C. C. Landry, J. C. Neff, M. P. Cassidy, C. R. Lawrence, K. E. McBride, G. L. Farmer (2007), Impact of disturbed desert soils on duration of mountain snow cover, Geophys. Res. Lett., 34, L12502, DOI:10.1029/2007GL030284.

Comment: Since that time, 1982 - 1987 approximately, three of the key indicators have changed adversely. These indicators are visibility, acid neutralizing capacity of some of the lakes, and the nitrate content of certain lakes. Additionally, from other monitoring conducted in the area ozone has been detected at rather high concentrations. What is alarming to me is that two of the indicators, visibility and the lake water nitrates, began to change prior to the present Jonah and Pinedale anticline gas field development so that any increase in air pollution from these fields will only accelerate the decline. Furthermore, there are two additional oil/gas fields in the planning stage in the Rock Springs to Baggs area which have the potential of adding even more air pollution to the lake and streams of the Bridger Wilderness. The more recent decrease in acid neutralizing capacity coupled with the increase in lake nitrates is an even more serious alarm bell since it heralds a probable acidification of the lakes with increasing air, pollution.

Response: BLM is aware that this may be an issue; please see enclosed reference: Jill S. Baron. 2006. Hindcasting Nitrogen Deposition To Determine An Ecological Critical Load. Ecological Applications, 16(2), 2006, pp. 433–439.

Comment: The DRMP imposes tier 4 emission requirements, yet this requirement is not advisable. The technology to achieve tier 4 emission standards is not yet available, has not been technically proven, and will not become widely available until 2010. References to specific technology are not appropriate in a twenty year plan, since technologies may become obsolete and superseded by technology that better protects air quality. Such determinations are appropriately left to the Wyoming Department of Environmental Quality (WDEQ).

Response: Tier 4 is included as an example, to be used in the future when available. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

Comment: My suggestion is to slow oil and gas development until the technology can catch up with itself and the trend in our increasingly poor air quality is reversed. (And that's just what I can see, let alone what we breathe, but you'll have to ask a scientist for those statistics.) The key is to take oil and gas development slowly and the preferred Alternative 4 isn't slow enough and allows for too many loopholes.

Response: BLM does not have authority to prohibit development of valid existing oil and gas leases. The areas available and not available for leasing have been revised in the final EIS. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are

below applicable significance criteria or levels of concern. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time are inconclusive.

Cultural Resources

General Comment Responses: *No GCRs are associated with this category.*

Comments on Document/Suggested Changes

Comment: Page Number & Issue:4-18: Lander Trails Agreement omitted. Recommendations: The RMP should reference or incorporate the Lander Trail PA, which currently governs management of a segment of the Lander Trail.

Response: The Shell/Ultra Lander Trail Programmatic Agreement (PA) is found in the recently published draft SEIS for the Anticline as an appendix. The final EIS references the PA.

Comment: Page Number & Issue:4-34: "Lands actions would be prohibited or would require special mitigation measures within 1 mile or the visual horizon (whichever is nearer) of the Lander Trail and the Sublette Cutoff Trail and also within 1 mile of contributing segments of these trails. This is an additional three-quarter mile over Alternative 2, and these restrictions could result in rerouting of ROWs and additional costs to ROW proponents, and also in prohibiting other lands and realty authorizations. Under Alternative 1, these restrictions would not occur, and under Alternative 2, the restriction would be for one quarter mile; thus, this alternative would be more restrictive and would therefore have more impact on the lands and realty program." The RMP should reference or incorporate the Lander Trail PA, which currently governs management of a segment of the Lander Trail.

Response: You are correct. The Shell/Ultra Lander Trail PA is found in the recently published draft SEIS for the Anticline as an appendix. Overall, we are trying to incorporate National Historic Trail setting management in this RMP in a more holistic manner. See also the comments received by the National Park Service, the Oregon California Trails Association, and the Wyoming State Historic Preservation Officer (SHPO) for National Historic Trails recommendations.

Comment: Page Number & Issue: 2-76, Alternative 3: Objective 1 Protect NRHP-eligible cultural sites and national historic trails. Actions i. The area within 1 mile of the Lander and Sublette Cutoff Trails would be unavailable for oil and gas leasing. j. Surface occupancy would be prohibited within 1 mile of the Lander and Sublette Cutoff Trails. 2-79: " Recommendations: This is unnecessarily restrictive and not realistic; USQ recommends its modification and/or deletion.

Response: An adequate range of alternatives is provided for analysis purposes. Alternatives 2 and 4 are less restrictive than Alternative 3.

Comment: Page Number & Issue: 2-51: Management Objective and Actions Objective 1 "Protect NRHP-eligible cultural sites and national historic trails. Actions: b. Surface disturbing activities would be prohibited within one-quarter mile or the visual horizon (whichever is nearer) of the Lander and Sublette Cutoff Trails. c. Surface occupancy would be prohibited within one quarter mile of contributing segments of the Lander Trail and the Sublette Cutoff (Map 3-1). Recommendations: The RMP should reference or incorporate the Lander Trail Programmatic Agreement (PA), which currently governs management of a segment of the Lander Trail.

Response: Correct. The Shell/Ultra Lander Trail PA is referenced in the Pinedale Anticline SEIS. The final EIS has been revised to reference the PA.

Comment: Page Number & Issue: 2-76, Alternative 3: Objective 1 Protect NRHP-eligible cultural sites and national historic trails. Actions: i. The area within 1 mile of the Lander and Sublette Cutoff Trails would be unavailable for oil and gas leasing. j. Surface occupancy would be prohibited within 1 mile of

the Lander and Sublette Cutoff Trails. Recommendations: The RMP should reference or incorporate the Lander Trail PA, which currently governs management of a segment of the Lander Trail.

Response: Correct. The Shell/Ultra Lander Trail PA is referenced in the Pinedale Anticline SEIS. The final EIS has been revised to reference the PA.

Comment: Pa2-114, 2-115: "Alternative 4: Management Objective and Actions. Objective 1 Protect NRHP-eligible cultural sites and national historic trails. f. The Lander Trail and its visual historic setting would be protected through establishment of a VRM Class II designation for about 84,380 acres of public land within 2 miles of contributing segments of the trail (Map 2-30). i. Surface occupancy or disturbance would be prohibited except for linear crossings within one quarter mile of the Lander Trail. 1. In addition to the one-quarter mile NSO in the South Piney Canyon Area, CSU stipulations would be applied for the next three-quarters of a mile on either side of the Lander Trail, for a total stipulation area of 1 mile on either side of the trail. j. Surface occupancy would be prohibited within 1 mile on either side of the Sublette Cutoff Trail. Recommendations: The RMP should reference or incorporate the Lander Trail PA, which currently governs management of a segment of the Lander Trail.

Response: Correct. The Shell/Ultra Lander Trail PA is referenced in the Pinedale Anticline SEIS and is printed as an appendix to this document.

Comment: Page Number & Issue:4-12: "Minerals management actions resulting in construction that is visible on or above the surface would have the potential to directly impact the visual integrity of cultural properties that derive their significance from natural settings or from settings relatively devoid of modern intrusion. For example, portions of the Lander Trail and Sublette Cutoff Recommendations: The RMP should reference or incorporate the Lander Trail PA, which currently governs management of a segment of the Lander Trail.

Response: The following text has been added to the Cultural Resource Management section under Actions Common to All Alternatives (draft EIS page 2-6): "Management of the Lander Trail and trail setting within the boundaries of the Pinedale Anticline Project Area would be consistent with the Lander Trail Programmatic Agreement."

Comment: We would like to see the preferred alternative also specify the following:

- No surface occupancy and no OHV use on original wagon ruts and swales (Class 1 trail per the Oregon-California Trails Association's [OCTA] Mapping Emigrant Trail [MET] classification protocol) . An explicit goal to nominate eligible trail sites and segments to the National Register of Historic Places
- Enhanced protection of the Buckskin Crossing-Sand Springs-Muddy Creek segments of the Lander Road and their setting from visual intrusions, at the same level as that proposed for the Sublette Cutoff
- Prohibition of hard mineral exploration and development within one mile of the Sublette Cutoff
- Reclamation of abandoned development sites visible from the historic trails

Response: BLM agrees with this comment about closing National Historic Trail (NHT) swales to OHV use and will blend this into our transportation planning and road designation efforts. Most Pinedale Field Office trail ruts are two-track routes that do support light vehicular use without damage; however, BLM also agrees that it should consider additional closures of fragile trail resources. BLM agrees that it is

desirable to close the Sublette Cutoff Trail to salable minerals. There is no recognized locatable mineral potential in this area and, therefore, BLM feels pursuing a locatable mineral withdrawal is unwarranted.

Comment: • Page 2-114, management Objective and Actions, says that "select NRHP-eligible sites would be protected from inappropriate use, erosion, trampling, or other damage." What is meant by "select NRHP-eligible sites"? As currently worded, the statement implies that some eligible sites would not be "selected" for that level of protection. BLM has responsibility for appropriate management of all eligible sites, and language should be included to reflect this responsibility. Any selection process, if that is what is being proposed, should be predicated upon which site needs protection measures. What selection criteria would be employed for identifying protected sites - and how would they be protected?

Response: Pinedale Field Office staff originally prepared a list of all the National Register of Historic Places (NRHP)-eligible sites by common name and Smithsonian number (e.g., 48LN39, aka Names Hill; 48SU301, aka The Wardell Buffalo Trap). It was decided that listing the sites by common name posed an additional threat and the actual site names and numbers were removed. BLM does have a list of the "select sites" which can be provided to NPS in a proprietary manner. BLM's selection process includes those sites deemed most prone to vandalism and erosion, such as communal bison kill sites, all rock art sites, historic inscription sites, and sites in high-use recreation areas such as Boulder Lake and Trapper's Point.

Comment: Page 2-114, Objective 1, Action f and on Page 2-160, Historic trail protection actions, Alternative 4: We request the BLM establish the VRM Class II designation within 3 miles of the historic trails. This distance is generally considered to be the viewshed foreground and will more adequately protect the setting of these important cultural resources. Further, this language is compatible with recommendations for trails management in the preferred alternative in the draft Casper RMP and is acceptable to our office. We strongly recommend the National Historic Trails not be managed differently by various BLM field offices.

Response: BLM's Visual Resource Management (VRM) strategy was conducted through a team approach with a formal visibility assessment, averaging all values while placing additional value on the NHTs in the planning area. While much of the NHTs in Pinedale did value out as VRM Class II, some valued out as VRM Class III, based on 2005 settings. BLM concurs that it is desirable to manage NHTs as consistently as possible. For trail segments managed as VRM Class II, VRM designation has been extended to three miles for consistency with the Casper and Kemmerer RMPs.

Comment: Page 2-114, Goals, Objectives, and Actions: We encourage the BLM to pursue National Historic Landmark status for the Trapper's Point site.

Response: This is an excellent idea and BLM agrees. Please note that in 2007 the site was formally nominated to and is now listed on the National Register.

Comment: Page 2-115 (1)(i)(j) Management Objective and Actions "Surface occupancy or disturbance would be prohibited except for linear crossings within one-quarter mile of the Lander Trail." "(j) Surface occupancy would be prohibited within 1 mile on either side of the Sublette Cutoff Trail." Comment: This high level protection measure is excessive and unsupported. For protection from surface disturbance of the actual trail, "a ¼ mile from the centerline or visual horizon, whichever is less," restriction is more than appropriate. We urge that this language be revised to reflect that change.

Response: BLM disagrees with the suggested change. The past 20 years of experience has demonstrated that the NHTs setting cannot be adequately managed with the "1/4-mile buffer". What this old buffer

resulted in was a 1/2-mile corridor flanked by intensive development reminiscent of a highway flanked by modern intrusions.

Comment: We are concerned that, unless BLM strengthens and adopts Alternative 3 in the Final EIS, it will permit oil and gas development to further impair the historic and cultural landscapes of the Upper Green River Valley.

Response: BLM has strived for balance in the RMP and is committed to complying with the Mineral Leasing Act of 1920, the National Energy Policy Act of 2005, and laws and policies requiring protection of historic and cultural landscapes.

Comment: The following are things that I would like to see in the RMP: • Protect all historic and cultural sites from energy development

Response: In all alternatives, BLM does indeed protect significant sites from development or mitigate adverse effects that are proposed.

Comment: Page Number & Issue:4-23: "Construction during winter (or during periods of winterlike conditions) in sensitive cultural resource areas (e.g., the San Arcacio soils of the Jonah gasfield, the Anticline, and the foothills/breaks of the Mesa; the eolian sediments of the Big Piney/La Barge oil and gas field) could affect cultural resources, because it is virtually impossible to conduct any meaningful or professional cultural resource investigations with frozen ground or with snow cover." Recommendations: Provide sources or delete.

Response: This has been BLM's experience over many years. Recently, construction was terminated at a well pad when important archeological features were discovered while the ground was frozen and the find could not be evaluated. It should be obvious that an archeologist cannot conduct surface inventory with 100% snow cover. No deletion will be made.

Comment: Page 2-114, Goals, Objectives, and Actions: We encourage the BLM to pursue National Historic Landmark status for the Trapper's Point site.

Response: This is an excellent idea and BLM agrees. Please note that in 2007 the site was formally nominated to and is now listed on the National Register.

Comment: Page 3-18, Jonah/Pinedale Anticline/La Barge Oil and Gas Fields: The statement that, "The BLM is working with industry officials to develop a program in which the industry will sponsor data recovery excavations at the pace of one site for each well they develop in the area" is not accurate. Please revise to state management of cultural resources within the Jonah Field will occur in accordance with the programmatic agreement for this field.

Response: This statement in the draft EIS was incorrect. The cultural section of the final EIS has been corrected. BLM does have a Programmatic Agreement with operators in the Jonah Gas Field that will allow for the excavation of two to three sites per year at the discretion of the archeologists. However there are no plans to have a site excavated for every well pad developed.

Comment: Page 3-21: The decision to allow the cabins to deteriorate in the Scab Creek Wilderness Area must be made in consultation with the SHPO. These cabins need to be recorded and evaluated for National Register eligibility. If the cabins are determined to be eligible properties, the decision to allow deterioration may be considered an adverse effect per 36 CFR 800.5(a)(2)(vi). The BLM is required to consult with the SHPO and other consulting parties, if appropriate, to discuss ways to avoid, minimize, or

mitigate the adverse effects of this decision as specified at 36 CFR 800.6(a). We request the BLM initiate consultation with us sometime this year on the management of these cabins.

Response: BLM's Pinedale Field Office (PFO) was attempting to follow national wilderness guidelines for such cabins in wilderness study areas (WSAs). BLM notes that a few of the known cabins are recorded but not evaluated for National Register purposes, such as 48SU416. BLM concurs that recordation and evaluation are desirable, and it will coordinate with Wyoming Parks and Cultural Resources to prioritize this workload.

Comment: Page 4-240 Cultural Resources 4.19.4 "Oil and gas development would cause the greatest amount of cumulative effect to cultural resources from construction of well pads, roads, pipelines, and diverse ancillary facilities." Comment: It must be recognized that the oil and gas industry is the single greatest contributor to BLM's knowledge and understanding of cultural resources in the FO area. Moreover, oil and gas activities are lawful permitted uses and potential impacts to cultural resources must be mitigated. The claim industry creates the greatest amount of cumulative effect to cultural resources is overstated. We recommend replacing this statement with the language on page A2-4 where it is pointed out that industry works to practice "avoidance" first. "If avoidance is imprudent or infeasible, mitigation may include excavation…stabilization, monitoring, protection barriers and signs, or other physical and administrative measures." Page 241 "Surface disturbing activities that occur in close proximity to sensitive Native American sites and some historic sites would potentially introduce visual intrusions to those sites where the setting contributes to the NRHP eligibility …. This has been the case, for example, along the Lander Trail in the Deer Hills area and in direct proximity to the "Piney Rock Art site" (private surface), where EOG Resources placed an oil well and pump jack whose grasshopper pump is run 24 hours a day, 7 days a week by a noisy diesel motor. The cumulative impact is the direct introduction of visible, audible, and atmospheric elements that are out of character with the historic property." Comment: We object to the paragraph cited above for a number of reasons. First, it is unwarranted to identify an operator in this document as being a bad operator simply because it has exercised its lease rights. Second, BLM must recognize that it does not have jurisdiction over State lands. Clearly, the State of Wyoming determined that production from this oil well deserved priority status as opposed to setting it aside for cultural values.

Response: BLM recognizes that cultural resources inventory, evaluation, and mitigation in support of energy development has greatly increased the knowledge of the area's prehistory; BLM has acknowledged this publicly in various newspaper formats, during public talks, and at local schools. However, the great amount of "unexpected discoveries" due to heavy equipment activity in the PFO clearly established that industrial development in the PFO has resulted in the greatest disturbance to cultural resources. The BLM also recognizes that illegal artifact collecting (not an industry-generated impact) has severely damaged the public cultural resources of the PFO. Indeed, BLM has worked most successfully with a number of operators for decades in managing important cultural resources and fully expects to do so in the future. The subject pump jack has created visual, audible, and atmospheric conditions that are out of character with the site setting. That is a factual, accurate statement.

Comment: PAGE: 2-114 SECTION: RECOMMENDED CHANGE: Add the following: Coordinate with local governments with respect to all cultural resource evaluations. EXPLANATION: DM calls for coordination with local governments. Cultural resources management in Wyoming has significant impacts on private lands and thus closer coordination than BLM is used to is necessary.

Response: BLM does not concur with the recommended change. There is no federal law, policy, or regulation in place to do this. BLM does work closely with the Sublette County Historic Preservation Commission on National Register nominations and other matters affecting select cultural resources. BLM also works with both county museums in areas of mutual interest. The PFO conducts about 1,200 cultural

resource evaluations annually and to expand the consultation would greatly slow down the permitting process, an action that runs against the Energy Policy Act of 2005.

Comment: PAGE: 2-114 SECTION: 2.5.5 RECOMMENDED CHANGE: Objective 1 Protect NRHP-eligible cultural sites and national historic trails consistent with the determinations regarding respective importance and sensitivity. EXPLANATION: DM 8130.14 requires a determination as to significance or sensitivity. 8130.14.A "In establishing management objectives, the relative importance and sensitivity of known and anticipated cultural properties should be considered, not simply their geographic distribution and density. Simple density is not necessarily a measure of the importance of cultural properties or the magnitude of potential conflicts. In establishing management objectives, the relative importance and sensitivity of known and anticipated cultural properties should be considered, not simply their geographic distribution and density. Simple density is not necessarily a measure of the importance of cultural properties or the magnitude of potential conflicts."

Response: The change is not needed. BLM routinely makes the determinations that are discussed, and current procedures are compliant with all applicable law, regulation, and policy. BLM has never used site density or geographic distribution as National Register determining factors.

Comment: PAGE: 2-114 SECTION: 2.5.5 RECOMMENDED CHANGE: Revise: a. Surface occupancy would be prohibited on selected communal big game kill sites (Trapper's Point), Oregon Trail inscription sites, rock shelters, Native American burial locales, and Native American traditional cultural properties (TCP) if BLM determines that the site is important and is otherwise sensitive to the anticipated use. EXPLANATION: The action is prescriptive, not performance based. It is over broad since it prohibits surface use for all sites without regard to the proposed use. For instance, if surface use includes livestock grazing, then the RMP would prohibit grazing without regard to whether the site is sensitive to the proposed use.

Response: Livestock grazing is not classified as "surface occupancy." In order for BLM to fulfill its multiple-use mandate, it is required to balance resource protection with authorizing valid land use applications. Any conflicts are weighed on a case-by-case basis and if adverse effects are proposed, BLM implements the appropriate level of mitigation. BLM sees no need for this change to the document. BLM knows of virtually no impact upon the PFO grazing preference system over the last 50 years.

Comment: PAGE: 2-114 SECTION: 2.5.5 RECOMMENDED CHANGE: Revise management actions to conform to limits found in DM 8130 and 8140 as follows: EXPLANATION: Management actions are subject to determinations as to the significance of the site and its sensitivity. In the context of specific actions or undertakings to implement the RMP objectives, DM 8140 also applies.

Response: The BLM PFO's current management actions conform to extant BLM manuals and other guidance such as Instruction Memoranda (IMs), Information Bulletins (IBs), and supplementary policy.

Comment: PAGE: 2-114 SECTION: 2.5.5 RECOMMENDED CHANGE: REVISE a. Cultural resource management activity plans would be completed and implemented to identify, record, preserve, and protect [those](strikeout) archaeological and historic sites that are determined to be significant and sensitive. Activity plans would be prepared for any current or future sites listed in, or determined eligible for listing in, the NRHP. Site-specific management prescriptions, including data recovery if warranted, would be included in the activity plans. The level of protection would be in proportion to the significance of the site. EXPLANATION: DM 8130.14 protection limited based on relative importance and sensitivity. 8140, Protecting Cultural Resources ¶8140_.06.C Level of protection must be proportionate to significance. C. The Field Office manager's first choice shall be to avoid National Register listed and eligible properties that would otherwise be affected by a proposed land use, if it is reasonable and feasible

to do so. In part, reasonableness is a measure of proportion and prudence. For example, avoidance would not represent reasonable balance and should not be chosen if the redesign or relocation efforts that would be incurred by the BLM or an authorized land user would be out of proportion to the cultural property's evaluated significance, data potential, or preservation value.

Response: The BLM PFO's current management actions conform to extant BLM manuals and other guidance such as IMs, IBs, and supplementary policy. BLM developed the appropriate mitigation of potential adverse effects based upon the criteria outlined in law, regulation, policy, and our internal manuals as well as the Wyoming cultural resources Programmatic Agreement and the new Jonah Programmatic Agreement.

Comment: PAGE: 2-114 SECTION: 2.5.5 RECOMMENDED CHANGE: REVISE b. Select NRHP-eligible sites that are determined to be significant and sensitive would be monitored and mitigation developed to protect the sites [from inappropriate use, erosion, trampling, or other damage](strikeout) in proportion to their significance.. EXPLANATION: The change conforms to DM 8140 and avoids situations where range projects are denied on grounds of trampling while wild horse and large game continue the trampling.

Response: The commenter has previously pointed out that there are no wild horses. It is appropriate to protect NRHP-eligible sites from damage. BLM sees no need to change the document.

Comment: PAGE: 2-114 SECTION: 2.5.5 RECOMMENDED CHANGE: g. If a proposed action would diminish the integrity of a an important and sensitive cultural property's setting, and the integrity of the setting contributes to NRHP eligibility, appropriate mitigation would be applied (Appendices 1, 3, and 5). EXPLANATION: RMP action is over broad and does not conform to BLM guidance.

Response: The BLM PFO's current management actions conform to extant BLM manuals and other guidance such as IMs, IBs, and supplementary policy.

Comment: Page: 3-12, SECTION: 3.3.1, RECOMMENDED CHANGE: Add information regarding the cultural resource sites that are on private land. EXPLANATION: Several of the historic sites are not on public land, e.g. Cora Butte, Names Hill, Father DeSmet Monument, and Fort Bonneville

Response: Names Hill is predominantly on State of Wyoming land. BLM shares Cora Butte with a landowner and Fort Bonneville is split between state land and private surface.

Comment: PAGE: 3.135, SECTION: 3.18.2, RECOMMENDED CHANGE: Revise for accuracy: Several important cultural sites, including the Wardell Buffalo Trap (48SU301), are on private lands in the vicinity of Ross Butte. EXPLANATION: Cultural site, Wardell Buffalo Trap is located on private land, a fact that is incorrectly omitted from the FEIS.

Response: The assertion made in the comment is incorrect. The Wardell Site is on lands administered by the BLM PFO, including new and important archaeological additions to the 160 acres of the formal National Register boundary.

Comment: PAGE: 4-10, SECTION: 4.3.2, RECOMMENDED CHANGE: Revise RMP and FEIS to conform to DM 8130.14 and DM 8140 as discussed below. EXPLANATION: Analysis omits fundamental distinctions made in BLM manuals for planning for cultural resources and for managing cultural resource impacts from undertakings. The RMP and DEIS incorrectly treat as equally significant all resources potentially listed on the NHP register. This contradicts explicit manual direction M- 8130.14 also require BLM to consider feasibility, need, and balance with other multiple uses. DM 8130.14

requires a determination as to importance or sensitivity of the specific cultural resource. "In establishing management objectives, the relative importance and sensitivity of known and anticipated cultural properties should be considered, not simply their geographic distribution and density. Simple density is not necessarily a measure of the importance of cultural properties or the magnitude of potential conflicts. In establishing management objectives, the relative importance and sensitivity of known and anticipated cultural properties should be considered, not simply their geographic distribution and density. Simple density is not necessarily a measure of the importance of cultural properties or the magnitude of potential conflicts." DM 8130.14.A. (Emphasis Added). DEIS §4.3.2 discusses undertakings, which are governed by DM 8140. The direction quoted above is expanded in DM 8140 to direct BLM to weigh and evaluate the need to protect resources, NHP eligibility is a minor factor. Commonly found resources merit less protection than those that are significant and sensitive. DM 8130.14 protection must be tied to relative importance and sensitivity. 8140, Protecting Cultural Resources ¶8140_.06.C Level of protection must be proportionate to significance. The Field Office manager's first choice shall be to avoid National Register listed and eligible properties that would otherwise be affected by a proposed land use, if it is reasonable and feasible to do so. In part, reasonableness is a measure of proportion and prudence. For example, avoidance would not represent reasonable balance and should not be chosen if the redesign or relocation efforts that would be incurred by the BLM or an authorized land user would be out of proportion to the cultural property's evaluated significance, data potential, or preservation value.

Response: The BLM PFO's current management actions conform to extant BLM manuals and other guidance such as law, regulation, IMs, IBs, and supplementary policy.

Comment: PAGE: 4-12, SECTION: 4.3.3, RECOMMENDED CHANGE: Trampling or wallowing by grazing animals (livestock, wildlife and wild horses) [Livestock trampling and wallowing could] (STRIKEOUT) may directly impact cultural artifacts and features on or just below the surface, by breaking or scattering these artifacts, although on the other hand, cattle trails and other heavily trampled and exposed areas would allow otherwise undetected cultural resources to be identified and recorded. [Livestock] (STRIKEOUT) Scratching and rubbing by livestock, wildlife, and wild horses would impact certain types of cultural properties, including historic and prehistoric structures and rock art sites. In most instances, these types of animal behaviors would result in minimal or localized impacts. There would be long-term impacts from grazing by livestock, wildlife, and wild horses from repeated trampling on cultural sites over time; for example, in established game trails, wild horse routes, stock driveways, along fence lines, on rock alignments, near water sources, and in sheltered or shaded areas (springs are especially sensitive, as these areas have a high potential for being prehistoric sites). [Range and wildlife improvement activities that include construction of structures visible on or above the surface, could directly affect the visual integrity of cultural properties deriving their significance from natural settings or from settings relatively devoid of modern intrusion.] (STRIKEOUT) EXPLANATION: DEIS shows significant bias by attributing trampling impacts to only livestock grazing when wildlife and wild horses have similar or with horses probably greater impacts. Livestock grazing animal movements are more regulated that either wildlife or wild horses. Concentrations in feedgrounds have much greater environmental impacts, which are entirely omitted from DEIS. The Local Governments find the concerns about visual impacts incongruous in light of the fact that several livestock sites, such as herder camps are treated as cultural resources and are subject to special visual protection. Range projects are not brightly colored and are designed to blend into the scenery. This sentence is inaccurate and speculative. It is better to delete or at least remove the bias by recognizing equal impacts from wildlife management structures.

Response: There are currently no authorized wild horses in the Pinedale planning area.

The impact analysis in question analyzes impacts from livestock grazing on cultural resources. Therefore, including wildlife and wild horses as other contributors to the impact is not appropriate in this location of the impact analysis. Furthermore, the BLM grazing program involves the permitting of livestock grazing,

whereas the wildlife program does not permit grazing by wild animals. Rather, the wildlife program serves to provide habitat to meet specified population objectives. The impact analysis can only analyze BLM actions.

Comment: PAGE: 4-14, SECTION: 4.3.3., RECOMMENDED CHANGE: Cultural resources eligible for the NRHP under Criteria A, B, or C, where integrity of setting is a contributing factor to their eligibility (as well as Native American sacred or respected sites) would be protected by VRM Class [I and] (STRIKEOUT) Class II designations. Any cultural properties within a VRM Class II I area would benefit from the constraints on [prohibition of] (STRIKEOUT) surface disturbance. However, fewer cultural resources would be identified, documented, and recorded [in VRM Class I areas] (STRIKEOUT) because of the limitations placed on development activities and the consequent reduction in the need for cultural resource inventories. EXPLANATION: BLM does not have authority to impose VRM Class I for cultural resource properties. Class I is limited to wilderness and by a long-expired IM to WSAs. VRM Class II does not prohibit surface disturbance or, if it does, then the EIS needs to fully disclose the impacts on all of the multiple uses.

Response: The text on page 4-14 of the draft EIS is not making any decision to designate VRM Class I management due to cultural resources. Rather, it is analyzing the impacts that could be expected for a few cultural resources that happen to fall within areas designated as VRM Class I for other reasons.

Comment: PAGE: 4.23, SECTION: 4.3.7, RECOMMENDED CHANGE: DELETE [Reducing and eliminating wildlife resource-driven timing limitations in this area could result in more soil disturbance and discovery and in possible damage to previously unrecorded sites. Construction during winter (or during periods of winterlike conditions) in sensitive cultural resource areas (e.g., the San Arcacio soils of the Jonah gasfield, the Anticline, and the foothills/breaks of the Mesa; the eolian sediments of the Big Piney/La Barge oil and gas field) could affect cultural resources, because it is virtually impossible to conduct any meaningful or professional cultural resource investigations with frozen ground or with snow cover.] (STRIKEOUT) EXPLANATION: These two statements are untrue. Surveys are conducted before construction in the warmer months.

Response: No strikeout is recommended. The BLM PFO is under considerable pressure to conduct year-round drilling and completion activities in areas that in the past have been closed due to wildlife restrictions. Thus, BLM is under increasing pressure to permit land disturbing activities in winter months, with snow cover, frozen ground, and conditions making cultural resource investigations impossible. The RMP is a disclosure document; BLM is disclosing this situation.

Comment: PAGE: 4.23, SECTION: 4.3.7, RECOMMENDED CHANGE: REVISE or DELETE Cultural resources in Minimally Developed Areas may [would] (STRIKEOUT) be less protected than those in NSO or No Leasing areas, but these resources may [would] (STRIKEOUT) also be less directly threatened than those in the Intensively Developed Fields due to less surface disturbance. Outside of specific cultural resource sites that merit or warrant special stipulations, such as site-specific NSO areas, there would be wildcat drilling and exploration activities in Minimally Developed Areas, with new roads penetrating areas where access had previously been restricted (e.g., miles-long improved roads into areas where previously only two-track access existed). There could be indirect effects expected from this new access. Conversion of Minimally Developed Areas into Intensively Developed Fields would make the management of intact viewsheds and natural settings more difficult. The potential for unexpected discoveries is greater in Minimally Developed Areas because of the poor understanding of the dynamics of buried site potential and preservation in these largely unstudied areas. EXPLANATION: It is inaccurate to assume less or more protection, the manual guidance is the same, protect important and sensitive resources based on need and feasibility. The generality of the RMP implies that BLM has an obligation to protect all cultural resources to the same level. The manual guidelines make it clear that

BLM is not to give the same level of protection to all resources. It also assumes that cultural resource surveys would not be required to approve wild cat wells and that too is incorrect.

Response: BLM sees no need for change. The BLM PFO's current management actions conform to extant BLM manuals and other guidance such as law, regulation, IMs, IBs, and supplementary policy. The various alternatives are designed to evaluate increased or decreased levels of development and disturbance and the commensurate increase or decrease of threats to cultural resources.

Comment: PAGE: 4.24, SECTION: 4.3.7, RECOMMENDED CHANGE: This is particularly true for the Trapper's Point ACEC, the Oregon Trail areas, and other historical and archeological sites. EXPLANATION: Oregon Trail is historical not archeological.

Response: BLM is aware of this. That is why the phrase "historical and archeological" was chosen. Also note that sites such as the Sand Springs Emigrant Camp on the Lander Trail have both archeological and historic archeological components.

Comment: PAGE: 4.25, SECTION: 4.3.7, RECOMMENDED CHANGE: ADD Qualifier Those sites associated with Trapper's Point but located on adjacent private land would not be protected.

Response: The final EIS has been updated to include this information.

Comment: PAGE: G-5 CHANGE: CULTURAL RESOURCE – [A fragile and nonrenewable](STRIKEOUT) Remnant of human activity, occupation, or endeavor reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture or natural features. EXPLANATION: BLM Manual 8100, Glossary definition of cultural resource contains no reference to "fragile and nonrenewable" language and its inclusion is contradicted by the very examples in the definition.

Response: No change is recommended. Cultural resources are nonrenewable and can be fragile, such as rock art sites, stone alignments, ceramic localities, and historic structures. The commenter is misunderstanding manual guidance and definitions.

Comment: : PAGE: G-6 CHANGE: CULTURAL RESOURCE SITE (cultural property)– A physical location of past human activities or events. Cultural properties are extremely variable in size, ranging from the location of a single cultural resource feature to a cluster if cultural resource structures with associated objects. Cultural resource properties that do not meet the new threshold in the cultural resource site definition adopted in 2005 (15 or more prehistoric associated artifacts within 30 meter diameter, 50 or more historic associated artifacts within 30 meter diameter) will not be recorded as sites for purposes of Section 106 consultation and entry into the Wyoming Cultural Resources Information System. BLM IM No. WY-2005-044. EXPLANATION: New site definition threshold requiring recordation of cultural resources was adopted by BLM in 2005 and should be referenced. BLM IM No. WY-2005-044 (cultural resources that fall below the threshold are recorded on a Wyoming Isolated Resource form).

Response: BLM is aware of these changes and has adopted them. All BLM policies do not have to be repeated in the RMP to be implemented. The BLM PFO's current management actions conform to extant BLM manuals and other guidance such as laws, regulations, IMs, IBs, and supplementary policy.

Comment: PAGE: G-20 CHANGE: RESOURCE DAMAGE – Long-term or permanent [d](STRIKEOUT)Damage to any natural or cultural resources that result in impacts such as erosion, water pollution, degradation of vegetation, loss of archeological resources, or the spread of weeds.

EXPLANATION: Definitions needs to clarify that the term as commonly used by BLM refers to permanent or long-term damage, as most "impacts" to resources are reversible.

Response: Perhaps a semantic difference is obtained here. While impacts can be mitigated, it is hard to reverse damage to an historic site or structure. Destruction of an archeological site by bulldozing is not reversible, but it is mitigatable.

Comment: PAGE: G-23 CHANGE: TRADITIONAL CULTURAL PROPERTY (TCP) SITE - A cultural resource property that derives significance from traditional values associated with it [known to be perceived](STRIKEOUT) by a specified social and/or cultural group as important in maintaining the cultural identity, heritage, or well-being of the group. In the [RMPPA](STRIKEOUT) planning area, this mainly pertains to cultural sites that are sensitive to Native American tribes. A traditional cultural property may qualify for the National Register if it meets specific National Park Service criteria. EXPLANATION: The definition needs to be revised to conform to BLM TCP policy and National Park Service direction. BLM Manual 8100 (TC definition) and 8110.42(c) (allocations to traditional use category); 36 CFR 60.4 (criteria for evaluation); National Register Bulletin 38 (discussing traditional cultural properties).

Response: No change is required here. The BLM PFO's current management actions conform to extant BLM manuals and other guidance such as laws, regulations, IMs, IBs, and supplementary policy. It also must be emphasized that ongoing Native American consultation fine tunes those sites, locales, and properties considered important or sacred to modern Native American groups.

Comment: We are aware that existing leases have an effect on trails management. For any sections of historic trail corridor that have not yet been leased, appropriate strategies for protecting trail setting should be considered before a lease is issued. Inclusion of language reflecting the impacts of leasing on trails management would be a meaningful addition to the Pinedale RMP.

Response: BLM agrees with this comment and will strive to further protect the NHTs and their viewsheds on BLM-administered lands and above federal minerals.

Comment: While we prefer the management plan laid out in Alternative Three, we believe it needs improvements to truly reflect your multiple use mandate and to provide the necessary protection for the significant cultural resources under your control. Therefore, we would urge you to adopt the following additional safeguards to Alternative Three: Enforce seasonal drilling stipulations so that unintentional damage to cultural resources due to an inability to do surveys during the winter months does not occur;

Response: The Alliance's point concerning the inability to conduct cultural resource investigations in winter time due to snow cover and frozen ground is well taken and BLM shares your concern. See the BMPs in Appendix 5 of the draft EIS for winter restrictions on such activities.

Comment: While we prefer the management plan laid out in Alternative Three, we believe it needs improvements to truly reflect your multiple use mandate and to provide the necessary protection for the significant cultural resources under your control. Therefore, we would urge you to adopt the following additional safeguards to Alternative Three: Withdraw future oil and gas leases from important cultural resource areas such as the Trapper's Point and New Fork Potholes region;

Response: The Trapper's Point and New Fork Potholes areas are proposed in the draft EIS Preferred Alternative for area of critical environmental concern (ACEC) status and to be unavailable for oil and gas leasing.

Comment: Section 3.3.2 cultural resource subregion indicates the Jonah subregion also contains an extensive archaeological district characterized by a unique concentration of late prehistoric. Material and it appears to have good potential to contain intact Paleo-Indian components. While this statement indicates their presence. There is no plan of action that outlines what happens when these archeological and pre-historic items are encountered at one of the sites. The EIS should address and what are the protocol procedures and plan of action that will be implemented to preserve and glean this information from these sites when they are encountered. This would also go for any prehistoric archaeological sites prehistoric native Indian burial sites rock art sites etc.

Response: You make good points here, thank you. In May of 2007, BLM, EnCana, BP/America, the Wyoming SHPO, and the Shoshone Tribe signed a Programmatic Agreement for cultural resource management in the entire Jonah Gas Field. This Programmatic Agreement contains a Research Design and Cultural Resources Management Plan that outline the strategies brought forward in your request, and BLM can make the Programmatic Agreement and its appendices available to you. Native American human remains located on BLM-administered land will be managed in accordance with the Native American Graves Protection and Repatriation Act and its implementing regulations. All rock art sites in the Pinedale Field Office are managed on a case-by-case basis, but carefully, because many lie in active oil and gas fields. Their location is proprietary.

Comment: Page Number & Issue: 2-6, 2.3.1: "Special requirements to alleviate air quality impacts would be included on a case-by-case basis in use authorizations (including lease stipulations) within the scope of BLM's authority." Recommendations: Defer to WDEQ's primary jurisdiction on this issue.

Response: Use of the phrase "within the scope of BLM's authority" provides for this.

Comment: In too many instances, BLM worries about economic impacts to operators and states various impacts to operator activities in the event that certain restrictions regarding wildlife protection are implemented. Section 4.7.1 contains a statement that emission mitigation would be required under all alternatives based upon use of best available rig technologies which would reduce rig emissions. This is a red herring argument because there are no stipulations that will force use of, and more importantly, advancement of such technologies. Absent a requirement, such usage is left to the discretion of the operators who will opt out for as long as possible.

Response: It is reasonable to reveal impacts to operators, as well as other potential impacts of RMP actions. Specific requirements for the development of individual gas fields would be determined in the project EIS and ROD, such as the Jonah and Pinedale Anticline EIS and ROD. BLM would require mitigation of air emissions in these documents to the extent of its authority.

Comment: Appendix 19 A19-26 Table A19-9 WDEQ-AQD There is adequate data from the Pinedale area. It is not necessary to use Yellowstone, which is far removed from the RMP area. Yellowstone should be removed from the text and figures.

Response: BLM includes air quality monitoring data located within the potentially affected environment, as required by NEPA.

Comment: The BLM Must Acknowledge and Address the Existing and Predicted Air Pollution Impacts in the Pinedale RMP Area The "Applicability to the Pinedale Area" section of the draft RMP states that, The analysis of the proposed alternatives must demonstrate continued compliance with all applicable local, state, tribal, and federal air quality standards. Existing air quality throughout the planning area is in compliance with all ambient air quality standards, as demonstrated by the relatively low concentration levels presented in Table A19-3.9. Contrary to this language, the Pinedale area is already experiencing

visibility impairment and is likely out of compliance with PSD increments, as shown in analyses conducted for previous EISs in the area. In addition, the 8-hour ozone standard has recently been exceeded in the area and the BLM's draft EIS/RMP allows for growth in fine particle emissions that are cause for concern regarding future compliance with the fine particle standard. For the BLM to act as if none of these issues exist in this DEIS/RMP is a huge falsehood, misleading and even extremely shortsighted when one considers the impacts of these issues to human health and the environment. These issues must be dealt with in this resource management plan, which is supposed to plan for overall air quality compliance in the Pinedale planning area. Specifically, the BLM must acknowledge and address the areas of concern described below.

Response: BLM will continue to comply with all air quality laws, rules, and regulations. WDEQ PSD guidance states that the Pinedale area is in compliance with the PSD increment for NO2. Whether (or not) modeling is conducted for a RMP is decided on a case-by-case basis. An RMP is *not* a PSD increment analysis.

Comment: Ozone Exceedances Near Oil and Gas Fields Point to a Worsening Problem- Recent exceedances of the 8-hour ozone standard in southwest Wyoming show a worsening air quality problem despite the controls already in place for emissions from oil and gas development. Four exceedances of the 8-hour ozone standard occurred during February of 2005 and 2006 at the Jonah and Boulder monitoring sites, where NOX emissions from oil and gas operations were the likely cause of these high values. EPA's July 6, 2006 letter to DEQ explains that high NOX levels were present during the days on which these exceedances occurred. Because this area is largely lightly populated, with relatively low on-road mobile source emissions, oil and gas operations were likely a major contributor to this problem. The fact that the oil and gas development in Wyoming is taking place in lightly populated areas does not lessen the importance of protecting the air quality for those people who live there, most importantly for sensitive populations, including children, the elderly and those with respiratory conditions. Exposure to ozone is a serious concern as it can cause or exacerbate respiratory health problems, including shortness of breath, asthma, chest pain and coughing, decreased lung function and even long-term lung damage.10 Tables in Chapter 3 of the DEIS/RMP and the Air Quality Technical Support Document (TSD) acknowledge that the Pinedale area is already seeing concentrations that are 97% of the 8-hour ozone standard. And, in fact, the monitoring site that is 3 miles west of Boulder, Wyoming in the planning area saw 8-hour average ozone concentrations in 2005 9 BLM, DEIS/RMP, Appendix 19, A19-7. 10 See EPA's National Ambient Air Quality Standards for Particulates and Ozone, 62 FR 38,856 (July 18, 1997). that were 99% of the standard.

Response: High levels of ozone were measured (> NAAQS) during the winters of 2005 and 2006. This is technically *not* an exceedance.

Comment: The BLM is proposing to allow NOx emissions and VOC emissions in the planning area to increase by 200% and 275%, respectively, between the base year (2001) and 2021. See Table A19-11, Alternative 4 (preferred alternative). Even considering the fact that we don't know the resultant impacts that could occur as a result of this increase in emissions without completing a dispersion modeling analysis, any increase in emissions of ozone precursors is almost certain to threaten the area's compliance with the ozone standard.

Response: BLM is analyzing impacts that might occur in the future if existing and future oil and gas leases are developed. BLM does not "propose" to increase emissions. NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with the BLM on the analysis methodology.

Comment: The BLM must establish strict and enforceable mitigation measures that essentially do not allow for any growth in NOx and VOC emissions in the area in order to avoid violations of the ozone NAAQS. In order to fulfill its responsibility to provide for compliance with the ozone standard in this DEIS/RMP, the BLM must ensure that this value does not increase further and instead make a plan within this DEIS/RMP to decrease ozone levels. Due to increasingly high ozone levels in the area, the Farmington, New Mexico RMP developed a strategy in which the BLM joined with other air quality control agencies in the area to create the Four Corners Ozone Task Force. The goal of this task force is to develop a plan that would prevent ozone levels from violating the standard.12 The BLM must also be proactive in the case of Pinedale and should join with the WDEQ and key stakeholders in order to prevent ozone violations here as well.

Response: The BLM believes that we have rigorously explored the alternatives given the level of information that was available. We have taken the initiative to evaluate cumulative BLM activities on a larger scale. We quantify impacts for site-specific projects where data on specific activities are known.

Comment: Ongoing Development is Predicted to Cause Significant Deterioration of Air Quality in the Area-- The draft EIS/RMP includes problematic language explaining that, "Comparisons of potential PM10, NO2, and SO2 concentrations in NEPA air quality analyses with PSD concentrations are intended only to evaluate a threshold of concern and do not represent a regulatory PSD Increment Consumption analysis," (Appendix 19, A19-6). The BLM must consider the PSD increments as important and legally binding Clean Air Act requirements. The PSD increments are separate ambient air quality standards not to be exceeded, as set out in §163 of the Clean Air Act, that apply in addition to the national ambient air quality standards in clean air areas. The BLM is required under FLPMA, 43 U.S.C. § 1712(c)(8), to "provide for compliance with" all Clean Air Act requirements, and thus the BLM cannot authorize an action that would allow the PSD increments to be exceeded. (See also 43 C.F.R. § 2920.7(b)(3) (requiring the same for land use authorizations.) In the past, the BLM has also indicated that the predicted PSD increment violations in EIS documents should not be considered as real increment violations because they are modeled. However, since only emissions from major stationary sources which commenced construction or modification after the applicable "major source baseline 11.

Response: BLM will continue to comply with all air quality laws, rules, and regulations. WDEQ PSD guidance states that the Pinedale area is in compliance with the PSD increment for NO2. Whether (or not) modeling is conducted for a RMP is decided on a case-by-case basis. An RMP is *not* a PSD increment analysis.

Comment: The 4th max 8-hr ozone concentration at the Boulder site (ID 560350099) in 2005 was 0.079 ppm, or 158 ìg/m3. This is 99% of the 8-hr ozone standard of 160 ìg/m3. The BLM used a background concentration for the DRMP based on 2005 data from the Jonah Infill development area (40 mi NW of Farson). That monitor had a 4th max 8-hr average in 2005 of 0.076 ppm, or 152 ìg/m3, which is 97% of the 8-hr ozone standard. http://www.epa.gov/air/data/reports.html See http://www.nmenv.state.nm.us/aqb/ozonetf/. 6 date" and emissions increases from minor, area and mobile sources that occurred after the relevant "minor source baseline date" affect the allowable increment, an air quality monitor cannot distinguish between pollutant concentrations from sources that are part of the baseline and those from sources that consume increment.

Response: The BLM relied on the state for the data. The WDEQ provided the BLM with the air quality monitoring data. Some of the data are dated but reflect the state's opinion of the best available data to characterize the background.

Comment: Therefore, it is impossible to use monitoring data to establish compliance with the PSD increments; the only way to determine compliance is to complete a modeling analysis. Modeled violations

of the legally mandatory PSD increments were predicted in both the Jonah Infill and the Pinedale Anticline DSEIS documents. As mentioned above, FLPMA and related regulations specify that all CAA requirements be met in the development of land use plans. The BLM is required to "provide for compliance with" all CAA requirements, and cannot authorize an action that would violate the PSD increments, which are a CAA requirement under Section 163. A complete PSD increment analysis is an important component for this DEIS/RMP. Both the Jonah Infill and Pinedale Anticline EIS analyses showed NO2 and PM10 increment violations under most of the modeling scenarios for most alternatives. Additionally, these impacts were likely underpredicted due to flaws in the emission inventories. This draft EIS/RMP should acknowledge the increment violations that were already modeled in the past EIS documents and make a plan for the reversal of this disturbing trend in worsening air quality, particularly since the RMP would authorize considerable oil and gas development, the primary cause of NO2 increment consumption identified in the Wyoming DEQ increment consumption analysis for southwestern Wyoming. The increment violations predicted in the Jonah and Pinedale EISs are even more disturbing considering that in 2005, the Wyoming Department of Environmental Quality (WYDEQ) released a report on NO2 increment consumption in Sublette County, Wyoming.14 This analysis indicated that a maximum of anywhere from 11.16 ìg/m3 to 12.23 ìg/m3 of NO2 increment was already consumed in Sublette County (Table SR-12 of WYDEQ NO2 Increment Report), and the maximum NO2 increment consumption was found to occur in the Jonah Pinedale Development Area (see pages SR-19 and SR-22). Adding this analysis to the additional increment consumption resulting from the increased development already underway in the Jonah Infill and the predicted impacts from the Pinedale Anticline project, the NO2 increment in Sublette County will be violated.

Response: BLM will continue to comply with all air quality laws, rules, and regulations. WDEQ PSD guidance states that the Pinedale area is in compliance with the PSD increment for NO2. Whether (or not) modeling is conducted for a RMP is decided on a case-by-case basis. An RMP is *not* a PSD increment analysis.

Comment: The major source baseline dates are January 6, 1975 for SO2 and PM10 and February 8, 1988 for NO2. 40 CFR 52.21(b)(14)(i). The minor source baseline dates in Wyoming differ by pollutant and were triggered on the date that a complete PSD permit application was received by the WYDEQ, e.g., the minor source baseline date for NOx was triggered on February 26, 1988. See definitions of "major source baseline date" and "minor source baseline date" in the Wyoming PSD rules. 14 Summary Report, Southwest Wyoming NO2 PSD Increment Consumption Modeling: Results for Sublette County, September 15, 2005 (WYDEQ NO2 Increment Report).

Response: The BLM relied on the state for the data. The air quality monitoring data were provided to the BLM by the state WDEQ. Some data are dated but reflect the state's opinion of the best available data to characterize the background.

Comment: The BLM must revise its air quality management objectives in Section 2.3.1 and must significantly modify its air quality management goals and objectives under Alternatives 2, 3, and 4. The BLM's proposed Management Goal, which is identical under Alternatives 2, 3, and 4, is to "Minimize the impact of management actions in the planning area on air quality by complying with all applicable air quality laws, rules, and regulations. Implement management actions in the planning area to improve air quality as practicable." See RMP DEIS, pgs. 2-50, 2-75 - 76, 2-113 - 114. Because the BLM cannot regulate air emissions, this goal is inappropriate. At a minimum, the BLM should more carefully define its lack of authority with respect to air quality "management actions." The BLM cannot attempt to impose air emission regulations through its normal management responsibilities. Further, even assuming the BLM had the authority to regulate air quality or emissions, the Management Goal is poorly worded and could lead to increased litigation. Opponents to natural gas development could, and likely would, suggest the above Management Goal prevents the BLM from authorizing any actions that may lead to increased

emissions within the planning area. Opponents to natural gas development have used similarly phrased language in the Pinedale RMP and Buffalo RMP to suggest not only that BLM has authority over air quality, but that the BLM cannot authorize actions which may impact air quality. The BLM must revise its Management Goal under Alternatives 2, 3, and 4 to state that BLM's only management goal, objective, or action will be to ensure that the WDEQ is invited to participate in the NEPA process as part of the State of Wyoming's cooperating agency status. In the event the BLM unwisely retains the potentially illegal objectives contained in the RMP DEIS, the BLM must include clear language in the RMP disavowing any attempt by BLM to regulate air emissions or air quality in the planning area.

Response: The BLM disagrees. The air quality management objectives are correctly stated. BLM will continue to comply with all air quality laws, rules, and regulations. The WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern.

Comment: The BLM must revise, or delete entirely, its Management Objectives under each of the above alternatives because they are entirely beyond the BLM's authority. For example, the BLM's first Management Objective is to "Maintain concentrations of criteria pollutants associated with management action in compliance with applicable state and federal Ambient Air Quality Standards (AAQS)." See RMP DEIS, pgs. 2-50, 2-75, 2-113. Both the BLM and the IBLA have recognized that the WDEQ, with oversight from the EPA, has the authority to enforce AAQS in Wyoming. Similarly, despite the fact only the WDEQ has the authority to enforce Prevention of Significant Deterioration (PSD) Increments in Wyoming, BLM's second Management Objective is to "Maintain concentrations of pollutants associated with management actions in compliance with the applicable Prevention of Significant Deterioration (PSD) increment." See RMP DEIS, pgs. 2-50, 2-75, 2-113. Proposed Objective 3 even more inappropriately suggests it is BLM's responsibility to "reduce visibility-impairing pollutants ... in accordance with the State of Wyoming's Regional Haze State Implementation Plan (SIP)." See RMP DEIS, pgs. 2-50, 2-75, 2-113. Opponents to development may suggest these Management Objectives prohibit the BLM from authorizing any actions which may increase emissions or have potential visibility impacts in the planning area. The BLM must delete all four of its inappropriate Management Objectives under Alternatives 2, 3, and 4.

Response: The BLM disagrees. The air quality management objectives are correctly stated. BLM will continue to comply with all air quality laws, rules, and regulations. The WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern.

Comment: The BLM must also delete Management Action c. under Alternatives 2, 3, and 4 which would authorize the BLM to impose special requirements, including lease stipulations, to eliminate emissions. As noted above, the BLM does not have the authority to regulate emissions in Wyoming and could not directly, or indirectly through lease stipulations, regulate air quality or emissions. The BLM must delete this unlawful "Action."

Response: The BLM disagrees. The air quality management objectives are correctly stated. BLM will continue to comply with all air quality laws, rules, and regulations. The WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern.

Comment: Item: Page A19-31, Table A19-16, Mitigation Options. Comment: Several of the potential mitigation options presented in Table A19-16 require comments. 1) Installation of SCR on compressor engines.

In the proposed standards for Stationary Spark Ignition Internal Combustion Engines, EPA states the following with respect to the installation of SCR on natural gas fired engines: "For SI lean burn engines, EPA considered SCR. The technology is effective in reducing NOx emissions as well as other pollutant emissions, if an oxidation catalyst is included. However, the technology has not been widely applied to stationary SI engines and has mostly been used with diesel engines and larger applications thousands of HP in size. This technology requires a significant understanding of its operation and maintenance requirements and is not a simple process to manage. Installation can be complex and requires experienced operators. Costs of SCR are high, and have been rejected by States for this reason. EPA does not believe that SCR is a reasonable option for stationary SI lean burn engines ". Consequently, this technology is not readily applicable to unattended oil and gas operation that do not have electricity.

There is very little information in the literature regarding the incremental NOx emission reduction of SCR beyond lean burn technology. This is because there have been very limited installations of this technology for oil and gas compressor engines. Table 1 presents a summary of incremental SCR emission reductions and cost effective control estimates for SCR on a lean burn engine.

Response: The data in the table were developed in concert with EPA. The measures were intended to provide a list of potential mitigation options that could be considered. BLM will consider adding or amending mitigation measures as better information becomes available.

Comment: F-7 Fig 3-11 Why wasn't the data from the Jonah site (Table 3-1) included on this plot?

Response: The best available meteorological and ambient air quality data were used for this analysis. Currently available Jonah data are not complete for 2006.

Comment: F-16 Fig 3-29 & 30 The FS prefers you not use the red and green lines from the Fox document. See comment 16 above.

Response: Figures 3-29 and 3-30 have been updated in the final EIS.

Comment: F-24 Fig 4-1 What are the units on this graph?

Response: The units on the Y axis of Figure 4-1 are "emissions tons per year". This has been updated in the final EIS.

Comment: A19-1 Ambient Air Quality Constituents You might also mention that the analysis does not look at VOCs that are ozone pre-cursers.

Response: VOCs are mentioned in the ozone bullet under the section Ambient Air Quality Constituents. VOCs have been taken into account and are calculated in Tables A19-6, A19-7, A19-8, and A19-11 in Appendix 19.

Comment: A19-6 Last paragraph Here you discuss visibility in SVR, yet elsewhere it is discussed in terms of DV. It might be good to choose one or describe both.

Response: An explanation of deciview has been included in Appendix 19 of the final EIS.

Comment: A19-9 Forest Service There is a 4th Class I wilderness area in close proximity, the Teton Wilderness area, please add this to your text.

Response: Teton Wilderness Area has been included in Appendix 19 of the final EIS.

Comment: A19-20 Existing Air Quality Here you say that ozone is close to the Standard, but fail to mention that SO2 is at 100% of the standard according to Table A19-3. Also, in Table A19-3 PM2.5 and SO2 were never measured at the Jonah site, please validate your data sources. This table is repeated 3 times.

Response: Table A19-3 has been revised and updated in the final EIS.

Comment: A19-14 Air Quality Impact Assessment, 1st paragraph, last sentence Where are the assumptions that were made documented?

Response: Assumptions for the air quality impact assessment are listed in Section 4.2, which includes a description of the assumptions for analysis, as well as methods of analysis. Also, see Appendix 19 for emission assumptions.

Comment: A19-16 5th bullet What is meant by "induced or secondary growth related to increases in VMT"? Could you give an example?

Response: An example of induced or secondary growth would be the increase in vehicle miles traveled due to general population increase in the area, not directly related to BLM activity but perhaps indirectly related (i.e., more gas field jobs translating to higher local population).

Comment: A19-26 Table A19-9, Sulfur compounds This is in conflict with Table A19-3 which says SO2 is 100% of standards.

Response: The data for SO_2 in Table A19-3 was incorrect in the draft EIS. This table has been revised and updated in the final EIS.

Comment: Page Number & Issue: Appendix A, A-19, A-29. Recommendations: The air analysis should reflect current and monitored data, state BACT for oil and gas facilities, and federal regulations.

Response: Extensive air quality monitoring has been and is currently being conducted in the Upper Green River basin beginning in 2005. Much of this data are still not readily available as they are undergoing a thorough quality assurance/quality control process by WDEQ. A base case (year 2001), a short term (year 2011) and a long term (2018) emissions inventory is presented in Appendix 19 of the draft and final EIS. The results of the impact analysis are also presented in Appendix 19. Chapter 3 of the draft and final EIS presents background and current air quality data, including criteria pollutants, HAP's, visibility, atmospheric deposition (wet and dry) and a summary of existing air quality. Chapter 2 of the final EIS presents existing and potential future agreements with other state and federal agencies and air quality management under each alternative. Chapter 3, Section 3.2.6 presents a brief discussion of cooperative agreements between the BLM and other state and federal agencies.

Comment: Even in the discussion of air quality impacts (DEIS pages 4-5 through 4-8) no estimate is given for how much NOx and SO2 would be emitted from projected oil and gas development with in the PRA under the. life of the new RMP. Nor is there any information given for how much other acid or acid-producing chemicals are currently being emitted - or are projected to be emitted in the future from drilling, completion and production operations (e.g., HC1 emitted from evaporation of completion fluids).

Without this information it is impossible for the reader and decision-maker to gauge the significance of potential impacts to surface waters from air pollution deposition.

Response: Estimates of potential NOx and SO_2 impacts are provided in Chapter 4, Section 4.19.3 of the draft and final EIS. Included in this section are estimates of potential wet and dry deposition of acidic species (i.e., all nitrogen and sulfur species). Also see Figures 3-15 to 3-30 of the draft EIS, which present data for nitrogen and sulfur deposition and local lake chemistry.

Trapper's Point and Lander Trail

Comment: That further consideration be given to "Rural Historic Landscape" status for the Trapper's Point/Green River Rendezvous/Fort Bonneville area; That further analysis be given to the potential economic impacts of cultural tourism in the area; That development be paced so that new major gas fields are not allowed until development in the existing and expanded fields has been completed; That seasonal drilling stipulations be enforced to protect cultural resources from inadvertent disturbance during the winter months; That future oil and gas leasing be withdrawn in important cultural areas such as the Trapper's Point and New Fork Potholes region; That new infrastructure be clustered and directional drilling be mandated to minimize industry's footprint; That the loopholes which could allow areas designated for minimal development to become intensively developed and which could allow surface drilling in No Surface Occupancy areas be closed; and, That the cleanest technologies and best environmentally protective practices be employed.

Response: BLM feels that the proposed ACEC for nearly 4,000 acres of the Trapper's Point area is a good first step, which includes no leasing in this ACEC. BLM is considering National Historic Landmark (NHL) status for the Trapper's Point site, as well. Unfortunately, all of the Green River Rendezvous NHL is privately owned and subdivided by Ron Sapol some years ago. Fort Bonneville is half owned by the State of Wyoming and half by a private rancher. BLM intends to restrict construction in archeologically sensitive areas during the winter when snow cover and frozen ground preclude conducting normal cultural resources investigations. Tourism is an important part of the region's economy, and historically tourism has maintained the sustainability of this region's economy during energy busts. Oil and gas leaseholders have rights BLM is bound to honor. BLM does not have the authority to prohibit drilling in areas where valid leases exist. Site-specific drilling and development requirements and BMPs must be developed and applied on a site-specific basis. The BMPs outlined in the draft EIS, and new ones that may be developed, would be applied, as practical, to new developments. It is necessary to provide for access to existing valid leases and for drainage situations that could occur should those existing leases be developed. The language describing how the unavailable and No Surface Occupancy (NSO) areas could be developed, and how areas could be converted to intensive fields has been refined in the final EIS.

Comment: In addition to a Rural Historic Landscape designation around Trapper's Point, this designation could also be appropriate for areas along the Lander Trail. While the areas of the trail nearest the Anticline have had their integrity compromised, other areas of the historic trails - including the Big Piney/Lander segment west of Marbleton and the Buckskin Crossing area - continue to possess characteristics that make them worthy of consideration as RHLs.

Response: You are correct. The Lander Trail from Buckskin Crossing to U.S. Highway 191 and the Sublette Cutoff might qualify as rural historic landscapes. BLM will pursue these locales; the other locales you mention do not appear to possess cultural resource values that lend themselves to Rural Historic Landscape designation.

Comment: We are also gratified to see that Alternative Three would establish SRMAs for the Green and New Fork Rivers as well as new ACECs for Trapper's Point, New Fork Potholes, the Upper Green River, Ross Butte and the CCC Ponds. The establishment of new management areas for the Wind River Front

and Miller Mountain would also be beneficial. Nevertheless, we would continue to encourage you to look into seeking Rural Historic Landscape designation for the above-cited areas.

Response: ACEC designation for the 4,000 acres of the Trapper's Point area is a good start. BLM has been encouraged to consider NHL status for this area, and BLM feels there is merit in this recommendation as well. Also, the Lander Trail from Buckskin Crossing to U.S. Highway 191 might qualify. BLM will pursue these locales; however, the other locales you mention do not appear to possess cultural resource values that lend themselves to Rural Historic Landscape designation.

Comment: We support your proposed stipulations in the preferred alternative that call for no surface occupancy at emigrant inscription sites; prohibition of oil and gas leasing within one mile of the Sublette Cutoff; and designation of trail setting as VRM Class II as opposed to Class III. These are positive steps toward the protection of important trail resources. W. also support your ongoing program of condition assessment for the Buckskin Crossing to Sand Springs Emigrant Camp and Sand Springs to Muddy Creek segments of the emigrant trails.

However, we are concerned that the proposed quarter-mile "buffer" on contributing segments of the Lander Road and Sublette Cutoff may be inadequate, based on the visible results of this approach at some trail locations across Wyoming. The importance of setting along the trail corridor should not be ignored. In some places, visitors experience the historic trail corridor as a "hallway" through dense developments of well pads and related structures. Page 3-20 of your draft RMP makes essentially the same observation. The quarter-mile buffer may be suitable in places where nearby topography obscures development from view of the trail, but we ask that you consider stronger protection for the remaining contributing segments of National Historic Trail under your management.

Response: Generally, BLM agrees with NPS's observations. That is why the Lander Trail from Buckskin Crossing to U.S. Highway 191 is proposed as an "Unavailable for Leasing" area to protect the viewshed and setting in this area. BLM is also extending the 2-mile visibility study area to 3 miles on either side of the NHTs to further protect the viewshed. Similarly, BLM has attempted to protect the viewshed along the Sublette Cutoff and the nationally significant historic inscriptions located on BLM-administered surface and/or minerals in this area. BLM also recognizes that it has the option to extend viewshed/settings studies beyond 3 miles if a project or proposal warrants. BLM will continue to strive for greater protection of the NHTs in its jurisdiction.

Comment: Clearly, several landscapes near Pinedale would fit well within this category (Rural Historic Landscape). We would be especially interested in seeing such a designation for the lands associated with the fur trade, including the Trapper's Point/DeSmet monument/Fort Bonneville/rendezvous areas. Such a designation would afford the Pinedale BLM a wonderful opportunity to examine and interpret the fur trade era in line with modern scholarship on the subject. While, in the past, histories of the fur trade era have concentrated most heavily on the business of the white men's fur trade adventures, recent scholarship has focused much more intensely on the interesting cross-cultural aspects of the trade. "Fur trade society," a concept rarely considered or discussed in the early and mid-twentieth century is now a common subject of study. It is hard to imagine a landscape more fitting than that under the Pinedale BLM's jurisdiction for examining, interpreting, and understanding this fascinating culture.

Response: The DeSmet Monument and site is listed on the National Register of Historic Places. Fort Bonneville (on State of Wyoming and private land) is also listed on the National Register of Historic Places. BLM is proposing the Trapper's Point region as an ACEC, and in this designation BLM sees an opportunity to further pursue Landscape status for the area, which is rich in prehistoric and historic cultural resources. BLM's staff archeologists have written two reports on the fur trade sites of the region

and work closely with the Museum of the Mountain Man on several projects, thus BLM shares the Alliance's interest and excitement in this important aspect of American history.

Request for Additional Protection of Sites

Comment: Unfortunately, this history of cross-cultural cooperation has been largely forgotten and that forgetting has allowed us to misunderstand much about the later conflicts between the Indians and whites. The Pinedale BLM office has a tremendous opportunity to restore some of this lost history by providing insightful and important interpretation of this era.

Response: The DeSmet Monument and site is listed on the National Register of Historic Places. Fort Bonneville (on State of Wyoming and private land) is also listed on the National Register of Historic Places. BLM is proposing the Trapper's Point region as an ACEC, and in this designation the BLM sees an opportunity to further pursue Landscape status for the area, which is rich in prehistoric and historic cultural resources. BLM's staff archeologists have written two reports on the fur trade sites of the region and work closely with the Museum of the Mountain Man on several projects, thus BLM shares the Alliance's interest and excitement in this important aspect of American history.

Comment: We believe that Alternative 3 comes closest to fulfilling the multiple-use requirement of FLPMA and the additional requirement to avoid the unnecessary or undue degradation of resources and values on the public lands. However, we strongly encourage BLM to modify this alternative in the Final EIS and determine which historic and cultural resources, including the Upper Green River NHL, Lander Trail, Sublette Cutoff, and cultural resources within the area of Trapper's Point, could benefit from no surface occupancy (NSO) or no leasing designations. We also strongly encourage BLM to consider the importance of context and setting to the historic significance of these resources during this review.

Response: BLM is attempting to protect and manage the Sublette Cutoff and Lander National Historic Trails within its multiple-use mandate; BLM appreciates your support in these efforts. BLM fully recognizes the importance of context and setting of the NHTs, and you will note that the Lander Trail varies from VRM II to III throughout the document.

Oil and Gas

Comment: We are concerned that the Draft EIS places too much emphasis on accommodating oil and gas leasing and development, and provides inadequate assurances that significant historic resources will be protected and managed in a manner consistent with Section 110 of the National Historic Preservation Act (NHPA), 16 U.S.C. Sec. 470h-2. Each of the four alternatives proposed by the Bureau of Land Management (BLM) in the Draft EIS will further intensify energy development within the Pinedale Field Area. In particular, the preferred alternative will make over 95 percent of the federal mineral estate within the planning area available for oil and gas leasing and development. We question whether BLM can manage oil and gas activity at this level while preventing the unnecessary or undue degradation of the many, nationally significant historic resources within the Upper Green River Valley as required by the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. Sec. 1732(b). We are particularly concerned for the lack of unqualified commitments within the Draft EIS to protect historic resources of known significance from the potential adverse effects of oil and gas development. Accordingly, we recommend that BLM develop binding management guidance to ensure that oil and gas development will not impair these historic resources, especially those resources associated with the Upper Green River Rendezvous Site National Historic Landmark (Upper Green River NHL).

Response: BLM is required to honor valid existing lease rights. BLM agrees that the Section 110 work is proving difficult to effect. However, the PFO staff takes pride in the fact that its Section 110 work does get implemented. The PFO has recorded several rock art sites and contributed to publication of James D.

Keyser's book on the subject. The PFO staff has also conducted Section 110 research on wagon roads, the Lander Trail, coal mining, the Altithermal, Remote Sensing, Rock Alignment sites, Fort Bonneville, and other topics. BLM's recent work at the Wardell Site, both in stabilization and salvage excavations, coupled with interpretation, is particularly noteworthy. Thus while the "106 work" will continue to dominate BLM's efforts, the "110 program" is vibrant in the PFO. BLM feels that the proposed Trapper's Point ACEC, encompassing almost 4,000 BLM acres adjacent to the Green River Rendezvous site (which is located entirely on private surface/private minerals holdings) is an important proactive step.

Comment: A closer reading of the Draft EIS reveals that, if certain circumstances are met, restrictions on oil and gas activity "could be lifted if proposed by operators ..." Draft EIS at 2-121, 2-122. Thus, even though BLM may designate a culturally important area like Trapper's Point as an ACEC and make it unavailable for oil and gas leasing under the Pinedale RMP, it could later lift this restriction in the interest of facilitating energy production. The conversion of restricted areas "into Intensively Developed Fields would make that management of intact viewsheds and natural settings more difficult" and pose a major threat to historic resources like the Upper Green River NHL whose historic significance is inextricably bound up with the visual integrity of the landscape. Id. at 4-23. In the final analysis, the substance of the Draft EIS departs very little from the current RMP, under which BLM nearly leased away development rights adjacent to a National Historic Landmark.

Response: The provisions for leasing unavailable areas are intended to provide for drainage or other situations that might occur in the areas unavailable for oil and gas leasing. It is not BLM's intention to lift this restriction in proposed ACEC areas such as Trapper's Point. A clarification of this point has been added to the final EIS. BLM cannot manage the Programmatic Agreement (NHL) as a whole, because part of this area is privately owned. BLM only has authority over those areas that are federally owned.

Comment: We recommend that BLM place unqualified restrictions on oil and gas leasing and development in the area of significant historic and cultural resources. That is, we strongly object to provisions within the Draft EIS authorizing BLM to waive development or leasing restrictions at the request of oil and gas operators. Areas designated as NSO and no leasing in the Pinedale RMP should remain under such designation for the life of the plan in order to provide the public with assurance that BLM is meeting its responsibility to preserve historic properties under the Section 110 of the NHPA.

Response: The National Historic Preservation Act, among other things, directs federal agencies to protect important cultural resources and, if threatened, mitigate potential adverse effects. While avoidance of disturbance is recognized as one way to minimize adverse effects, avoidance in the Jonah gas field, for example, is impractical. Thus, BLM implements various mitigations to offset adverse effects to significant cultural resources. Additional discussions of how the unavailable and NSO areas work and the conditions for conversion to allow development have been added to the final EIS.

Other

Comment: In the future, we would ask that the (AHW) Alliance for Historic Wyoming be considered an interested party for all Section 106 consultations related to this document. You may contact us at Alliance for Historic Wyoming, 712 South Second Street, Laramie, WY 82070, (307) 742-5449.

Response: The Pinedale Field Office engages in about 1,200 individual undertakings per year, and many of these have no cultural resources conflicts. Too, it may be outside the purview of RMP commenting to request "interested party" status for projects. BLM welcomes the Alliance's interest in the Pinedale Field Office's cultural program and will be contacting you with regard to the interested party status request.

Comment: We urge BLM to recognize that it is unwarranted to impose severe protection measures along the entire length of the trail. Such an approach isn't even warranted along a Congressional designated

historic trail. Rather, it is more logical for the agency to identify specific areas of highest importance for protection while taking into account the possibility of other uses. As stated previously in these comments, the purpose of these trails was to open up the West for settlement and development. Oil and gas activities are temporary and all visual impacts will be eliminated once production is completed. It is important for BLM archeologists to recognize this fact and to work to accommodate oil and gas activities without resorting to "no surface occupancy" buffers along the trail. These same comments apply to the next paragraph on this page regarding State leases within the Pinedale Anticline development.

Response: NHTs are not the expansion era wagon roads that indeed did pave the way for development. Their significance lies in part in a preservation of the natural, unobstructed settings that lend to their National Register eligibility. Oil and gas impacts to the National Historic Trails system are not temporary; we have noted the impacts to NHT settings for many decades. We seek balance, and when impacts are proposed, develop appropriate mitigation. A classic example is within the Pinedale Anticline, where BLM developed a Programmatic Agreement among Shell, Ultra, SHPO, OCTA, the Park Service, the Advisory Council on Historic Preservation, and interested parties to mitigate impacts to the NHT setting.

Forestry

General Comment Responses:

Comments:

- PAGE: 4.29, SECTION: 4.4.7, RECOMMENDED CHANGE: ADD Reduced logging may result in catastrophic fires due to the extent of diseased and pest infested timber in the commercial conifer stands. EXPLANATION: RMP should increase logging to reduce fuel loads, a policy set out in statute by HFRA. 16 U.S.C. §6501. Of the six purposes set out in HFRA, five address risk of catastrophic fire and managing to limit disease and insect infestations. 16 U.S.C. §6501(1)-(5).
- PAGE: 2-115 Forestry Resources SECTION: 2.5.5 RECOMMENDED CHANGE: Revise Management Goal to conform to Chapter 1. Manage forest and woodland stands to maintain a diverse structure of age class and condition consistent with site capability. EXPLANATION: Management goal inconsistent with objective stated on 2-23. HFRA does not manage a stated number of acres or that all acres be in old growth. Instead, HRFA requires that each site be managed for diverse structure and age class of trees to maintain a "healthy" forest. HRFA does not direct BLM to manage forests for "pre-fire suppression" conditions when it is not typical of the region. Unlike other parts of the country, pre-fire suppression in Wyoming would involve large areas of recently burned timber. Any old growth would be in relatively small patches and unlikely to remain old growth. In short, pre-suppression conflicts with other objectives in HRFA and is not required in HRFA. Not sure where BLM got this objective since not found in law or rule. Rocky Mountain forests unlikely to be "fire resistant" since lodgepole pine evolved in fire landscape. You get old growth through fire suppression, then disease, insect infestation, and then catastrophic forest fires. Congress enacted HRFA to avoid that cycle. Objectives are not consistent with HRFA.

Response: Please review Healthy Forests Restoration Act of 2003 (HFRA) Section 102, (e) Old Growth Stands, (2) which states "…maintain, or contribute toward the restoration of, the structure and composition of old growth stands according to the pre-fire suppression old growth conditions characteristic of the forest type taking into account the contribution of the stand to landscape fire adaptation and watershed health, and retaining the large trees contributing to old growth structure". Old growth stands vary considerably by forest type. Comparing an old growth western Oregon stand comprised of Douglas fir, hemlock, and associated species with a different (longer) disturbance interval to a Rocky Mountain lodgepole pine landscape with a very different much shorter disturbance return interval is not appropriate. An old growth landscape covers different seral states in a patch dynamics pattern. Old growth forests are dynamic systems with seral states that vary across the landscape. Long return interval stand replacement fire is a natural fire regime. Most of the long return interval fire regime systems (lodgepole pine, specifically) have not been significantly altered by fire suppression. The Fire Regimes 1–3 which are shorter return interval (5–75 years) are the fire regimes that have been most altered by fire suppression activities.

Unique Comments

Comments on Document/Suggested Changes

Comment: With regard to the forestry section is unclear whether timber will be harvested under this current proposal. The forestry section 3 .4 speaks of statements and facts of current conditions and harvests rather than the impacts of the plan on those harvests. The EIS should outline what federal harvesting guidelines should be adhered to if and when subject well sites are developed within those areas. Development in those well sites in forest areas have much more of an impact on the environment

than open range lands, due to do the close proximity and interaction of running water, riparian areas, groundwater and wildlife habitat.

Response: The Alternatives Summary Table—page 2-161 of the draft EIS—shows the differences between the alternatives. Unfortunately, this table does not include the most current data for potential harvest acreages in forested areas. This has been corrected in the final EIS. There are no federal guidelines for harvesting. Each potential harvest unit is analyzed and dealt with on a site-specific basis. The potential treatment acreage and volume will be updated in each alternative, as follows:

- Alternative 1 — Forest Treatment: 200 acres, Woodland Treatment: none, Volume: 3,600 CCF/1,800 MBF
- Alternative 2 — Forest Treatment: 300 acres, Woodland Treatment: 250 acres, Volume: 2,400 CCF/1,200 MBF
- Alternative 3 — Forest Treatment: 200 acres, Woodland Treatment: 700 acres, Volume 1,600 CCF/800 MBF
- Alternative 4 — Same as Alternative 3

Comment: PAGE:2-115 SECTION:2.5.5 RECOMMENDED CHANGE:d. Forest commodity production and stand improvement activities would be directed toward producing healthy forest [stands focused on small diameter trees, consistent with making the stand fire resilient.](strikeout) Approximately 700 CCF/400 MBF of forest products would annually be available for sale. EXPLANATION:Limiting forest products to secondary role inconsistent with FLPMA where forest products are a primary multiple use. "(l) The term "principal or major uses" includes, and is limited to, domestic livestock grazing, fish and wildlife development and utilization, mineral exploration and production, rights-of-way, outdoor recreation, and timber production." 43 U.S.C. §1702(l). RMP should provide for more output.

Response: Please review HFRA Section 102, (e) Old Growth Stands, (2) which states "…maintain, or contribute toward the restoration of, the structure and composition of old growth stands according to the pre-fire suppression old growth conditions characteristic of the forest type taking into account the contribution of the stand to landscape fire adaptation and watershed health, and retaining the large trees contributing to old growth structure."

Old growth stands vary considerably by forest type. Comparing an old growth western Oregon stand comprised of Douglas fir, hemlock, and associated species with a different (longer) disturbance interval to a Rocky Mountain lodgepole pine landscape with a very different much shorter disturbance return interval is not appropriate. An old growth landscape covers different seral states in a patch dynamics pattern. Old growth forests are dynamic systems with seral states that vary across the landscape. Long return interval stand replacement fire is a natural fire regime. Most of the long return interval fire regime systems (lodgepole pine, specifically) have not been significantly altered by fire suppression. The Fire Regimes 1–3 which are shorter return interval (5–75 years) are the fire regimes that have been most altered by fire suppression activities.

The wording "secondary product" is referenced to the woodlands, where little if any commercial product has been removed nor has there been a demand for such products. Little if any "timber", as referred to in FLPMA, is available within the woodlands. Most of the potential product is either firewood or biomass (for which little market currently exists). The primary or major uses within these areas are forage for wildlife and livestock grazing and for recreation.

Comment: PAGE:2-115 SECTION:2.5.5 RECOMMENDED CHANGE: REVISE b. Restoration of aspen stands would be emphasized through removing/reducing conifer [and/or sagebrush](strikeout) invasion. Prescribed fire and overstory removal of dead and dying aspen would be used to rejuvenate and expand these stands so that watershed and wildlife habitat would be improved, and natural fire breaks would be created within the landscape. EXPLANATION: Action should be reconsidered in light of sage brush habitat issues for sage grouse.

Response: Areas that support aspen stands are not considered sage-grouse habitat by wildlife specialists. Sage-grouse may make some transitory use of these areas, but that use is minimal. The only grouse species that make significant usage of aspen stands are blue-grouse and spruce-grouse. Aspen restoration would benefit these species by re-establishing portions of their habitat.

Comment: PAGE:2-116 SECTION:2.5.5 RECOMMENDED CHANGE: ADD d. Encourage cutting of Christmas trees and posts and poles. EXPLANATION: RMP omits these important uses of forest and wood stands.

Response: This issue is addressed in Section 2.3.3 of the draft EIS, Management Guidance Common to All Alternatives, page 2-6, second paragraph. These totals are much higher than historic use and were developed to account for potential increased demand.

Comment: PAGE: 4.26, SECTION: 4.4.1, RECOMMENDED CHANGE: ADD discussion of current conditions for commercial stands of conifer. ADD Management would address areas where there is high mortality, especially in commercial conifer stands. EXPLANATION: The MSA notes high mortality in commercial stands MSA 3-35; but assumptions omit this important fact and corollary need to address the problem. MSA 3-35 “Most stands in the planning area are starting to exhibit a reduction in vigor and wood fiber production and increases in disease and insect susceptibility as well as mortality. Inventory data indicate that current mortality rates vary from zero volume loss in young seedling and sapling stands to 18.4 cubic feet per acre per year in the spruce-fir sawtimber stands. The average mortality rate for all stands is approximately 7.7 cubic feet per acre per year or a total yearly loss level of nearly 1.64 mmbf. About 98 percent (1.61 mmbf) of the mortality is occurring in the commercial conifer. Primary insects or diseases include bark beetles, dwarf mistletoe, and several varieties of rusts.”

Response: The third assumption in Section 4.4.1 of the draft EIS lists forest health as a major determining factor in forest management. However, the items referred to are a condition of aging stands, close to their natural disturbance regime.

Comment: PAGE: 4.27, SECTION: 4.4.3, RECOMMENDED CHANGE: REVISE Grazing by livestock, wild horses, and wildlife [Livestock grazing] (STRIKEOUT) could affect forest management actions. The regeneration of aspen and other deciduous trees and shrubs in forested and riparian areas could be reduced by livestock and wildlife grazing. EXPLANATION: Bias evident here and change is needed. Deer and elk are equally or more fond of aspen.

Response: You are correct. Wildlife grazing/browsing on regeneration was inadvertently left out. The Proposed RMP includes large ungulate wildlife in the grazing/browsing impacts.

Comment: PAGE: 4-27, SECTION: 4.4.3, RECOMMENDED CHANGE: REVISE Portions of the Wyoming Range forest/woodland area have a high potential for coalbed natural gas (CBNG) development although using current technology these areas are not considered commercially feasible (ENSR and Booz Allen Hamilton 2003). EXPLANATION: Drilling for CBM at 3500' would be very speculative. The statement is not accurate as written.

Response: Active wells are present in the area in question. Speculative or not, coalbed natural gas (CBNG) is being produced.

Comment: PAGE: 4.27, SECTION: 4.4.3, RECOMMENDED CHANGE: ADD Forest management techniques including logging will contribute to forest health by removing dead and dying trees, reducing the spread of insects and diseased trees, and reducing the likelihood of a catastrophic fire. The sale of forest products also provide economic benefits to the communities. EXPLANATION: RMP needs to acknowledge the management needs and risk of fire due to decadent stand conditions.

Response: The final EIS has been updated to include these impacts.

Comment: PAGE: 4-160, SECTION: 4.13.7, RECOMMENDED CHANGE: Impacts resulting from forest management would be less than those under Alternative 1. Fewer acres would be available for harvest of forest products and this increases the risk of major fires with resulting loss of vegetation, soil erosion, water pollution, emissions, and loss of wildlife habitat. Managing forests for a disturbance-based seral state would create a more diverse forest age-class structure and as a result, woody vegetation, fuel loadings, insect infestations, and catastrophic wildland fires would decrease. The lower timber harvest proposed under this alternative would also reduce the ability for weeds to establish themselves in disturbed areas.

Response: This paragraph was poorly worded in the draft EIS. There is the potential for the same acres of forested land to be treated, but with less forest product coming off the land. This alternative also has woodland treatments where Alternative 1 has none. See the updated text in the final EIS.

Comment: PAGE: 4-182 SECTION: 4.17.3 RECOMMENDED CHANGE: REVISE Forest management practices would change the seral stage of the affected stands. Many forest management practices are designed to alter or set back the seral stage of the forest community. Harvest of late-seral or climax forest stands would change the structure and species makeup of timber stands to favor early-seral species and address morbidity in stands, disease, and risk of catastrophic fire. These activities would potentially increase species diversity and richness, depending on different wildlife species' habitat requirements. This would affect all wildlife species dependent on those forest seral stages. Properly mitigated commercial timber harvests could improve big game habitat in the long term. Timber management activities would improve big game habitat by improving forest age class diversity and distribution, edge effect, and forage community diversity.

Response: This change has been made in the final EIS, except with the word "large" in place of "catastrophic".

Comment: PAGE: 4-182 SECTION: 4.17.3 RECOMMENDED CHANGE: REVISE Access roads for logging operations could affect aquatic habitats by concentrating stream flow, increasing erosion rates, scouring streambanks and increasing water yields. and [fragmenting habitats.](STRIKEOUT) Increased spring runoff could increase erosion but establish more stable streams and rivers. Removal of forest understory vegetative cover by logging or fire could alter aquatic habitats by changing the time to peak discharge following precipitation events and increasing sediment transport from upland sources to the stream channel. This also impacts a forage component required for many forest-dwelling species. EXPLANATION: Rosgen D. research shows that increased water yields scour streambanks and improve water habitat. These changes are not necessarily adverse. EIS needs to disclose both costs and benefits rather than implying that all impacts are bad.

Response: Stream dynamics and channel function are the results of complex interactions of forces (e.g., gravitational, electromagnetic, and chemical) and vegetation. Some erosion within a stream channel is

natural, as are the processes that stabilize sediment and aid channel stability. Roads and removal of vegetation within the riparian area tend to decrease watershed capacity, resulting in more rapid run-off. This also frequently results in changes in stream channel conditions that benefit some species while being detrimental to others. Again, this is a complex matrix of interactions. The increased flow that creates potential spawning gravels may also degrade other gravels by filling them with sediment and decreasing the volume of water available for late season flows. These interactions are complex and too site-specific to be covered in this document. On the whole, the greatest amount of habitat diversity and stability is maintained when efforts are made to keep water on the land longer. This means that the initial statement is correct and will remain in the document. The Rosgen statement appears to have been taken out of context.

Other

Comment: Also related to preventing Waste of timber resources, scorched standing timber and blowdowns as have occurred should be lumbered/salvaged before rot/waste regardless of where (wilderness or not).

Response: Forest health issues are a major determining factor in forest management. Where it is determined that it is feasible and appropriate to do salvage logging, it will be done. Wilderness and wilderness study areas have restrictions on what type of treatment can be done. Mechanized harvesting cannot be done in these areas, leaving prescribed fire and wildland fire as the major treatment options open to BLM.

Lands and Realty

General Comment Responses (GCRs)

Comments:

- The BLM has not demonstrated the need for the right-of-way ("ROW") avoidance and exclusion areas in the PAPA. APC owns numerous oil and gas leases in the area and its ability to develop those leases could be significantly impacted if the BLM inappropriately limits AFC's ability to access said leases. The BLM must allow oil and gas lessees and operators to design access routes to facilitate development projects. Further, the creation of the ROW exclusion and avoidance areas does not appear to reflect or acknowledge APC's valid and existing lease rights or its rights as the operator of units such as the Two Buttes Unit. The Interior Board of Land Appeals has noted that "[w]hen a federal unit has been approved and the unitized area is producing, rights-of-way are generally not required for production facilities and access roads within the unit area." Southern Utah Wilderness Society, et al., 127 IBLA 331, 372 (1993). If lessees are not allowed access to their lease parcels, or are prohibited from installing pipelines necessary to transport the produced resource, they are deprived of all economic benefit of the lease. In such situations, the lessee, the State of Wyoming, and the federal government will be deprived of the economic benefit of potential oil and gas development, and the BLM may be inappropriately taking APC's property rights in violation of the U.S. Constitution.
- There are also areas designated as right-of-way (ROW) exclusion areas throughout the DRMP/EIS, yet inadequate justification is provided. The maps in the DRMP/EIS do not enable one to determine the locations of the proposed exclusion areas. BLM must provide strong justification for designating areas as off-limits to pipelines, access roads and other ROWs, and the maps must be clear to enable readers to analyze the effects on resources and how ROW exclusion areas would affect existing leases.

Response: All valid existing rights will be honored.

Comments:

- In the Final EIS and revised RMP, the BLM should continue to leave most of the Pinedale Resource Area open for wireless communications infrastructure. Specifically, the BLM should adopt Alternative #1 or Alternative #2 because they would allow the siting of wireless communications infrastructure on a large percentage of BLM-administered land, while adopting fewer restrictions on the types of uses and facilities. Based on the description in the Pinedale Draft RMP/EIS, Alternatives #1 and #2 appear to be consistent with the executive and legislative directives that require the BLM to make federal land available for the siting of wireless communications infrastructure. These Alternatives also promote the federal policies favoring emergency communications and the deployment of telecommunication to rural areas.(This paragraph is located on page 25).
- The BLM should provide more opportunities to site wireless communications infrastructure on federal lands because it would improve the local economy and the uses of adjacent areas. Although the BLM must weigh various principles of resource management in its preparation of an RMP, section 1601.0-8 of the BLM's rules also requires the consideration of "the impact on local economies and uses of adjacent or nearby non-Federal lands."
- Union has committed to the deployment of emergency communications throughout its service area. The FCC has stated that "the public interest demands that carriers and technology providers

strive to ensure that when wireless callers dial 911, emergency responders are provided with location information that enables them to reach the site of the emergency as quickly as possible."41 Furthermore, the FCC has warned that "inadequate location information can result in a loss of life that might otherwise have been prevented."42 To provide these communications, however, Union will need to construct wireless communications infrastructure.43 Thus, the BLM should prepare a Final EIS and revised RMP to encourage and facilitate the siting of this infrastructure on federal lands in the Pinedale Resource Area.

Response: It is reasonable to place restrictions on commercial and other activities to protect surface resources. The Preferred Alternative would not prohibit development of new communication sites.

Unique Comments

Comments on Document/Suggested Changes

Comment: PAGE: 4.36, SECTION: 4.5.7, RECOMMENDED CHANGE: REVISE for accuracy Under this alternative, activities [impacts] (STRIKEOUT) from wildlife and fisheries management would be greater than under Alternative 1 because of an increased emphasis on habitat enhancement and protection and because of additional restrictions on surface disturbing and other disruptive activities. For greater sage-grouse, big game, sensitive species, and raptors in Intensively Developed Fields, Minimally Developed Areas, and Unavailable Areas, the restrictions placed on development would result in more impacts and restrictions to lands and realty. The placement of ROWs, as well as the windows of construction opportunity for building pipelines, roads, etc., could be affected by both seasonal restrictions and the presence of NSO areas. Relocation or rerouting of the rights-of-way will increase surface disturbance by increasing distances. It also concentrates use in areas rather than dispersing impacts. These restrictions would also impact structure types, heights, and locations. This would either decrease opportunities for ROW authorizations or increase the stipulations placed on ROW authorizations, which could increase cost to the proponents. EXPLANATION: Makes no sense to say greater impacts on wildlife and fisheries when preceding paragraph concludes that there will be less surface disturbance and impacts due to mineral development. It might be more accurate to say there may be more activity but not necessarily greater adverse environmental impacts.

Response: The impacts referred to in the text are from wildlife and fisheries management activities, projects, and restrictions, which would be enhanced under this alternative, to the Lands and Realty Program. Additional restrictions on surface-disturbing and disruptive activities would potentially limit opportunities to approve Lands and Realty projects.

Comment: Page Number & Issue:4-31: "As an example, stipulations could be placed on pipeline or road ROWs, which call for dust suppressants. The requirement to use dust suppressants could increase construction costs. Formal consultation would be required for any project-related activity (dust suppression) that would cause a depletion of the Colorado River system." Recommendations: Most dust suppression water does not come from the Colorado River, so statement needs to be corrected and quantified.

Response: Any water in the Pinedale Resource Management Planning Area, whether it comes from wells, rivers, etc., is part of the Colorado River system.

Comment: a. Existing routes ('corridors') for large utility facilities would be maintained (Map 3-10). No new routes would be identified. New development would be limited to existing routes.

b. Linear ROW crossings in 100-year flood plains, wetlands, and riparian areas would be considered on a case-by-case basis (Map 3-14).

c. No exceptions would be permitted for activities in ROW exclusion areas (Map 2-24; Table 2-27, p. 2-165).

d. ROW for communication sites would be processed on a case-by-case basis with the following criteria:

1. Development would be limited to already-existing multiple use sites; no new sites would be established.

2. Towers on all sites would be restricted to heights that do not require lighting, in accordance with Federal Aviation Administration regulations.

3. All new and replacement towers would be self supporting and non-guyed.

4. New users on all sites would be responsible for notifying existing users of frequencies and for resolving any interference problems with existing facilities."

Recommendations: This is unnecessarily restrictive and not realistic; USQ recommends its modification and/or deletion.

Response: An adequate range of alternatives is provided for analysis purposes. Alternatives 2 and 4 are less restrictive than Alternative 3.

Comment: The DRMP also prohibits new routes (corridors) for "large utility facilities" (pg. 2-79). It is unreasonable for BLM to impose this restriction when it is clear that existing energy transportation corridors are already full. The FRMP must provide for new corridors where needed.

Response: An adequate range of alternatives is provided for analysis purposes. Alternatives 2 and 4 are less restrictive than Alternative 3.

Comment: PAGE: 4-139, RECOMMENDED CHANGE: REVISE EXPLANATION: Acres to be withdrawn do not add up and are not consistent.

Response: In the final EIS, text has been updated to change special management area (SMA) to special recreation management area (SRMA) and to make the discussion more generic, emphasizing SRMAs and an extensive recreation management area.

Comment: The table on page 2-161 indicates ROW avoidance on the Lander and the Sublette, and then later indicates ROW exclusion on the Lander and Sublette. Is this an inadvertent duplication, or do the two statements have different meanings?

Response: Table 2-27 of the draft EIS, right-of-way (ROW) Avoidance and Exclusion Areas by Alternative, indicates that the trails are ROW avoidance, not ROW exclusion areas. The trails also have several other surface disturbance limitations as specified in Chapter 2.

Comment: On page 2-117, the BLM indicates that exceptions to ROW avoidance and exclusion areas would only be granted if certain criteria are met. The criteria for both ROW exclusion and avoidance areas, however, are identical. The BLM should develop less stringent criteria to utilize when considering exceptions to ROW avoidance areas; otherwise, the two designations are not significantly different.

Response: The text has been revised in the final EIS.

Comment: PAGE: 3-25, SECTION: 3.5.2, RECOMMENDED CHANGE : State and local governments can acquire public land by lease or patent for public purposes and must pay for land used as landfills or other waste purposes under the Recreation and Public Purposes Act. EXPLANATION: The EIS omits RPPA acquisitions and incorrectly implies that RPPA would be under §203, FLPMA sale authority.

Response: The definition of R&PP (Recreation and Public Purpose Act of 1926) disposal has been added to the final EIS.

Comment: PAGE: 4.36, SECTION: 4.5.7, RECOMMENDED CHANGE: REVISE to Increase land available for disposal. EXPLANATION: RMP assumes need for additional land for community development. The RMP and MSA already identify potential of 6400 acres suitable for disposal and 14,500 suitable for exchange (DEIS 2-26) but only 790 acres are classified for disposal. This is a big and unexplained difference.

Response: Although 6,300 acres meet the FLPMA disposal criteria for sale, approximately 5,510 acres of the 6,300 acres contain one of the criteria in Appendix 13 of the draft EIS for retention or acquisition.

Comment: PAGE: G-8 CHANGE: EXCLUSION AREA – Areas with sensitive resource values where rights-of-way and 302 permits, leases and easements would not be authorized unless required by law. EXPLANATION: (1) FLPMA requires that all actions of the BLM are subject to valid existing rights, and there may be circumstances where the right-of-way is required by statute. FLPMA § 701(a), (h). Cf. 1997 Green River RMP Glossary (recognizing rights-of-way in exclusion areas may be granted when mandated by law) (2) Rights-of-way are one of the principle uses under FLPMA, and congressional reporting requirements apply if the plan designates an exclusion area over 100,000 acres. 43 C.F.R. § 1712(e) (management decisions excluding one or more of the principal major uses for two or more years with respect to a tract of land of one hundred thousand acres or more subject to congressional reporting and approval requirements), § 1702(l) (defining principle or major uses to include rights of- way). Also, the draft statewide consistency definition explains that the term is not exclusive to lands and realty action proposals, and FLPMA's congressional approval procedures applicable to withdrawals aggregating 5,000 acres or more may be triggered depending on activity prohibition. 43 U.S.C. § 1714(c).

Response: An updated definition of "exclusion area" has been included in the final EIS.

Comment: PAGE: G-26 CHANGE: WITHDRAWAL – [An action that restricts the use of described public lands from operation of certain laws, which are also described in the withdrawal order.](STRIKEOUT) Withholding an area of federal land from settlement, sale, location or entry, for the purpose of limiting activities in order to maintain other public values in the area or reserving the area for a particular public purpose or program. Withdrawal also may be used to transfer jurisdiction or management to other federal agencies. EXPLANATION: The definition is too general and needs to be revised to incorporate the more specific definition under FLPMA, 43 U.S.C. § 1702(j).

Response: The proposed definition of "withdrawal" is in error. The final EIS contains an updated definition.

Wireless Communications

Comment: The BLM also should encourage and facilitate the siting of wireless communications infrastructure on federal lands because it would advance significant public policy goals. As mentioned above, a purpose of the Communications Act is to promote "communication by wire and radio so as to make available . . . to all the people of the United States, . . . a rapid, efficient, Nation-wide, and world-wide wire and radio communication service."59 The siting of wireless communications infrastructure also

would coincide with the efforts of other federal agencies to promote the deployment of telecommunications in rural areas.

Response: Commenter failed to provide specific revisions on how to encourage and facilitate the siting of communication infrastructure on federal lands.

Comment: The BLM should prepare a Final EIS and revised RMP for the Pinedale Resource Area to assist other federal agencies in meeting their statutory mandates and regulatory policies. For example, the FCC must promote the availability of wireless communications in rural areas under the Communications Act.° The FCC has stated that "wireless services have advanced to the point where many people rely on them for communications wherever they may be, whether at home or in the workplace, indoors or outdoors, or in an urban, suburban or rural area."61 In the Telecommunications Act of 1996, which revised the Communications Act, Congress also required the FCC to implement a federal Universal Service Fund to promote connectivity in rural areas through financial incentives to institutions that provide telecommunications and information services.62 In addition, the FCC has adopted several measures "to promote access to spectrum and facilitate capital formation for entities seeking to serve rural areas or improve service in rural areas."63 The FCC also has initiated other programs to increase access to communications in rural areas.64

Response: Commenter failed to provide specific examples on how assist other federal agencies in meeting their statutory mandates and regulatory policies.

Comment: wireless providers often need to site communications infrastructure on federal lands to ensure that rural areas receive access to mobile wireless services. Union also requires access to federal lands to install infrastructure for its fixed wireless, or tellular, communications service. Union provides tellular service to many ranches and other remote residents for which the cost of building wireline service is prohibitive. Thus, the BLM should prepare a Final EIS and revised RMP to facilitate the deployment of wireless communications infrastructure to permit the provision of these much-needed telecommunications and broadband services.

Response: Commenter failed to provide specifics on how to facilitate the deployment of wireless communications infrastructure.

Comment: The BLM should prepare a Final EIS and revised RMP for the Pinedale Resource Area to facilitate the siting of wireless communications infrastructure on federal lands because it would further the statutory and regulatory goals of land-use planning. Although the BLM must balance the management of various land uses in the Pinedale Resource Area, the siting of wireless communications infrastructure would (1) be consistent with the existing RMP; (2) not compromise public resources; (3) support other uses of federal lands; (4) correspond to the policies of other governmental entities; and (5) benefit the local economy and the use of adjacent non-federal areas.

Response: Commenter failed to provide specifics on how the siting of wireless communications infrastructure would (1) be consistent with the existing RMP; (2) not compromise public resources; (3) support other uses of federal lands; (4) correspond to the policies of other governmental entities; and (5) benefit the local economy and the use of adjacent non-federal areas.

Comment: The BLM also should retain a flexible approach for the siting of wireless communications infrastructure because of the inherent limitations of utility corridors. In particular, the BLM should be aware that utility corridors often are not traditionally designed to accommodate the type of infrastructure necessary to provide modern wireless telephone operations. For example, existing corridors are typically used for the siting of point-to-point microwave systems, which have different technical and operational

requirements than mobile wireless systems. The use of these existing corridors frequently results in dead zones within a wireless network.

Response: Utility corridors have nothing to do with the siting of wireless communications. Wireless communication sites would not be subject to the same restrictions placed on linear ROWs and would not be limited to ROW corridors.

Comment: As Sheriff of Sublette County, it is my responsibility to provide communications for law enforcement, EMS and fire services. Some of the repeaters and towers we communicate with are on BLM ground. As part of the Resource Management Plan, I would ask that these sites be held and keep existing sites that have been studied, and found useful in providing continued services to Sublette County.

Response: Existing communication towers will not be affected by decisions in this RMP.

Comment: Page 4-207, paragraph 7, discusses ROW management and states "as oil and gas demands increase, these corridors are stretched across miles of landscapes" it should be noted that the areas designated as Intensely Developed and Minimally Developed are not substantially greater than the areas currently being developed for energy extraction. Paragraph 8 requires communication towers to be self-supporting and non-guyed, is this technically feasible given the Wyoming winds?

Response: Currently, many of the communication towers are self-supporting and non-guyed. This type of tower has proven to be technically feasible and will allow communication sites to be placed close together.

Comment: Another restriction is limiting communication sites to those already-existing, and imposing further restrictions on towers. The DRMP has provided no basis for imposing restrictions that would impair field communications and prevent the use of remote telemetry. Again, justification must be provided for these unreasonable restrictions.

Response: The intent is not to restrict, but to designate areas where communications site for multiple users may occur.

Comment: PAGE: 2-117, RECOMMENDED CHANGE: Insert in ¶g 1. Communication sites would consider technical need, including range and location. EXPLANATION: RMP incorrectly assumes existing sites are adequate when technical specifications as to range and location should be the dominant consideration. Existing locations are only suitable if they meet technical specifications. RMP fails to deal with basic characteristics of communication sites.

Response: An adequate range of alternatives is provided for analysis purposes. Alternatives 2 and 4 are less restrictive than Alternative 3, and both provide for considering communication sites on a case-by-case basis. This approach considers technical specifications of the site.

Land Tenure Adjustments/Sales

Comment: To specifically highlight one significant area of concern, I would greatly appreciate the BLM's consideration of language in the RMP that would initiate land disposal or land exchanges. Pinedale is surrounded by public lands administered by the BLM and is facing a severe housing shortage and as such, the RMP should identify parcels that could be considered for exchange, disposal or other action to allow Pinedale to address these needs.

Response: BLM-administered public lands located northeast of the town of Pinedale contain a major big game migration bottleneck and are not suitable for community expansion. Lands southwest of Pinedale

are located in the Pinedale Anticline gas field. Land tenure adjustments would be considered per the criteria set forth in Appendix 13 of the draft EIS. Lands suitable for consideration for disposal, exchange, and acquisition are identified in Appendix 14 of the draft EIS.

Comment: Please see joint letter included with our comments, from the Sublette County Board of County Commissioners and Pinedale Mayor's office, requesting lands within 2 miles of Pinedale not be leased so that future growth would not be inhibited.

Response: BLM-administered public lands and mineral estate within 2 miles of the town of Pinedale fall into two categories: those included in the Pinedale Anticline development and already leased, and those in the Civilian Conservation Corps (CCC) Ponds area south of Fremont Lake. The Fremont Lake lands are not available for oil and gas leasing or development under the Proposed Plan. They are also not available for town expansion. Lands on the Mesa would remain leased and available for oil and gas development for the foreseeable future, while the Pinedale Anticline gas field is developed.

Comment: PAGE:2-116 SECTION:2.5.5 RECOMMENDED CHANGE:REVISE a. Of the 6,300 acres that meet FLPMA disposal criteria for sale, [790](strikeout) 6300 acres would be available (Appendix 14, Map 2-31). EXPLANATION: Making only 790 acres available for disposal of the 6300 acres eligible for community development contradicts Objective 2. It is also not responsive to the transportation issues raised below. Sublette County lacks land for housing and its roads are crowded and trashed by daily commuters to and from gas fields. If the land is identified as suitable for disposal in the RMP it is arbitrary and capricious to then limit disposal to a mere 790 acres.

Response: Most of the lands identified as suitable for disposal are not conveniently located for community expansion. Having lands available or not available for disposal has nothing to do with transportation needs because roads are handled under the ROW program.

Comment: As to BLM lands available for sale, are there protections against aggressive logging and/or drilling? There are significant water, scenic and wildlife values in parcels in 36N, 112 and 113W. These should be protected by deed restrictions.

Response: Public lands in T. 36 N., R. 112 W. and 113 W., are only available for sale under Alternative 1. Under the other 3 alternatives, including the preferred alternative, these lands could only be disposed of through exchange under the criteria set forth in Appendix 13 of the draft EIS. If an exchange were to ever occur with these parcels, a public meeting or meetings would be held to gather input for a site-specific analysis from the public at that time regarding what interest (i.e., minerals) would be conveyed through the exchange.

Comment: We are requesting BLM keep open the possible transfer of ownership of BLM lands within this two mile radius of the Town of Pinedale to either the Town or the County.

Response: Land tenure adjustments would be considered per the criteria set forth in Appendix 13 of the draft EIS.

Comment: PAGE: 2-118, RECOMMENDED CHANGE: Delete ¶j. [j. No water disposal pits would be permitted.] (strikeout), EXPLANATION: As noted above, the better solution is to convey land to the county for a waste site and allow for disposal of produced water there. The current policy has a number of adverse environmental impacts and the FEIS fails to address these significant adverse cumulative impacts. This policy has the effect of transferring the adverse impacts to private land. Because there is so little private land in this region, the cumulative impacts are more intense and thus more severe.

Response: Most lands suitable for water disposal pits would not meet the criteria set forth for disposal actions. If a parcel did meet both FLPMA and Appendix 13 criteria, the only instrument available to sell public land for commercial purposes is a Section 203 FLPMA sale on a competitive basis. If sold under a competitive basis, there is no guarantee who would submit the highest bid and what purpose the lands would be used for.

Oil and Gas

Comment: The following are things that I would like to see in the RMP: • Notify nearby and on-site landowners of lease sales before the sales occur.

Response: This is not an RMP decision, but rather Wyoming BLM policy.

Comment: MINERAL MANAGEMENT REFERENCE: Appendix 10 DESCRIPTION OF ISSUE: Appendix 10 contains a description of surface disturbances associated with oil and gas development but doesn't include any mention or description of required infrastructures for these activities. SUGGESTED REVISION/ACTION: Communications, electrical and many other necessary facilities are required to support the activities described in this appendix. PacifiCorp recommend that this appendix be revised and expanded to include the other infrastructures

Response: Appendix 10 of the draft EIS has been updated in the final EIS to address additional infrastructures associated with oil and gas development.

Comment: TO BE ADDED TO SUGGESTED REVISION/ACTION FOR MINERAL MANAGEMENT APPENDIX 10 COMMENT: SUGGESTED REVISION/ACTION: that will be required to support the estimated 5,300 to 8,724 additional wells proposed during the next 20 years.

Response: Appendix 10 in the draft EIS has been updated in the final EIS to address additional infrastructures associated with oil and gas development.

Comment: REFERENCE: 4.14.7 Impacts Under Alternative 4, pg. 4-165 DESCRIPTION OF ISSUE: The acreage in Class II would be substantially increased to 30 % from the current 10%. SUGGESTED REVISION/ACTION: PacifiCorp is concerned that this increase in Class II designation and the associated siting restrictions would limit or preclude construction of support infrastructure facilities to already authorized oil and gas developments.

Response: These impacts are discussed in Section 4.5 of the draft EIS, which includes impacts to the lands and realty resource, where these ROW actions would be processed.

Comment: As with previous alternatives, the BLM has not adequately explained or justified the right-of-way ("ROW") exclusion areas throughout the Pinedale Resource Area. Alternative 4 would prohibit water disposal pits in the planning area. See RMP DEIS, Pgs. 2-118, 2-120 - 122. Unfortunately, the phrase "water disposal pits" is not defined. Does the phrase apply to disposal pits for produced water sometimes associated with coalbed natural gas development or reserve and completion pits which are a normal and integral part of oil and gas development? If the BLM intends to prohibit reserve and completion pits; the BLM Is significantly limiting operators' ability to develop the oil and gas resources under their leasehold. The BLM should not prohibit reserve: and completion pits.

Response: The term, as used in the draft EIS, was not meant to include reserve or completion pits. Language dealing with water disposal pits has been revised in the final EIS.

Comment: PAGE: 2-118, EXPLANATION: Also the policy ignores other opportunities for reinjection or desalination.

Response: Prohibition of water disposal pits would not affect the ability to use reinjection wells or desalinization plants.

Comment: REFERENCE: Table 2-31 pgs. 2-171 to 174 and Appendix 5 – Fluid Minerals DESCRIPTION OF ISSUE: This summary of surface disturbance restrictions table and appendix contains surface disturbance restrictions within oil and gas development areas that appear to be inconsistent with other requirements for Alternative 4 (e.g., ¼ mile from occupied sage grouse leks, 1000 feet from active raptor nests or 1,400 feet for ferruginous hawks and no dates provided for "strutting season") SUGGESTED REVISION/ACTION: In most other section of the document these requirements are much more restrictive. PacifiCorp could support these restrictions if they are intended to apply to all activities, but would encourage the BLM to clarify what appears to be conflicting management restrictions.

Response: Appendix 5 of the draft EIS contains best management practices (BMPs) that would be applied as appropriate. The BMPs are not intended to be prescriptive management actions, such as those found in Chapter 2 of the draft EIS. Table 2-31 and Appendix 12 of the draft EIS have been reviewed for accuracy and to be consistent with other portions of the document.

Corridors/ROWs

Comment: Under this alternative, the BLM has also inappropriately limited the creation of new utility corridors, potentially in violation of Section 368 of the Energy Policy Act of 2005, which requires the BLM to designate utility corridors to foster oil and gas development. Alt. 3

Response: The intent is not to restrict, but to designate areas where corridors may occur, as stated on page 2-117 of the draft EIS.

Comment: These new required electrical facilities would require rights-of- way on federal land and no new corridors or allowances for such facilities are identified in the EIS and RMP. PacifiCorp generally supports most components of Alternative 4 but has concerns with the BLM not identifying any new utility corridors through or adjacent to the permitted development fields. The RMP also contains many surface occupancy or seasonal cultural, visual, wildlife or other resource constraints that could preclude construction of the required infrastructure required to provide safe reliable electrical service to the growing development and surrounding areas. PacifiCorp would like to see Alternative 4 include designation of new utility corridors and provisions for exceptions to resource constraints if the facilities are sited within authorized corridors or within Intensively and Minimally Developed oil and gas fields. We have prepared specific comments on the draft RMP which are included in the enclosed table.

Response: PacifiCorp's current main power line into Pinedale is identified as a corridor on Map 3-10, as are several other corridors. Due to the incompatibility of pipelines and power lines, as explained to BLM by both industries, trying to designate power line corridors through Minimally Developed Areas would be very difficult, and next to impossible in Intensively Developed Fields. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: REFERENCE: Transmission Corridors DESCRIPTION OF ISSUE: On August 8, 2005, President Bush signed into law the first National Energy Plan in more than a decade. The Plan provides for the designation of "Energy Corridors" in 11 western states, which, in turn, will be incorporated into various RMPs/Forest Management Plans in those states. The enactment of the Energy Corridor requirement emphasizes the importance of proper transmission corridor planning at the western regional and local RMP/Forest Plan levels. SUGGESTED REVISION/ACTION: PacifiCorp recommends that the

BLM take active steps to work with stakeholders at the federal, state, and local level to expand the concept of federal Energy Corridors to state-wide utility corridors that include state and local government lands. These corridors should be identified in RMPs as they are updated or renewed. In addition to addressing existing energy needs, the establishment of state-wide utility corridors must take into consideration reasonable foreseeable development. Engaging electrical utilities and state land management agencies in the energy corridor planning process will improve communication and avoid unnecessary delays in the country's efforts to meet current and future demands for electricity.

Response: Pinedale Field Office has worked and will continue to work with surrounding federal agencies in corridor planning.

Comment: REFERENCE: Transmission Corridors DESCRIPTION OF ISSUE: In November 2005, PacifiCorp prepared and submitted a map to the Department of Energy of its identified or proposed energy corridors as part of the West-Wide Energy Corridor Programmatic Environmental Impact Statement (PEIS). These corridors were submitted in response to a DOE and DOI Notice of Intent to prepare the West-Wide Energy Corridor PEIS as directed by Section 368 of the Energy Policy Act of 2005. PacifiCorp also submitted GIS data and maps of its current high voltage transmission line locations within the study area. SUGGESTED REVISION/ACTION: PacifiCorp recommends that the BLM designate areas that are currently occupied by high voltage electric transmission lines as energy corridors.

Response: PacifiCorp's high voltage power lines are designated as corridors as shown on Map 3-10 of the draft EIS.

Comment: Lands and Realty REFERENCE: Assumptions – pg. 4-30 DESCRIPTION OF ISSUE: The analysis is based on the following assumptions: • ROW's for energy related facilities (roads, pipelines, etc.) are anticipated to increase. • The installation of power lines, telephone lines, fiber-optic cable and communications sites is anticipated to increase. • The effects of designation and development of transportation and utility ROW corridors would be mitigated on a case-by-case basis. SUGGESTED REVISION/ACTION: PacifiCorp agrees with these assumptions and recommends that the final EIS and RMP include designation of additional corridors and guidelines for ROW corridor designation to meet the needs of the upcoming permitted energy developments. To avoid conflicts and overlaps, BLM should adopt procedures that require all existing entities to be notified when there are plans for an applicant to install new facilities within an existing ROW so uses do not conflict with each other.

Response: Procedures are in place for existing ROW holders to be notified if a new facility is to be placed near or adjacent to an existing ROW. Federal regulations at 43 CFR 2807.14 state that existing ROW holders will be notified when it receives a grant application for land subject to your grant or near or adjacent to it. All applications for permit to drill (APDs) are posted for 30 days for public review at the local BLM office.

Comment: REFERENCE: ROW Incompatibility DESCRIPTION OF ISSUE: Placement of energy facilities adjacent to each other or other activities may result in safety or incompatibility issues. Activities generally excluded from transmission (high voltage) utility corridors include mining, materials storage and disposal, range and wildlife habitat improvements involving facility construction, non-linear energy project development, blasting, excavation, and high profile (tall) facility development. SUGGESTED REVISION/ACTION: The RMP should include a specific provision stating that ROW facilities will not be placed adjacent to each other if issues with safety or incompatibility or resource conflicts are identified. The Western Electric Coordinating Council (WECC), a regional coordinating council for western utility groups, also supports it. It is not always possible for multiple electrical lines to be located in the same ROW corridor and still maintain adequate separation from other lines or utilities (such as gas pipelines). All utilities must be placed so as to meet reliability and safety standards, particularly with an

eye toward reducing the risk of losing all lines due to a common disaster (lighting strike, earthquake, etc.) within a single corridor.

Response: The suggestion to state in the RMP that ROW facilities would not be placed adjacent to each other if safety or incompatibility issues are identified has merit. The final EIS has been revised to include language to this effect.

Comment: REFERENCE: Access Under Emergency Situations DESCRIPTION OF ISSUE: In an electrical emergency situation, unimpeded access and an exemption to any seasonal restrictions must be available to inspect and conduct necessary repairs within a right-of-way area governed by a ROW Grant. SUGGESTED REVISION/ACTION: The RMP should include the definition of an Electrical Emergency Condition. As defined in PacifiCorp's ROW grants with the BLM, an "Electrical Emergency Condition" is a condition or situation that is imminently likely to endanger life or property or that is imminently likely to cause a material adverse effect on the security of, or damage to, PacifiCorp's electrical system.

Response: In an emergency situation, all ROW holders have exemptions to any seasonal restrictions to conduct necessary repairs.

Comment: REFERENCE: 2.3.6 Minerals Management pg. 2-9 DESCRIPTION OF ISSUE: A description of the Reasonably Foreseeable Development scenario for future mineral development in number 4 describes activities where exceptions to seasonal closure periods would be required. SUGGESTED REVISION/ACTION: PacifiCorp must be allowed access to inspect or repair its structures and facilities without vehicle access restrictions. In most situations this will be accomplished by a 4-wheel drive service truck or an all terrain vehicle (ATV). If repairs are necessary, the use of larger equipment may be required. These vehicles will use existing roads and trails as much as feasible, but in some cases, the use of overland travel may be required. Power line construction and maintenance activities should also be included in the description of exceptions.

Response: ROW activities that would typically require an exception during seasonal closure periods include road construction or improvement and pipeline, power line, and communication site construction. Activities that would be permissible during seasonal closure periods without requiring an exception would include daily operations and emergency or nonstandard maintenance. These activities would be permissible if operations are confined to an existing ROW, require no longer than 48 to 72 hours to complete, are conducted during daylight hours only, and involve no new surface disturbance.

Comment: Transportation, Access and Travel Management REFERENCE: 4.12.1 Transportation and Access pg. 4-140 DESCRIPTION OF ISSUE: This section of the analysis contains the following assumptions: • ROW application for energy-related transportation facilities (e.g., roads, pipelines) are anticipated to increase. • The effects of designation and development of transportation and utility ROW corridors would be mitigated on a case-by-case basis SUGGESTED REVISION/ACTION: PacifiCorp agrees with these assumptions and recommends that the final EIS and RMP include designation of additional corridors and guidelines for ROW corridor designation to meet the needs of the upcoming permitted energy developments.

Response: PacifiCorp's current main power line into Pinedale is identified as a corridor on Map 3-10 of the draft EIS, as are several other corridors. Due to the incompatibility of pipelines and power lines, as explained to BLM by both industries, trying to designate power line corridors through Minimally Developed Areas would be very difficult, and next to impossible in Intensively Developed Fields. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: Transportation, Access and Travel Management REFERENCE: Map 3-10 DESCRIPTION OF ISSUE: Transportation, routes and corridors map shows a limited number of designated corridors to or within the designated oil and gas development fields. SUGGESTED REVISION/ACTION: NONE LISTED.

Response: PacifiCorp's current main power line into Pinedale is identified as a corridor on Map 3-10 of the draft EIS, as are several other corridors. Due to the incompatibility of pipelines and power lines, as explained to BLM by both industries, trying to designate power line corridors through Minimally Developed Areas would be very difficult, and next to impossible in Intensively Developed Fields. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: The BLM has not adequately explained or justified the right-of-way ("ROW") exclusion area throughout the Pinedale Resource Area. EnCana owns numerous oil and gas leases in the resource area and its ability to develop those leases would be significantly impacted if the BLM inappropriately limits EnCana's ability to access its leases. The BLM must be willing to work with oil and gas lessees and operators to design access routes to proposed oil and gas development projects. Further, the creation of the ROW exclusion and avoidance areas does not appear to reflect or acknowledge EnCana's valid and existing lease rights or their rights as the operator of Federal units. Alternative 3 would even appear to create ROW exclusion areas within the center of Jonah Field, an area that is already developed. While the issuance of the oil and gas leases does not guarantee access to the leasehold, a federal lessee is entitled to use such part of the surface as may be necessary to produce the leased substance. 43 C.F.R. § 3101.1-2 (2006). With respect to approved units, the Interior Board of Land Appeals has noted that "[w]hen a federal unit has been approved and the unitized area is producing, rights-of-way are generally not required for production facilities and access roads within the unit area. Southern Utah Wilderness Society, et al., 127 1BLA 331, 372 (1993).

Response: All valid existing rights will be honored. An adequate range of alternatives is provided for analysis purposes. Alternatives 2 and 4 are less restrictive than Alternative 3.

Comment: The BLM has not adequately explained whether the restriction limiting vehicular activities to existing roads and trails in sage-grouse habitat and crucial winter range applies to roads and trails existing as of the date the RMP is released, or only limits activities to roads and trails existing as of the date a particular seasonal stipulation begins. If the BLM intends to prohibit all new ROWs in sage-grouse habitat and crucial winter range, it must clearly indicate its intent, and disclose the significant negative impacts closing the Pinedale Resource Area to new oil and gas development will have upon the local economy.

Response: The designation "existing roads and trails" does not prohibit the authorization of future ROWs.

Comment: PAGE: 2-116, SECTION: 2.5.5, RECOMMENDED CHANGE: REVISE b. Utility facilities would be restricted to existing routes and designated corridors only where technically feasible and practicable; potential routes could be State Highways 189, 191, 350, 351, 352, 353, and 354. New corridors could be established as new oil and gas fields are developed (Map 3-10). EXPLANATION: RMP omits important issue of technical feasibility.

Response: If it is not technically feasible to restrict a utility to a corridor then it is not practicable. Therefore, practicable covers the term technically feasible.

Comment: Page: 2-117, Recommended Change: Delete ¶f, Explanation: Contradicts maps showing existing rights-of-way, Map 2-30. RMP would designate existing corridors as exclusion or avoidance areas. This makes no sense. West Wide Energy corridor FEIS shows existing rights-of-way in exclusion area entirely. Need to Reconcile West wide Energy Corridor FEIS with RMP. Both should address the extent to which corridors meet anticipated demand.

Response: The West Wide Energy Corridor final EIS does not include utility corridors in the Pinedale Field Office.

Comment: The DRMP prohibits new corridors for large utility facilities, yet BLM would impose this restriction despite the fact that existing energy transportation corridors are already full. This is an unreasonable restriction that the final RMP must correct.

Response: The intent is not to restrict, but to designate areas where corridors may occur.

Comment: Page N2-117: "d. New power lines would be buried to the extent technologically practicable." Recommendations: USQ recommends that the word "economically" be added for the purpose of clarity. Number & Issue:

Response: It was not the intent of BLM to allow aboveground lines for economic reasons, but for technological ones.

Wind Energy

Comment: REFERENCE: Sustainable Development DESCRIPTION OF ISSUE: Many federal land management agencies, including the BLM and the Forest Service, have issued policy statements in regard to sustainable development concepts, which include provision for renewable energy resources. The joint federal agency explanation of this concept entitled "Sustainable Development and its Influence on Mining Operations on Federal Lands" dated April 2002. In the context of resource planning, this document describes sustainable development as addressing social, economic and environmental interests. SUGGESTED REVISION/ACTION: PacifiCorp urges the BLM to use these principles and this terminology when evaluating alternatives. This is consistent with PacifiCorp's own vision of sustainability as reflected in our environmental respect policy. Where as the BLM does support sustainable resource development, the draft RMP states that wind resource development would be required to comply with many avoidance restrictions that would limit or curtail renewable resource development. PacifiCorp would like to encourage the BLM to reconsider its restrictions and be willing to review any future proposals based on the current technology and potential resource impacts.

Response: BLM believes the restrictions the draft EIS places on wind development and other activities are appropriate.

Comment: • What is the potential for wind energy development within the Pinedale district? This is an issue in adjoining BLM districts, but we do not find it addressed in this draft RMP.

Response: The wind energy potential is briefly described in Chapter 3 of the draft EIS. The potential for wind energy development in the planning area is low. For more information please refer to the Wind Energy Final Programmatic Environmental Impact Statement (http://windeis.anl.gov/eis/index.cfm).

Fish and Wildlife, Sensitive Species

Comment: REFERENCE: Lands and Realty – specific comments L&R management objectives – Objective 3 actions, pg. 2-117 DESCRIPTION OF ISSUE: This objective states: " New power lines

would be buried to the extent technologically practicable to minimize predation of sage grouse" SUGGESTED REVISION/ACTION: PacifiCorp is opposed to this statement as an overall objective due to the associated additional costs, reliability concerns, potential for extended outages and resource damages and there is no current scientific data for this area that identifies sage grouse predation is an issue or power lines increase predation.

Response: PacifiCorp's quotation of the draft EIS is mistaken; the document does not state "to minimize predation of sage grouse." BLM is requiring the burying of power lines, when practicable, to minimize visual disturbances and to reduce perching sites for raptors that may contribute to the predation of other wildlife species.

Comment: REFERENCE: Wildlife and Fish Habitat Management– Objective 2 pgs. 2-143 to 146 DESCRIPTION OF ISSUE: This objective is to maintain sufficient undisturbed or minimally disturbed greater sage grouse habitats. Power lines in Intensively Developed Fields are required to be buried for the protection of sage grouse and actions are the same for Minimally Developed, No Surface Occupancy (NSO) and Unavailable areas SUGGESTED REVISION/ACTION: PacifiCorp questions the need and justification for burying power lines in areas designated for extensive development and not likely to contain suitable habitat to support sage grouse. We also oppose the need for the same level of restrictive actions in all of the different management areas.

Response: It is reasonable to require actions that would reduce impacts on sensitive species, when practicable.

Comment: Lands and Realty – specific comments REFERENCE: Objective 4 – pgs. 2-148 to 149 DESCRIPTION OF ISSUE: This objective is to maintain sufficient, undisturbed or minimally disturbed sensitive species habitat. In minimally developed areas surface disturbing activities would be avoided in white tailed prairie dog towns larger than 12.5 acres and above ground facilities would be equipped with anti-raptor perching devices. SUGGESTED REVISION/ACTION: PacifiCorp support the protection of sensitive species but doesn't support the actions recommended for this objective in areas where oils and gas development has been approved. There is no scientific data to support the recommendation for "anti-raptor perching devices" and recent studies are showing them to be ineffective in keeping raptors off power lines.

Response: A study conducted by Kemmerer BLM has shown that anti-raptor perching devices are very successful in minimizing raptors' use of power lines to search for prey, which is the reason why anti-raptor perching devices are recommended.

Comment: REFERENCE: Objective 8 - pg 2-151 DESCRIPTION OF ISSUE: Objective states that raptor habitats and territories would be maintained in compliance with the Migratory Bird Treaty Act (MBTA), as outlined in Appendix 18 for bald eagles. SUGGESTED REVISION/ACTION: Appendix 18 pg. A18-9 needs to be revised to reflect currently proposed management guidelines issued by the USFWS and construction standards in the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines: Sate of the art in 2006

Response: Appendix 18 of the draft EIS is based on recommendations from the USFWS, which administers the Migratory Bird Treaty Act. In addition, page 9 of Appendix 18 states that power lines should be constructed to the standards identified by APLIC 1996.

Comment: REFERENCE: Alternatives Summary Table 2-25 pg. 2-163 DESCRIPTION OF ISSUE: Wildlife protection restrictions for raptors in Alterative 4 requires that no surface disturbance or high-profile structures be placed within 1 mile of active nests. SUGGESTED REVISION/ACTION:

PacifiCorp doesn't support this restriction because it is more strict than the currently proposed bald eagle management guidelines or definition for disturbance and could greatly hinder the ability to construct facilities. This restriction doesn't address the situation where a facility is built during the non-nesting season and birds select a site within one mile of the nest facility, construct a nest and lay eggs. An active nest is one with eggs or young (for the majority of protected species) as defined and protected under MBTA.

Response: This is a restriction BLM has been using for quite some time and is to protect birds under the Migratory Bird Treaty Act.

Comment: Wildlife and Fisheries REFERENCE: Guidelines for Protection of Sensitive Biological Resources DESCRIPTION OF ISSUE: Timing and spatial stipulations for sensitive biological resources should be regarded as guidelines only and not as definitive dates and distances. A one-size fits all approach puts an undo burden on the applicant. SUGGESTED REVISION/ACTION: Although PacifiCorp understands the need for developing guidelines to protect sensitive biological resources, site and project specific information must be taken into consideration. The Agency should present recommendations for controlling surface disturbing and disruptive activities as guidelines, not as mandates.

Response: Under BLM Manual 6840, BLM is required to do more than just recommend that sensitive species be protected. The point is to manage sensitive species so that they will not be federally listed.

Comment: REFERENCE: Wyoming BLM Mitigation Guidelines Appendix 2 and 3 DESCRIPTION OF ISSUE: These mitigation guidelines provide direction for reducing impacts to wildlife from the various RMP alternatives. However, the stipulations for surface disturbance in Appendix 3 is more restrictive than those in Appendix 5 for Fluid Minerals. SUGGESTED REVISION/ACTION: There appears to be a double standard as to acceptable levels of wildlife impacts and mitigation requirements. The same level of mitigation as outlined in Appendix 5 should be applied to all oil and gas development required infrastructure.

Response: Alternative 3 is the conservation alternative that is broaching objectives and actions based on peer reviewed scientific studies that indicated that the current protection mechanisms are not sufficient. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale. Appendix 3 of the draft EIS has been revised in the final EIS.

Comment: REFERENCE: Wildlife and Fish Habitat Management – Objective 2, pg. 2-70 to 72 DESCRIPTION OF ISSUE: This objective and associated actions are intended to maintain fish and wildlife habitats for Alternative 2. SUGGESTED REVISION/ACTION: PacifiCorp believes that by adopting these actions and using them for Alternative 4 it would eliminate much of the double stands described above.

Response: BLM feels that the actions proposed in Alternative 4 are appropriate.

Comment: REFERENCE: BLM Sensitive Wildlife Species – pgs. 3-123 to 125 DESCRIPTION OF ISSUE: This section describes the sensitive species within the resource area and current status. Much of the data is old (e.g., sage grouse 1995-99 and pygmy rabbit 1980's) and may not reflect current status due to energy development. SUGGESTED REVISION/ACTION: Significant seasonal operational, disturbance or siting restrictions are based on protection of these species or their habitat without a current knowledge of their population distribution or habitat abundance. Mitigation measures or siting restrictions should be viewed as general recommendations until data is updated.

Response: The best available population data were used. Under BLM Manual 6840, BLM is required to do more than just recommend that sensitive species be protected. The point is to manage sensitive species so that they will not be federally listed. BLM is conducting current baseline studies for BLM sensitive species to eliminate this concern.

Comment: REFERENCE: Wildlife and Fish Habitat 4.17.3, pgs. 182 to 183 DESCRIPTION OF ISSUE: This section describes impacts common to all alternatives and states "Above ground ROW actions, such as communication sites and power lines would have long term impacts. These types of permanent structures are particularly hazardous to avian wildlife because of the potential for collision or electrocution." " Impacts from ROW-approved actions such as power lines, communication sites and wind turbines, would increase injury and death to bats, raptors and other migratory birds as a result of collision." SUGGESTED REVISION/ACTION: PacifiCorp disagrees with these statements and thinks they should be removed because it is required to construct and maintain its faculties to minimize impacts to avian resources in compliance with its internal environmental governances and ROW permitting stipulations.

Response: BLM cannot always mitigate all impacts, and despite Avian Power Line Interaction Committee design standards, bats and raptors are still electrocuted. Some of these issues stem from location of the structure (e.g., in migration corridors). Power lines and other such facilities are placed in the area of human need, sometimes independent of migratory issues; therefore, the impacts analysis is valid.

Comment: REFERENCE: Impacts Under Alternative 4 4.17.7, pg. 4-209 DESCRIPTION OF ISSUE: Requirement to prohibit wind development within 3 miles of sage grouse leks, raptor concentration routes or migratory bird routes to minimize collisions. SUGGESTED REVISION/ACTION: The BLM should use this as a recommendation and not a siting stipulation during evaluations of potential renewable resource proposals.

Response: There have been several studies nationwide based on the effects of placement of wind facilities. This recommendation is based on the results of these impacts.

Comment: PAGE: 2-116, SECTION: 2.5.5., RECOMMENDED CHANGE: REVISE e. [Realty actions that would protect wildlife migration routes would be considered] (strikeout). Public lands would be retained to facilitate migration corridors [provide for free movement of migrating big game animals at]:(strikeout) EXPLANATION: Local governments object to any land acquisition. The tax base is already hurt by the percentage of federal ownership. Unlike other western states, the revenue distribution system in Wyoming does not assure that communities have revenues to address the increased demand for community services. Eviscerating the tax base by acquiring additional private land is even more problematic. Also it is inaccurate to suggest that big game animals are "constricted" through public land migration corridors when the animals primarily use private lands, largely because that is where the water is. If the maps were to include a private land layer, it would be apparent there is no "bottleneck" or constriction. This inaccuracy is repeated throughout the RMP and should be corrected.

Response: This action does not imply land acquisition, but retention of lands already administered by BLM. The word used is "retained", not "acquired". Big game migration corridors and bottlenecks within the planning area are well documented. Most of the big game migration corridors extend beyond private land and onto state and federal lands, in some cases for hundreds of miles. Many migration corridors have been compromised, abandoned, or restricted (bottlenecked) because of development on federal and private lands.

Visual Resources

Comment: Visual Resource Management (VRM) REFERENCE: 2.4.4 Alternative 4 pg. 2-20 DESCRIPTION OF ISSUE: The integrity of the visual setting of the national historic trails would be protected from surface disturbance. SUGGESTED REVISION/ACTION: The designation of visual buffer zones for a minimum distance of 2 miles on either side of national historic trails or redesigning a project to conform to the classification of a VRM Class II designation may be unrealistic within the designated oil and gas development fields. PacifiCorp supports the ¼ mile or visual horizon restriction as proposed in Alternative 1 (pg. 2-44). Large and highly visible exploratory and development structures, power line, support roads, and other facilities are necessary yet to some segments of the population may be considered as impairing the quality of scenic (visual) values.

Response: It is appropriate to have a long-term goal of protecting the visual integrity of these resources. The text has been revised to clarify that the Visual Resource Management (VRM) Class II designation applies to contributing segments of the historic trails.

Comment: REFERENCE: 3.14.3 Visual Resource Management System, pg. 3-106 DESCRIPTION OF ISSUE: Use of VRM tools to manage visual values within the RMP planning area is an accepted process. However VRM classifications are not consistent across boundaries between the Pinedale and Rock Springs BLM Field Offices. SUGGESTED REVISION/ACTION: PacifiCorp's support of the VRM process is based on the need for consistency between field offices and context that the placement of certain electrical facilities within both Pinedale and Rock Springs Resource Areas is both necessary and consistent with the multiple use concepts embodied within the RMP.

Response: VRM classifications have been made consistent across the field office boundary to the extent possible.

Other Land and Realty Issues

Comment: Because these values are so unique, we, as a community, are trying to conserve large portions of private land in the area through the use of conservation easements. For example, the Green River Valley Land Trust worked with nearly 40 families to conserve nearly 20,0000 acres to date and hopes to double that by the end of this year. Leasing the federal minerals makes this difficult and affects the ability to raise funds to do so.

Response: BLM has considered the conservation activities of local landowners in refining the alternatives in the final EIS. The areas unavailable for oil and gas leasing have been updated in the final EIS.

Comment: Item: Page 1-9, Section 1.4.2, General Planning Criteria "The planning decisions in the RMP will apply only to the BLM-administered public land surface and mineral estate in the planning area, including BLM-administered minerals that underlie nonfederal lands (split estate)." Comment: The RMP should identify any standards recommended by cooperating agencies that may differ from the standards that those agencies apply to nonfederal lands under their jurisdiction. It should be clear to the public where substantial additional requirements are placed on activities on federal land by state and local governments.

Response: The policies and land use plans of the cooperating and other state, federal, and local agencies are not going to be reproduced in the RMP. The requirements of state and local governments apply to all lands, not just federal lands.

Comment: PAGE: 2-120, RECOMMENDED CHANGE: REVISE Replace prohibition with waste disposal sites owned by local governments. f. [On-lease water disposal pits would not be allowed.]

(strikeout) Lands identified as suitable for disposal will be conveyed upon request to local governments for purposes of developing produced water disposal sites. EXPLANATION: See Comment #66.

Response: Most lands suitable for on-lease water disposal pits would not meet the disposal criteria in Appendix 13 of the draft EIS. If a parcel did meet both FLPMA and Appendix 13 criteria, the only instrument available to sell public land for commercial purposes is a Section 203 FLPMA sale on a competitive basis. If sold under a competitive basis, there is no guarantee who would submit the highest bid and what purpose the lands would be used for. Language regarding water disposal pits has been revised in the final EIS.

Comment: PAGE: 4.36, SECTION: 4.5.7, RECOMMENDED CHANGE: ADD The lands available for lease or disposal will include areas suitable for OHV recreation, such as desert riding in Granite Wash or Clay Dunes. EXPLANATION: Local governments will pursue leases or patent under R&PPA in order to meet recreation demand for OHV areas. Otherwise, users turned away from public and National Forest System lands will trespass on private land.

Response: OHV recreation areas are being considered in response to other comments received. It is not necessary to process R&PP actions in order to provide for OHV use areas. R&PP actions are limited to 640 acres.

Comment: Under either Alternative 3 or 4 the Department of the Interior would be required to comply with the formal withdrawal requirements imposed by FLPMA. Under FLPMA a withdrawal is defined as: withholding an area of Federal land from settlement, sale, location, or entry, under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of Federal land, other than "property" governed by the Federal Property and Administrative Services Act, as amended (40 U.S.C. 472) from one department, bureau or agency to another department, bureau or agency.

43 U.S.C. § 1702(j) (2006). If Alternative 3 is selected, the BUM would make a total of 711,920 acres unavailable to oil and gas leasing and, under Alternative 4, a total of 174,410 acres unavailable for oil and gas leasing. Because such decisions constitute a withdrawal, the Department of the Interior will be required to comply with the procedural provisions of Section 204 FLPMA. 43 U.S.C. § 1714 (2006), Among other things, only the Secretary of the Interior - or a designee in the Secretary's office appointed by the President and confirmed by the Senate - has the authority to make withdrawals of federal "ands. 43, U.S.C. § 1714(a) (2006). The Secretary is also required to provide notice of the proposed withdrawal in the Federal Register and conduct hearings regarding the withdrawal. 43 U.S.C. § 1714(b)(1) and (h). Finally, the Secretary is required to notify both houses of Congress of specific information relating to the proposed withdrawal. See 43 C.F.R. §§ 1610.6; 43 U.S.C. § 1714(c)(2).

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: Page: 2-122, Recommended Change: Add the following: BLM will request that the public lands in the area be withdrawn. Explanation: BLM cannot classify areas as unavailable to mineral leasing without also securing a withdrawal. BLM argument that it can use land use classification (§202(e)) in lieu of (§204) is legally incorrect. More accurate to describe WSAs closed to oil and gas by statute rather than non-discretionary. A rule could require closure and be nondiscretionary. The broad use of unavailable for leasing has a number of legal and factual problems: inversely condemns state leases and interferes with state school land revenues and administration; inversely condemns existing leases interferes with and inversely condemns private lands. Drainage guidance does not conform to IM and will make this area

vulnerable much like what occurred in eastern Wyoming when BLM did not lease at the request of the Forest Service and development proceeded on private land.

The decision itself is entirely arbitrary and capricious, because it is based on Highway 191 not on geology or any other relevant factor. FLPMA defines appropriate consideration for withdrawals, 43 U.S.C. §1714(c), and here again the grounds for the withdrawal fall far short of statutory considerations.

The unavailable leasing area does not adequately address the risk of drainage, because the development causing the drainage will not necessarily be a federal lessee upon which BLM can force the drilling of a protective well. Nor do the rules give BLM the authority to force a company to buy a lease and thus pay royalties. As BLM discovered in eastern Wyoming, it is difficult to determine either the amounts or the developer that actually effected the drainage.

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: Page: 4.72, Section: 4.7.1, Recommended Change: REVISE per withdrawal Explanation: Withdrawal may not be approved given contradictions with other resource mandates. It appears that this is the reason that BLM is attempting to avoid withdrawal procedures. The assumption that elk management requires seasonal closure is contradicted with experience in Nitchey Ridge to the south. See Taylor (2005).

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: Page: 2-122, Recommended Change: Objective 4 (Unavailable Areas) Withdraw Make federal lands and minerals from mineral leasing as depicted on Map 2-9 unavailable for oil and gas leasing [(156,900] (strikeout) acres). Explanation: As explained a year ago, BLM lacks the discretion not to follow FLPMA mandates as they apply to withdrawal of federal land. BLM may have discretion to decide not to issue a lease but FLPMA does not give BLM discretion not to follow withdrawal rules. See Comment # 9, 27. The local governments also note that the basis for closing the 156,900 acres is largely arbitrary (e.g. east of Highway 191) and fails to meet criteria imposed in FLPMA for a withdrawal. One of the stated reasons is for a U.S. Air Force seismic monitoring station. A withdrawal requires action in accord with 43 U.S.C. § 1714. Resource Associates of Alaska, 114 IBLA 216, 219(1990). This is precisely why BLM followed FLPMA's withdrawal procedures in proposing to modify the same public land originally withdrawn for the purpose of a weather station. 51 Fed. Reg. 1859 (1986) (proposed changing the purpose of the withdrawal to a seismological site and proposed continuing the existing withdrawals for an additional 5-year period). The exclusion area, therefore, needs to be withdrawn in accordance with FLPMA.

Response: The Wind River Front management area is intended to address other resource needs, not just those of the USAF Detachment.

BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: Page: G-7 Change: Easement–[A right afforded a person or agency to make limited use of another's real property for access or other purposes.](STRIKEOUT) An easement is an interest in land which entitles the easement holder to a limited use or enjoyment over another person's property Explanation: The legal definition of easement established under state law should be used because it is controlling. Sierra Club v. Hodel, 848 F.2d 1068, 1083 (10 Cir. th . 1988). Suggested language is taken verbatim from Wyoming common law. Owsley v. Robinson, 65 P.3d 374, 377 (Wy. 2003).

Response: BLM has determined that a definition of "easement" is not necessary in the FEIS.

Livestock Grazing

General Comment Responses: *No GCRs are associated with this category*.

Comments on Document/Suggested Changes

Comment: Chapter 4 Page 41 Commentor WGFD We recommend replacing 7th paragraph ("Closing treated area....") with the following language, "Treated lands should be protected from grazing by domestic livestock for at least two years or until the BLM determines that grasses have become fully established to control surface runoff and sedimentation."

Response: Chapter 4 deals with disclosing the impacts of management actions, not establishing them. The suggested wording has been added to Chapter 2, Proposed Plan, under Vegetation, where grazing management of vegetation treatments is discussed.

Comment: PAGE: 4.38, SECTION: 4.6.2, RECOMMENDED CHANGE: REVISE Applying appropriate guidelines to grazing operations to comply with the Wyoming Standards for Rangeland Health would affect livestock operators on those allotments for which there is a formal determination of not meeting the Standards for reasons attributable to grazing. Such adjustments could include season-of-use changes, forage allocation reductions, implementation of grazing management practices (e.g., growing season deferment, riparian pastures, and exclosures), forage utilization limits, and conversions in kind or type of livestock. EXPLANATION: Handbook requires determination that grazing is the cause of any failure to meet or maintain standards. H- 4180.2 App. C.

Response: This text has been updated in the final EIS.

Comment: PAGE: 4-40, SECTION: 4.6.2, RECOMMENDED CHANGE: Water developments designed to provide new water sources for wildlife and livestock would increase water availability for all grazing animals, [livestock,] (STRIKEOUT) and would promote improved distribution of both livestock and wildlife. Large reservoirs capable of supporting fisheries provide a reliable source of water to livestock and wildlife through drought periods. Protection of springs, seeps, and adjacent riparian areas from grazing animals provides cleaner and more dependable water sources for all grazing animals [livestock.] (STRIKEOUT) EXPLANATION: Changes balance paragraph.

Response: This section portrays impacts on the livestock grazing program. Impacts to wildlife habitats are discussed in Section 4.17 of the draft EIS.

Comment: PAGE: G-1 CHANGE: ACTUAL USE – The amount of animal unit months consumed by livestock based on the numbers of livestock and grazing dates submitted by the livestock operator [and confirmed by periodic field checks by the BLM.](STRIKEOUT) EXPLANATION: Actual use definition in grazing regulations does not provide for periodic field checks and RMP definition should conform. Regulations require an actual use report submitted by permittee or lessee. 43 C.F.R. § 4100.0-5.

Response: The definition has been revised in the final EIS.

Comment: PAGE: G-1 CHANGE: ALLOTMENT – An area of land designated and managed for livestock grazing where one or more livestock operators graze their livestock. EXPLANATION: Per 43 C.F.R. § 4100.0-5, definition should clearly state that land is designated for livestock use.

Response: The definition has been revised in the final EIS.

Comment: PAGE: G-2 CHANGE: ANIMAL UNIT MONTH – A standardized unit of measurement of the amount of forage necessary for the sustenance of one animal unit for 1 month; [also a unit of measurement that represents the privilege of grazing one animal unit for 1 month](STRIKEOUT) EXPLANATION: Second part of the definition is inaccurate and should be deleted. The grazing permit and preference represent the grazing privilege, not AUMs. 43 C.F.R. § 4100.0-5.

Response: The definition has been revised in the final EIS.

Comment: PAGE: G-9 CHANGE: GRAZING PREFERENCE – The total number of AUMs on public land apportioned and attached to base property owned or controlled by a permittee, lessee, or an applicant for a permittee or lessee. Grazing preference includes active use and use held in suspension. Grazing preference holders have a superior or priority position against others for the purpose of receiving a grazing permit or lease. EXPLANATION: Definition does not adequately define grazing preference and should be revised to conform to BLM grazing regulations 43 C.F.R. § 4100.0-5. The revised regulation makes the definition of grazing preference similar to the definition adopted in 1978, 68 Fed. Reg. 68452 (2003), and reflects the consistent policy and practice of the Grazing Service and later the BLM up until the 1995 changes.

Response: The definition has been revised in the final EIS.

Comment: PAGE: G-18 CHANGE: PREFERENCE - Grazing privileges established following passage of the Taylor Grazing Act, based on the adjudication of the grazing use of the Federal range during the priority period. The preference in most cases was adjusted to reflect wildlife needs. The active preference and suspended preference together make up the total grazing preference EXPLANATION: Definition lacks important historical detail and should be revised accordingly. See Public Lands Council v. Babbitt, 529 U.S. 728, 735 (2000) (citing 1937 Rules for the Administration of Grazing Districts); Natural Resources and Environment, Rangeland Reform Revisited (Summer 2003).

Response: The definition has been revised in the final EIS.

Comment: PAGE: G-19 CHANGE: RANGELAND IMPROVEMENTS - An authorized physical modification or treatment which [Any activity or program on or relating to rangelands that](STRIKEOUT) is designed to improve forage. . . EXPLANATION: Per 43 C.F.R. § 4100.-5, a range improvement is not an “activity or program” but a physical modification or treatment.

Response: The definition has been revised in the final EIS.

Comment: PAGE: G-19 CHANGE: RANGE TREND - The direction of change in range condition over time, as measured by monitoring data, either toward or away from desired management objectives. EXPLANATION: Definition is incomplete and needs to be revised to conform to BLM grazing regulations, 43 C.F.R. § 4200.0- 5 (definitions of trend and monitoring).

Response: The definition has been revised in the final EIS.

Comment: PAGE: G-21 CHANGE: SEASON OF USE - A livestock grazing permit term and condition identifying [t](STRIKEOUT)The time during which livestock graze a given area[, and is manipulated to achieve resource objectives](STRIKEOUT) determined by the BLM to achieve management and resource condition objectives. EXPLANATION: Per 43 C.F.R. §§ 4130.03, 4130.3-1.

Response: The definition has been revised in the final EIS.

Alternatives

Comment: Our family as stockmen, ranches, and wildlife managers recommend alternative #3 with one exception-that no punitive decreases in animal unit grazing be left in alternative #3. It is counter intuitive to diminish or risk economic disaster through diminishing AUs as cattle and sheep are the major management tools for the BLM as it deals with the numerous specifies of concern on our state sage brush steppes. If the gas industry/BLM uses the economic viability of the grazer they will lose their only significant management tool for wildlife and sagebrush health.

Alternative #4 plays out the creation of conflict between grazing and drilling by being the most destructive alternative for the grazers. Short of restoring the AUs to alternative #3 the only other alternative is #4 which through development activity puts pressure on the habitat utilized by wildlife and grazers for managing the sage brush steppe. To avoid the lists of current species of concern you must keep a healthily ungulate grazing structure in place.

Response: It is reasonable to analyze an alternative that would close allotments in the active gas fields. This was placed in Alternative 3 as the most restrictive alternative, not as an attempt to pit interest groups against each other. BLM can choose elements from any alternative in formulating the Proposed Plan in the final EIS.

Comments on RMP Livestock Grazing Analysis

Comment: Chapter 2 Page 118 Commentor WGFD As an Action, we recommend that a defined number of AMPs be targeted for completion on a yearly basis. Furthermore, we recommend that priority be given to those allotments located within Intensively Developed Fields.

Response: As experienced in the former Pinedale RMP, scheduling a specific number of allotment management plans (AMPs) is not realistic. Currently, mitigation efforts, such as in the Jonah Interagency Office, are addressing landscapes within and adjacent to developing fields.

Comment: The effects of different livestock grazing intensities on forage plant production was studied in a ponderosa pine type in Colorado as early as the 1940's (Schwan et al, 1949). This study showed that forage consumption at a rate of 57% produced an average of twice as much forage as a rate of 71%. An area left ungrazed by livestock for 7 years produced three times as much forage as the 71% use area. The authors concluded that, as grazing use increased, forage production decreased. During that same period, Dyksterhuis (1949), in a classic paper on the use of quantitative ecology in range management, presented examples of how stocking rates must be adjusted based on precipitation and range condition, which included a rating based on departure from the potential plant community. NRCS (USDA, 1982) considers proper grazing management as that management that sustains the potential plant community.

The effects of conservative (30 – 35%) use vs. heavy (60 – 65%) grazing use on grasses and forbs by cattle was determined in a New Mexico study (Galt et al, 1999). Both of these pastures had experienced conservative use for over 10 years. In 1997, one pasture was changed to heavy use. This study showed that heavy stocking rates resulted in serious declines in productivity in the succeeding year. Perennial grass production was reduced by 57% and forbs by 41% in the heavily grazed pasture compared to the conservatively grazed pasture. The authors cited a number of other studies in arid environments that showed heavy stocking rates were accompanied by decreases in forage production when compared to conservative use. After drought, the ability of forage plants to recover was directly related to the standing crop levels maintained during the dry period. The studies cited showed that grazing during different seasons was less important than grazing intensity.

Five long-term stocking rate studies from three different locations in Arizona, New Mexico and Utah documented similar patterns (Holechek et al 1999a). In the Desert Experimental Range in Utah, a 13-year study with moderate (35%) and heavy (60%) use by sheep resulted in annual forage production of 198 lbs/acre and 72 lbs/acre. The authors recommended 25 – 30% use of all forage species. A 10-year study at the Santa Rita Range in Arizona demonstrated that perennial grass cover and yield showed an inverse relationship to grazing intensity, while burroweed, an undesirable species, increased with increasing forage use. The authors recommended a 40% use level. A 37-year study at the Jornada Experimental range in New Mexico involving conservative (33%) and moderate (45%) use showed that the lower grazing intensity resulted in greater black grama (perennial grass) cover. Lowland areas with high clay content and periodic flooding grazed at moderate intensity had higher cover of Tobosa, a perennial grass, than heavily grazed areas. They recommended 30% be used as a stocking intensity with no more than 40% removed in any year. A 10-year study at the Chihuihuan Desert Rangeland Research Center looked at four grazing intensities of 25%, 35%, 50% and 60%. Light (25%) and moderate (35%) use produced 70% more forage than 50% use and more than double that achieved at 60% use. Here, the author recommended conservative stocking at 30 – 35%.

Hutchings and Stewart (1953), suggested that 25 – 30 % use of all forage species by livestock was proper. They recommended this level because routinely stocking at capacity will result in overgrazing in half the years and necessitate heavy use of supplemental feed. Even with this system, they recognized that complete destocking would be needed in 2 or 3 out of ten years. Holechek et al (1999a) concluded that the research is remarkably consistent in showing that conservative grazing at 30 – 35% use of forage will give higher livestock productivity and financial returns than stocking at grazing capacity. They also recognized that consumption by rodents and other wildlife must be taken into account as part of this utilization, otherwise, rangeland productivity would suffer even at these levels of use. Galt et al (2000) recommended levels of 25% utilization for livestock and 25% for wildlife with 50% remaining for watershed protection. In none of these cases have the scientists recommended 50% utilization by livestock and they are clear that even at the lower use levels recommended, allowance for wildlife use must be included in overall use.

Response: Appropriate grazing use levels are determined on a site-specific allotment or pasture basis depending on the vegetation type and condition, other uses, and other information pertinent to the area.

Comment: Schulz and Leininger (1990) studied long-term riparian exclosures compared to areas that continued to be grazed. They found that, after 30 years, willow canopy cover was 8.5 times greater in livestock exclosures than in adjacent grazed riparian areas. Grasses were 4 to 6 times greater in cover within the exclosure than outside. Mean peak standing crop of grasses within the exclosure was 2,410 Kg/Ha, while outside in caged plots, mean peak standing crop was 1,217 Kg/Ha.

Often cited, Franklin Crider's study on root growth stoppage from plant top removal provided quantitative measurements of plant re-growth under different amounts of removal (Crider 1955). Three mid-west perennial grasses were grown from seed in pots under ideal conditions of watering and fertilization. After sixty days of growth, these potted grasses were clipped once at intervals from 10% to 90% of the above ground biomass. Repeat clippings of the potted grasses were made every two days to return the plants to the same height as the original clipped percent. The experiment lasted thirty three days at which time root growth of controls became inhibited by the size of the pot. Crider concluded that under these ideal growing conditions, if these species of grasses had 40% or less of their aboveground biomass clipped either once or many times, then the net root mass was the same or more at the end of the experiment. This was used to make the assumption that grazing during the entire growing season at 40% or less would sustain plants from one season to the next. This same study has been used to justify the 50% or "take half/leave half" proposition that range managers have used for decades. Clearly, the long-term range studies cited here show that under actual field conditions, these use levels are excessive and light

grazing (25% or less by livestock) is most appropriate to meet BLM's mandate for sustainable use. Any alternative chosen for the RMP needs to include this information.

Response: Appropriate grazing use levels are determined on a site-specific allotment or pasture basis depending on the vegetation type and condition, other uses, and other information pertinent to the area.

Comment: The RMP does not lay out any strategy for drought. During adverse precipitation conditions, forage production is reduced, yet the RMP does not analyze actual use by livestock over the past planning period in relation to precipitation to demonstrate that it has employed management guidance or drought standards that de-stock allotments in proportion to the reduction in forage production. In a review of drought effects and management, a Prescott National Forest biologist has shown the need for de-stocking and rest to maintain plant communities during dry and drought conditions and the irreversible loss of soil that can occur.

Without specification of grazing regimes to allow for below normal and drought conditions, sensitive species of native grass such as Idaho fescue, bluebunch wheatgrass and others can lose vigor, productivity and be lost over time unless proper stocking and rest are employed to maintain these plants. Failure to do so is in violation of the impairment provision of FLPMA.

Research has provided guidance on this matter. Grazing and rest requirements for key species of grass can be critical. Native cool season perennial bunchgrasses can be very sensitive to defoliation and growing season use. For example, Anderson (1991) stated in regards to bluebunch wheatgrass: "Effects of growing season defoliation injury are well documented: basal area, stemnumbers and both root and forage yields are reduced and mortality can be high. … Defoliation to very short stubble heights during the boot stage has been reported to essentially eliminate plants within as few as three years. … Vigor recovery has been found to require most of a decade, even with complete protection from grazing."

The author went on to describe experiments in which a single clipping of the grass during the growing season produced 43% less herbage and 95% fewer flower stalks the following year than unclipped plants. Under a deferred system in eastern Oregon, it was reported that bluebunch wheatgrass could not be maintained at 30 – 40% use in the boot stage (early June). A one time removal of 50% of the shoot system during active growth may require six years' rest even in an area with 17" precipitation.

Anderson (1991) also makes the point regarding bluebunch wheatgrass that, "The belief that range improvement will occur after one or two years of rest following a single season of more than 'light' use during the growing season is erroneous." Mueggler (1975) also determined that Idaho fescue of moderately low vigor required 3 years of rest for recovery and that plants of bluebunch wheatgrass and Idaho fescue in very low vigor may require 8 years and 6 years of rest, respectively for recovery. BLM failed to consider the recovery, growth and maintenance requirements for these sensitive native grasses.

The RMP should specify that seasons of use should be shortened and stocking numbers reduced and prescribe that forage utilization limits should be lowered in times of drought. The RMP should employ the Standard Precipitation Index (SPI), as this is an objective standard based on measurements of external data. Such a methodology provides a consistent means of addressing drought conditions through scientific analysis, and would allow the BLM to make important decisions about protecting native ecosystems in times of severe stress in an objective manner.

We refer BLM to the following publications that provide guidance for managing rangelands, before, during and after drought:

Box, Thadis W. 1967. Influence of Drought and Grazing on mortality of Five West Texas Grasses. Ecology Volume 48, Issue 4 (July 1967), 654-656.

Chamrad, Albert D. and Thadis W. Box. 1965. Drought Associated Mortality of Range Grasses in South Texas. Ecology Volume 46, Issue 6 (Nov. 1965), 780-785.

McMinn, Robert G. 1952. The Role of Soil Drought in the Distribution of vegetation in the Northern Rocky Mountains. Ecology Volume 33 (Jan 1952), 1-15.

University of Arizona Cooperative Extension. Rangeland Management Before, During, and After Drought. ag.arizona.edu/pubs/natresources/az1136.pdf These publications and the direction therein should be included in the RMP.

Response: In the past, drought periods and management of livestock in response to drought have been sufficiently handled on an as-needed basis. This approach is supported in 43 CFR 4100.

Comment: Forage Consumption by Livestock. The RMP failed to analyze the current and potentially available forage to satisfy the forage consumption by the number of livestock it currently permits or proposes to permit.

The Society for Range Management (SRM) in 1974 defined an Animal Unit "to be one mature (1000 lb.) cow or the equivalent based upon average daily forage consumption of 26 lbs. dry matter per day."11. SRM also defined an Animal Unit Month as "The amount of feed or forage required by an animal-unit for one month." NRCS defined the forage demand for a 1,000 pound cow as 26 pounds of oven-dry weight or 30 pounds air-dry weight of forage per day12. It is important to ensure that forage consumption rates by livestock are based on the size of animals present on the allotment and a reasoned estimate of their daily consumption rates. The following analysis provides some background and justifies a more current forage consumption rate for cow/calf pairs. It is BLM's obligation to ensure this forage is accurately accounted for as this is its fiduciary duty to the American People.

The University of Nevada Agricultural Experiment Station published a report on cattle production in 194314 (Brennan and Harris, 1943). That report analyzed 14 years of ranch operation for eleven ranches in northeastern Nevada. At that time, a mature cow was considered one unit and a branded calf or weaner as ½ cow unit, for a combined total of 1.5 cow units per cow/calf pair. Bulls were considered 1.5 cow units. For the period 1938 – 1940, the average turnoff weight (when they left the range) of mature cows was 959 pounds, calves were 381 pounds and bulls were 1222 pounds. This means that in the 1930's, a cow/calf pair was 1340 pounds. With breeding, supplements and hormones, weights have increased over time, for example, Anderson et al (ca 2000) calculated a 35% increase in dressed weights per animal between 1975 and 1995.

USDA market statistics give the average weights of slaughter cattle for the week ending August 14, 2004 as 1251 pounds. The estimate for the same week in 2005 for slaughter cattle average weight was 1260 pounds. The USDA National Agricultural Statistics Service data for average live weight of cattle slaughtered in 2004 was 1242 pounds compared to 1187 pounds in 1995, or an increase of nearly 8.5% in those 10 years. The Livestock Monitor is a newsletter produced by the North Dakota State University Extension Service Livestock Marketing Information Center in cooperation with USDA State Extension Services. The Livestock Monitor shows for the week ending August 6, 2005, live weights of slaughter cattle averaged 1258 pounds.

The potential weights of mature cows can be even larger than these numbers. For example, NRCS in its National Range and Pasture Handbook, referenced above, defines body condition scores. A body

condition score of 6 which is described as "Good, smooth appearance throughout. Some fat deposits in brisket and over the tailhead. Ribs covered and back appears rounded." This body condition score relates to a pregnancy percentage of 88%, which is important as a goal for cow/calf operations as dry cows are usually culled and replaced and the weight gain of calves is important for income. According to Dr. Larry W. Olson, Extension Animal Scientist at Clemson University, a medium frame cow in body condition score 6 could easily weigh 1300 – 1400 pounds.

Holechek et al (2001) summarized the weaning weights of calves grazed on various types of rangelands at different stocking rates. The data for the period since 1990 produced an average weaning weight of 430 pounds and a range of 382 – 475 pounds.

Ray et al (2004) gave a weaning weight of 480 pounds for calves. Using the current market statistics for slaughter cattle at about 1250 pounds and assuming a calf weight of 300 pounds to allow for weight gain during the grazing season, an estimate for the average weight of a cow/calf pair during the grazing season of 1,500 pounds seems reasonable.

As pointed out above, the NRCS used 26 lbs/day of oven dry weight for a 1,000 pound cow and stated this was equivalent to 30 pounds per day air-dry weight. The NRCS Range and Pasture Handbook value of 30 pounds air-dry weight would be 3% of body weight for a 1,000 pound cow. Applying this to the estimate of a current weight of 1,500 pounds for a cow/calf pair, the daily forage consumption would be 45 lbs of airdry forage per day, or for a month (30.4 days), 1368 pounds of forage per AUM.

The forage needs for domestic sheep must also be determined. Based on current USDA published weights for ewes and lambs, adult domestic sheep weigh from 165 to 440 pounds , and lambs about 129 pounds. A low-end estimate of the weights of a sheep and two lambs grazing on these allotments would be 400 pounds (200 pounds for the ewe and 100 pounds each for two lambs). The forage consumption rate for sheep given in the 1964 R4 Range Analysis Handbook cited above was 3.3% of body weight per day consumed as air dry forage weight. Using these estimated weights of mature sheep (ewes) and lambs with two lambs per ewe and a total weight of 400 pounds would result in forage consumption of 13.2 pounds per day for each mature sheep with two lambs, or 6.6 pounds per day for a mature ewe weighing 200 pounds.

Forage consumption rates must be calculated based on the current weights and consumption rates of livestock in order to provide the forage needed for wildlife, plant community sustainability and watershed protection and to ensure the public trust is not violated by undercharging for the actual weights of cattle and calves grazed.

The RMP Preferred Alternative proposes to graze 107,536 AUMs. However, that is based on an AUM equivalent to 800 lbs of forage per month. The most current information, reviewed above shows that number to be 1368 lbs/month per AUM. Therefore, if sufficient forage were available to satisfy all needs, the numbers of livestock grazed should be reduced to account for the increases in weight and correct the erroneous assumption that 800 lbs/month is an accurate consumption figure.

Using the ratio between the RMP forage amount per AUM divided by the correct figure above, gives a needed reduction in permitted numbers and or seasons to account for the RMP's understated forage consumption, without accounting for wildlife, plant and watershed needs.

Furthermore, the RMP does not calculate the amount of forage and residual plant matter needed for wildlife, plant community and watershed protection while it assumes continuing to graze these large numbers of livestock allows forage to exist for big game and other species.

No criteria is offered for spring, summer and fall forage needs, which are not predominantly shrubs, but herbaceous vegetation. No evidence of past monitoring or compliance with any of the suggested criteria for wildlife is included in the RMP or combined in an analysis of wildlife populations or habitat quality to ascertain the role past management of BLM lands has had on these attributes.

The RMP does not reveal the inherent conflicts between livestock and wildlife. While it calls for seasonal habitat restriction on fawning habitat and winter range closures, it does not account for the effects of its failure to accommodate deer and elk during spring, summer and fall.

Hiding cover for fawns decreased more rapidly when cattle were present. This subjects fawns to higher predation rates. When no cattle were present, deer selected more meadow-riparian habitat. When cattle were present, deer selected home ranges with less meadow-riparian habitat. With heavy stocking, deer moved into montane shrub habitat. They also increased the size of their home ranges in the presence of cattle. While preferring aspen groves when not grazed by cattle, their use fell significantly when cattle were present. In the absence of livestock, deer preferred meadow riparian habitat. During moderate livestock grazing, deer moved into montane shrub habitat and used aspen habitat only when no cattle were present. Habitat shifts in deer and elk populations occur, placing stress on these wildlife populations.

Response: Site-specific analyses and allocations of resources are not within the scope of the RMP.

Comment: PAGE: 4.37, SECTION: 4.6.1, RECOMMENDED CHANGE: REVISE to REMOVE Cumulative effect text [• Population increases in the Upper Green River Valley would result in additional subdivision of ranchlands. • Population increases in the Upper Green River Valley would result in increased recreational use within grazing allotments.] (STRIKEOUT) Instead Increased regulation of public land, including ESA issues, predators, WGFD restrictions on grazing operations, and demand for housing would encourage the sale and subdivision of ranches. Loss of ranches to subdivision will see a correlative loss of open space and winter habitat for wildlife and reduced recreation access. EXPLANATION: These are cumulative effects not assumptions relevant to livestock grazing.

Response: It is reasonable to assume that population increases are not entirely due to actions of BLM, as they are occurring throughout the West. The cumulative impacts of increasing population, economic changes, and subdivision of lands are discussed in Chapter 4.

Comment: PAGE: 4.38, SECTION: 4.6.2, RECOMMENDED CHANGE: REVISE Impacts from livestock grazing would primarily be related to annual forage removal by grazing livestock and are similar to those by other game species. Pasture and herd rotational grazing and other BMPs are intended to improve livestock dispersal throughout the pasturelands; to control the season, duration, and intensity of grazing; and to achieve range condition objectives.

Response: This section's intent is to describe impacts of livestock grazing. Impacts of wildlife on livestock grazing are discussed later in this section (page 4-40, paragraphs 6 and 7 of the draft EIS).

Comment: PAGE: 4.45, SECTION: 4.6.7, RECOMMENDED CHANGE: [Range improvements would be evaluated for their impact on the viewshed of the Lander Trail. These restrictions could inhibit construction of fences and water developments, which would potentially alter grazing management and result in a reduction of utilized AUMs.] (STRIKEOUT) EXPLANATION: This is an unreasonable restriction and would ensure that RMP representations of no decrease in AUMs are false. Cannot reconcile this paragraph with assumptions throughout EIS that there will be no change in grazing.

Response: It is reasonable to design range improvements to conform with the management of other resources, such as the Lander Trail.

Comment: PAGE: 4.45, SECTION: 4.6.7, RECOMMENDED CHANGE: [Livestock could be excluded from unallocated public lands, which would result in a loss of potential forage for livestock.] (STRIKEOUT) EXPLANATION: If a forage reserve then no reduction. Livestock do not use unallocated public lands. This does not make any sense.

Response: Livestock presently use most of the 21,000 acres of unallocated parcels, even though they have never been allocated and no grazing permits exist. This is a reasonable depiction of the impacts of allocating these parcels to other uses.

Comment: PAGE: 4-98, SECTION: 4.9.3, RECOMMENDED CHANGE: DELETE GROSSLY BIASED [Livestock grazing in and around campgrounds would create impacts on vegetation and could cause physical damage to facilities. The use of livestock fences could serve as obstacles to certain recreational activities. Livestock rub on public and private property such as signs and vehicles, and defecate in and around campsites, boat ramps, and other facilities. Allowing grazing on lakeshore and riparian areas could cause soil compaction and have impacts on riparian vegetation; this would be especially apparent in riparian areas where livestock remain for extended periods of the grazing season or where livestock are concentrated while grazing and loafing. These conditions decrease the benefits associated with an aesthetically pleasing and healthy environment and increase the public's disregard for public property. The benefits attributed to the public's perception of BLM grazing and recreational management practices would be affected. In localized areas, the impacts would be moderate. Some people enjoy seeing livestock; grazing may contribute to an understanding of commodity production and agricultural practices.] (STRIKEOUT) EXPLANATION: RMP closes campgrounds to livestock grazing. If text refers to areas around camp sites, the impacts apply equally to other grazing animals, especially riparian area use. Bias is extreme here and not credible.

Response: This is an accurate description of current impacts in camping areas. It is reasonable to assume that this type of impact could be expected to continue, particularly in unfenced facilities. The recreating public reacts differently to domestic livestock in campgrounds than to wildlife.

Comment: PAGE: 4-151, SECTION: 4.13.2, RECOMMENDED CHANGE: DELETE [If reclamation is unsuccessful, AUM reductions could be necessary.] (STRIKEOUT) ADD Reclamation will include monitoring with close coordination with local agencies and landowners and permittees. Reclamation will be tailored to site capacity as determined by soil survey and objective will be to restore or enhance vegetation. EXPLANATION: BLM cannot punish livestock operator for failed reclamation.

Response: BLM's objective is for reclamation to be successful. In most instances, reclamation results in usable forage for livestock and other animals. If for some reason reclamation proves not possible, it is reasonable to consider reductions in vegetation use.

AUMs

Comment: The smallest footprint for PRMP mineral development, Alternative 3. This alternative is likely attractive to some in the conservation community, for example, but it also punitively reduces the AUMs (animal unit months), the amount of land/time available for grazing by ranchers. We can only interpret this as a deliberate but crude attempt to cause a political effect, i.e., to divide a wedge between ranchers and conservationists who have increasingly found common ground regarding the threat mineral sprawl poses to the Upper Bridger-Teton National Forest.

Response: It is reasonable to analyze an alternative that reduces livestock grazing in the developed fields. It was not designed as a punitive portion of Alternative 3.

Comment: 1.) There should be no net loss of AUM's in the resource area as a result of conflict with other uses of the land (oil&gas, wildlife, recreation, special designation areas, etc.).

Response: Current reclamation strategies within the active gas fields are such that no long-term reductions in grazing preference should occur. No significant reductions are anticipated as a result of other activities unless there is an actual decrease in land acreage, such as by fencing a campground. This would involve minimal acreage and no significant loss of animal unit months (AUMs) would be expected.

Comment: The best that the BLM can do is to come up with Plan Alternative 3 that pits any sensable restrictions against livestock permitees (users) by cutting their AUM's. The less land disturbed by drilling and roads should allow the same AUM's to be maintain for a given area.

Response: It is important to consider the impacts of closing grazing allotments in areas of intensive oil and gas development. It is not intended as a "trade-off" for other facets of Alternative 3. BLM can choose individual elements of each alternative in formulating the Proposed Plan. Alternatives do not have to be carried forward in their entirety.

Comment: I do not believe that it is right for the BLM to use this political maneuvering to change rancher and livestock-permittee opinion. Does this alterative cut it AUM's for livestock also effect the forage and habitat available for wildlife in these areas?

Response: Reductions in AUMs would theoretically result in more residual forage, which may have advantage to wildlife such as nesting sage-grouse and wintering elk. However, the industrialization of the landscape in the gas fields would also impact wildlife habitats and populations.

Comment: A stated management goal is to "enhance livestock grazing" through, in part, actions to maintain the current grazing preference of 107,907 AUMs. However, the proposed action sets the stage for failure to meet this goal in several ways. These include an expressed readiness to reduce grazing in industrialized areas, an implied priority for wildlife in crucial big game winter ranges, grazing season adjustments in elk parturition areas and prohibitions against increases in active grazing preferences in at least two proposed Wild & Scenic River units.

WSGA acknowledges that energy development will, at least temporarily, remove significant forage in certain areas. This impact need not result in a loss of AUM's within the resource area provided that the plan makes a commitment to no net loss of AUM's and maintains the flexibility to enhance available livestock grazing in non-development areas. We request that the final plan provide for necessary livestock grazing enhancements as needed to assure no net loss of livestock AUM's.

Response: It is reasonable to consider grazing reductions in heavily industrialized areas, as well as conservation of crucial big game habitats through stricter controls of livestock grazing and disallowing grazing increases in Wild and Scenic River (WSR) areas. Energy development may indeed result in a loss of AUMs, through inability to manage livestock in an industrialized area, if not through reduction of actual forage availability. BLM does not anticipate adopting a policy stipulating no net loss of livestock AUMs.

Comment: Chapter 2 Page 118 Commentor WGFD We question the maintenance of current grazing preference of 107,907 AUMs knowing that both short- term and long-term decreases in forage will occur throughout the life of the RMP (100,000 acres annually for vegetation treatment and 7,136 estimated number of new federal gas wells anticipated to be developed with 42,180 acres of initial disturbance and 17,300 acres of long-term disturbance).

Response: While BLM recognizes that certain activities may result in a short-term reduction in availability of forage, BLM will mediate those issues on a case-by-case basis by employing various mitigation tools (such as temporary rest, temporary closures of allotments, implementing various grazing systems, etc.) while maintaining preference. Given propoer planning and mitigation options, BLM does not believe that long-term decreases in forage need occur as a result of intensive oil and gas field development.

Comment: Continuation of comment above Maintenance of the higher level of AUMs would likely be detrimental of vegetation management in remaining available grazing lands. We recommend that the available AUMs be re-analyzed.

Response: Analysis of available AUMs and proper stocking rates can be measured through periodic rangeland monitoring.

Comment: In addition, no alternative considered changes in the numbers of livestock that are permitted, or the actual use being made by livestock. Certainly livestock grazing is another significant influence and impact on the environment, and options that include changing the amount of actual use by livestock should have been considered, particularly given prolonged and lingering drought conditions.

Response: Changes in the number of AUMs available for livestock grazing are considered in Alternatives 2 and 3. An increase or decrease in the number of available AUMs would mean a corresponding increase or decrease in the number of livestock or actual use.

Legal Compliance, FLPMA, etc.

Comment: Moreover, because the DEIS acknowledges that roughly 43% of the acres contained in allotments that have been assessed fail to meet the SRH, the RMP fails to comply with FLPMA. As we stated above, FLPMA mandates that the authorized officer reduce grazing or otherwise modify use when the SRH are not being met, but the RMP fails to take that action. The RMP further fails to evaluate whether grazing livestock is appropriate to particular areas, given the value of other uses diminished or foregone (e.g., wildlife, recreation, cultural, etc.).

Weighing the impacts of resource management practices is consistent with the BLM's mission of providing lands for multiple uses as recognized in the Multiple Use Sustained Yield Act. Case law cited in the BLM's guidance concludes that the "multiple use" concept as defined in law and regulations requires "a reasoned and informed decision that the benefits of grazing ... outweigh the costs" and a weighing of "the relative values of the resources." The Pinedale RMP DEIS fails this requirement. Applied to the management of livestock grazing, the analysis must weigh the benefits and harms of grazing to determine if BLM should allow this use in any given area. Moreover, should the agency conclude that livestock grazing is an appropriate use, BLM must consider multiple-use values in determining how that area should be grazed. National Wildlife Fed'n v. BLM, No. UT-06-91-1 (DOI, Office of Hearings and Appeals, Hearings Div.) (Dec. 20, 1993) at 25, aff'd Comb Wash (citing 43 U.S.C. §§ 1701(a)(8), 1702(c)). Therefore, in establishing grazing thresholds such as stocking rates and utilization levels, BLM is required to abide by "FLPMA's mandate [that it] protect the full spectrum of environmental, ecological, cultural, and recreational values." Id.

During the development of the Upper Deschutes RMP for the Prineville District, the BLM proposed an alternative in which the BLM would use a formula to estimate the potential for conflict and demand associated with domestic livestock grazing. This matrix is attached to these comments and we urge the Pinedale BLM to incorporate a similar process for identifying allotments in need of rest and/or closure into this RMP.

Instead the of weighing whether or not the impacts of the domestic livestock grazing program outweigh its costs, the Pinedale RMP proposes more range "improvements" for these allotments. This ignores that in the 1960's, BLM began a massive program of developing water, putting streams and springs into pipelines, seeding with crested wheatgrass, building fences, engaging in rotation grazing, and spending millions of dollars to "even out livestock distribution".

An early example of this, among others, was in BLM's Vale District, where millions of dollars were spent on crested wheatgrass seedings and structural range improvements. Today, across BLM lands in the west, many of these systems have fallen into disrepair, the land has failed to recover and we are faced with more and more proposals to install grazing systems, water developments, and seed – not reduce livestock numbers. This is in spite of the fact that long-term studies, including those from the Vale District have shown that stocking rate is the critical variable, not grazing systems. These are cited in a later section.

Before the Pinedale Field Office authorizes more range "improvements" as this RMP proposes to do to correct the degraded conditions found on a majority of the allotments in the planning area, it should first disclose the monitoring and other data that indicates such practices have been effective at actually improving soil, water quality, vegetative production, and other resources. Without such information, the DEIS fails to meet NEPA requirements for scientific integrity.

43 CFR Sec. 4100.0-8 states: "Land use plans shall establish allowable resource uses (either singly or in combination), related levels of production or use to be maintained, areas of use, and resource condition goals and objectives to be obtained. The plans also set forth program constraints and general management practices needed to achieve management objectives. Livestock grazing activities and management actions approved by the authorized officer shall be in conformance with the land use plan as defined at 43 CFR 1601.0-5(b)."

In the case of the Pinedale RMP and DEIS, the BLM has recognized many times that the quality of the land in the project area is severely diminished. Thus, when the RMP seeks to improve "range condition," as it must, what this really means is that the RMP must provide for improved riparian, upland, and wildlife habitat conditions and include goals and objectives and allowable use standards to achieve those goals.

The correction of resource degradation caused by domestic livestock and the prevention of future degradation should be driving forces behind the RMP and should be reflected throughout the NEPA document and in any future agency decisions regarding domestic livestock grazing in the project area. Specific livestock grazing levels that will be used to meet standards are lacking in all alternatives in the DEIS and must be included in the FEIS. Otherwise, the plan lacks teeth and is unenforceable. Simply stating that specific standards will be developed at the site specific level violates law and allows the BLM to continue the degradation caused by domestic livestock. By not stating minimum livestock utilization standards in the RMP, the BLM failed to establish allowable use levels as required by both 43 CFR Sec 4100.0-8 and 43 CFR 1601.0-5(b).

The DEIS states that the Standards for Rangeland Health (SRH) will ensure that domestic livestock grazing occurs at levels that will protect resources, and the DEIS claims that these standards will be used to guide domestic livestock grazing at the site specific level. These standards are as follows:

1. Uplands are in proper functioning condition
2. Riparian and wetland areas are in proper functioning condition
3. Water quality meets State standards

4. Air quality meets State standards
5. Provide habitat as necessary, to maintain a viable and diverse population of native plant and animal species, including special status species

The discussion of these standards fails to include allowable use standards and guidelines and/or objectives that are paramount to achieving or maintaining the above listed standards. Moreover, About 65% of the planning area has been evaluated for compliance with the Wyoming Standards for Rangeland Health (USDI, BLM 1997a). These assessments indicated that 58 allotments composed of 348,131 acres are meeting the standards, 17 allotments (283,508 acres) are not meeting one or more standards because of grazing, and 12 allotments (27,404 acres) are not meeting one or more standards but the cause is not related to livestock grazing. A full 43% (almost half) of the acres that have been evaluated are not meeting the SRH because of grazing, yet the BLM fails to take any action in this RMP that would lead to actually attaining the standards set for in the SRH. Based on 43 CFR 4180, appropriate actions to address the negative impacts of domestic livestock are to be implemented that will result in significant progress toward attainment of the standards no later than the start of the next grazing season. Clearly this has not been accomplished.

The PFO has failed take the required "hard look" at the impacts of domestic livestock grazing. The DEIS fails to scientifically and accurately determine those lands which are capable and suitable for livestock grazing. The BLM has further failed to accurately and quantitatively determine how much forage (i.e. forage capacity) is currently available. On top of this, the RMP DEIS fails to properly allocate that forage to watershed and stream protection, wildlife habitat and food, then to livestock if available.

Furthermore, the RMP fails to provide for long-term rest to facilitate recovery, and any discussion of impacts should have addressed the unwillingness of permittees to use peer-reviewed range science principles for management and their strong opposition to the most minimal standards of performance. Instead they rely on unfounded solutions such as time-controlled grazing and "holistic" management such as advocated by Alan Savory.

For example, the effects of different livestock grazing intensities on forage plant production were studied in a ponderosa pine type in Colorado as early as the 1940's. This study showed that forage consumption at a rate of 57% produced an average of twice as much forage as a rate of 71%. An area left ungrazed by livestock for 7 years produced three times as much forage as the 71% use area. The authors concluded that, as grazing use increased, forage production decreased. During that same period, Dyksterhuis, in a classic paper on the use of quantitative ecology in range management, presented examples of how stocking rates must be adjusted based on precipitation and range condition, which included a rating based on departure from the potential plant community. NRCS considers proper grazing management as that management that sustains the potential plant community.

The effects of conservative (30 – 35%) use vs. heavy (60 – 65%) grazing use on grasses and forbs by cattle were determined in a New Mexico study. Both of these pastures had experienced conservative use for over 10 years. In 1997, one pasture was changed to heavy use. This study showed that heavy stocking rates resulted in serious declines in productivity in the succeeding year. Perennial grass production was reduced by 57% and forbs by 41% in the heavily grazed pasture compared to the conservatively grazed pasture. The authors cited a number of other studies in arid environments that showed heavy stocking rates were accompanied by decreases in forage production when compared to conservative use. After drought, the ability of forage plants to recover was directly related to the standing crop levels maintained during the dry period. The studies cited showed that grazing during different seasons was less important than grazing intensity.

Five long-term stocking rate studies from three different locations in Arizona, New Mexico and Utah documented similar patterns. In the Desert Experimental Range in Utah, a 13-year study with moderate (35%) and heavy (60%) use by sheep resulted in annual forage production of 198 lbs/acre and 72 lbs/acre. The authors recommended 25 – 30% use of all forage species. A 10-year study at the Santa Rita Range in Arizona demonstrated that perennial grass cover and yield showed an inverse relationship to grazing intensity, while burroweed, an undesirable species, increased with increasing forage use. The authors recommended a 40% use level. A 37-year study at the Jornada Experimental range in New Mexico involving conservative (33%) and moderate (45%) use showed that the lower grazing intensity resulted in greater black grama (perennial grass) cover. Lowland areas with high clay content and periodic flooding grazed at moderate intensity had higher cover of Tobosa, a perennial grass, than heavily grazed areas. They recommended 30% be used as a stocking intensity with no more than 40% removed in any year. A 10-year study at the Chihuihuan Desert Rangeland Research Center looked at four grazing intensities of 25%, 35%, 50% and 60%. Light (25%) and moderate (35%) use produced 70% more forage than 50% use and more than double that achieved at 60% use. Here, the author recommended conservative stocking at 30 – 35%.

Hutchings and Stewart, suggested that 25 – 30 % use of all forage species by livestock was proper. They recommended this level because routinely stocking at capacity will result in overgrazing in half the years and necessitate heavy use of supplemental feed. Even with this system, they recognized that complete destocking would be needed in 2 or 3 out of ten years. Holechek et al concluded that the research is remarkably consistent in showing that conservative grazing at 30 – 35% use of forage will give higher livestock productivity and financial returns than stocking at grazing capacity. They also recognized that consumption by rodents and other wildlife must be taken into account as part of this utilization, otherwise, rangeland productivity would suffer even at these levels of use. Galt et al recommended levels of 25% utilization for livestock and 25% for wildlife with 50% remaining for watershed protection. In none of these cases have the scientists recommended 50% utilization by livestock, as the BLM continually authorizes (i.e. take half, leave half) and they are clear that even at the lower use levels recommended, allowance for wildlife use must be included in overall use.

Clearly, the long-term range studies cited here show that under actual field conditions, light grazing (25% or less by livestock) is most appropriate to meet BLM's mandate for sustainable use. These utilization rates are the minimum needed to ensure proper functioning condition, which is the minimum acceptable condition. The BLM would do well to require at least minimum compliance with these standards in the RMP until these standards can be evaluated at the site-specific level.

As previously discussed, the DEIS fails to consider a reasonable range of alternatives for domestic livestock grazing in the planning area. The statutes governing domestic livestock grazing on public lands do not unconditionally provide that grazing privileges shall always be safeguarded. Instead they provide that such privileges will be adequately safeguarded as long as they are consistent with the purposes and provisions of the TGA, namely protecting the federal rangelands and ensuring their orderly use. 43 U.S.C. § 315b. The Act clearly states that the need for stability must be balanced against the need to protect the rangeland. See id. § 315a.

Furthermore, maintaining and improving wildlife habitat and restoring degraded range conditions, as reflected in the purpose and need for the RMP revision, is consistent with analyzing a no grazing alternative, and should be reflected in this analysis, is in compliance with both the Taylor Grazing Act of 1934, the Federal Lands Policy Management Act (FLPMA) of 1976, and other laws that govern livestock management on public lands.

The Taylor Grazing Act was passed to "stop injury to public lands by preventing overgrazing and soil deterioration," and the Federal Land Policy and Management Act (FLPMA) requires the BLM to

maintain and improve wildlife habitat. It also requires that "Allotment management plans shall be tailored to the specific range condition of the area to be covered by such plan, and shall be reviewed on a periodic basis to determine whether they have been effective in improving the range condition of the lands involved…" (43 U.S.C. § 1752(d) (emphasis added))

The requirement to focus on improvement of range condition is also explicit in the Public Rangeland Improvement Act (PRIA), which provides that the goal of public land range management is to improve range condition (emphasis added).(43 U.S.C. §§ 1901(b)(2), 1903(b)) "Range condition" as defined in PRIA means the "quality of the land" as reflected by the ability of specific areas to support the productivity sought by BLM. (See id. § 1902(d)).

The RMP DEIS fails to disclose how current AMPs and management direction have been effective at preventing injury to public lands and preventing overgrazing. Instead the DEIS acknowledges that current management has led to many problem areas across the PFO, but fails to take any action to correct those problems. Instead, it is just business as usual across the planning area, and the BLM is continuing to degrade these public lands in violation of the laws and regulations that govern domestic livestock grazing.

Response: FLPMA does not address the Standards for Rangeland Health (SRH), which were not established in 1976, nor does it mandate reductions in grazing. Reductions are based, rather, on rangeland monitoring data consistent with CFR Subpart 4100. Consistent with BLM policy, the RMP states that lands would be managed to meet or move toward the SRH. The RMP does not attempt to accomplish site-specific analysis on the suitability for livestock grazing by area. The PFO has not determined that degraded conditions exist over the majority of the area. The RMP does establish allowable resource use (i.e., 107,907 AUMs), and resource condition goals (i.e., meet SRH). BLM has not determined that the quality of the land in the planning area is severely diminished (see Appendix 20, Table A20-2; and Chapter 3, Table 3-5 of the draft EIS). When an allotment does not meet SRH, appropriate actions have been or will be taken consistent with 43 CFR 4180. Site-specific analyses and allocations of resources are not within the scope of this RMP.

There are numerous studies and agendas in the field of natural resource management. BLM attempts to employ best management practices in an objective approach that allows sustainable multiple use of the public lands.

Comment: PAGE: 1-16 SECTION: 1.5.2 RECOMMENDED CHANGE: Management for Wyoming Standards for Healthy Rangelands was approved by the Secretary of the Interior August 12, 1997. These Standards and Guidelines were developed in compliance with the Department of the Interior's final rule for grazing administration effective August 21, 1995 (43 CFR 4180.1). Wyoming Instruction Memorandum 97-111, dated September 26, 1997, requires that the Standards and Guidelines will be incorporated in all Wyoming RMPs through plan maintenance. The RMP was revised to show that the Standards for Healthy Rangelands apply to all resource programs and activities and the Guidelines for Livestock Grazing Management apply only to the livestock grazing program. EXPLANATION: Section needs to add conformance to Wyoming Standards for Healthy Rangelands. The text recommended is copied from the Pinedale MSA, which recognized that all resource uses had to meet rangeland health standards. MSA 2-38. The RMP has materially deviated from that criteria and needs to be changed. See Comment #2.

Response: Compliance with the Standards for Rangeland Health does indeed apply to all users of the resources, yet only 43 CFR 4180 allows for the "enforcement" of these standards within the grazing program.

Comment: PAGE: 2-7 SECTION: 2.3.5 RECOMMENDED CHANGE: The Wyoming Standards for Healthy Rangelands would apply to all resource management decisions and activities and Guidelines for Livestock Grazing Management would apply to all livestock grazing activities on public lands. EXPLANATION: Change conforms to MSA statement of BLM policy which remains unchanged. As written, the RMP provides that Standards for Healthy Rangelands do not apply to other resource management decisions and that statement is incorrect.

Response: Compliance with the Standards for Rangeland Health does indeed apply to all users of the resources, yet only CFR 4180 allows for the "enforcement" of these standards within the grazing program.

Comment: PAGE: 2-8 SECTION: 2.3.5 RECOMMENDED CHANGE: REVISE: Conversions from one type of livestock to another would be evaluated on a case by- case basis, including an environmental analysis, and would be authorized in conformance with the grazing rules and analyzed in light of the goals and objectives of the RMP. EXPLANATION: Conversions need to conform to grazing rules as much as RMP, which can be revised or amended.

Response: Conversions in type will conform to the grazing regulations. It is not necessary to continue to state in each section that regulations will be followed.

Comment: PAGE: 2-119, RECOMMENDED CHANGE: h. Approximately 21,000 acres of unallocated forage on public lands would be considered for wildlife and livestock allocation on a case-by-case basis, in accordance with RMP goals and objectives. 1. The number of AUMs to be allocated to each use would be determined after the lands have been evaluated to determine the range condition and appropriate carrying capacity. EXPLANATION: Must be revised to conform to FLPMA and grazing rules. Reallocation of grazing must be done in direct correlation to the other use. BLM cannot reallocate forage to wildlife if the rancher is responsible for increases in forage. Similarly, rancher cannot be forced to take a reduction when elk are the cause of the resource issue. Any reallocation must be fair and even-handed. 21000 acres are too small for forage reserve. FLPMA requires 10-year permits unless " (1) the land is pending disposal; or (2) the land will be devoted to a public purpose prior to the end of ten years; or (3) it will be in the best interest of sound land management to specify a shorter term:" 43 U.S.C. §1752(d). the land is not pending disposal, is not to be devoted to another public purpose and the RMP fails to document that it is in the interest of sound land management, because lack of AMP, or land use plan is not a valid reason.

Response: These 21,000 acres actually consist of small parcels. Although the logic may be correct, the size of the parcels makes the case-by-case approach most reasonable. These parcels were never allocated for livestock grazing; this is not "reallocation". This statement provides for some of the parcels to be allocated to livestock grazing.

Comment: PAGE: 2-119, RECOMMENDED CHANGE: Delete ¶k. [k. Forage reserves would be established to accommodate and facilitate rangeland restoration and recovery on a landscape scale. Authorized forage removal would not exceed the livestock carrying capacity (acres/AUM) of the allotment identified as a forage reserve. The PFO would actively pursue opportunities as they arise to establish forage reserves based on reasons such as—

- The cooperation of a current permittee under a partnership agreement or memorandum of understanding
- Newly available forage for livestock on a sustained yield basis such as that created upon cancellation of preference within an individual allotment

- Non-BLM lands made available in cooperation with another agency or entity. Forage reserves, once established, would be managed in accordance with the provisions of an appropriate activity plan developed in consultation with the interested public.] (strikeout)

In general, local governments note that the livestock grazing section fails to recognize that grazing is a principal multiple use established and confirmed in both TGA and FLPMA. The land in Wyoming was determined to be chiefly valuable for livestock grazing and withdrawn for grazing districts in accordance with Section 1 of TGA. 43 U.S.C. §315a. The entire idea of forage reserves can only work when a ranch goes out of business because there are no "vacant allotments" in the planning area. If a ranch goes out of business, then the community loses another significant agriculture component that not only supports the community but remains an important part of the custom and culture of western Wyoming. The local governments are therefore opposed to forage reserves because they involve retiring allotments and putting ranches out of business.

EXPLANATION: In general, local governments note that the livestock grazing section fails to recognize that grazing is a principal multiple use established and confirmed in both TGA and FLPMA. The land in Wyoming was determined to be chiefly valuable for livestock grazing and withdrawn for grazing districts in accordance with Section 1 of TGA. 43 U.S.C. §315a. The entire idea of forage reserves can only work when a ranch goes out of business because there are no "vacant allotments" in the planning area. If a ranch goes out of business, then the community loses another significant agriculture component that not only supports the community but remains an important part of the custom and culture of western Wyoming. The local governments are therefore opposed to forage reserves because they involve retiring allotments and putting ranches out of business.

Response: Forage reserves would provide livestock operators with flexibility to manage existing allotments and enhance forage. Forage reserves would only be available from willing participants. A forage reserve does not retire an allotment, but keeps it in production to facilitate livestock grazing throughout the planning area.

Comment: PAGE: 4.45, SECTION: 4.6.7, RECOMMENDED CHANGE: The impacts from the following activities would be similar to those impacts described under Alternative 3: fire and fuels management, [establishment of forage reserve allotments,] (STRIKEOUT) the closure of campgrounds and recreational sites to livestock grazing, the closure of existing and new exclosures to livestock grazing, [the incorporation of deferments and/or periods of rest into allotments where grazing begins prior to June 1, measures to improve elk habitat adjacent to elk feedgrounds, the exclusion of livestock from elk parturition areas between May 1 and June 30, and designation of the WSR units.] (STRIKEOUT) EXPLANATION: See Comment #, chapter 2-119. BLM cannot defer grazing in areas adjacent to elk feedgrounds when elk are the reason the area needs to recover. BLM exclusion for brucellosis points out the need to address disease in the feedgrounds as per litigation still pending against BLM. See Comment # ch. 2-138. Even BLM Handbook does not exclude grazing from WSR units and as identified in previous comments, RMP WSRA study fails to meet BLM manual criteria and must be severed from RMP. See Comment ch. 2-31.

Response: It is BLM policy to defer or rest allotments following vegetation treatments. These management actions include cooperation with the affected grazing permittee.

Monitoring and Mitigation

Comment: The DEIS states that federal grazing allotments in the planning area will be monitored every 2-10 years (see Table All-1). The Service is concerned that this level of monitoring may not ensure adequate evaluation of habitat conditions present on the Bureau's grazing allotments. If allotments are normally permitted for a 10 year time period and it could be up to 10 years before an allotment is

monitored, then allotments may not be monitored frequently enough to allow for adjustments to grazing intensity, if necessary. The Service suggests that the Bureau evaluate the conditions of its grazing allotments on a consistent, more frequent basis to ensure an adequate assessment of the conditions of the resources present there.

Response: BLM's ability to monitor is subject to funding and manpower. At present our workload priorities are largely governed by both the Energy Policy Act of 2005 and land use planning, such as the development of this RMP. Also, this situation does not apply to all of the more than 200 allotments in the PFO. BLM more closely monitors allotments involving prior resource concerns.

Comment: 2.) Adjustments in grazing practices (season long vs. deferred), seasons of use, and/or permitted/annual use numbers should only occur after rangeland monitoring indicates a change is needed. Deferred grazing systems on all allotments may not be appropriate.

Response: BLM policy is to conduct monitoring before implementing these types of changes. It is not necessary to duplicate all policy statements in the RMP.

Comment: Range scientists have increasingly recognized the most important determinant of range condition or health is whether carrying capacity is exceeded, not management efforts like grazing systems. FLPMA also forbids that exceedance of carrying capacity on grazing allotments.

Response: Rangeland monitoring data have not indicated that allotments in the PFO are exceeding the carrying capacity.

Comment: PAGE: 2-118, SECTION: 2.5.5, RECOMMENDED CHANGE: BLM or third parties would fund projects to mitigate loss of forage in industrialized areas. EXPLANATION: The livestock operators should not be required or expected to fund projects necessary to mitigate loss of forage.

Response: It is within the scope of the RMP to allow for offsite mitigation for specific on-the-ground developments. Such mitigation could include provisions for domestic livestock grazing and would be contemplated for site-specific projects at the implementation level.

Comment: PAGE: 4.39, SECTION: 4.6.2, RECOMMENDED CHANGE: ADD Well sites will be adequately fenced. As further mitigation for impacts on ranch operations, BLM will facilitate and support range improvements to increase forage for livestock. EXPLANATION: Past restrictions on range improvements interfere with allotments maintaining, meeting range health standards. Moreover, recent experience with reclamation at Sand Draw and Stud Horse Butte show that without mitigation even short term losses make ranch operations uneconomic. The objective for local governments is to maintain ranch operations, as part of the economy and the custom and culture of the region.

Response: It is within the scope of the RMP to allow for offsite mitigation on specific on-the-ground developments. Such mitigation could include provisions for domestic livestock grazing and would be contemplated for site-specific projects at the implementation level. Mitigation strategies are currently being addressed at the well-field planning level.

Comment: PAGE: 4.45, SECTION: 4.6.7, RECOMMENDED CHANGE: REVISE, EXPLANATION: The RMP changes do not support the RMP assumption that there will be no decreases in grazing AUMs. Revisions are necessary to conform to range health policy that states livestock grazing reductions are not appropriate where livestock is not the causal factor. The RMP must also commit to range projects to mitigate loss of forage during development.

Response: It is appropriate to implement grazing reductions where sufficient forage to support current grazing is not available. Whereas it is the overall intent to maintain AUMs, the text on page 4-45 of the draft EIS refers to site-specific situations where monitoring supports changes in management, including reductions, which is supported by CFR. It is within the scope of the RMP to allow for offsite mitigation on specific on-the-ground developments. Such mitigation could include provisions for domestic livestock grazing and would be contemplated for site-specific projects at the implementation level.

Brucellosis

Comment: 7.) The BLM should not set seasons of use based upon the risk of transmission of brucellosis. The issue of risk of transmission of brucellosis should be handled in the "herd plan" process.

Response: The statement that exists in Alternatives 3 and 4 under Livestock Grazing Management will be modified with an additional sentence as follows: This action would only occur after, and in conjunction with, a herd management plan developed through coordination and cooperation with the affected grazing permittee and the WGFD.

Wildlife and Fish

Comment: A strong concern of ours was the equitable sharing of forage between domestic livestock and wildlife. The grazing component of the RMP must deal with wildlife needs fairly.

Response: Existing rangeland monitoring of wildlife habitat and livestock forage availability has not indicated habitat deficiencies for either user of the rangeland resources.

Comment: The assumptions contained in 4.6.1 include a statement that "Large predators (gray wolf, grizzly bear) would increase their range and would impact livestock grazing on BLM lands." Without further explanation, we are left to surmise the meaning of this statement and its relevance to the RMP. Does it simply mean that these predators will kill livestock? Does it assume no federal or state predator management activities? Most importantly, does it signify that BLM anticipates restricting livestock grazing in order to provide protection for these species? Even the USFWS has maintained that no specific habitat protections are necessary to provide for the gray wolf.

Response: It is correct to assume that more predators will likely result in more livestock deaths. The management of endangered species is the responsibility of the USFWS, and it is not implied that the BLM PFO will implement changes in grazing management to protect the gray wolf or grizzly bear.

Comment: There is currently underway a cooperative effort by both cattle ranchers and the Wyoming game and Fish Department to develop herd management plans for both elk herd units and cattle operations. That process should serve as the appropriate venue for exploration of any changes to livestock grazing within elk parturition areas. It is inappropriate to propose such adjustments in the RMP.

Mitigation for the impacts of energy development together with ongoing efforts to meet Standards for Rangeland Health may necessitate adjustments in grazing practices. However, any such adjustments should be site specific and based on rangeland monitoring utilizing accepted protocols.

Response: The statement that exists in Alternatives 3 and 4 under Livestock Grazing Management will be modified with an additional sentence as follows: This action would only occur after, and in conjunction with, a herd management plan developed through coordination and cooperation with the affected grazing permittee and the WGFD. Also, it is a standard operating procedure to base any and all grazing management adjustments on the evaluation of rangeland monitoring information.

Comment: BLM should also consider more stringent grazing standards for the protection of wildlife habitat.

Response: Changes in grazing management, including the numbers of livestock, seasons of use, areas, and class of livestock, are based on rangeland monitoring data and designed to achieve rangeland health for all land uses.

Comment: Moreover, the impacts of domestic livestock grazing on sage-grouse extend beyond impacts to leks.

Response: The discussion of grazing impacts on sage-grouse has been expanded in the final EIS.

Comment: PAGE: 2-119, RECOMMENDED CHANGE: DELETE [e. Livestock grazing in areas of crucial big game winter ranges would be managed to enhance vegetation condition and forage availability for wildlife.] (strikeout) EXPLANATION: Standards need to be deleted as they have not been justified nor does FEIS document the impacts on the permittees or the need for the change in forage allocation. The grazing preference adjudications in Wyoming, allocated 25% for livestock and left wildlife with the remaining 75% of the forage. This proposed change in management would mean additional reductions in grazing, without documenting the need or without documenting the impacts on the agriculture industry. The local governments believe that BLM should continue its historical commitment to livestock grazing and must therefore delete these sections. This standard is a de facto adjustment of grazing preference without following monitoring criteria found in grazing rules and 2003 BLM Wyoming PLC and Wyoming Grazing District MOU. RMP cannot repudiate either rules or MOU.

Response: There is no implication in that section that reductions in AUMs will be performed within crucial big game habitat. Any such actions would be developed according to monitoring information and grazing regulations.

Comment: PAGE: 2-119, RECOMMENDED CHANGE: DELETE [f. Livestock water developments on crucial elk winter ranges would be designed, located, and managed to maintain winter elk forage.] (strikeout) EXPLANATION: This would ensure no upland water, which interferes with meeting Healthy Rangeland standards and limits tools available to reduce elk and cattle conflicts. Prejudges situation without monitoring or without using range science.

Response: It is reasonable, and feasible, to design developments to maintain crucial wildlife habitats. To suppose otherwise is to say that livestock and big game are incompatible on public lands.

Comment: PAGE: 2-119, RECOMMENDED CHANGE: DELETE [g. Grazing seasons in allotments containing elk parturition areas would be adjusted to begin after June 1 to reduce the potential for brucellosis transmission.] (strikeout) EXPLANATION: Brucellosis exists due to elk feedgrounds. BLM should not penalize livestock operators but rather should clean up elk feedgrounds.

Response: Restricting livestock access to elk parturition areas during calving prevents the spread of brucellosis to livestock.

Comment: PAGE: 4.37, SECTION: 4.6.1, RECOMMENDED CHANGE: [• Large predators (gray wolf, grizzly bear) would increase their range and would impact livestock grazing on BLM allotments.] (STRIKEOUT) Large predators (gray wolf, grizzly bear) would increase their range but effects will be blunted by cooperation with state animal damage management board. EXPLANATION: RMP fails to include cooperation with Wyoming Animal Damage Management Board, which BLM must do pursuant to MOU and FLPMA. 43 U.S.C. §1712(c)(9).

Response: It is correct to assume that more predators will likely result in more livestock deaths. The management of endangered species is the responsibility of the USFWS, and it is not implied that the BLM PFO will implement changes in grazing management to protect the gray wolf or grizzly bear. It is not necessary to reiterate all policy, law, and regulation in the RMP.

Comment: PAGE: 4-40, SECTION: 4.6.2, RECOMMENDED CHANGE: REVISE [Wildlife habitat management activities would generally affect livestock grazing through restrictions on range management in order to control livestock distribution into and utilization of crucial habitats. Uneven distribution of big game would cause some grazing allotments to receive a disproportionate amount of the total wildlife grazing area within the planning area, which could further necessitate adjustments in livestock management.] (STRIKEOUT) Where wildlife habitat management activities may affect livestock grazing such as distribution and utilization of crucial habitats, BLM will work with permittees and WGFD to secure solutions. If uneven distribution of big game results in disproportionate grazing by wildlife, then BLM will work with WGFD to reduce wildlife use to conform to livestock grazing permits and range capacity. Sensitive wildlife habitats (e.g., greater sage-grouse leks, whitetailed prairie dog towns, and big game crucial winter ranges) would also influence location, the timing of construction, and the cost of range improvements. In addition, modifications of fences constructed prior to adoption of standards (BLM Manual H-1741-1) could be required to ensure that livestock remain in the appropriate area, without those modifications unnecessarily endangering wildlife. EXPLANATION: This paragraph is inaccurate. Compliance with range health standards is required by rule and wildlife use is not exempt. Distribution of wildlife that exceeds range standards or allotment capacity must by solved by WGFD changing management, not by reducing livestock. BLM can only reduce livestock numbers when they are the cause. DM 4180-1; App. C.

Response: This assessment of impacts in the draft EIS is reasonable.

Comment: PAGE: 4.45, SECTION: 4.6.7, RECOMMENDED CHANGE: REVISE Management actions to achieve or maintain a seral stage appropriate for the maximum benefit of Colorado River cutthroat trout may [would] (STRIKEOUT) alter the management of livestock in Colorado River cutthroat trout habitat areas. Livestock management strategies could include [forage allocation reductions,] (STRIKEOUT) deferred or [shortened] (STRIKEOUT) grazing periods, use of riparian pastures, increased cattle herding, increased fencing, and upland water development. EXPLANATION: Cannot reduce grazing without monitoring, etc. BLM has obligation to pursue options other than removal of cattle. Again contrary to representations throughout FEIs that there will be no reductions in grazing.

Response: As stated in the management actions common to all alternatives, any changes in grazing management would be based on site-specific monitoring. It is reasonable to alter livestock use to conserve other resources. The text has been updated to change “would” to “could” to recognize that changes would not be necessary in areas where Colorado River cutthroat trout habitat already functions well.

Comment: PAGE: 4.45, SECTION: 4.6.7, RECOMMENDED CHANGE: REVISE Increased emphasis on maintaining and improving habitats for sensitive species may [would result in limiting range improvements and altering] (STRIKEOUT) livestock grazing management where grazing activities are shown to adversely affect [impact] (STRIKEOUT) the integrity of the species or their habitat. EXPLANATION: Local governments object to RMP provisions that would limit range and vegetation management tools. This paragraph like the others in this section irreconcilably conflict with representations that the RMP would not change grazing levels.

Response: The RMP does not rule out site-specific situations, such as sensitive species needs, which would necessitate management changes for any user of the resources.

Comment: PAGE: 4-183 SECTION: 4.17.3 RECOMMENDED CHANGE: REVISE The impacts from livestock grazing management on fish and wildlife habitat would include competition for forage and water and habitat use and alteration. Livestock driveways [impact wildlife habitats because of](STRIKEOUT) may have reduced vegetation and compaction of soils. [Stock driveways tend to concentrate high levels of livestock use that can cause significant degradation (e.g., near-complete removal of vegetation, soil compaction).](STRIKEOUT) These areas [no longer provide forage or shelter but could be are](STRIKEOUT) used as wildlife movement corridors. Late-season grazing can remove residual vegetation [that would be necessary](STRIKEOUT) on big game winter ranges [and provide important nesting cover for greater sage-grouse in the following spring.](STRIKEOUT) Livestock grazing activities can also serve to enhance forage for big game species. Regrowth areas previously used by cattle could be favored because of the resultant increase in forage palatability. EXPLANATION: Highly unlikely that driveways have adverse impact on wildlife habitat. Certainly wildlife make equal or greater use so again statement must be qualified or deleted. Utilization levels set for livestock grazing leave sufficient residual forage. Grouse nesting is in sage brush not in grass species. Statement sounds as if taken from research on sharptailed grouse on Great Plains.

Response: Livestock driveways concentrate use in narrow strips and result in high impacts to vegetation and soils. Most driveways in the planning area contain little or no sagebrush as a result of intensive use. The impact analysis as presented is reasonable.

Comment: PAGE: 4-184 SECTION: 4.17.1 RECOMMENDED CHANGE: REVISE or DELETE Late summer and early spring are periods when livestock are most apt to utilize shrubs, and if over grazed reducing their availability to wildlife. Livestock grazing in the fall or early spring [would remove the](STRIKEOUT) utilizes residual herbaceous understory, and if over grazed, it may reduce [reducing its](STRIKEOUT) vertical structure, which may affect [reduces the](STRIKEOUT) visual security for upland nesting birds. This could lead to increased predation and lower nesting success. EXPLANATION: Livestock grazing utilization does not reduce forage for wildlife. It only occurs if overused. Authors appear to begrudge every stem, leaf and blade of grass to something other than wildlife. This is not supported by science or facts. EIS assumes livestock grazing removes vegetation. Cattle unlike wild horses do not remove entire plant. Author is uninformed about livestock grazing and should consult range staff or processionals. The causal relationships are indirect or cumulative and are not direct.

Response: Current research has produced a correlation between a certain amount of residual grass height (3.9") and sage-grouse nesting success. Livestock grazing by nature removes vegetation, as does every kind of vegetation consumption. Leaves and stems removed by animals or other uses are not present to provide shelter for sage-grouse and other birds, which is the impact this paragraph conveys. The document attempts to disclose the types of impacts likely to occur; the determination in the Preferred Alternative that current livestock grazing capacity would be maintained weighs those impacts and makes a management choice.

Comment: PAGE: 4-209 SECTION: 4.17.7 RECOMMENDED CHANGE: DELETE [Livestock grazing would result in various impacts on wildlife and fisheries. Allocating some forage increases to wildlife and watershed protection would improve wildlife cover, forage, and habitat and mitigate impacts that livestock grazing would otherwise impose on the area. Establishment of forage reserves would provide management with flexibility to rest other allotments during drought years, habitat improvements, wildland fire, prescribed burns, and other circumstances.](STRIKEOUT) EXPLANATION: It is grazing in general, not specific to livestock. Unlikely that forage increases would have significant benefit, the original grazing preference adjudications already allocated most of forage to wildlife. Since those adjudications big game numbers have increased exponentially. Forage reserve is too small to have benefits identified.

Response: No forage has been adjudicated to wildlife in the planning area. Big game numbers are currently at half of population objective (deer), below objective (moose), or approximately at population objective (pronghorn). Only elk, (about 8% of the big game animals in herd units in the planning area) are slightly above objective. This is likely at least partly because they are artificially fed in the winter.

Comment: PAGE: 4-209 SECTION: 4.17.7 RECOMMENDED CHANGE: DELETE [Water projects developed in crucial winter ranges could lead to a redistribution of livestock on crucial winter ranges. This could result in the loss of sufficient forage needed to maintain wildlife fitness during winter. A significant loss of forage likely would cause wildlife redistribution to areas that might be occupied by other big game herds or to private lands, increasing winter mortality and human conflicts. Since native winter habitats can only support a limited wildlife population, the result could be a reduction in species diversity or viability. Adjusting grazing seasons in allotments containing elk parturition areas to begin after June 1 would reduce the potential for brucellosis transmission.](STRIKEOUT) EXPLANATION: Impact rests on unestablished assumptions, namely that there is insufficient habitat to support big game. If that is the case, BLM must analyze excess numbers and conduct a new adjudication of forage and habitat. BLM cannot assume no change in grazing AUMs but then provide for reductions in grazing by precluding range projects. The assumption that better distribution of grazing animals will rob big game of winter forage is also false, since forage can be expected to grow during grazing season. Given the high numbers of big game, the risks of loss of species diversity, extirpation are simply not supported. Issue of disease must be independently assessed.

Response: It is reasonable, and feasible, to design developments to maintain crucial wildlife habitats. To suppose otherwise is to say that livestock and big game are incompatible on public lands. It is reasonable to disclose that redistributing livestock to ridge tops and other crucial winter range areas would increase livestock use of forage previously available for big game during winter.

Big game numbers are currently at half of population objective (deer), below objective (moose), or approximately at population objective (pronghorn). Only elk, (about 8% of the big game animals in herd units in the planning area) are slightly above objective. This is likely at least partly because they are artificially fed in the winter.

Comment: PAGE: 209 SECTION: 4.17.7 RECOMMENDED CHANGE: REVISE Mineral supplement blocks for livestock and wildlife use would be placed in locations that both promote proper grazing distribution and prevent inappropriate [livestock](STRIKEOUT) use on riparian habitat, minimizing soil compaction and runoff near surface waters, and could decrease grazing pressure and competition for riparian vegetation. EXPLANATION: Grazing use applies to big game, wild horses and livestock

Response: There are no wild horses in the planning area. It is unlikely that placement of salt blocks would increase deer or pronghorn use to the point of riparian degradation. Strategic placement of supplement blocks is intended to manage livestock use, not big game.

Comment: PAGE: 4-209 SECTION: 4.17.7 RECOMMENDED CHANGE: DELETE [Closing riparian and other exclosures to grazing by livestock would allow these areas to achieve their management objectives (e.g., PFC, potential natural community [PNC], fish and wildlife habitat).](STRIKEOUT) EXPLANATION: MSA indicates <3% of riparian segments are not functioning, thus there is no demonstrated need to close part of allotments. Nor is there any evidence from MSA that fisheries habitat is degraded due to grazing activities.

Response: There is no need to eliminate this statement. Closing riparian areas to livestock use is a valid way of achieving site objectives. This is a reasonable impact to report in this section.

Comment: PAGE: A3-7 SECTION: Livestock Grazing RECOMMENDED CHANGE: REVISE entirely EXPLANATION: Discussion assumes grazing harmful to wildlife habitat. Big game numbers would not have increased if the rangelands were not productive wildlife ranges.

Response: Big game numbers are currently at half of population objective (deer), below objective (moose), or approximately at population objective (pronghorn). Only elk, (about 8% of the big game animals in herd units in the planning area) are slightly above objective. This is likely at least partly because they are artificially fed in the winter.

Appendix 3 of the draft EIS has been revised in the final EIS.

Comment: PAGE: A3-7 SECTION: RECOMMENDED CHANGE: [New water developments could also bring livestock use into previously unused areas, decreasing available forage during critical time periods.](STRIKEOUT) EXPLANATION: See above comment.

Response: New water developments have always been analyzed for the effect they would have on the surrounding environment, including the reliance on forage by species other than livestock.

Range Management/PFC

Comment: The WDA recommends the development of new AMPs and evaluation of all current AMPs in the PFO due to land-use changes impacting rangeland conditions since the mid-1970s. The AMP is a valuable tool for the management of domestic livestock to enhance rangelands, but only if it is utilized.

Response: BLM's ability to evaluate AMPs is subject to funding and manpower. At present, our workload priorities are largely governed by both the Energy Policy Act of 2005 and land use planning, such as the development of this RMP.

Realistically, today's evaluation efforts may be directed more at mitigation potential relative to programs such as the Jonah Interagency Office and the Wyoming Landscape Conservation Initiative. When opportunities for such mitigation occur within an existing AMP, then evaluation of that AMP should occur. Opportunities for development on other non-AMP landscapes will raise the question of whether an AMP is warranted.

Comment: Acreage set aside as unleased land must remain unleased until function returns through reclamation in other developed areas of the PFO. Due to the interspersion of state and private lands and different mineral ownership in federal areas labeled as unleased, there is no assurance that any unleased acreage will remain unleased during the life of the PRMP (ie: drainage prompting BLM to issue leases). In the absence of successful reclamation on developed fields, designated land categories must remain constant through the life of PRMP.

Unleased federal land is needed as a safehaven for wildlife and domestic livestock. With increased surface disturbance throughout the PFO, wildlife can congregate on private lands, thus impacting the private landowner. For domestic livestock, who are typically removed for a period during early reclamation, alternatives for forage need to remain available for grazing. The agriculture industry needs assurances that functioning landscapes exist to provide forage for domestic livestock during the continuous decline of available forage due to energy development.

Additionally, the WDA encourages "Operator Committed Measures for Agriculture" as a segment of leasing proposals to the BLM. These voluntary measures are needed to recognize the energy development impact to agriculture and plan for the current habitat reclamation and future use of the allotments by domestic livestock.

Response: The intent of implementing the Unavailable for Leasing areas is to provide areas that are undeveloped through the life of the existing gas fields. Any leases offered to offset drainage from adjacent state- or privately-owned lands would be for small areas. Amendment of the RMP, a lengthy process involving full NEPA documentation through an EIS, would be required to change the areas available for leasing in the RMP.

Comment: While the proposed actions in livestock grazing management include some drastic reductions in AUMs, the RMP states that it has only 65% of the planning area evaluated for compliance with the Wyoming Standards for Rangeland Health. It also states that there is significant data lacking on the proper functionality of riparian areas. Determining management objectives on inconclusive scientific data does not appear to offer the best prescription for collaborative resource management.

Response: The completed RMP will not interfere with our ability to incorporate necessary management changes that may be identified through ongoing assessments.

Comment: PAGE: 1-8 SECTION: 1.4.1 RECOMMENDED CHANGE: Issue 11: Livestock Grazing and Vegetation Management Most of the planning area is licensed for livestock grazing. Maintaining grazing levels is necessary to sustain the agriculture component of the economy that has been a mainstay historically and remains an important part of the custom and culture. Populations of certain big game species directly affect and in some cases interfere with meeting or maintaining vegetation to comply with Wyoming Standards for Healthy Rangelands. Energy development may also displace livestock grazing and reclamation success may vary by site. EXPLANATION: As noted above, maintaining current levels of grazing and meeting rangeland health standards are two important issues that the RMP omits even though they were significant enough to be addressed in the MSA.

Response: Livestock grazing is dependent on the vegetation resource. Continuation of livestock grazing is addressed through resolution of Issue 3, Vegetation Management. The contribution of livestock grazing to the economy is included in the impact analysis in Chapter 4.

Comment: PAGE: 2-118, SECTION: 2.5.5., RECOMMENDED CHANGE: REVISE Enhance livestock grazing; maintain a balance between commodity production and the enhancement of wildlife habitat, watershed, and riparian areas; maintain range condition at, or improve range condition toward, the Wyoming Standards for Rangeland Health; improve forage production and ecological conditions to benefit livestock, wildlife habitat, watershed values, and riparian areas; maintain or improve riparian habitat to enhance forage conditions, wildlife habitat, and stream quality; and achieve riparian health as measured by proper functioning condition as a minimum standard of stability on all riparian areas. EXPLANATION: BLM should have a goal of no net loss of grazing. PFC is a measure not a standard. It is more useful where there is free-flowing water rather than in all riparian areas.

Response: The mission of BLM is to sustain the health, diversity, and productivity of the public lands. It may be necessary to reduce or increase grazing to achieve that mission. With thorough understanding of the methodology, proper functioning condition (PFC) assessments can be appropriately applied to all riparian areas.

Comment: PAGE:2-138 SECTION: RECOMMENDED CHANGE:REVISE d. Treated areas would generally be rested from livestock grazing for a minimum of two full growing seasons after treatment unless the appropriate level of environmental analysis determined that shorter durations would be adequate. Analysis could indicate a need for a longer or shorter rest period.

Response: The first sentence addresses the potential for a rest period shorter than 2 years; this addition is not necessary.

Livestock vs Conservation

Comment: One glaring reoccurring theme in the discussion of Alternative 3 (and some discussion in Alternative 4 as well) is the alluded pitting of the livestock industry against the conservation concerns under Livestock Grazing Management. The management objectives and actions clearly intend to create a wedge between conservation-oriented actions and livestock actions. It also appears that both livestock and wildlife uses on public lands will be the sacrifices through the implementation of the single-use activity of oil and gas development. It seems unwarranted and unnecessary and the management objectives should be reconsidered for this section.

Response: It is reasonable to analyze an alternative that would close allotments in the active gas fields. It was placed in Alternative 3 because it is the most restrictive alternative, not as an attempt to pit interest groups against each other. BLM can choose elements from any alternative in formulating the Proposed Plan in the final EIS. Alternatives 3 and 4 provide for large areas to be unavailable to leasing and development in an attempt to provide a balance of uses on a landscape scale.

Comment: I have been reviewing the draft RMP and it disturbs me to see that one of your strategies has been to "Divide and Conquer" by pitting the ranchers against the recreationalists against the conservationists, why else would you limit the AUM's allowed in Alt. 3 when you also limit the gas drilling and recreational areas, doesn't limiting the gas and recreational areas then allow for grazing to stay at the same level? But if you open up more area for drilling as in Alt.4 you will then allow more AUM's?

Response: It is reasonable to analyze an alternative that would close allotments in the active gas fields. It was placed in Alternative 3 because it is the most restrictive alternative, not as an attempt to pit interest groups against each other. BLM can choose elements from any alternative in formulating the Proposed Plan in the final EIS.

Collaboration

Comment: Success in meeting multiple use resource management goals under Alternative #4 is directly dependent on effective application of adaptive management. While WSGA supports adaptive management as a theoretical approach, we are necessarily concerned by the uncertainty that it creates for grazing permittees and other users. Its practical application requires close ongoing communication among managers and users at all levels. Potentially affected livestock operators must have a seat at the table in management discussions, project development and mitigation efforts.

Response: We fully agree as to the importance of including the grazing permittee at all levels of management discussions and project development.

Comment: 4.) Livestock operators, specifically those most affected, must have a seat at the table on mitigation boards and projects where grazing may be affected.

Response: The PFO is aware of the importance of including affected grazing permittees as it develops mitigation projects. The makeup of mitigation boards would be determined at the site-specific project level, such as for the Jonah Interagency Office.

Comment: PAGE: 2-119, RECOMMENDED CHANGE: ADD k. BLM will work closely with conservation districts and local Wyoming grazing districts to facilitate management of rangelands, monitoring of rangeland health and planning for projects to enhance rangeland condition on public and private lands. EXPLANATION:RMP needs to recognize commitments made by BLM in 2003 MOU.

Response: Acknowledgement of BLM's working relationship with local and state governments is included in Chapter 3.

Comment: PAGE: 4.45, SECTION: 4.6.7, RECOMMENDED CHANGE: DELETE forage reserve EXPLANATION: Notion of a forage reserve only works if the area available is compatible with ranch operations. The very few unallocated acres are not in the development areas, so there is little basis for assuming these areas could provide economically efficient relief. Forage reserves that are not economically efficient and effective are inconsistent with local plans and policies. The allotments are fully committed to grazing with the exception of a few small areas. Thus establishment of forage reserve is of questionable merit unless another ranch is removed form the economic and community.

Response: The establishment of forage reserves will include appropriate levels of coordination, cooperation, and consultation prior to finalization.

Comment: PAGE: G-1 CHANGE: ALLOTMENT MANAGEMENT PLAN – An AMP is prepared in consultation, cooperation and coordination with the permittee(s), lessee(s), and landowners involved, district grazing advisory boards, and any State having lands within the area covered by the AMP [and other affected interests.](STRIKEOUT) EXPLANATION: In addition to consultation, FLPMA requires cooperation and coordination. 43 U.S.C. § 1752(d). Also, the interested public is only entitled to notice of a proposed AMP and the opportunity for public participation in its development. Duty to consult, cooperate and coordinate does not automatically apply to public. 43 C.F.R. § 4120.2(c).

Response: There is no district grazing advisory board. The definition is appropriate.

Minerals

General Comment Responses

Comments:

- Alternative 3, as well as the Preferred Alternative, unreasonable close entire areas from resource development. These areas might be suited for gas development if the proper mitigation strategies are developed. Again, the alternatives needlessly place restrictions that would be more appropriate with site specific environmental review for specific projects.
- The Pinedale area is a vast field of natural gas and Alternative 3 provides for less than half that area to be developed for minerals this in turn would mean a great socio-economic loss for the region. In addition, Alternative 3 goes too far with imposing unnecessary development restrictions and does not balance the production of oil and gas resources with environmental resources.

Response: The draft EIS presents four alternatives that range from strong commodity production to strong environmental protection. The plan does take the nation's energy needs into account, but it also takes the other resource values within the planning area into account, as required by numerous laws and regulations. Alternative 2 purposely addresses enhanced commodity production, whereas Alternative 3 purposely addresses enhanced surface resource protection. This was done to meet the NEPA requirement to analyze a reasonable range of alternatives.

Comments:

- The Preferred Alternative is based on a limited RFD that one could argue is outdated. Any Record of Decision should be based on a more accurate RFD based on the size and scope of both the Jonah Field and Pinedale Anticline.
- The RFD is inadequate. The newly discovered natural gas resource in the Pinedale Anticline justifies an update to the RFD.
- Outdated information of potential mineral resource areas needs to be updated based on new findings and current field production and well results. This could affect all acreage and percentages and most likely will require that additional analyses be conducted. The updated mineral resource data should also include deep (Rock Springs and Hilliard Formations, or, in the Pinedale Anticline example, depths approaching 20,000 ft.) oil and gas potential, which should also be analyzed based on current findings.

Response: The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period.

Comments:

- Set a slower, more reasonable pace for new gas development; Cluster drilling infrastructure so it minimizes impact on the land and wildlife; Follow seasonal drilling restrictions; and PERMANENTLY PROTECT certain critical areas from any new leasing or development.

- I understand how rich this land is for energy development. So in the areas that are decided upon development, please take your time. Use careful EA's, cluster the developments, and adopt & enforce meaningful mitigation & monitoring processes.

Response: Development rates and infrastructure scenarios are project-level issues that can be addressed through project-level EISs. "Clustering" is currently occurring on the Pinedale Anticline and to a lesser extent in the Jonah Field where multiple wells (sometimes as many as 32) are developed from a single well pad. Seasonal restrictions are already designed to minimize impacts to the target species during crucial life-cycle periods. Permanently setting areas aside from leasing or development is beyond the authority of this RMP. Such "permanent" set asides require congressional approval.

Comments:

- Prohibit oil and gas leasing and development in environmentally sensitive areas. These include big-game migration corridors, bottlenecks, winter and transitional ranges, sage grouse nesting habitat, the Green and New Fork River corridors, the scenic Wind River and Wyoming Fronts and areas of critical environmental concern
- I am most concerned with the recent draft that proposes to open the upper Green River, upper New Fork and Hoback Rim areas for oil and gas leasing. Please make this area Unavailable for Leasing in the new RMP.
- While we prefer the management plan laid out in Alternative Three, we believe it needs improvements to truly reflect your multiple use mandate and to provide the necessary protection for the significant cultural resources under your control. Therefore, we would urge you to adopt the following additional safeguards to Alternative Three: Require that development be paced so that major new gas fields are not allowed until development in existing and expanded fields has been completed

Response: BLM does not have the authority to prohibit development of valid existing leases. The alternatives consider a number of areas that could be made unavailable for leasing. However, even in these areas, valid existing leaseholders would have the right to develop those leases while they remain in effect.

Comments:

- Considering the economic benefits which should result from extracting these important natural gas resources, I urge the BLM to remove the unnecessary drilling restrictions and stipulations which you have written as alternatives in the Resource Management Plan Environmental Impact Statement. Your Reasonable Foreseeable information including updated in project-specific EIS/EA data - as well as from other sources.
- It appears to me that, even though your RMP in principal is well prepared, too many restrictions and stipulations are being placed on the energy companies. This must translate into higher prices, if the companies are held to these conditions. I personally cannot imagine them even being interested in investing in the development of these important resources, if they cannot make enough profit. I honestly believe you need to remove the restrictions in the alternatives of the plan.

Response: BLM is required to manage the federal lands and mineral estates under its jurisdiction for multiple use. This draft EIS does address reduced restrictions in the areas analyzed as available for intensive oil and gas development.

Comments:

- I am, however, concerned with the many restrictions which are part of the alternatives in the document. An RMP should be much more general in nature and should not be site-specific. Including these restrictions in the RMP may discourage the major energy companies from developing the Pinedale Anticline potential further.
- Restrictions such as the seasonal restriction and surface disturbance portion of the RMP need to be removed from the document, if we want the energy companies to invest their resources. Seasonal restrictions would create a seasonal work force, which has been seen to be detriment to any economic stimuli and severely reduce production output. New technologies should no longer require these kind of restrictions.

Response: BLM is required to manage the federal lands and mineral estates under its jurisdiction for multiple use. This draft EIS addresses reduced restrictions in the areas analyzed as available for intensive oil and gas development. It also maintains restrictions as measures to protect important wildlife and other resource values in areas with lower development potential. More detailed site-specific analysis does occur through project-level analysis documents, i.e., EAs and EISs.

Comments:

- BLM partially updated the level of development anticipated in the Pinedale Resource area in September of 2006 when it issued the RFD Scenario Final Report by acknowledging that up to 3,100 wells may be drilled in the Jonah Field. See RFD Scenario Final Report, pg. 51. Nonetheless, the 2006 report was still inaccurate because it estimated that 2,450 additional wells would be drilled in the Pinedale Anticline area compared to the 4,400 wells that have been proposed. The BLM's projection for the Pinedale Anticline area is thus still 2,000 wells too low. The BLM must significantly increase the level of projected development in light of these approved and proposed projects, as well as any other potential development projects in the western portions of the planning area and, in particular, in the Big Piney/La Barge CAP and Riley Ridge areas.
- Further, the BLM must update the RFD Scenario in light of the BLM's recent approval of the Jonah Infill Drilling Project ("JIDP") in March of 2006, and the proposal from the Pinedale Anticline operators to significantly increase development. The unrestricted RFD Scenario for the Pinedale Resource Area anticipated a total of 7,903 wells drilled from up to 5,687 wells. The JIDP approved the drilling and development of 3,100 wells from 3,100 pads, and the BLM recently released a SDEIS for the Pinedale Anticline area proposing the approval of 4,399 wells from 250 new well pads (over the 700 producing wells/wellpads authorized in the PAPA ROD in 2000). The operators in the South Piney area have also proposed at least 210 coalbed natural gas wells, a proposal currently being studied by the BLM. Thus; at the very least, the BLM is aware of 7,709 wells that have been permitted or actually proposed, before the RMP has even been approved. This level of development surpasses the BLM's anticipated levels of development under Alternatives 1, 3, and 4, and is only a few wells below the unrestricted RFD Scenario or the RFD Scenario for Alternative 2.
- Appendix 10 of the RMP, DEIS provides estimates of "reasonably foreseeable development" for oil and natural gas in the PRA. However, that discussion appears to exclude a considerable amount of the past, present and foreseeable development in the Resource Area. The RMP DEIS states that the projected total number of well locations (non-CBNG) in the planning area during 2001-2020 would be 7,927 conventional gas wells for Alternative 2 and 7,836 conventional gas wells for Alternative 4 (the BLM's preferred alternative). However, more than 1,500 other oil and

gas wells have been drilled in the Big Piney / La Barge area. The PAPA Draft SEIS projects 4,399 conventional gas wells in the Pinedale Anticline through 2025. And the Jonah Infill Final EIS projects up to 3,100 additional conventional gas wells, on top of 533 previously approved gas wells. Collectively, these add up to more than 9,500 conventional oil and gas wells. This total exceeds the RMP DEIS's projections even for Alternative 2 (the maximum drilling scenario). Thus, the RMP DEIS does not present an accurate picture of past, present and reasonably foreseeable future drilling development.

Response: The final RFD report completed in September of 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period. BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the number presented in the draft EIS is current, valid, and applicable.

Comments:

- I would like you to know that I am strongly against allowing any mineral leasing in the Upper Green, Upper New Fork, and Hoback Rim areas. This is some of the most beautiful country in the U.S., why ruin it. You have already allowed the area south of Pinedale to be destroyed. You have destroyed the wintering grounds for antelope, deer, and sage chickens. Now you want to take away the home for the elk also. The crystal clear streams and lakes will fill with mud and debris from run off and erosion. Trout fishing will be destroyed. Please don't allow drilling or leasing in these areas.
- This proposed area, Upper Green, Upper New Fork and Hoback Rim of the Greater Yellowstone should be preserved and classified as Unavailable for leasing. They apparently were considered to have values that outweighed their industrialization and why they were protected by the current moratorium in the first place.

Response: The RMP is designed to address a reasonable range of alternatives. Alternative 3 analyzed making much of the federal lands and minerals in Upper Green unavailable for new oil and gas leases. Management of federal lands and mineral estates in the Upper Green has been addressed in the final EIS.

Comments:

- I'm more concerned with the impact drilling in a volatile geologic area may have on human life. The super magma chamber under Yellowstone is about ready to blow. Are you willing to be the one who OKs the opening of that Pandora's box? Think about it.
- Lastly, you may end up with far more energy than you can handle, as Yellowstone is a supervolcano that destroyed most of North America thousands of years ago. It's due, in fact, to go off any time, as studies indicate it does so every 250,000 years, and the last was just over that length of time in the past. That means that any gas-saturated magma will be getting relatively close to the surface, and a single hole that exposes ANY of it to air will cause ALL of it to separate and at once. That means it will go off immediately upon contact with air. Please reconsider!

Response: There is no current seismic evidence to suggest the magma chamber extends under the planning area.

Unique Comments

Comments on Document/Suggested Changes

Comment: PAGE: 2-122, EXPLANATION: If the lands are leased, BLM has limited authority to limit data acquisition. Relatively few lessees explore areas where they do not have a lease.

Response: BLM has the authority to manage disruptive activities on public lands. This section appropriately lays out management actions that would apply to geophysical activities.

Comment: PAGE:2-150,SECTION:Unavailable Areas RECOMMENDED CHANGE: Withdrawals EXPLANATION: The conditions are duplicative and repetitive. The above comments apply to the "unavailable" areas that should be withdrawn.

Response: The conditions need to be stated clearly as they apply to each type of oil and gas management area.

Comment: Page Number & Issue:4-187, 4-197: language discussing evaporation ponds for condensate water. Recommendations: What is condensate water? Please define.

Response: This is a typographical error; it has been changed to "produced water" in the final EIS.

Comment: Page 4-70 Alternative 4, The 7,136 wells (federal minerals) projected under this alternative would potentially extract 19,168 BCF of natural gas and 150 million barrels of oil during the life of the plan, which is an 8% reduction in the projected number of wells and a 5% reduction in the projected gas and oil volume from the unrestricted estimates and a 1% reduction of production from continuation of current management (alternative 1). Comment: BLM must explain how the 7,136 well figure was derived.

Response: The 7,136 figure is derived from the RFD, see Table 4-2 on page 4-48 of the draft EIS.

Comment: Literature Cited Odum, E. P. 1971. Fundamentals of Ecology, 3rd edition. Saunders, Philadelphia. Smith, R. L. 1974. Ecology and Field Biology, 2nd edition. Harper and Row. APPENDIX 3 MITIGATION GUIDELINES – ALTERNATIVES 2, 3, AND 4 Page A3-1 Performance based stipulations Comment: The term "performance-based stipulations" is not adequately defined or explained.

Page A3-2 Permitting and Authorization Process Comment: This section is a helpful summary/roadmap of the BLM's permitting process. The pre-application consultation process could be beneficial. It is important that the terms and conditions agreed upon during the pre-application consultation not change, unless no other option is available, throughout the rest of the process.

Page A3-3 Exception Process Comment: It is encouraging that BLM will limit its "exception" consultation to relevant agencies.

Page A3-4 No Surface Occupancy Guidelines Comment: BLM provides for a waiver, exception, or modification of an NSO decision; but once in place, the reality is it would take a Herculean effort to undo an NSO planning decision. Before implementation, the BLM should take a "hard look" at potential NSO areas to ensure they are clearly supported by valid data.

Page A3-4 Performance-Based Stipulations and Mitigation Comment: This section discusses adaptive management and the role of management, research and monitoring. Operators currently monitor various resources and submit that information to the BLM. The BLM, however, is under staffed and cannot always analyze that data. For adaptive management to work, the data must be analyzed.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale. Appendix 3 has been revised in the final EIS.

Comment: Alternative 4 would prohibit water disposal pits in the planning area. See RMP DEIS, pgs. 2-118, 2-120 - 122. Unfortunately, the phrase "water disposal pits" is not defined. The BLM must define this phase in order to provide operators with the information needed to comment on the proposed RMP. Does the phrase apply to disposal pits for produced water sometimes associated with coalbed natural gas development, or reserve and completion pits which are a normal and integral part of oil and gas development? If the BLM intends to prohibit reserve and completion pits, the BLM is significantly limiting operators' ability to develop the oil and gas resources under their leasehold. The BLM should not prohibit reserve and completion pits. The BLM must be aware that closed-loop drilling systems are not economic or technically feasible under all circumstances. As discussed above, once the BLM has issued an oil and gas lease conveying the right to access and develop the leasehold, the BLM cannot later impose unreasonable mitigation measures that take away those rights. See Conner v. Burford, 84 F.2d 1441, 1449-50 (9th Cir. 1988); 43 C.F.R. § 3101.1-2 (2006) (BLM can impose only "reasonable mitigation measures . . . to minimize adverse impacts . . . to the extent consistent with lease rights granted"). Requiring closed-loop drilling systems may actually lead to the loss of significant reserves if projects become uneconomic. The BLM must clarify the proposed requirement regarding water disposal pits.

Response: Definitions of water disposal pits, water evaporation pits, surface discharge, temporary pits, and permanent pits have been added to the glossary in the final EIS. The restriction applies to off-location produced water disposal pits. It does not apply to reserve, completion, or cuttings pits that are constructed on the well pad. This clarification has been added to the final EIS. The language regarding water disposal pits has been revised in the final EIS.

Comment: Page Number & Issue: 2-9: "4. Fluid mineral activities that would typically require an exception during seasonal closure periods would be road construction or improvement, well pad construction or expansion, well drilling operations, well completion operations, regularly scheduled workover operations, geophysical exploration, pipeline construction, setting production facilities, constructing compressors, and installing power lines. Activities that would be permissible during seasonal closure periods without requiring an exception would include daily operations; road maintenance (including snow removal); remedial workover operations immediately essential to maintaining well production; workover, well logging, and operations that do not alter the wellbore or casing; and regularly required (for example, monthly, every 2 months, every 3 months, etc.) production facility and pipeline maintenance. These activities would be permissible if operations are confined to an existing well pad and/or access road, require no longer than 48 to 72 hours to complete, are conducted during daylight hours only, and involve no new surface disturbance." Recommendations: BLM should provide citations or delete the last sentence in the paragraph: "These activities would be permissible if operations are confined to an existing well pad and/or access road, require no longer than 48 to 72 hours to complete, are conducted during daylight hours only, and, involve no new surface disturbance." Specifically, putting limitations on time frames and hours of accessibility during the day for activities not requiring an exception is not realistic for oil and gas operations.

Response: This section has been updated in the final EIS.

Comment: Page Number & Issue:4-64: "If, however, such equipment is not available and an operator cannot commence operations without it, field development delays would occur." Recommendations: Delete sentence. See previous comments under Section II. General Concerns.

Response: The referenced text is stating the impact that would occur if Alternative 3 were implemented. Because the text is based on a recommended mitigation in the wildlife portion of Alternative 3, it is appropriate to state what the anticipated impact to oil and gas development would be.

Comment: 3. Inconsistent values Many of the impact estimates (such as the total number of acres available for oil and gas leasing, the total number of wells, etc.) appear in several places throughout the document. However close examination of these numbers indicates that they are not consistent. For example the text on page 4-61 presents acres available for "intensive fluid mineral leasing…" and "minimally developed areas" for Alternative 3. These two figures add up to more acres available for oil and gas leasing than the total mentioned several times throughout the document, leading one to wonder exactly how many acres would be available under this alternative and why a lower number is so often used in the various tables and in the estimate of certain impacts on the oil and gas industry. Further, one is left to assume that these inconsistencies occur throughout the document.

Response: Acreages have been checked for consistency and updated in the final EIS.

Comment: we're talking about the NSO area in the northern part of the -- of this area on Alternative 4. I think it leads people to believe that there won't any occupancy up there. There won't be any drilling going on. And I think that's going to fool people. There's a lot of different ownerships and minerals up there, and if a private landowner allows a well in there, they're going to be there directionally drilling for quite a period of time going different directions. And so if people believe that there won't be any wells up there, I think they're fooling themselves, and I think the BLM is trying to fool the people there.

Response: The RMP only has jurisdiction over the BLM-administered federal lands and minerals within the planning area. The map depicting the large-block NSO in the Upper Green includes all ownership only for map clarity. It does not intend to imply that private or state minerals are encumbered by the designation. The draft EIS/RMP on page 1-9 states, "BLM decisions will not apply to private land with private mineral estate, federal lands administered by other federal agencies, or federal mineral estate administered by other federal agencies."

Comment: PAGE: G-27 CHANGE: ZONE - Applied to the Pinedale RMP, these are areas where planned levels of oil and gas management activities are similar. Within a specific zone, the level of planned oil and gas development and the level of surface disturbance to support planned oil and gas operations are consistent. If disturbance or development exceeds the established levels, then parcels can move to other zones with more applicable levels of oil and gas management. EXPLANATION: Definition of "Zone" found in Pinedale Definitions document but not Pinedale RMP Glossary.

Response: RMP does not reference ZONE; therefore definition is not needed.

Comment: PAGE: A10-6 SECTION: RECOMMENDED CHANGE: EXPLANATION: Using all mineral ownerships only confuses and does not add to public understanding.

Response: BLM disagrees. Well development does occur in the planning area on private and state minerals. It is important for the public to know this.

Comment: PAGE: G-2 CHANGE: APPLICATION FOR PERMIT TO DRILL. The approved APD is a contract permit between the operator and the Federal government and cannot be changed or modified unless authorized by BLM. EXPLANATION: The APD is not a contract but by its own terms a permit, to which there are no consequences to BLM if it fails to allow drilling operations. Specifically, the approval of an APD does not warrant or certify that the applicant holds legal or equitable title to the subject lease which would "entitle the applicant to conduct drilling operations." 43 C.F.R. § 3162.3-1(I).

Response: The final EIS has been revised to remove the statement: "The approved APD is a contract between the operator and the federal government and cannot be changed or modified unless authorized by the BLM."

Comment: PAGE:4-176 SECTION:4.16.1 RECOMMENDED CHANGE: Mineral resource development would increase management requirements for fire suppression which are handled by the lessee. Impacts of fluid mineral resource development on fire management could include the introduction of additional ignition sources, barriers or impediments to fire areas, and increased fire risk potential as a result of increased access for recreational and other public land users. These impacts would generally be the same for leasable, locatable, and salable minerals.

Response: BLM feels the statement is accurate and no revision is needed.

Comment: PAGE: 4.48, SECTION: 4.7.1, RECOMMENDED CHANGE: Tables cited are not in either DEIS or Appendix 10. EXPLANATION; Missing tables.

Response: The correct citation is Tables A10-4 and A10-5 of the draft EIS. This has been corrected in the final EIS.

Comment: PAGE: 4-48, SECTION: 4.7.1, RECOMMENDED CHANGE: Replace [Unrestricted Development] (STRIKEOUT) with Standard Lease Stipulations EXPLANATION: IM 2004-89 specifies that the unconstrained option must use standard lease stipulations, ¶VIII. It is inaccurate to state "unrestricted development" because lease stipulations impose important constraints.

Response: The text on page 4-48 in the draft EIS has been changed from "unrestricted development" to "unrestricted development (only standard lease stipulations will be required)."

Comment: PAGE: 4.47, SECTION: 4.7.1, RECOMMENDED CHANGE: Revise to use only high, medium and low. EXPLANATION: RMP does not follow mineral leasing handbook, which directs BLM to identify high, medium, and low potential. Should delete "very" and combine areas.

Response: The subject Bureau handbook is intended to provide guidance to assist in preparing these types of fluids determinations. Because it was determined that there was such a wide range in potential well counts within the planning area, additional potential categories were developed.

Comment: PAGE: 2-47 SECTION: 2.5.2 RECOMMENDED CHANGE: ADD The private mineral estate with privately owned surface will not be affected by the minimally developed designation. EXPLANATION: The division of the planning area into minimally developed based on the land being east of Highway 191 is entirely arbitrary. The state highway was not located based on geology and the same trends on the west side of the road continue on the east side. Map 2-9 should be revised to omit the private lands from the classification. As currently presented, it fails to meet NEPA objectives of full disclosure and analysis of the impacts.

Response: The draft EIS/RMP at page 1-9 states, "BLM decisions will not apply to private land with private mineral estate, federal lands administered by other federal agencies, or federal mineral estate administered by other federal agencies." BLM feels this is sufficient.

Comment: PAGE: 2.47 SECTION: 2.5.2 RECOMMENDED CHANGE: EXPLANATION: Required to display the impacts by number of acres and wells. IM 2004-89 (Att. 1-7). Instead, discussion looks at anticipated production. EPCA requires display of acres and wells starting from the baseline (no action) and through each alternative. The tables for numbers of wells show pads, not acres and do not accurately

display surface disturbance acres by each alternative. IM on EPCA explicitly requires this display and the RMP and Appendix fail to conform.

Response: Tables 4-2 and A10-1 of the draft EIS depict the projected wells for each alternative. Tables A10-2 and A10-3 of the draft EIS project the initial and long-term surface disturbance for each alternative.

Comment: PAGE: 2-126, RECOMMENDED CHANGE: ¶7 Delete one sentence. [The SRMA would be administratively unavailable for fluid mineral leasing.] (strikeout) EXPLANATION: Closing Scab Creek RMA (Front country) to mineral leasing inconsistent with rest of RMP. Area is already developed with roads etc. no rationale to close it. WSA portion is closed by law.

Response: This proposed closure is consistent with the proposed management prescriptions for the other proposed Special Designation/Management Area (SD/MA)/ special recreation management areas, including the Wind River Front which includes the Scab Creek SRMA.

Comment: I implore the BLM to get good information on every resource and how they will be affected by oil and gas drilling prior finalizing any new RMP.

Response: The RMP is based on the best available information and data at the time the analysis was initiated, see Section 4.1.2 on page 4-2 of the draft EIS.

Comment: As presented, a combined proposed plan and draft impact statement which simultaneously does not adequately consider 25% of the planning area grossly distorts the impact analysis of each alternative. This is especially important because the Anticline's approved and proposed growth, with several thousand new wells in that 25%, over a significantly longer period than the life of this proposed PRMP, is critical to how much of the planning area is committed to mineral development and how much should be permanently made unavailable for mineral development and instead be available for other uses.

Response: The draft EIS/RMP analysis and data are for the planning area as a whole. Analysis and data specific to the Jonah and Pinedale Anticline are found in the field development EISs for those fields and is not repeated in the draft EIS/RMP. The RFD does include the projected development in the Jonah and Pinedale Anticline fields and, therefore, the impact analysis does reflect the impacts associate with these fields.

Comment: Based on statistical data in the Mineral Report, the hydrocarbon resources within the planning area may be placed within one of the following categories for potential development: very high, high, moderate, low, very low, and no potential for development. Very high potential for hydrocarbon development indicates areas in which average well density is anticipated to be more than 500 wells per township (36 square miles).

- High potential for hydrocarbon development indicates areas in which average well density is anticipated to be more than 100 wells per township.
- Moderate potential for hydrocarbon development indicates areas in which average well density is anticipated to be 20 to 100 wells per township
- Low potential for hydrocarbon development indicates areas in which average well density is anticipated to be less than 20 wells per township.
- Very low potential for hydrocarbon development indicates areas in which average well density is anticipated to be less than 2 wells per township.

- No potential for hydrocarbon developments indicates areas in which no wells are anticipated. Comment: We object to the proposal to place very high, high, and moderate potential in an NSO or unavailable categories without proper justification. Based upon our review of the DEIS, no justification has been provided.

Response: Portions of areas designated as having very high, high, and moderate potential for the development of oil and gas resources also have very high surface resource values for VRM, wildlife, recreation, watershed, cultural resources, etc. The objectives established to protect or enhance the surface resource values are the justification for the unavailable and/or Large Block NSO designations.

Comment: In discussing why this RMP could not support the closing of some of the identified ACEC designations or Special Management Areas, the document states "Closure of the entire planning areas to new oil and gas leasing would eliminate development and production in areas where conflicts can be mitigated or don't exist. Closure contradicts BLM policy of keeping public lands open and available for mineral exploration".

This statement does not adequately represent the proposed ACEC designations. Suggestions by the public to increase some acreages in current ACEC areas and the creation of several new ACEC areas that contain unique and qualifying features for protection does not mean that the public is asking to close "the entire planning area to new oil and gas development." The BLM has recognized in the RMP that the public scoping comments indicated high levels of concern about the rate and scale of oil and gas development (Chapter 2). Additionally, it is mystifying why the BLM would make this statement in light of the earlier statement from the BLM (Chapter 2) that 734,000 acres of the 1.2 million acres are already leased. With the proposal of 7,836 new wells on 734,000 acres the BLM is advocating for in their Preferred Alternative and the current 176,000 acres that are already under oil and gas development, it seems rather disingenuous to the public to make such a statement about closing the entire planning area to new leasing.

Response: The referenced text solely applies to an alternative that would close the entire planning area to oil and gas leasing, which was considered but was eliminated from detailed analysis. It does not apply to ACEC or SD/MA considerations.

Comment: Maps Page 2-7, 2-8, 2-9 Commentor WGFD. The Intensively Developed field polygon on the PAPA crest should be modified to reflect the preferred alternative for the PAPA SEIS

Response: The ROD for the RMP/EIS will be consistent with decisions made in the ROD for the supplemental EIS to the PAPA.

Comment: Residential areas not presently leased should be designated "unavailable for leasing". As leases expire the same designation should apply. (There seems to be plenty of land already available for leasing)

Response: This would only provide "selective protection" for those residential properties with underlying federal minerals that are not currently leased and could provide "protection" for some residential properties with leased federal minerals should those leases expire without the lease being developed. It would not provide any protection for residential properties with underlying private mineral estates, nor would it provide protection for residential properties developed in the future on lands within underlying federal minerals. It is also contrary to the intent of Congress when it established the various laws that allowed for the transfer/patent of federal lands to private entities, but retained the mineral estates in federal ownership to be developed for overall benefit of the American public at large.

Comment: Page Number & Issue: 2-118: "j. No water disposal pits would be permitted." Recommendations: Delete portion of statement providing that water disposal pits are not allowed. BLM should clarify whether it means disposal pits or evaporation pits. Terminology used is not regular terminology in operations. Evaporation pits should be considered in these areas.

Response: This management action has been clarified in the Final EIS. Definitions of water disposal pits, water evaporation pits and surface discharge have been added to the glossary in the FEIS.

Comment: Alternative 4 would prohibit water disposal pits in the planning area. See RMP DEIS, pgs. 2-118, 2-120 - 122. Unfortunately, the phrase "water disposal pits" is not defined. The BLM must define this phase in order to provide operators with the information needed to comment on the proposed RMP. Does the phrase apply to disposal pits for produced water sometimes associated with coalbed natural gas development, or reserve and completion pits which are a normal and integral part of oil and gas development? If the BLM intends to prohibit reserve and completion pits, the BLM is significantly limiting operators' ability to develop the oil and gas resources under their leasehold. The BLM should not prohibit reserve and completion pits. The BLM must be aware that closed-loop drilling systems are not economic or technically feasible under all circumstances. As discussed above, once the BLM has issued an oil and gas lease conveying the right to access and develop the leasehold, the BLM cannot later impose unreasonable mitigation measures that take away those rights. See Conner v. Burford, 84 F.2d 1441, 1449-50 (9th Cir. 1988); 43 C.F.R. § 3101.1-2 (2006) (BLM can impose only "reasonable mitigation measures . . . to minimize adverse impacts . . . to the extent consistent with lease rights granted"). Requiring closed-loop drilling systems may actually lead to the loss of significant reserves if projects become uneconomic. The BLM must clarify the proposed requirement regarding water disposal pits.

Response: Definitions of water disposal pits, water evaporation pits, and surface discharge have been added to the glossary in the final EIS. The restriction applies to off-location produced water disposal pits. It does not apply to reserve, completion, or cuttings pits that are constructed on the well pad. This clarification has been added to the proposed RMP final EIS.

Comment: Historically, analyses by land management agencies of alternatives that emphasize resource extraction alternatives (oil and gas drilling, mining, timber) emphasized the benefits of extraction and ignored the costs. Failure to include all the costs of an oil and gas 5 drilling proposal has two distorting influences on the decision making process. First, the alternatives that emphasize drilling appear more attractive than they actually are, and second, the opportunity costs of conservation-oriented alternatives will appear greater than they really are. Agency planners must provide a full accounting of the costs associated with extraction activities. Only when all the costs and benefits are fully accounted for can a truly informed assessment of the alternatives occur.

Response: A true cost-benefit analysis, including analysis of non-market values, is beyond the scope of the RMP. However, qualitative discussion of nonmarket values and impacts has been added to Chapter 4.

Comment: Page: 3.39, Section: 3.7.5, Explanation: Exclusion area needs to be withdrawn pursuant to FLPMA's withdrawal procedures. Comments #89, 207.

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: Where produced waters would be used for drilling (before the surface casing is installed), dust suppression, or reclamation, require treatment to drinking water standards. To minimize the release of potential contaminants such as benzene and PAHs, require or encourage the use of distillation over reverse osmosis in the treatment of produced waters. o Discourage disposal of produced waters through deep-well injection. Prohibit injecting produced waters with lower quality into any Class I, II, III or IV

ground water. Injection should not reduce quality in ground waters that have potentially beneficial human uses. When produced waters would be re-injected, require best available monitoring to prevent loss of integrity of aquifer seals. The RMP should also include direction to comport with "EPA regulations requiring that the injection pressure must remain less than the fracture gradient, which, at higher pressures would result in artificially fracturing the overlying rock, possibly creating pathways to other aquifers or the surface" [39]. o Where use of treated produced water could result in adverse effects to surface waters, ground waters or other components of the environment, the RMP should require the use of "green" dust palliatives that will not increase salinity in ground or surface waters and will not pose any contamination risks.

Response: Operating standards and BMPs for management of produced water are presented in Appendix 3, to the extent of BLM authority and within the scope of the RMP.

Comments on Alternatives

Comment: The overall minerals management under Alternative 3 is inappropriate because it unreasonably limits oil and gas development. The BLM is effectively foreclosing oil and gas development in the Pinedale Resource Area outside of the Pinedale Anticline and Jonah Fields.

Response: The draft EIS/RMP is designed to present a reasonable range of alternatives and make projections of the impacts associated with each of those alternatives. Accordingly, the draft EIS projects varying levels of impacts to air quality, wildlife, and socioeconomic values, as well as to other resource values. Alternative 4 provides a midrange of impacts between the higher level of commodity production in Alternative 2 and the higher level of surface resource protection in Alternative 3. Even under Alternative 3, "Existing oil and gas or other mineral lease rights would be honored".

Comment: On page 2-31, the BLM incorrectly states that the entire planning area, other than the 7,636-acre Scab Creek area, would be open to consideration for leasing, exploration, and development of oil and gas, despite the fact that 172,500 acres are unavailable for leasing under Alternative 1 in the Wind River Front. See RMP DEIS, pgs. 2-175, 4-52, Map 2-1. Another 41,300 acres is available with only No Surface Occupancy Restrictions thus indirectly prohibiting most oil and gas development by making development more costly or technically infeasible. See RMP DEIS, pgs. 2-175, 4-47.

Response: The referenced statement is a direct recapitulation of text from the existing RMP approved in 1988. Alternative 1 would continue implementation of the decisions in the 1988 plan. It is important to note the statement is that other than Scab Creek area, "the entire planning area would be open to CONSIDERATION for leasing . . . ." It does not state the entire area would be "OFFERED for leasing . . ." The leasing moratorium instituted in 2000 was intended to withhold those lands from leasing until they could be reevaluated through an update/revision of the 1988 RMP. This draft EIS/RMP accomplishes this. If Alternative 1 is selected, the leasing moratorium would expire and those lands would be available for leasing "consideration" as prescribed in the referenced text. The text as written on page 2-31 of the draft EIS is correct. The referenced NSO restrictions are again a direct carryover from the 1988 RMP, and they do provide for development of the underlying mineral resource through offsite techniques.

Comment: In the final alternative selection, great care should be taken to ensure that development takes place in a manner that maximizes development of existing resources, contemplates protection of surface values and considers the long-term value of the natural resources being considered for development.

Response: The existing analysis in the draft EIS/RMP and substantive public comment will be considered in the development of the final EIS.

Comment: As indicated above, the restrictions placed on oil and gas development under Alternative 3 are far too onerous and unreasonable. The increases in areas unavailable to leasing or only available with NSO or other restrictions, the increases in VRM Class II designations, and the various wildlife stipulations and requirements would significantly retard oil and gas development in the Pinedale Resource Area. Once again, the BLM's cumulative impacts analysis on page 2-245 conflicts with the information expressed in Table 4-2 and Appendix A10. It appears the BLM improperly confused the cumulative number of conventional natural gas wells in the Resource Area, as expressed in the BLM's cumulative impacts analysis in Appendix A19. See RMP DEIS, Appd. A19, pg. A19-17.

Response: The RMP analyzed four alternatives—the No Action (Alternative 1, the continuation of the 1988 RMP), a less restrictive enhanced commodity option (Alternative 2), an enhanced surface resource protection scenario (Alternative 3), and a scenario melding Alternatives 1 through 3. To meet the enhanced surface resource objective, Alternative 3 is purposely restrictive to provide a range of alternatives as prescribed by NEPA and CEQ. The final EIS has been corrected, where appropriate, to reflect the correct well projection for federal wells.

Comment: The range of alternatives in the DEIS is arbitrarily limited and unduly constrains BLM's management options. For example, Alternative 1 carries forward the current management actions; Alternative 2 attempts to show the effects of oil and gas operations with few additional restrictions; Alternative 3 focuses on preservation, the most restrictive management, while Alternative 4, the preferred alternative, represents an attempt to reconcile potential conflicts. Clearly, only Alternative 4 is viable as a preferred alternative. However, it provides BLM with constrained and, therefore, narrow management options. Moreover, in order to demonstrate an adequate range of alternatives, Alternative 4 relies upon management tools that are unsuitable to facilitate reasonable multiple use activities, such as grazing, oil and gas exploration and development and motorized recreation.

We urge BLM to include in the Final EIS a revised preferred alternative that affords BLM with greater flexibility to more reasonably address the needs of all uses on public lands. The new preferred alternative would utilize a broader variety of management options available to manage oil and gas and other activities without the excessive limitations required in Alternative 4 and without the lack of management options identified in Alternative 2. For example, we recommend that BLM include a management area that would provide for moderately development areas in addition to intensively and minimally developed areas. This would provide a better balance than the "all or nothing" approach adopted by BLM in the DEIS.

A revised preferred alternative could reduce the use of unnecessarily severe restrictive stipulations, including limiting seasonal and no surface occupancy to areas where they are actually justified. We recommend that a new preferred alternative be crafted from a blend of Alternatives 2 and 4. As such, the revised alternative would not require a supplemental EIS because it would draw upon the elements of the alternatives already analyzed in the DEIS.

Page 2-2 NEPA "Drilling practices, well pad-size limitations, drilling materials and fluids, and reclamation requirements are determined on a site-specific basis at the Application for Permit to Drill (APD) or field development EIS stage" Comment: Activity plans can be tiered to the RMP. We disagree with BLM's assumption that another EIS will be needed. Geographic Area Plans or other small scale NEPA analyses should be tiered to the existing NEPA analysis for the RMP to show that operations and impacts remain within the scope of the analysis.

Page 2-2 Table 2-1 Public Comments and Their Treatment in the Draft EIS "Phased development strategies are included in Alternatives 3 and 4. The planning area would be divided into three or four areas (depending on alternative) for management of oil and gas leasing and development. Different levels

of development would be allowed within each area, which would allow for phased development of the planning area.

Response: BLM feels the draft EIS/RMP does portray a reasonable range of alternatives consistent with the legislative mandates for mineral development and multiple use. The Minimally Developed Areas is a designation for areas that would be available for oil and gas leasing and development with standard lease stipulations and timing limitation and controlled surface use restrictions where appropriate. It provides a level of management between the Intensively Developed designation and the Unavailable/Large Block NSO designations. Although the document refers to it as minimally developed it could just as easily be called moderately developed. The term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS. Alternative 4 is a composite developed from Alternatives 1, 2, and 3. Alternative 4 is designed to provide balance between commodity production and surface resource protection. RMPs are not designed with the level of site specificity to adequately address the impacts that could occur through the implementation of a given project, whether the project is a timber sale, oil and gas field development, range improvement project, wildlife habitat project, etc. Consequently, project-level NEPA analysis will be required as the referenced statement implies.

Comment: Even the most limited option, Alternative 3, calls for too large an energy footprint and disrespects communities as well as private and public lands. It is the least damaging of the several draconian choices presented, but it does not go far enough to reduce the size of the footprint of lands available for leasing and exploitation and, as stated earlier, creates an unnecessary and deliberate tension among private/public land interests.

Response: BLM feels the draft EIS/RMP addresses a reasonable range of alternatives. It is not designed or intended to supersede decisions made in current and valid NEPA documents such as the Jonah Infill EIS. The vast majority of the wells projected in each alternative reflects development already approved for the Jonah and Pinedale Anticline.

Comment: Given the extent of the current and proposed gas development in southern Sublette, responsible Resource Management Plan should emphasize a marginal analysis approach to the proposed new drilling activity. It should also focus on adequate margins for error given the drastically incorrect assumptions and projections (i.e. noxious gas emission levels, wildlife herd reductions, transportation levels, etc.) that appear to be inherent in the BLM's previous attempts at environmental impact planning and control. The Preferred Alternative (4) gives no consideration to these fundamental approaches to sound policy. In comparison to Alternative 3, the Preferred Alternative 4 is predicted to generate a relatively modest (15%) marginal increase in estimated natural gas production while 1) putting at risk a disproportionate amount of acreage (34%), and 2) accepting a 23% marginal increase in noxious emissions.

Response: The draft EIS/RMP is designed to present a reasonable range of alternatives and make projections of the impacts associated with each of those alternatives. Accordingly, the draft EIS projects varying levels of impacts to air quality, wildlife, and socioeconomic values, as well as to other resource values. Alternative 4 provides a mid-range of impacts between the higher level of commodity production in Alternative 2 and the higher level of surface resource protection in Alternative 3. Again, it is important to remember that regardless of the alternative ultimately selected, approximately 65% of the federal lands/federal mineral estate in the planning area is currently leased under the 1988 RMP. The leaseholders/operators have valid and existing rights to develop and produce these existing leases.

Comment: The overall minerals management approach under Alternative 3 is inappropriate because it unreasonably limits oil and gas development. As the BLM is aware, mineral exploration and production is identified as a principal or major use of federal lands under FLPMA, 43 U.S.C. § 17020), and federal

agencies are required to expedite projects which increase domestic energy production, Executive Orders 13211, 13212, and 13302. Notably, under this alternative 711,920 acres would be unavailable for OMS-1\ leasing, 307,450 would be available only with NSO stipulations, and another 339,570 acres available only with stringent seasonal or controlled use stipulations. In particular, over 268,030 acres of land with moderate, high, or very high potential for oil and gas would be made unavailable for leasing; another 237,590 acres with moderate, high, or very high potential for oil and gas development are available, but only with NSO restrictions. Such decisions eliminate almost the entire planning area from mineral development and must not be selected.

Response: The draft EIS/RMP is designed to address a reasonable range of alternatives. Alternative 3 is purposely designed to enhance protection of surface resource values, whereas Alternative 2 is purposely design to enhance commodity production. Collectively they form the outer limits of the four alternatives analyzed.

Comment: I do have some concern about some of the policy language in the Alternative RMP. I discourage you from placing site-specific restrictions on a non-site specific plan. The restrictions suggested in the alternatives would make it unattractive for the major energy companies to consider the development of these natural gas fields. I would suggest that you eliminate these restrictions especially those in alternative 3.

Response: The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document.

Comment: PAGE: 4-70, SECTION: 4.7.4, RECOMMENDED CHANGE: [Overall, the management actions proposed under this alternative would result in impacts similar to those under Alternative 1] (STRIKEOUT); however a substantial part of the planning area (174,410 acres) would still be withdrawn from [unavailable for] (STRIKEOUT) fluid mineral development (Tables 2-32 and 2-33). As established in the above discussions on Impacts Common to All Alternatives, Impacts under Alternative 1, and Impacts under Alternative 2, fluid mineral resources underlying lands withdrawn from [unavailable] (STRIKEOUT) to leasing and without remnant existing leases would be unrecoverable. Resources underlying areas withdrawn from [unavailable for] (STRIKEOUT)leasing but with remnant existing leases would require substantial mitigation or offsite development actions such as directional drilling (so long as this does not infringe upon lease rights), [and these areas would experience increased development costs.] (STRIKEOUT) Leased hydrocarbon resources located beyond the technical or economic reach of directional drilling would be considered inaccessible and therefore unrecoverable. EXPLANATION: Closing 15% of planning area to energy development is not similar to Alt. 1. See Comment Ch. 2- 9 regarding statutory withdrawal requirements and previous comments by local governments, April 2006. Where there is drainage, BLM can require drilling of an off-setting well only if economic. Increased development costs would not necessarily occur. Moreover, where the withdrawal affects private land, the drainage mitigation rules would not apply to non-lessees. BLM must quantify resources probably lost and this is not done in the FEIS.

Response: The referenced statement has been modified in the final EIS as follows: “A substantial part of the planning area (441,100 acres) would be unavailable for fluid mineral development (Tables 2-32 and 2-33). The affects of other management actions would be similar to those described for Alternative 1.”

Oil and gas leasing is a discretionary act under the authority of the Secretary of the Interior. Withholding areas from leasing is not subject to the withdrawal requirement under FLPMA. The Mineral Leasing Act gives the Secretary of the Interior the discretionary authority to determine whether federal lands are or are not available to leasing. In decision 162 IBLA 339 (August 19, 2004), IBLA states: “The relationship of the statutory requirements in section 226 pertaining to lease issuance to the discretionary authority of the

Secretary was considered in detail in Haley v. Seaton, 281 F.2d 620, 624-25 (D.C. Cir. 1960), which traced the origins of those provisions to earlier amendments to the Mineral Leasing Act and observed: It is significant that the phrase 'may be leased by the Secretary of the Interior' in § 17 of the original Mineral Leasing Act [now 30 U.S.C. § 226] was carried forward without change in the Amendment of 1935 and the Amendment of 1946, indicating an intent to continue to give the Secretary of the Interior discretionary power, rather than a positive mandate to lease. Id. at 625. The court concluded that the provision containing requirements for the issuance of competitive or noncompetitive leases applies only to lands 'to be leased,' plainly implying that the Secretary of the Interior was to determine what lands were to be leased. Accordingly, BLM concludes that the acceptance or rejection of the applications to lease here involved was a matter resting within the discretion of the Secretary of the Interior. Id."

Until a drainage situation occurs, BLM does not have sufficient data to be able to reasonably project or predict where drainage would occur that may require the developing of offsetting federal wells or what the volume of the drainage could be.

Comment: fundamental flaws in the BLM's approach to Alternative 4 which prevent EnCana from fully supporting Alternative 4. EnCana suggests that certain elements of Alternatives 2and 4 could be blended to create an Alternative which does not exceed the regulatory authority of the BLM, but which also optimizes opportunities for oil and gas development while also providing appropriate environmental protection for all competing resources.

Response: The draft EIS/RMP is designed to address a reasonable range of alternatives. Alternative 4 is already a composite of Alternatives 1, 2, and 3 and is intended to provide a reasonable balance between commodity production and surface resource protection.

Comment: Finally, we conclude that the draft PRMP as presented is not a balanced analysis of the pros and cons of a suitable set of alternatives. Rather it is an advocacy document favoring "mineral sprawl". That fundamental objection notwithstanding, the best choice from our perspective would be a modified version of Alternative 3. We recommend increasing the "unavailable for leasing" area to include from Daniel north to the boundary of the planning region, including the entire Hoback Basin, and the permanent withdrawal of the "unavailable for leasing" areas shown on Map 2.3.

Response: BLM analyzed an appropriate range of alternatives in the draft EIS. BLM does not have the authority to prohibit development of existing valid leases. The alternatives consider a number of areas that could be made unavailable for leasing. However, even in these areas, existing valid leaseholders would have the right to develop those leases while they remain in effect.

Comment: 1. Problems with Alternative 4: Crucial discussion and management actions are lacking through the document in terms of landscape management, analysis of potential impacts, monitoring and mitigation, maintaining management flexibility in control of lease stipulations, the granting of permit stipulations without a public comprehensive process, ensuring methods for reclamation costs, adequacy of bonding and funding reclamation, and leasing without sufficient data, to name a few. It also lacks in taking a more conservative approach to leasing that ensures adequate protective measures for fish, wildlife, water resources, and air quality.

Response: The RMP does address management and impacts across the landscape of the planning area and does address cumulative impacts beyond the planning area where appropriate. Chapter 4 does address potential impacts. Bonding requirements are already established by various BLM regulations. It is not necessary to address them in the RMP. The RMP is not a funding appropriation document. Alternative 3 does take a conservative approach to leasing.

Compliance with Laws, NEPA, Policy

Comment: Page 1-14 Energy Policy Act of 2005/Categorical Exclusions (CX) "Bureau of Land Management Energy and Non-Energy Mineral Policy" "This statement sets forth BLM policy for the management of energy and non-energy mineral resources (mineral resources) on public lands. It reflects the provisions of five important acts of Congress relating to mineral resources: …, and the Energy Policy Act of 2005." Comment: Section 390 of the EP Act directs that certain types of oil and gas development do not require further analysis under NEPA. These statutory provisions apply to all Federal land management agencies. Accordingly, while on-site inspections of all proposed well and road locations are required, any needed consultations with FWS and others must also be held, and all appropriate mitigation and best management practices must be identified and reasonably applied; drilling does not need to be delayed for preparation of a NEPA document. BLM instruction memorandum 2005-247 provides guidance for implementing these exclusions.

Page 1-15 "The Energy Policy Act of 2005 encourages energy efficiency and conservation; promotes alternative and renewable energy sources; reduces dependence on foreign sources of energy; increases domestic production; modernizes the electrical grid; and encourages the expansion of nuclear energy." Comment: Discussion of the categorical exclusions contained in the EP Act and how those provisions can be applied to subsequent oil and gas drilling and development is missing from the analysis and discussion in the RMP. In reviewing an Application for Permit to Drill (APD), Surface Use Plan of Operations (SUPO), or pipeline application involving a proposed activity that fits into one of the five categories, the appropriate CX is to be applied as it has been determined that no further NEPA analysis is required. Comment: BLM is continuing to process more applications each year. Continuing approvals at these high levels, while performing necessary monitoring and evaluating the effectiveness of mitigation measures, requires BLM to make efficient use of the CX authorities and to change how it processes APDs in the intensively developed areas vs. minimally developed and restricted areas. Some possibilities are:

- Allowing use of Categorical Exclusions for sundry notices and Applications for Permits to Drill on multiple-well pads.
- Establishing monitoring as a priority to track land use plan and project implementation. A system for tracking and coordinating monitoring within and among agencies needs to be developed, along with improvements in coordination among agencies for data exchange and research.

Response: The use of the Categorical Exclusions under the Energy Policy Act of 2005 is provided by statute under the Act and therefore does not require an RMP decision to implement. The Pinedale Field Office routinely processes authorizations under one of the five statutory Categorical Exclusions where appropriate. Likewise, establishing monitoring and tracking measures is already under BLM's authority and in many cases has already been instituted. A RMP decision is not needed to establish monitoring or tracking systems. BLM will comply with all laws, including the Energy Policy Act of 2005, in determining whether a Categorical Exclusion is applicable in any particular instance.

Comment: Item: Page 1-14, Section 1.5.2, Bureau of Land Management Energy and Non-Energy Mineral Policy "This statement sets forth BLM policy for the management of energy and non-energy mineral resources (mineral resources) on public lands. It reflects the provisions of five important acts of Congress relating to mineral resources: …, and the Energy Policy Act of 2005." Comment–Section 390 of the Act provides that certain types of oil and gas development do not require further analysis under NEPA. The statutory provisions apply to the BLM. Accordingly, while onsites of all proposed well and road locations are required, any needed consultations with FWS and others must be held, and all appropriate mitigation and best management practices must be applied, drilling does not need to be delayed for preparation of a NEPA document. BLM instruction memorandum 2005-247 provides

guidance for implementing these exclusions. The following five provisions of the Act need to be clearly incorporated into the final RMP EIS:

- Individual surface disturbances of less than five (5) acres so long as the total surface disturbance on the lease is not greater than 150 acres and site-specific analysis in a document prepared pursuant to NEPA has been previously completed.
- Drilling an oil and gas location or well pad at a site at which drilling has occurred within five (5) years prior to the date of spudding the well."
- Drilling an oil or gas well within a developed field for which an approved land use plan or any environmental document prepared pursuant to NEPA analyzed drilling as a reasonably foreseeable activity, so long as such plan or document was approved within five (5) years prior to the date of spudding the well.
- Placement of a pipeline in an approved right of-way corridor, as long as the corridor was approved within five (5) years prior to the date of placement of the pipeline."
- Maintenance of a minor activity, other than any construction or major renovation of a building or facility.

Response: The use of the Categorical Exclusions under the Energy Policy Act of 2005 is provided by statute under the Act and therefore does not require an RMP decision to implement. The Pinedale Field Office routinely processes authorizations under one of the five statutory Categorical Exclusions where appropriate. BLM will comply with all laws, including the Energy Policy Act of 2005, in determining whether a Categorical Exclusion is applicable in any particular instance.

Comment: 3. Is the record of Decision compliment with the Mineral Leasing Act? a. For NSO designations? b. For minimal development areas?

Response: The management recommendations under all four alternatives are compliant with the Mineral Leasing Act.

Comment: 4. Is the Record of Decision compliant with the Energy Policy Act?

Response: The management recommendations under all four alternatives are compliant with the Energy Policy Act of 2005.

Comment: I am deeply concerned about Alternative 3 to the Pinedale Resource Management Plan. I believe it is inappropriate to include seasonal drilling stipulations in the RMP; this causes fluctuations in the local economies, transient work forces and reduces the ability to extract resources while having a detrimental impact on wildlife. Furthermore I suggest that mandated directional drilling and clustered development should not be included in an RMP but should become part of the subsequent project level NEPA process. I am also concerned that language has been removed which would allow areas designated for minimal development to become developed if proven to be lucrative. I believe this maybe in violation of the mineral leasing act. I therefore suggest that you remove these components from the RMP.

Response: It is reasonable to apply stipulations to protect surface resources when permitting oil and gas wells or other developments. No alternative presented in the draft EIS would mandate directional drilling or clustered development. All alternatives presented in the draft EIS comply with the Mineral Leasing Act.

Comment: Although Section 390 of the Energy Policy Act of 2005 is clear that under certain conditions oil and gas development does not require further analysis under NEPA, there is no discussion in the DRMP of these provisions or how they will be applied. While onsites for proposed wells and roads are required as are consultations with USFWS where necessary, and appropriate mitigation measures and best management practices are necessary, drilling under specified conditions does not need to be delayed for preparation of a NEPA document. EM urges BLM to incorporate the language of Section 390 in the DRMP, including Instruction Memorandum 2005-247 which provides guidance for implementing these exclusions in the final RMP. The need for increasing reliance by BLM on categorical exclusions is evident in light of higher volumes of Applications for Permits to Drill received each year. EM urges BLM to strengthen its monitoring program to determine the effects of project approvals and land use plan implementation, and to evaluate the effectiveness of mitigation measures. EM recognizes limitations exist on the use of categorical exclusions but due to the limited impacts involved, EM believes BLM should consider using categorical exclusions to approve sundry notices and Applications for Permits to Drill on multiple-well pads.

Response: BLM must operate in compliance with all applicable laws, regulations, and directives. It is not necessary for an RMP to contain text from each applicable law, regulation, and directive. A description of the Energy Policy Act of 2005 is included in Chapter 1 of the draft EIS and references to the Act are included in Chapter 2 of the draft EIS.

Comment: BLM policy (IM 2005-069, Interim Offsite Compensatory Mitigation for Oil, Gas, Geothermal and Energy Rights-of-Way Authorizations by BLM) is clear that offsite mitigation may only be used on a voluntary basis but language on DRMP page 2-13 appears to imply that approval will be denied without it. EM urges BLM to revise the DRMP to be consistent with the IM. If offsite mitigation is considered, it is imperative that operators enter into such agreements on a voluntary basis and that BLM relies on current resource information to improve decision-making and facilitate public support.

Response: BLM must operate in compliance with all applicable laws, regulations, and directives. This includes IM 2005-069 until it expires or is rescinded. The Compensatory (offsite) Mitigation section in Chapter 2 plainly states: "Compensatory, or offsite, mitigation *proposed by oil and gas or other operators could* be considered . . . (emphasis added."

Comment: The BLM's authority under FLPMA is expressly made subject to valid existing rights, 43 U.S.C. § 1701, an RMP prepared pursuant to FLPMA, after lease execution and after drilling and production has commenced, is likewise subject to existing rights. See Colorado Environmental Coal., et al., 165 IBLA 221, 228 (2005). The Pinedale RMP, when revised, cannot defeat or materially restrain APC's existing right to develop its leases through conditions of approval or other means. See Colorado Environmental Coal., et al., 165 IBLA 221, 228 (2005) (citing Colorado Environmental Coal., 135 IBLA 356, 360 (1996) aff'd, Colorado Environmental Coal. v. Bureau of Land Management, 932 F.Supp. 1247 (D.Colo. 1996). Further, once the BLM has issued a federal oil and gas lease without no surface occupancy stipulations, and in the absence of a nondiscretionary statutory prohibition against development, the BLM cannot completely deny development on the leasehold. See, e.g., National Wildlife Federation, et al., 150 IBLA 385, 403 (1999). Only Congress has the right to completely prohibit development once a lease has been issued. Western Colorado Congress, 130 IBLA 244, 248 (1994). The BLM must acknowledge that the revised Pinedale RMP, when adopted by the BLM, will not modify or impact APC's lease rights.

Response: This is stated as such on page 2-8 of the draft EIS.

Comment: When the EPA recommends a reduction of the current levels of emissions from oil and gas development (which it recently has), this is not to be read and dismissed. This means adaptive

management which lowers these levels - PERIOD. It is NOT acceptable to read comments in any RMP Alternative like "clarifying changes could be made in the future to the wording of oil and gas lease stipulations....as long as the clarification does not place additional restrictions on the leaseholder." BLM policy needs to start considering the rights of community members. wildlife and the environment and not the exclusive protection of "leaseholder rights".

Response: BLM does not have the authority to place additional restrictions on oil and gas leases, even if such restrictions would reduce impacts of lease development. The alternatives analyzed attempt to provide balance on a planning-area scale between industrialized areas and undeveloped, open habitats for wildlife.

Comment: I therefore strongly oppose this Alternative and support instead Alternative 3 with the following revision included in its final form: • Reduce the annual number of wells drilled to stabilize air quality and wildlife populations, as well as allowing community infrastructure to adapt properly to growth.

Response: Both the President's Energy Policy and the Energy Policy Act of 2005 direct the Secretary of the Interior, and subsequently BLM, to develop the energy resources under its jurisdiction in an efficient and environmentally sound manner. This RMP is consistent with this directive. The alternatives do address different levels of development.

Comment: The Preferred Alternative is mot consistent with the mineral leasing act especially in the areas designated for "minimal development".

Response: The Mineral Leasing Act of 1920 states, "All lands subject to disposition under this chapter which are known or believed to contain oil or gas deposits MAY be leased by the Secretary (emphasis added)." It is within the Secretary's authority to designate certain lands unavailable for leasing.

Comment: With this in mind I would like to register my comments on the RMP regarding compliance with the Federal Mineral Leasing Act. In compliance with the act, I support: authorizing the leasing of lands that are known or believed to contain oil or gas deposits. If valuable deposits of oil or gas have been discovered within the Pinedale BLM District, the company engaged in the prospecting process is entitled to a lease. Each alternative under consideration for adoption must be in compliance with the Mineral Leasing Act.

Response: The Mineral Leasing Act of 1920 states: "All lands subject to disposition under this chapter which are known or believed to contain oil or gas deposits *may* be leased by the Secretary (emphasis added)." It is within the Secretary's authority to designate certain lands unavailable for leasing.

Comment: BLM should also directly implement/require that all leasees/operators comply withy Wyoming DEQ requirements (Wyo. DEQ was granted primacy by Federal EPA and thus acts as agents of/for Fed.EPA); therefore also honoring Wyo. law on Federal public lands.

Response: By virtue of the applicable state law, rule, and/or regulation, operators/leaseholders are required to adhere to those given laws, rules, and regulations or are subject to the built-in penalties. BLM does not have the authority to enforce state law, rule, or regulation.

Comment: Finally, Wyo. Split Estate surface laws should be implemented/required by BLM of their mineral leasees/operators, rather than current BLM practice to ignore such Wyo. law. Similarly, BLM should comply with Wyo. Game/Fish requirements and work together therewith/in-conjunction towards common conservation/mitigation measures.

Response: This is beyond the jurisdiction and authority of this RMP.

Comment: PAGE: A3-4 SECTION: 2. RECOMMENDED CHANGE: NSO analysis will be preceded by documentation justifying the need to impose NSO, e.g. slope, erosive soils, geologic hazards. EXPLANATION: Insert EPCA analysis that this is the least restrictive constraint on development necessary to protect resources. IM 2005-234.

Response: The RMP is in conformance with the Energy Policy and Conservation Act (of 2000) (EPCA), and the least restrictive measure required to protect the resource values under this alternative is implied.

Comment: 6) Protect the rights of surface owners where the federal government owns the mineral rights.

Response: BLM must operate within all applicable laws, regulations, and directives.

Comment: While Table 1-1 makes it clear that BLM's jurisdiction is limited to Federal lands, it is not clear how it will coordinate with Wyoming Fish and Game Department, WOGCC, the WY State Lands Office and other entities including private landowners to assure land use and resource management objectives are consistent with land ownership. EM encourages inclusion of recent BLM publications, e.g., IM 2005-069, Interim Offsite Compensatory Mitigation for Oil, Gas, Geothermal and Energy Rights-of-Way Authorizations by BLM and the split estate manual, in the final RMP.

Response: BLM Wyoming has MOUs with various state agencies that detail coordination requirements. It is not necessary they be detailed in an RMP. Coordination with private landowners would be conducted on a case-by-case basis. BLM must operate in compliance with all applicable laws, regulations, and directives. This includes Instruction Memoranda that have not expired. It is not necessary to include all applicable guidance within the text of an RMP.

Comment: Page 2-143 Indefinite postponement of leasing is an unacceptable management approach and is inconsistent- with the provisions of BLM national energy policy (chapter 1, page 15) which states that public lands shall remain open and available for mineral exploration and development unless withdrawal or other administrative actions are clearly justified in the national interest.

Response: The Mineral Leasing Act of 1920 states: "All lands subject to disposition under this chapter which are known or believed to contain oil or gas deposits *may* be leased by the Secretary (emphasis added)." It is within the Secretary's authority to designate certain lands unavailable for leasing.

Comment: The other thing I want you to consider is the communities surrounding your field office boundary. These communities are heavily reliant on the natural resources industry -- and part of your duty is to make sure your plans actually HELP those towns, not HARM them. Keep that in mind. Finally, I believe the best thing you can do before finalizing this plan is consult the Federal Mineral Leasing Act and the 2005 Energy Policy Act. I believe any and all of the answers you need can be found in those documents.

Response: All alternatives presented in the draft EIS comply with the Mineral Leasing Act and the Energy Policy Act of 2005.

Comment: I would like this opportunity to comment in regard to the Resource Management Plan compliance with the Federal Mineral Leasing Act. I understand that this Act authorizes for the lease of land which are known or believed to contain oil or gas deposits, as long as the company seeking the prospecting permit is able to establish this fact to the satisfaction of the Secretary. This is addressed in the language in the minimal development section of the Resource Management Plan. This section meets the

standards of the Mineral Leasing Act. I strongly believe the Resource Management Plan must continue to comply with the Federal Mineral Leasing Act because it ensures both the legality of the document and it will give a far greater degree of environmental protection.

Response: All alternatives presented in the draft EIS comply with the Mineral Leasing Act.

Comment: PAGE: 4.25, SECTION: 4.3.7, RECOMMENDED CHANGE: REVISE FOR ACCURACY & LEGALITY Mineral lease activities would cease as the area is withdrawn and if no discovery is made on the existing leases [Minerals leasing would be unavailable] (STRIKEOUT) within the Wind River Front MA (201,240 acres). EXPLANATION: As explained infra, BLM must use §204 to close the area to mineral leasing. Because there are some leases and possible mineral development on private land, EIS cannot say unequivocally that land is unavailable and there will be no development.

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: PAGE: 2-119, RECOMMENDED CHANGE: Provide opportunities for mineral extraction and energy exploration and development to provide resources to meet national and local needs while providing appropriate level of environmental protection for all competing resources. EXPLANATION: Revise objective to conform to FLPMA and Mining and Minerals Policy Act

Response: BLM feels the objective does comport with the requirements of FLPMA and the Mining and Minerals Policy Act.

Comment: PAGE: 2-7 SECTION: 2.3.4 RECOMMENDED CHANGE: ADD: RMP decisions to close public lands to mineral leasing or to mining under the 1872 Mining Laws will be recommended for withdrawal to the Assistant Secretary for withdrawals in accordance with Section 204 of FLPMA, DM 613 and 43 C.F.R. Subpart 2310. EXPLANATION: Withdrawal section needs to conform to law. The use of §202 land use decisions rather than §204 of FLPMA contradicts the plain language of the statute and IBLA decisions. The Secretary's discretion under the Mineral Leasing Act ("MLA") to refuse to issue oil and gas leases is exercised "both on an ad hoc basis, in response to specific lease offers, or more formally through his general authority to withdraw land from mineral leasing." Clayton W. Williams, Exxon Corp., 103 IBLA 192, 206 (1988) (citing Mountain States Legal Foundation v. Andrus, 499 F. Supp. 383 (D. Wyo. 1980) and Mountain States Legal Foundation v. Hodel, 668 F. Supp. 1466 (D. Wyo. 1987)). FLPMA requires the withdrawal to consider 12 separate factors, not all of which are addressed in the FEIS. BLM cannot claim that a land use plan closure is ad hoc since it is areawide, nor does the FEIS meet FLPMA criteria, such as notations in the BLM plat books. In short, BLM efforts to circumvent FLPMA's withdrawal procedures contradict the very reasons that Congress revoked all prior withdrawal authority and replaced it with a single section.

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: There seems to be a complete disconnect between national standards and the local mountain environment within which the existing and proposed additional mineral sprawl will occur. Use of models which do not take local conditions into account, and which, in addition, are not based on enough actual monitoring data is a basically flawed approach.

Response: The models used are scientifically accepted and designed to project the impacts to and from resource development in the planning area.

Comment: The DEIS states "management actions on existing leases within the unavailable areas would be designed to protect important habitats by excluding surface occupancy and/or disturbance to the extent

this restriction does not violate the leaseholder's rights." The Service suggests that the Bureau provide an entire description of "leaseholder's rights" and clarify what would or would not be allowed to occur in this situation.

Response: The leaseholder's rights are found at 43 CFR 3101.1-2. It is not necessary for the RMP to textually reiterate all applicable sections of all governing statutes and regulations. Federal regulations at 43 CFR 3101.1-2 state: "A lessee shall have the right to use so much of the leased lands as is necessary to explore for, drill for, mine, extract, remove, and dispose of all the leased resource in a leasehold . . ." It also goes on to state that exploring for, drilling for, mining, extracting, removing, and disposing of all the leased resource in a leasehold is subject to: "Stipulations attached to the lease: restrictions deriving from specific nondiscretionary statutes; and such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations at the time operations are proposed. To the extent consistent with lease rights granted, such reasonable measures may include, but are not limited to, modification to siting or design of facilities, of time operations, and specification of interim and final reclamation measures." Specific development limitations and their consistency with lease rights would be determined through project-level or site-specific NEPA analysis.

Comment: Although the BLM apparently considered the inventory data from the original Energy Policy Conservation Action ("EPCA") study, as required by BLM Instruction Memorandum 2003-233 and 2003-204 (Aug. 4, 2003), the BLM should also carefully review the results and analysis contained in the Scientific Inventory of Onshore Federal Land's Oil and Gas Resources and the Extent and Nature of Restrictions or Impediments to Their Development (2006) (EPCA II) prepared in compliance with § 604 of the Energy Act of 2000, Pub. L. No. 106-469, and § 364 of the Energy Policy Act of 2005, Pub. L. No. 109-58. The EPCA II study demonstrates the significant negative impacts stipulations have upon oil and gas leasing and development. The EPCA II study demonstrates that only 15% of lands containing natural gas resources within the entire Green River Basin are available with Standard Lease Terms and that 76% of the lands are encompassed with restrictions to development. The EPCA II Study further determined that 37% of the percent of the natural gas underlying federal lands in the Green River Basin is inaccessible between 3 and 6 months each year, and up 9% of the natural gas in the area is inaccessible a full 9 months of the year. See EPCA II, pgs. 122 - 125. The BLM should carefully consider the impacts more restrictive stipulations will have upon oil and gas development in the Pinedale Resource Area and, as required by the Energy Policy Act of 2005, ensure that stipulations imposed are only as restrictive as necessary. See Energy Policy Act of 2005, Pub. L. No. 109-58, § 363(b)(3), 119 Stat. 594, 723 (2005).

Response: The plan does take energy production into consideration, but it also takes the other resource values within the planning area into account, as required by numerous laws and regulations. Alternative 2 purposely addresses enhanced commodity production and relaxed seasonal and surface disturbance restrictions, whereas Alternative 3 purposely addresses enhanced surface resource protection. This was done to meet the NEPA requirement to analyze a reasonable range of alternatives.

Existing Leases

Comment: The BLM properly recognizes that existing oil and gas leases within the Pinedale planning area must be honored. Only Congress has the right to completely prohibit development once a lease has been issued. Western Colorado. Congress, 130 IBLA 244, 248 (1994). In the Final EIS' the BLM should discuss the fact that an oil and gas is a contract between the fed era (government and the lessee, and that the lessees has certain rights thereunder. See Mobil Oil Exploration 8, Producing Southeast Inc. v. United States, 530 U.S. 604, 620 (2000).

The BLM also appropriately recognizes that "[s]urface use and timing restrictions resulting from this RMP cannot be applied to existing leases." See RMP DEIS, pg. 2-8. However, BLM attempts to limit this

statement by suggesting it could impose conditions of approval ("COAs") to "mitigate potential impacts from oil and gas operations." The BLM cannot use site-specific COAs as a means to. enforce defacto stipulations on existing leases in contravention of a lessee's valid existing rights. Congress made it clear when it enacted FLPMA that nothing therein, or in the land use plans developed thereunder, was intended to terminate, modify, or alter any valid or existing property rights. See 43 U.S.C. § 170.1 (2006). BLM Instruction Memorandum 92-67 states that "[t]he lease contract conveys certain rights which must be honored through its term, regardless of the age of the lease, a change in surface management conditions, or the availability of new data or information. The contract was validly entered based upon the environmental standards and information current at the time of the lease issuance." In the Final EIS, the BLM should make it absolutely clear that it intends to honor valid and existing lease rights.

Response: This discussion is found on page 2-8 of the draft EIS.

Comment: We are supposed to be smart enough to extract the resources without wrecking the land. With this in mind, please reconsider your proposal to allow any drilling on the Hoback Rim, or the Wyoming Range. Looking into the future, you should not allow new wells until old wells are exhausted and reclaimed. This would cap the environmental impact on Sublette County and its magnificent herds of wildlife and flocks of grouse that represent the common wealth of Wyoming, indeed our renewable stock in trade that will endure far longer than the minerals.

Response: The current drilling proposal in the Hoback Rim area is on lands administered by the USFS and is, therefore, not within the area encompassed by this RMP. There are lands and mineral estates within the planning area in the Hoback Rim area and foothills of the Wyoming Range that are within the jurisdiction of this plan. Under Alternative 3, these lands would either be unavailable for new oil and gas leasing or new leases would be encumbered by a restriction prohibiting surface occupancy. Some of these lands are currently leased and the leaseholder(s) have a legal and valid right under the Mineral Leasing Act to explore, develop, and produce the oil and gas resources contained in those leases. BLM does not have the authority to prohibit development of existing leases.

Comment: Intensive development in Alternative 4 nibbles into critical habitat of all major species in the area in virtually all geographic areas. Why is it necessary in Alternative 4 to take bits of critical habitat for intensive development? The amount of land made available by these encroachments increases developable land by only a small amount. Surely adjustments can be made to remove these habitat encroachments from intensive development without discounting half of the area, as is done in Alternative 3.

Response: All the alternatives must recognize existing oil and gas leases. BLM does not have the authority to prohibit development of existing valid leases.

Comment: The NSO near Daniel in Alternative 4 doesn't address existing leases in what GASCO call "the Daniel anticline." What will be done with producing leases in the area?

Response: Under the Mineral Leasing Act, a leaseholder has a legal and valid right to explore for, develop, and produce the oil and gas resources contained within that lease. BLM does not have the authority to prohibit development of existing valid leases.

Comment: 5. This change in the RMP may open the door to further expansion into a major gas field development. The energy developers may later want to consider five acre well spacing, as in the Jonah Field. Even the "one third of 8,383 wells", as the draft is suggesting outside of Jonah and the Pinedale Anticline, will be too much. Will this possibility be considered in the RMP / EIS?

Response: The Preferred Alternative would not "open the door to further expansion" but would make the planning area less available for gas field development through the establishment of areas not available for leasing and areas available only with No Surface Occupancy stipulations. BLM does not have the authority to prohibit oil and gas development on existing valid leases.

Comment: We fully support BLM's stated intent to recognize valid existing lease rights. However, we are concerned that the statements made throughout the DEIS that BLM is simply giving the issue lip service. It has been the experience of operators in the Pinedale Field Office that BLM often applies COAs to operations that far exceed the terms of the lease. Therefore, it is critical for the agency to clarify that it does not have the discretion to modify proposed actions on existing, unstipulated leases voluntary agreement from the lease holder is obtained. According to BLM's 1601 Planning Manual, such modifications may include the choice of alternatives being considered during land use plan development and implementation and may include appropriate stipulations, relocations, redesigns, or delay of proposed actions. Clearly, BLM has ignored its own direction in selecting Alternative 4 as its Preferred Alternative. We strongly recommend that BLM reconsider its choice of preferred alternative based upon these comments.

Additionally, BLM policy as embodied in IM 92-67 instructs that mitigation required to prevent unnecessary and undue degradation under FLPMA must be consistent with existing lease terms. However, the standard for determining what constitutes unnecessary and undue degradation must also acknowledge that there is also "necessary and due degradation." Specifically, it is stated that if mitigation "would render a proposed operation uneconomic or technically infeasible so that a prudent operator would not proceed, such degradation may also be considered

Response: Federal regulations at 43 CFR 3101.1-2 state: "A lessee shall have the right to use so much of the leased lands as is necessary to explore for, drill for, mine, extract, remove, and dispose of all the leased resource in a leasehold subject to: Stipulations attached to the lease; restrictions deriving from specific nondiscretionary statutes; and such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses, or users not addressed in the lease stipulations at the time operations are proposed. To the extent consistent with lease rights granted, such reasonable measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures."

Chapter 1 of the draft EIS emphatically states that "[e]xisting oil and gas or other mineral rights would be honored." Alternative 4 is consistent with these requirements. The RMP is designed to address a reasonable range of alternatives. Additional alternatives are not deemed necessary.

Comment: Page 2-143 While the above discussion clarifies that the management zones are intended to protect wildlife from oil and gas and specific mitigation guidelines and operating standards for each resource are presented in Appendix 3 and apply to each of the management areas. Overall, it is not clear how oil and gas development on existing leases will differ for these management areas. It is also unclear how operations on future leases will differ between the intensively and minimally developed areas.

Response: Existing leases, regardless of where they are, provide the leaseholder/operator with the right to develop and produce the lease. All existing leases would be managed in accordance with 43 CFR 3101.1-2.

Comment: Another key problem in this DEIS is the lack of attention paid to the extent of land already leased. More leasing isn't necessarily the only the key issue in the plan region. Instead, a buy-back and trade out of existing leases in the Upper Bridger-Teton, on BLM, Forest Service, and private lands to make areas permanently unavailable for mineral development, is another key issue. It is not embodied in

any of the Alternatives; in fact, the possibility is not even recognized as an option anywhere in the document.

Response: Approximately 61% of the BLM-administered mineral estate in the planning area is currently leased for oil and gas development. It is outside the authority of BLM to stipulate actions on oil and gas leases on lands not administered by BLM. The possibility of exchanging non-producing leases with willing leaseholders is presented in Alternative 3 and has been added to Alternative 4 in the final EIS.

Comment: We want the moratorium on leasing that was put in place in the 2,000 ROD for the Pinedale Anticline EIS as illustrated on Map 2.1 and incorporated into Map 2.3 to include the addition of T34N, T35N and surrounding lands, the Upper Hoback, the Green River Valley, the Wyoming Range and the Winds to be permanently withdrawn. This would concentrate development largely to areas where it is already occurring and planned. This is our "Alternative 3 modified."

Response: It is not within the authority of BLM to make leasing decisions on USFS-administered lands in the Wind River and Wyoming ranges. BLM must honor valid existing leases. The areas available for oil and gas leasing have been revised in the final EIS.

Comment: The existing, leased areas are substantial and it is irresponsible to lease land well into the future when the infill alone will take years to develop. The BLM is proposing to sacrifice the natural resources of Sublette County for energy exploitation without a complete inventory of resources affected in specific areas such as the Rim, Upper Green River areas

Response: As directed by the Mineral Leasing Act of 1920, the Federal Land Management and Policy Act of 1976, and the Energy Policy Act of 2005, oil and gas development is one of the resource values that BLM is mandated to manage for public benefit. The alternatives in this RMP make varying allocations of lands available for oil and gas leasing and development consistent with these mandates.

Comment: 2) Delay the environmental analysis of new gas projects live so the Piney Gas/cbm project until the RMP is complete. This is important so that the BLM can take the time to complete an adequate environmental review process.

Response: Valid leases issued under the current RMP must be honored. BLM does not have the authority to prohibit development of valid existing leases.

Comment: Page Number & Issue:4-32: First paragraph "In addition, areas that are closed to mineral leasing, that have NSO stipulations, or that are otherwise identified as unsuitable for surface disturbance or occupancy, would be managed as ROW avoidance or exclusion areas." Fourth paragraph: "Any ROWs proposed in VRM Class II areas would be subject to intensive mitigation and, in some cases, could be precluded." Recommendations: Delete statements, as they hinder access to existing rights and leaseholds.

Response: Chapter 2, page 2-8, of the draft EIS emphatically states that "[e]xisting oil and gas or other mineral rights would be honored." It further states that COAs could be applied at the APD or Sundry Notice stage, providing the leaseholder right to develop the lease remains intact. The following text is being added to the final EIS: "If an Operator can demonstrate to the satisfaction of the Authorized Officer that a COA could not be technically or economically implemented, then the COA would not be applied or if it were already applied it would be rescinded."

Comment: Last, lands in Unavailable Areas would be subject to the following management. These lands would be unavailable for new leasing, including a decision to not re-offer leases that expire. 2-49, 2-122. Existing leases could be developed pursuant to the terms of the lease, including allowance for exploration

and development following discovery. Id. Again, it appears-but is not certain; this should be clarified-that existing leases might be subject to somewhat intensive management so as to protect the environment.

Response: The holders of an existing federal oil and gas lease have a valid legal right to develop and produce that lease. BLM can impose reasonable restrictions on post-lease actions, such as applications for permit to drill (APDs) under 43 CFR 31010.1-2. The following text change has been made in the final EIS: "Oil and gas operators would have the right to explore, develop, and produce existing leases. As prescribed in 43 CFR 3101.1-2, post-lease actions, such as APDs and Sundry Notices, could be subject to reasonable restrictions as determination necessary by the Authorized Officer."

Comment: Sitting as something like an 800 pound gorilla in the background of any alternative the BLM may adopt as the RMP is the question of how existing leases will be managed. Approximately 70 percent of the Pinedale Field Office has already been leased. Map 1-3. Thus, regardless of what provisions may apply to future leasing, such as designating an area unavailable for future leasing or allowing leasing only with NSO stipulations, the management of existing leases may well be the most significant question any alternative must address, and the RMP DEIS is insufficient in this regard. To the extent that the BLM addresses this issue, and it seems to do so only here and there throughout the RMP DEIS rather than in a carefully structured, cohesive (and easily located) fashion, it appears that the BLM misapprehends its legal rights and indeed obligations regarding areas of the Pinedale Field Office that have already been leased. The BLM appears to take the position that it has very limited rights to control the pace, location, and numerous other environmentally significant aspects of oil and gas development if an area has been leased. This is an incorrect view of BLM's rights and indeed its obligations under the law and to the American public, and this misapprehension of the BLM's legal rights and obligations relative to areas already leased for oil and gas development should be corrected in the final EIS and most importantly in the RMP.

Response: Holders of existing oil and gas leases have a valid legal right to explore, develop, and produce the lease. As provided in 43 CFR 3101.1-2, BLM does have the authority to impose "reasonable restrictions" to post-lease actions where the lease is not encumbered with stipulations. The draft EIS does provide for opportunities for BLM to mitigate impacts on existing leases, please refer to action items b and c under Objectives 2 and 3 on pages 2-55, 2-82, 2-83, and 2-120, 2-121 of the draft EIS.

Comment: Map 1-3 displays mineral ownership and federal leases. Most of the planning area is already leased; thus allocating areas available and unavailable for leasing such as in Map 2-3, Alternative 3, is very strange. Also, there is some confusion about changes in the designation of lands unavailable for leasing. If lands were to be truly made unavailable, or withheld, then leases would have to be bought back and the area removed from lands available for leasing in the future. We do not see that discussion in the DEIS. This needs to be corrected in the next Draft.

Response: BLM does not have the authority to buy back leases. The discussion for unavailable for leasing emphatically states that these areas may contain existing leases and that the holders of those leases have a legal right to develop and produce. The designation would retain currently unleased federal land/minerals in an unleased status and would prevent expired leases from being re-leased.

Comment: The proposed restriction on new access routes within big game crucial winter range, see RMP DEIS, pgs. 2-146 - 148, may violate existing lease rights, and the rights granted operators of approved oil and gas units. The BLM should not unreasonably restrict access to federal oil and gas leases.

Response: As previously stated, valid existing rights would be honored.

Comment: The BLM has not adequately explained or justified the right-of-way ("ROW") avoidance area on the far western portion of the Pinedale Resource Area. EOG owns numerous oil and gas leases in the area and its ability to develop those leases could be significantly impacted if the BLM inappropriately limits EOG's ability to access said leases. The BLM must be willing to work with oil and gas lessees and operators to design access routes to proposed oil and gas development projects. Further, the creation of the ROW exclusion and avoidance areas does not appear to reflect or acknowledge EOG's valid and existing lease rights or its rights as the operator of units such as the Green River Bend Unit, McDonald Draw Unit, Chimney Butte Deep Unit, Tip Top Shallow Unit, and the North La Barge Shallow Unit.2 While the issuance of the oil and gas leases does not guarantee access to the leasehold, a federal lessee is entitled to use such part of the surface as may be necessary to produce the leased substance. 43 C.F.R. § 3101.1-2 (2006). With respect to approved units, the Interior Board of Land Appeals has noted that "[w]hen a federal unit has been approved and the unitized area is producing, rights-of-way are generally not required for production facilities and access roads within the unit area." Southern Utah Wilderness Society, et al., 127 IBLA 331, 372 (1993). The BLM must recognize the lessee's right to use the lands included within their leasehold or units in order to develop the oil and gas resources. Obviously, if lessees are not allowed access to their lease parcels, or are prohibited from installing pipelines necessary to transport the produced resource, they are deprived of all economic benefit of the lease. In such situations the lessee, the State of Wyoming, and the federal government will be deprived of the economic benefit of potential oil and gas development.

Response: Table 2-27 of the draft EIS depicts the areas subject to ROW avoidance and exclusion and the resource value being protected for each alternative. The glossary at page G-3 of the draft EIS provides the following description of avoidance areas: "Areas with sensitive resource values where rights-of-way and Section 302 permits, leases, and easements would be strongly discouraged. Authorizations made in avoidance areas would have to be compatible with the purpose for which the area was designated and not be otherwise feasible on lands outside the avoidance area." Chapter 2, at page 2-8 of the draft EIS, states: "Existing oil and gas or other mineral lease rights would be honored." This also applies to unit operations.

Comment: As noted above, the provisions applicable to the various area designations in the various alternatives (Intensely Developed Field, Large Block NSO Area, Unavailable Area, and Minimally Developed Area) are clear that existing leases could be developed. Perhaps more significant is language like this that appears here and there throughout the RMP DEIS: "It is important to recognize that the authorized officer has limited authority to modify the site location and design of facilities, control of the rate of development and timing of activities, or require other mitigation under sections 2 and 6 of the [standard lease terms] (BLM form 3100-11) and 43 Code of Federal Regulations (CFR) § 3101.1-2." A7-1.

With respect to this last requirement it is probably important to emphasize to BLM that FLPMA's mandate to prevent unnecessary or undue degradation imposes dual requirements on the BLM, it must prevent both unnecessary degradation as well as undue degradation. Mineral Policy Center v. Norton, 292 F.Supp.2d 30, 42 (D.D.C. 2003). We would also note that this decision stands as the final word as to what the unnecessary or undue degradation clause means the Department of the Interior did not appeal this decision, and thus it is the final word as to the Department's responsibilities and has been accepted by the Department. Addressing this dual requirement, the court made plain that "Congress's intent was clear: Interior is to prevent, not only unnecessary degradation, but also degradation that, while necessary to mining, is undue or excessive." Id. That is, while unnecessary degradation may only prevent activities that are not generally recognized or used to pursue mining operations, the undue degradation prohibition establishes a further requirement to prevent activities that would unduly harm or degrade the public land. As stated by the court, "FLPMA, by its plain terms, vests the Secretary of the Interior with the authority-and indeed the obligation-to disapprove of an otherwise permissible mining operation because the operation, though necessary for mining, would unduly harm or degrade the public land." Id. Despite this

clearly established law, the BLM, through its Director, has persisted in misstatements of the governing legal standard, and this must be corrected. See 1-15 (Policy Statement from BLM Director Kathleen Clarke stating that mineral use authorizations will be made in a manner "to prevent unnecessary and undue degradation." (emphasis added)). The BLM's attempts to read the plain language of FLPMA in the conjunctive rather than the disjunctive were firmly rejected by the Mineral Policy Center court. It is impossible for the BLM to fully recognize let alone exert its retained rights when it persists in stating its legal obligations in an impermissibly constrained manner. FLPMA, like NEPA, provides the BLM with authority, and indeed an obligation, to protect the natural environment even in areas that have already been leased.

Clearly the BLM has retained very substantial rights under the standard lease, and under those retained rights the BLM has more than adequate authority to ensure that it fully complies with the laws and policies noted above by asserting these retained rights and the need to adhere to legal obligations when development is proposed on a lease. More specifically, these retained rights provide the BLM with more than sufficient authority to protect Large Block NSO and Unavailable Areas even though the area has been leased, so as to achieve the explicit management direction for these areas stated in the RMP.

Response: Holders of existing oil and gas leases have a valid legal right to explore, develop, and produce the lease. As provided in 43 CFR 3101.1-2, BLM does have the authority to impose "reasonable restrictions" to post-lease actions where the lease is not encumbered with stipulations. The draft EIS does provide for opportunities for BLM to mitigate impacts on existing leases, please refer to action items b and c under Objectives 2 and 3 on pages 2-55, 2-82, 2-83, and 2-120, 2-121 of the draft EIS.

Comment: The BLM has specifically adopted and promulgated policies and directives regarding the contractual rights granted in an oil and gas lease. BLM Instruction Memorandum 92-67 states that "[t]he lease contract conveys certain rights which must be honored through its term, regardless of the age of the lease, a change in surface management conditions, or the availability of new data or information. The contract was validly entered based upon the environmental standards and information current at the time of the lease issuance." As noted in the BLM's policies, the lease constitutes a contract between the federal government and the lessee which cannot be unilaterally altered or modified by the BLM. In the Final EIS, the BLM should make it absolutely clear that it intends to honor valid and existing lease rights.

Response: Chapter 2 at page 2-8 in the draft EIS, emphatically states that "[e]xisting oil and gas or other mineral lease rights would be honored."

Comment: The BLM states that "The pace and timing of mineral development activities is dependent on a variety of factors outside the management decisions of BLM (p. 4-109)." This is not the case. The agency can certainly control the pace by implementing phased development (requiring that the initial areas of drilling and production activities be completely reclaimed before development begins in other areas) or phased leasing (where BLM refrains from leasing the entire planning area at once). These policies are certainly within BLM's power to implement and should be considered for the Pinedale RMP.

Response: BLM cannot deny holders of existing leases access to develop their leaseholds. The referenced statement is correct in that the overall development pace is certainly influenced by the factors in the sentences following the statement. The RMP does provide for timing restrictions in certain crucial wildlife habitats, and all four alternatives establish areas that would be unavailable for leasing.

Comment: 2) Delay the environmental analysis of new gas projects, such as the South Piney Gas/CBM Project until the RMP is complete. This is essential since the current RMP fails to evaluate the impacts of CBM and because, without an updated RMP, the BLM cannot properly complete an impacts analysis or adopt mitigation measures;

Response: Valid leases issued under the current RMP must be honored. BLM does not have the authority to prohibit development of valid existing leases.

Comment: 3. That further development of the gas fields await the completion and adequate environmental review of the Pinedale Resource Management Plan, BLM.

Response: It is BLM policy that actions be conducted under an existing land use plan until a superseding plan is approved. Current development in the oil and gas fields within the planning area is being conducted in accordance with the existing RMP approved in 1988 as well as under the decisions set forth in approved valid NEPA environmental documents such as the Jonah Infill and Pinedale Anticline EISs. Valid leases issued under the current RMP must be honored. BLM does not have the authority to prohibit development of valid existing leases.

Comment: We ask the BLM to recommend to Congress that lands we describe as Alternate 3 modified, be withdrawn. Such an approach would prevent "mineral sprawl" into now pristine areas, and protect communities, private and public lands vital to the future of the area. Where leases have already been sold, the opportunity for public buy back or trade out should be implemented, as Senator Thomas outlined in his proposed bill to protect the Wyoming Range. Where leases have expired these lands should not be leased again, but rather covered by a permanent withdrawal to secure the area from energy exploitation and industrialization.

Response: Mineral withdrawal would affect hard rock minerals in the area, but would not prohibit leasing for oil and gas development. A large-scale lease buyback or trade program with many landowners and management agencies is properly addressed by the U.S. Congress, not BLM.

Pace of Drilling/Leasing

Comment: Please: * Set a slower, more reasonable pace for new gas development;

Response: Development rates and infrastructure scenarios are project-level issues that can be addressed through project-level EISs.

Comment: While drilling for natural gas may be considered as a legitimate use of the public lands, I believe that this activity must be restricted to the least environmentally sensitive areas, regardless of the concentration of gas. The scope of the drilling must also be reduced.

Response: The RMP, through the alternatives developed, tries to balance resources by concentrating development in areas with known high volume natural gas and/or oil reserves and prohibiting or restricting development is other portions of the planning area. Development rates (scope of drilling) and infrastructure scenarios are project-level issues that are addressed through project-level EISs.

Comment: As owners of over 250 acres of land that fronts on the Green River about 8 miles north of Cora, we are appalled at the recommendation to open this and other areas along the New Fork & Hoback Rim for oil and gas leasing.

We maintain this land, and will continue to do so, as open grazing pastures. We have no intent to subdivide or develop it and want to protect it with conservation easements. However such easements offer little environmental protection when there is so much surrounding BLM land that can impact those of us who care enough to do the right thing. Please do NOT lease BLM land for oil and gas in this critical area. Make the land UNAVAILABLE for LEASING!

Response: With the exception of a temporary moratorium on leasing enacted in 2000, these areas have been available for oil and gas leasing since passage of the Mineral Leasing Act of 1920. The areas unavailable for leasing have been revised in the final EIS.

Comment: I have been watching the RMP over the past few years and have finally decided to comment. I haven't up to this point because I understand that our nation, our state, our towns and our homes all need natural gas. It seemed to me like a balance could be struck between those needs and the other resources our public lands provide. However, the more I learn about the BLM's plans for the future of Sublette County, I am worried that this balance may be lost. There are some places where drilling, at this point, makes sense--the Jonah and the Mesa, for instance, have been heavily impacted already. But the Upper Green, the Upper New Fork, and the Rim are areas where it does NOT make sense to drill. The resources that will be lost--wildlife, scenery, habitat, history--are world class and deserve protection. Sublette County has given, and will continue to give, a lot towards our nation's energy needs...but are we really going to give up these treasures? Please, don't let these areas be leased. They are just too important. I can only imagine the intense pressure you and your agency are under, but I hope you will still be able to hear the individual voices out there who care about the future of Sublette County...please, please, don't lease the Upper Green, Upper New Fork, and Rim.

Response: The areas available and unavailable for leasing have been revised in the final EIS.

Comment: I realize that there is a need for energy. The United States needs to diminish its dependence on foreign oil but destroying our environment does not justify the means. Proponents of further oil and gas exploration and development will point to the revenues that the industry has pumped into the local economy. However, I beg the question: At what point does the end not justify the means. When the mineral reserves that lie under our county are depleted, the vast majority of these companies and their employees will pack up and move to another greener pasture to drill through. I appreciate the efforts of some companies to minimize the environmental impacts of their operations.

Response: Wells have been developed and produced in the Big Piney-La Barge area since the 1920s. New gas wells with a 30+ year life expectancy are still being drilled in this area. Drilling is anticipated in the Jonah Field for the next 5 to 10 years and for 15 to 20 years on the Pinedale Anticline. Wells in the Jonah Field and on the Pinedale Anticline have a life expectancy of 40+ years.

Comment: Alternative 4 of the Resource Plan would allow leasing to continue on at least 70 percent, or 850,000 acres, of the resource area, and it would relax wildlife protections as well as result in a significant increase in air pollution. Expanding drilling in this region would also scar the landscape with roads, pipelines and transmission lines, harm crucial wildlife habitat, and could pollute the fisheries of the Green and New Fork rivers. Such consequences are not acceptable in a good resource management plan.

Response: The vast majority of the lands that would be available for leasing under objectives 1 and 2 in Alternative 4 of the draft EIS are currently leased. Under this Alternative they would continue to be available. Please note that Alternative 4 in the final EIS increases the amount of land unavailable for leasing from 172,500 acres to 441,100 acres, and the acreage constrained by No Surface Occupancy from 21,485 to 198,370 acres.

Comment: Energy development has become the predominate use of public lands wherever oil and gas resources exist and BLM policies facilitate development to the near exclusion of other priorities,

Response: Changing BLM policy is beyond the authority and scope of this RMP.

Comment: The following are things that I would like to see in the RMP:

- No new major energy fields until the development in existing fields is complete

Response: Approximately 62% of the planning area is currently leased for oil and gas development. The holders of these leases have valid legal rights to develop and produce those leases.

Comment: Phased leasing, instead of a free-for-all, will spare wildlife and the social fabric of the area from boom/bust cycles.

Response: The draft alternatives would make large areas unavailable for leasing, which is a form of phased leasing.

Comment: The plan to commit vast tracts of the surface and the subsurface in the planning area totally to mineral sprawl appears to be removed from 21st century realities, as well as ignoring the current actual conditions already existing in the "Resource Planning Area". It is as though the draft plan is disconnected from both contemporary realities in the region and the county and the land use values it purports to take into account. Its very choice of words, such as "minerals" and "other resources", makes the point. The DEIS lacks viability as a credible document because of its overemphasis on energy, but it certainly excels in its graphic representation of what SDSBT characterizes as energy company preferences. Energy here... energy there...energy everywhere... energy a little bit more or a little bit less (mostly more), but ultimately energy. We get the message—the draft plan is nothing more than an energy development document.

Response: The contemporary reality in the region is that the planning area contains 50 trillion cubic feet of producible natural gas in areas already leased for gas production and that gas is going to be produced. The RMP attempts to balance that impending production with other surface resources in the area for which BLM has management responsibility, including wildlife habitats.

Comment: I am a resident of Sublette County and I am very concerned about the pace of the gas field development in our area and the management of our public lands. I know the proposed RMP took a lot of work but I don't think that there is a choice that demonstrates the balance we need to see. I get the feeling from the RMP that the gas resource gets precedence over all of the other resources.

Response: The gas resource is discussed at length in the draft EIS because it is a prominent resource and its development causes many impacts on other resources. BLM must fully consider the impacts of gas development on all other resources.

Comment: Why are we in such a hurry to extract this resource so fast? We don't treat any of our other resources this way. Do we allow hunting at anytime year round just because the animals are there? What is the rush? I realize we have a huge energy need in this country and our economy is growing but are we willing to sacrifice other values for the good of the people? Let's develop this resource slowly so that we can be scientific about the effects of the development. We can see problems, stop and fix them and then continue. Let's not wait until after the fact to assess the damages.

Response: The fluid mineral development addressed in this RMP is intended to help meet the nation's demand for natural gas. Alternatives 3 and 4 would concentrate development in areas already undergoing intense oil and gas development approved through existing NEPA documents, while making other areas unavailable for leasing or development. They also focus on accelerating reclamation in these intense development areas to restore impacted habitats.

Comment: Leasing and development are permitted to continue at an excessive pace. There is no requirement to rehabilitate drilled terrain in one area before moving on to another. There is no shortage of

natural gas at this point therefore no need to proceed with development at the pace that would be permitted in the EIS.

Response: Alternative 4 in the final EIS reduces the area available for leasing from 1,026,790 acres in the current RMP approved in 1988 to 758,180 acres and increases the area not available for surface occupancy from 21,485 acres to 198,370 acres. The RMP does require reclamation of disturbed lands (see Appendix 3 of the draft EIS). Specific reclamation standards, practices, and requirements are developed through project-specific EAs and EISs. Based on national statistics the country is currently experiencing a shortage of natural gas available to the consumer. None of the planning area adjoins or is adjacent to any congressionally established Wilderness areas. Alternatives 3 and 4 do make certain areas unavailable for leasing and oil and gas development. The plan does not establish buffers on lands adjacent to the WSAs. These lands are available for multiple-use management.

Comment: Please consider slowing down development of the gas fields in the Pinedale Anti-Cline and Jonah Field and do not give leases for the Upper Green, Rim, Hoback and Wyoming Range areas. It will destroy one of the last remaining bastions for wildlife, fishermen, hunters, photographers, birders, hikers and artists. It will also destroy the very values that I know you hold for your children, if it hasn't already.

Response: Development rates are project-level issues that can be addressed through project level EISs. The pace of development occurring in the Jonah Field is consistent with the requirement of the Jonah Infill EIS, completed in March of 2006. Development on the Pinedale Anticline is being addressed through the Supplemental EIS that is currently being prepared.

Comment: I am putting in my 2 cents worth of public lands for oil & gas exploration. Right now the BLM is simply raping our public lands & I want to see that practice stopped. We in Wyoming need to protect our clean air and water and habitat for wildlife. I would like to see all new leasing stopped and to even buy back some leases already leased.

Response: Stopping all leasing is not consistent with BLM policy and regulations (refer to page 2-3 in the draft EIS/RMP). Buying back leases would require Congressional funding authorization.

Comment: I hope that when you finalize this plan you will allow significant development to occur in the Pinedale and Jonah fields. We should not close an entire planning area to new oil and gas leasing, and existing leases should be honored. We should allow the development to occur, and require environmental mitigation for sensitive areas.

Response: Under all four alternatives, development in the Pinedale Anticline and Jonah Fields would continue to be consistent with the existing EISs for these areas.

Comment: Drilling restrictions and stipulations which are included in the alternative section of this draft RMP do not belong. An RMP needs to be more general in nature and should not be site-specific. For detailed land use decision, please rely on future EAs and EISs. I support year round drilling with appropriate wildlife mitigations.

Response: The RMP builds a framework for subsequent project-level NEPA documents. Such a framework includes suggested and required mitigation measures, as well as best management practices. As such, it is appropriate for the RMP to set the framework for measures that could reduce impacts.

Comment: I urge your agency to protect and say NO to development in the Upper Green River Valley, the Wyoming Range and indicated areas in the Hoback. With the ongoing development in the Jonah and

Pinedale Anticline Fields, I would hope that mitigation measures and performance-based management would limit impact to wildlife habitat, as well as our air and water quality.

Response: The RMP is designed to address a reasonable range of alternatives. Alternatives 3 and 4 would make much of the federal lands and minerals along the Wind River Front, which includes the Upper Green, Upper New Fork River, and Hoback Rim areas, unavailable for new oil and gas leasing or unavailable for surface disturbance. Management of federal lands and mineral estates in the Upper Green are being addressed in the final EIS. The area does contain some existing oil and gas leases, and the leaseholders/operators have valid existing rights to develop and produce the oil and gas resources within those leases. Development in the Jonah Field and Pinedale Anticline is constrained by a number of operator-committed measures and required mitigation that are designed to reduce impacts to surface resources such as wildlife.

Comment: I suggest continuing the minerals leasing moratorium in the upper Green River basin for 10 to 20 years at least or perhaps retiring those mineral interests permanently as a way to protect the scenic, wildlife and water resources of the Upper Green River Valley from the Wind River Mountains to the Wyoming Range.

Response: The final EIS addresses management of federal lands and mineral estates in the Upper Green.

Comment: The Upper Green and Wind River Front needs to be kept OFF LIMITS to drilling. This is an extremely fragile and irreplaceable area.

Response: Management of federal lands and mineral estates along the Wind River Front and in the Upper Green are addressed in the final EIS.

Comment: As a community member of Cora and the Upper Green. I wish to expresses my concern in the allowance of any drilling in this area because will only lead to more drilling. When and if the BLM allows for these permits to go through will only causes a chain reaction of perpetual drilling. Eventually drilling on private land will ensue. and that threatens what my family and neighbors have been trying to prevent. The Privet citizens are doing every thing in their power to prevent drilling in this area, why can't the BLM work toward the same, so that the upper green can remain protected.

Response: Please note that there is considerable acreage in the Cora and Upper Green area that does not contain federal minerals, nor does it fall within BLM's jurisdiction, but that still currently may be leased for oil and gas development.

Comment: One of the areas discussed in the Upper Green River Valley Coalition slide presentation that is not recognized in the RMP DEIS is the Ryegrass Area, an area generally west of the Green River and east of the Wyoming Range near Daniel, Wyoming. Much of the Ryegrass Area would be designated an Unavailable Area pursuant to Alternative 3, although the northern, western, and southern perimeters of it would be a Minimally Developed Area. Compare CD Slide 33 with Map 2-8. Pursuant to Alternative 4, much of this area would be designated a Large Block NSO Area, although again the perimeter would be a Minimally Developed Area. There are a number of reasons this entire area should be protected from any future leasing, including leasing subject to an NSO stipulation:

- Considerable portions of this area are not currently leased, meaning the BLM has a rare opportunity to protect an area from leasing and the resource management difficulties that leasing creates. Map 1-3. This also presents an opportunity to facilitate meaningful and effective off-site mitigation due to development in other areas.

- There is little in the way of existing oil and gas development in the area. Map 3-5; CD slide 35. Most the area only has a moderate development potential and some of it only has a low potential. Map 4-1.
- This area is entirely occupied by greater sage grouse nesting and brood rearing habitats as recognized under Alternative 3 and this is true of the vast majority of the area even under Alternative 4. Maps 2-28 and 2-36.
- This area contains several significant historic sites, including Fort Bonneville, the Prairie Mass site, and the Father DeSmet Monument. Map 3-1.
- The area contains significant expanses of unbroken sagebrush habitat. Map 3-11. Thus this could be an important area for use of off-site mitigation funds for either lease purchase/retirement or habitat improvement projects.
- There are several sensitive plant locations in the area. Map 3-12.
- Almost the entire area is crucial mule deer winter range. Maps 3-16, 3-19.
- Much of the area is moose crucial winter range. Maps 3-18, 3-19.
- Much of the area has at least two and in some areas three overlapping crucial ranges, some the greatest concentrations of overlapping crucial ranges in the Pinedale Field Office. CD slide 17.
- The area has a very high terrestrial vertebrate species richness. CD slide 34.

Given this remarkable concentration of biological and cultural values, all of the Ryegrass Area should be designated as Unavailable for future leasing. The loopholes currently present in the provisions applicable to Alternative 3, particularly allowance for conversion to an Intensively Developed Field, should be eliminated. And, BLM should exert its retained rights on existing leasing by taking actions that include but are not limited to requiring phased development, directional drilling, and full compliance with wildlife protective stipulations, as discussed above.

Response: The areas unavailable for leasing have been updated in the final EIS. Additional discussion of the different oil and gas management areas, how they would work, how areas could be converted from one type of area to another, and exceptions have been added to the final EIS.

Comment: A second area of tremendous value that does not receive the full protection it needs under the current RMP DEIS is the Cottonwood Area, just south of the Ryegrass area. CD slide 33. Much of the Cottonwood Area would be designated an Unavailable Area pursuant to Alternative 3, although the northern perimeter of it would be a Minimally Developed Area. Compare CD Slide 33 with Map 2-8. Pursuant to Alternative 4, almost the entire area would be designated a Minimally Developed Area. Compare CD slide 33 with Map 2-9. There are a number of reasons this entire area should be protected from any future leasing, including leasing subject to an NSO stipulation:

- There is little in the way of existing oil and gas development in the area. Map 3-5; CD slide 35. This area only has a moderate development potential. Map 4-1.
- This area is entirely occupied by greater sage grouse nesting and brood rearing habitats as recognized under Alternative 3 and this is true of the vast majority of the area even under Alternative 4. Maps 2-28 and 2-36.

- The area contains significant expanses of unbroken sagebrush habitat. Map 3-11. Thus this could be an important area for use of off-site mitigation funds for either lease purchase/retirement or habitat improvement projects.
- There are several sensitive plant locations in the area. Map 3-12.
- Some of this area is crucial pronghorn winter range. Maps 3-15, 3-19.
- There is crucial elk winter range in the area. Maps 3-17, 3-19.
- Some of the area is moose crucial winter range. Maps 3-18, 3-19.
- Some of this area has two overlapping crucial ranges for wildlife. CD slide 17. • There are large pronghorn parturition areas in the Cottonwood area and some elk calving areas. Map 3-20.
- The area has a very high terrestrial vertebrate species richness. CD slide 34.

Given this remarkable concentration of biological values, all of the Cottonwood area should be designated as Unavailable for future leasing. The loopholes currently present in the provisions applicable to Alternative 3, particularly allowance for conversion to an Intensively Developed Field, should be eliminated. And, BLM should exert its retained rights on existing leasing by taking actions that include but are not limited to requiring phased development, directional drilling, and full compliance with wildlife protective stipulations, as discussed above.

Response: The areas unavailable for leasing have been updated in the final EIS. Additional discussion of the different oil and gas management areas, how they would work, how areas could be converted from one type of area to another, and exceptions have been added to the final EIS.

Comment: It is time to withdraw the Wyoming Range from future energy leasing. Such a step would recognize that Sublette County has already made significant sacrifices to meet the nation's energy needs. The RMP should implement a wiser management approach to the Wyoming Range, one that emphasizes conservation of its exceptional wildlife, pure water, and recreational values

Response: BLM does not manage the Wyoming Range.

Comment: This rapid pace of development needs to slow down fast, that's obvious. These resources do not need to be extracted all at once. A viable solution that is not among those considered in the current revision of Pinedale BLM's resource management plan is called cluster development. This entails phased development areas that are prioritized according to the resources available and the habitat affected. There would be, for example, eight phases overlaying the county in the highest potential development areas. Three of these phases are already occupied and under intense development. Outside of those phases, drilling would be more concentrated and contained, into clusters or pods. This would provide buffer zones, allowing wildlife "room to roam" between the clusters. No other clusters would be allowed to be developed until the previous clusters are reclaimed. Instead of widespread impacts, the intensity would be contained and would help reclamation and mitigation efforts succeed. How else can you expect to execute "off-site mitigation" if you don't plan for areas that can be rested for the recovery of wildlife and soils?

Response: While it is not called clusters or clustered development, Alternatives 3 and 4 do establish concentrated development areas and also do establish areas not available for oil and gas leasing or for surface occupancy for oil and gas development. The unavailable areas would provide respite areas for wildlife and for offsite wildlife habitat augmentation projects.

Comment: Please be advised that I will support any reasonable method to stop your plan to allow any and all public lands, and even the private lands with mineral rights under the control of the BLM in the Green River and Hoback River basins, to be auctioned to the oil and gas industry to drill as they wish. I will encourage a legal injunction to stop this intrusion into these public lands, if necessary. I urge you to do the right thing for the local community and protect the Green River and Hoback River basins from drilling.

Response: The proposed actions and decisions in the draft RMP/EIS were developed in full accordance with the governing laws and regulations.

Comment: Since the RMP deals with BLM land usage for possibly as many as 20 years in the future, we are requesting that the BLM exclude lands within a two mile radius of the Town of Pinedale from oil and gas leasing.

Response: Only 18% (2,770 acres) of the lands within a two mile radius of the city limits of Pinedale is federal lands under BLM jurisdiction. Approximately 1,860 of those acres are on the Pinedale Anticline, of which 1,720 acres are leased and held by oil and gas production (HBP), 100 acres are leased but not held by production, and 140 acres are not leased. The remaining ±910 acres are northeast of the city limits near Fremont Lake and fall within a crucial big game (mule deer) migration route and/or the Fremont Lake/Pinedale municipal watershed. The 2-mile radius contains an additional 1,540 acres of federal minerals underlying private surface, of which 740 acres are currently leased. Alternatives 3 and 4 recommend that the BLM-administered lands northeast of Pinedale be withheld from leasing. It is very unlikely the lands on the Pinedale Anticline would be in a non-leased status during the anticipated lifespan of this RMP.

Comment: I therefore strongly oppose this Alternative and support instead Alternative 3 with the following revision included in its final form: • No new gas fields shall be developed until existing fields (Jonah and PAPA) have been fully developed and reclaimed.

Response: BLM does not have the authority to prohibit development of existing valid oil and gas leases.

Comment: The RMP's 30,000-foot view of the entire management area provides us the opportunity to consider the cumulative impacts of existing and proposed uses of public lands. With the vast majority of the field office already under lease, there is little that this RMP can truly alter as existing law favors lease rights and development plans generally trump any new protective measures that might otherwise be considered. With that in mind, it is critical that steps be taken to maintain areas that have not yet been leased.

Response: Currently about 744,000 acres, or 61% of the BLM-administered mineral estate, is leased; a majority, but not "vast". The alternatives attempt to provide areas that could remain unleased and undeveloped for the life of the RMP to provide wildlife habitats and other surface values.

Comment: Pace of Development: The BLM should reconsider its rapid pace of leasing lands in the Pinedale Field Office. Already there are difficulties with constructing the necessary infrastructure to properly extract and market our state's natural gas resources. As you are well aware, existing natural gas pipeline capacity is at its limit in western Wyoming. These conditions prevent the state of Wyoming and the federal government from collecting the full value of their resources. Currently, there is a $4.00/MMbtu price differential between the Opal Hub and larger national markets.

Response: Alternative 4 reduces the area available for leasing from 1,026,790 in the current RMP approved in 1988 to 758,180 and increases the area not available for surface occupancy from 21,485 to

198,370 acres. Alternatives 3 and 4 do make certain areas unavailable for leasing and oil and gas development. In essence, these scenarios would limit or restrict the overall rate/pace of development in the planning area. BLM recognizes that pipelines leaving Wyoming are functioning at or near capacity. BLM also recognizes that when there is not enough capacity to transport the full volume of gas that can/could be produced from wells within the state, wells are shut until pipeline capacity is available.

Comment: I ask you to remove the restrictions you have in place in the alternatives and instead initial dialogue between the environmentalists and the energy companies to come to some compromise, which will allow these fields to be developed and at the same time impose a minimum of damage to the environment.

Response: You make an excellent suggestion about working with energy companies and environmental groups to reach compromise on issues. Unfortunately, not all issues are solely between these two broad entities. Issues concerning the management of federal lands and minerals also exist with numerous members of the public not affiliated or associated with either of these groups. BLM certainly desires to work out solutions to all land and mineral management issues. Unfortunately, compromise is not always attainable; consequently, management restrictions are necessary.

Comment: I strongly support an RMP that views energy development over a 20 year period for maximum development and reserving site specific mitigations to future NEPA documents.

Response: Under all four alternatives the RMP provides for energy development for the life of the plan (i.e., at least through 2020). It also builds a framework for subsequent project-level NEPA documents. Such a framework includes suggested and required mitigation measures, as well as best management practices. As such it is appropriate for the RMP to set the framework for measures that could reduce impacts.

Comment: Alternative 3 does not take into account the vast field of natural gas in the project area to be developed for minerals and has far too restrictive criteria.

Response: The draft EIS/RMP is designed to present a reasonable range of alternatives and make projections of the impacts associated with each alternative. Accordingly, the document addresses varying levels of oil and gas leasing and development. Leasing and development would continue to occur in the planning area under each of the alternatives.

Comment: I strongly support an RMP that views energy development over a 20 year period for maximum development and reserving site specific mitigations to future NEPA documents.

Response: Under all four alternatives the RMP provides for energy development for the life of the plan (i.e., at least through 2020). It also builds a framework for subsequent project-level NEPA documents. Such a framework includes suggested and required mitigation measures, as well as best management practices. As such it is appropriate for the RMP to set the framework for measures that could reduce impacts.

Comment: It was a shock to us to learn about the Eagle Prospect Unit and now the BLM is proposing to open the Upper Green River, Upper New Fork, and Hoback Rim areas for oil and gas leasing. We are adamantly opposed to opening these areas up for leasing. Please place these areas in the “not available” category.

Response: The Eagle project is on USFS lands and is being addressed through an EIS being developed by USFS. The draft EIS/RMP does not “open” the Upper Green River, Upper New Fork River, and Hoback

Rim areas to oil and gas leasing. Under the current RMP approved in 1988, these areas are open to oil and gas leasing. A leasing moratorium was initiated in 1999 that withholds leasing along the Wind River Front and Hoback Rim area pending the completion of a revision of the 1988 RMP. This draft EIS/RMP constitutes that revision. Alternatives 1 and 2 would retain the referenced area open to leasing; Alternative 3 would make the area unavailable for leasing; Alternative 4 would make portions of the area unavailable for leasing and other portions available for leasing but unavailable for surface occupancy. Management of federal lands and mineral estates in the Upper Green/Hoback Rim area are being addressed in the final EIS.

Comment: I feel that opening the region below the Upper Green River Lakes for oil and gas extraction is unnecessary. Such endeavors would irreparably diminish the greatest value which that region currently offers to all of us.

Response: The lands and minerals for approximately 18 miles downstream from Green River Lakes fall under the jurisdiction of USFS and are not involved in this RMP. The RMP does address management of federal lands and mineral estates in the upper Green River/Hoback Rim area below the USFS lands. Alternatives 3 and 4 would make these unavailable for oil and gas leasing or new leases would be unavailable for surface occupancy. The area does contain some existing oil and gas leases and the leaseholders/operators have valid existing rights to develop and produce the oil and gas resources within those leases.

Comment: The BLM has shown unacceptable stewardship of the Mesa, Anticline and Jonah field with the mineral leases. How dare the BLM suppose to ride herd on a group of Gas & oil companies in the Upper Green. The alternatives in the Draft RMP are all unacceptable. No mineral leasing in the Upper Green is the only option. Re-impose the previous moratorium on drilling and create new legislation to support moratoriums on drilling & selling leases to mineral companies in the Upper Green.

Response: Alternatives 3 and 4 would make the Wind River Front and Upper Green River area unavailable for oil and gas leasing or unavailable of surface occupancy; however, holders of existing leases have a valid existing right to develop and produce those leases. Management of federal lands and mineral estates along the Wind River Front and in the Upper Green are being addressed in the final EIS.

The leasing moratorium instituted in 1999 was intended to withhold the lands from leasing until the management of these lands and mineral estates could be evaluated through an updated land use plan. The moratorium was never intended to be more than a placeholder until the RMP was revised and a decision made as to whether these lands would or would not be available for leasing. The moratorium was only intended to cover leasing; it did not extend to drilling because holders of existing leases within the area have valid legal rights to develop and produce those leases.

Comment: thus far the oil and gas development has been so much so fast that not only can the government inspections not keep up (this includes inspecting well casing and plugging operations by properly trained personnel—operations that, if not done correctly, would allow tremendous toxins, including benzene, to enter the water table), but the oil and gas companies can’t even get enough employees to do all jobs properly. These problems would be solved if the development is required to slow down over the next 10 to 20 years.

Response: While it is not called clusters or clustered development, Alternatives 3 and 4 do establish concentrated development areas and also do establish areas not available for oil and gas leasing or for surface occupancy for oil and gas development. The unavailable areas would provide respite areas for wildlife and for offsite wildlife habitat augmentation projects. In essence, these scenarios would limit or restrict the overall rate/pace of development in the planning area.

Comment: Closing an entire planning area to gas development is not only bad for our nation but is also illegal. Valid and existing lease rights have to have reasonable access to them otherwise it is considered a "taking" As you move forward on this RMP you need to keep in mind that pre-rmp lease rights exist and are very strong from a legal standpoint.

Response: Closing the entire planning area to gas development was not an alternative considered in detail in the draft EIS. BLM does not have the authority to prohibit development of existing, valid oil and gas leases.

Alternative Power Resources

Comment: Please instead prepare and consider and use the environmental resources already present, such as water, why not use HYDROPOWER and WINDMILLS, to provide clean energy power. Start at the coastline of the Mississippi (avoid another Katrina), all the way to Yellowstone. The geysers are natural water power under the earth, can you channel it?

Response: This suggested alternative is beyond the scope of this RMP.

Comment: I partially* support Alternative 3 as the BLM considers a management plan for the Upper Green River Valley. *If our nation has enough money to do this extra drilling, I must assume that we might also divert these funds to pursue renewable energy development. We simply need the mindset and heart to do that.

Response: Oil and gas drilling is financed by the operators, not by BLM.

Comment: Why does our bright government keep spending MY MONEY on wanting to DRILL for more oil in our few remaining wildernesses, when you should be investing that money in alternative energy means.

Response: Oil and gas drilling is financed by the operators, not by BLM.

Comment: The BLM is under a "federal mandate to produce as much domestic energy as possible" so it would be to your advantage to put this much work into pursuing renewable forms of energy such as solar or wind power. Stopping oil and gas development and pursuing more environment-friendly forms of renewable energy would be a positive step toward a desperately-needed shift in perspective, lifestyle, and priorities for the U.S.

Response: BLM is not in the business of "producing" energy, but under various federal laws and regulations does make certain federal lands and minerals under its jurisdiction available for lease, patent, and ROW for the develop of energy resources, whether it be oil and gas, coal, uranium, wind, geothermal, or solar.

Comments with Multiple Issues

Comment: C. Means By Which The BLM Can Meet Its Obligations To Protect The Natural Environment In Areas That Have Been Leased, And By Which It Can Meet Its Stated Management Objectives In Unavailable Areas And Large Block NSO Areas. There are numerous means by which the BLM can protect the natural environment in areas that have already been leased, or in areas that might be leased in the future, in full compliance with the rights BLM has retained pursuant to its standard lease form. Pursuing these actions would help ensure the agency meets its legal obligations under numerous statutes enacted to protect the natural environment. See 1-11 to 1-23 (reviewing many of these legal obligations). And perhaps most importantly, these are means by which the BLM's stated objectives for Unavailable

Areas and Large Block NSO Areas can be achieved despite some or all of the management area having been leased. 2-47, 2-49 (providing statements of management goals for Unavailable Areas and Large Block NSO Areas, which are to give emphasis to protection of the natural environment, especially wildlife values). These provisions should be incorporated into Alternative 3 so as to make it acceptable as the RMP for the Pinedale Field Office.

1. Paced and Phased Development: One of the most important means by which the environmental values in Large Block NSO and Unavailable Areas can be protected is by adopting specific provisions requiring phased and/or paced development in these areas. This is an "obvious" way to ensure that well density does not exceed the trigger for converting these areas-areas that are explicitly devoted to environmental protection-to one or more Intensively Developed Fields. As noted above, section 4 of the standard lease form specifically allows regulation of the rate of development, and BLM has recognized the validity of this approach in the Pinedale Anticline EIS. The BLM should make specific provision for phased and paced development in the RMP as a requirement for development of existing leases in the Large Block NSO and Unavailable Areas. The Interior Board of Land Appeals recently recognized that section 4 of the standard lease form allows the BLM to protect resources, even after a lease has been issued. National Wildlife Federation et al., 169 IBLA 146, 164 (2006).

2. Clustered Development and Directional Drilling: Another important means to achieve environmental protection is to require clustered development and the related technique of requiring directional drilling. Again, there is no doubt that imposing such requirements in the Large Block NSO and Unavailable Areas is well within the BLM's retained rights under a federal oil and gas lease. We urge revision of Alternatives 3 and 4 to include clear requirements that development in these areas will be limited to no greater than 160-acre per well surface spacing, or less if needed to protect environmental values, as a way to compel utilization of clustered development and directional drilling. Oil and gas lessees may have a right to retrieve all the oil and gas on a leasehold, but they do not have a right to do it exactly when, where, and how they chose; specifying when, where, and how oil and gas development occurs is well within BLM's authority, and in fact it, in the words of the Mineral Leasing Act, it has an obligation to "regulate" oil and gas development in this way. Consequently, the BLM should recognize and assert its rights in the RMP, and require clustered development and the use of directional drilling in the Large Block NSO and Unavailable Areas designated in the RMP. This is necessary to ensure the stated management objectives for these areas are met and maintained, as well as to prevent unnecessary or undue degradation of the public lands.

3. Lease Suspension: Lease suspension is another means at BLM's disposal to ensure full environmental protection is maintained in management areas with a conservation focus, specifically Large Block NSO and Unavailable Areas. As noted above, the Mineral Leasing Act gives the BLM authority to suspend leases "in the interest of conservation," a term that includes conservation of environmental values. The BLM should utilize this authority to fully protect Large Block NSO and Unavailable Areas, and the RMP should make provisions in this regard so as to meet the management objectives for these areas. The BLM has exercised this authority in other areas, such as during development of the Jack Morrow Hill Coordinated Activity Plan, and is contemplating using it in the Pinedale Anticline Supplemental EIS for interim protection of some Pinedale Anticline flank areas that are leased.

4. Unitization: Another mechanism that could be utilized to protect Unavailable and Large Block NSO areas, not to mention Minimally Developed areas, would be to require unitization of leases. This would allow lease holders to enjoy the benefits of development of leases while protecting sensitive areas. While there may be some limits on the ability to require unitization, the BLM could certainly urge operators to enter into voluntary unitization agreements and use other mechanism (pooling orders) to pursue unified development in sensitive areas. Unitization is a key component of the development plan on the Roan Plateau in Colorado which seeks also to protect the natural environment in that area, and BLM should

thoroughly consider that model. Pursuing unitization would allow for orderly development with less infrastructure and disturbance, while helping to eliminate issues such as those related to drainage.

5. Additional Conditions of Development: Other means to protect the natural environment that are well within BLM's retained rights to require include limitations on well pad size, requiring closed-loop drilling fluid systems, the use of remote well monitoring and car pooling and other traffic reduction techniques, and requirements to bury utility lines. The BLM should require these and other techniques and provisions as prerequisites to development on existing leases in Large Block NSO and Unavailable Areas. In addition, because it also has authority to require these provisions in Minimally Developed Areas and Intensively Developed Fields, it should require them as necessary to protect environmental values in these areas, too.

6. Retention and Enforcement of Lease Stipulations: One of the most important means by which the BLM can ensure that the natural environment is protected is to ensure that timing stipulations oriented toward the protection of wildlife crucial ranges are not abandoned and are in fact vigorously enforced. The WGFD recognizes the importance of these stipulations in its report Recommendations for Development of Oil & Gas Resources within Crucial & Important Wildlife Habitats, available at http://g£state.wy.us/ downloads/pdf/og pdf. The stated intent of Large Block NSO and Unavailable Areas is to protect wildlife habitat, provide refuge areas, and protect migration routes. 2-47, 2-49. Given this management focus, the BLM should expressly state in the RMP that permit waivers and exceptions to these lease timing stipulations will not be allowed in these areas. With waivers or exceptions to timing stipulations elsewhere in the planning area (i.e., in minimally and intensively developed areas) the RMP must state more clearly the extremely limited and carefully specified conditions under which these exceptions could occur, as well as how the WGFD and the general public will be able to participate in the decision-making. Requiring these stipulations as provisions on any new leases that are issued in the Pinedale Field Office should also be maintained in all crucial wildlife habitats wherever they may be located. This issue will be discussed further Section V of these comments where the BLM's proposed "performance based" mitigation in Appendix 3 is discussed.

7. Lease Buyout and Trade: Last, the BLM should fully consider and make provision for lease buyout and trades, particularly in areas devoted to conservation of environmental values. While we realize that lease buyouts might require Congressional authorization or that means to acquire or provide these monies might be beyond what the RMP can specifically require, the BLM certainly at a minimum can provide in the RMP that lease buyout will always be considered and explored when development in management areas devoted to conservation is proposed. And pursuing trades of leases from willing traders is certainly well within the BLM's authority without additional Congressional authorization, and BLM should make provision in the RMP to fully explore and utilize this obvious means of environmental protection to the maximum extent possible in management areas devoted to conservation. Specifically, the RMP should delineate priority areas for lease buyouts and trades to be considered, such as existing leases in unavailable areas, Areas of Critical Environmental Concern (ACEC), and in some cases large block NSO areas. By removing leases in these areas, the BLM would be ensuring that there are sufficient large block habitat areas relatively near existing fields for use of off-site mitigation funds on habitat improvement projects, and would better ensure the management objectives for these areas are adhered to.

Response: The draft EIS/RMP does comply with and comport to the laws and regulations referenced in pages 1-11 through 1-23 of the draft EIS. The draft EIS/RMP does provide for restrictions on post-lease actions in Unavailable and Large Block NSO areas. Page 2-8 states: "based on site- or project-specific environmental analysis, conditions of approval (COA) could be applied at the APD and Sundry Notice stage, and at subsequent development stages, to mitigate potential impacts from oil and gas operations within existing lease areas, providing the leaseholder's right to develop the lease remains intact." Page 2-47 through 2-49 provide a summary statement. Goals and objectives for various resource components are

found in each alternative. The Unavailable and Large Block NSO designations are some of the proposed management actions intended to achieve those goals and objectives.

The RMP/EIS provides the framework for the management of resources within the planning area, and as such it provides management goals, objectives, and broad management actions for the various resources analyzed. Depending on the alternative and the given Unavailable or Large Block NSO area, the amount and connectivity of the existing area will vary as will the potential for development and the amount of development needed to extract the mineral resources. Based on these variables, it is not appropriate for the RMP to set a one-size-fits-all development rate. It would be appropriate for project-level analysis to address this issue. As provided in 43 CFR 3101.1-2, BLM does have the authority to impose "reasonable restrictions" to post-lease actions where the lease is not encumbered with stipulations.

The reference to Section 4 in 169 IBLA 146, 164 (2006) is to a 1948 version of Section 4. The current Section 4 language differs from the 1948 version, see below. You are correct, Section 4 of the standard lease form does give BLM the authority to regulate the pace of development; however, the intent of Section 4 is to ensure the leaseholder exercises reasonable diligence in developing and producing, and must prevent unnecessary damage to, loss of, or waste of leased resources. It is not directed at the management of surface resources. The following is the current Section 4 from the standard lease form: "Section 4. Diligence, rate of development, unitization, and drainage—Lessee must exercise reasonable diligence in developing and producing, and must prevent unnecessary damage to, loss of, or waste of leased resources. Lessor reserves right to specify rates of development and production in the public interest and to require lessee to subscribe to a cooperative or unit plan, within 30 days of notice, if deemed necessary for proper development and operation of area, field, or pool embracing these leased lands. Lessee must drill and produce wells necessary to protect leased lands from drainage or pay compensatory royalty for drainage in amount determined by lessor."

BLM's authority to approve lease suspensions and units is established through regulations. It is not necessary to make an RMP decision to this effect. The RMP builds a framework for subsequent project-level NEPA documents. Such a framework includes suggested and required mitigation measures, as well as best management practices, including directional drilling, closed-loop systems, etc. Therefore, it is appropriate for the RMP to set the framework for measures that could reduce impacts to air quality.

BLM land use planning guidelines relative to minerals management specify that land use plans must establish criteria for evaluating waivers, modifications, and exceptions to lease stipulations and COAs. The draft EIS/RMP is consistent with this guidance. Appendix 8 states that BLM would coordinate exceptions and waivers with WGFD. Appendix 7 has been updated in the final EIS.

BLM does not have the statutory authority to buy back leases and consequently does not identify potential parcels or areas. The draft EIS/RMP does, however, identify opportunities for lease exchange. Page 2-83, under Alternative 3, states: "Non-producing leases within areas unavailable for new leasing would be exchanged for leases outside Unavailable Areas on a case-by-case basis with willing participants." For Alternative 3, this applies to all lands identified as Unavailable For Leasing, including ACECs. This language has been added to the Large Block NSOs and Unavailable for Leasing designations in Alternative 4.

Comment: Page 1-5 "cooperating agencies (also called cooperators) provide special expertise" Page 1-6 "Planning issues are determined from demands, concerns, conflicts, or problems concerning use or management of public lands and resources. These issues are usually expressed in terms of the potential adverse consequences or effects that a particular land or resource use may have on other land or resources used or valued by another or for another purpose." Comment: It is vital to recognize some uses are temporary in nature, such as oil and gas development, and that opportunities exist for sequential multiple

uses in the future while other uses (expansion of population centers and populated areas) are essentially permanent. Although recreation may be restricted at the time an area is being intensively developed for oil and gas, such uses may be more widespread once development is completed and reclamation occurs. Multiple use doesn't mean that all uses can occur at the same time, rather they may sequentially occur on the same landscape over time.

Page 1-9 Planning criteria "Planning and management direction will be focused on the relative values of resources and not on the combination of uses that will give the greatest economic return or economic output." Comment: We recognize that BLM is not bound by providing the greatest economic return. Nevertheless, it is inappropriate to weigh relative values based on the "American Idol" model of counting votes or comment letters. It is crucial for all land use decisions to be based upon scientific data and professional judgments rather than emotional rhetoric.

Page 1-9 "The planning decisions in the RMP will apply only to the BLM-administered public land surface and mineral estate in the planning area, including BLM-administered minerals that underlie nonfederal lands (split estate)." Comment: We recommend that the FEIS identify all standards recommended by cooperating agencies that differ from the standards those agencies apply to lands under their jurisdiction. It needs to be made clear to the public where substantial additional requirements are imposed on activities on federal land at the request of state and local governments.

Page 1-12 "Mineral Leasing Act of 1920" Comment: BLM must recognize that the Mineral Leasing act, as well as Wyoming's oil and gas regulations, requires prevention of the waste of oil and gas and protect correlative rights between parties on different lands. Prevention of waste is defined as, among other things, developing the oil and gas in a manner that achieves maximum economic recovery. Protection of correlative rights includes the concept of maintaining a level playing field so that operators on one set of lands do not face extraordinary costs not faced by operators of the same resource pool on adjacent lands. Fluid mineral resources underlying lands unavailable to leasing and without remnant existing leases would be unrecoverable. Resources underlying areas unavailable for leasing but with remnant existing leases would require substantial mitigation or offsite development actions such as directional drilling (so long as this does not infringe upon lease rights), and these areas would experience increased development costs. Leased hydrocarbon resources located beyond the technical or economic reach of directional drilling would be considered inaccessible and therefore unrecoverable. All mitigation comes at a cost. Rendering resources unrecoverable due to directional drilling and excessive surface use restrictions will likely result in a "waste of resources."

Response: The duration of an impact or disturbance is relative. When considered over a millennium or even a century, oil and gas development may truly be temporary; however, when considered over a human generation or human lifespan it may, in effect, be permanent. For example, the Salt Creek Field has been in operation since the 1880s and the Big Piney-La Barge area has been in operation since the 1920s. The RMP identifies impacts expected from the implementation of the various alternatives analyzed. The NEPA and BLM planning processes by design solicit public involvement and include cooperating agencies. BLM evaluates public comments on their substantive merit to the proposal, not on who submitted the comment or suggestion. You are correct, the MLA does intend the prevention of waste, but specifically the prevention of waste caused by an operator's actions. It does not obligate the Secretary of the Interior to make available all lands within his/her jurisdiction for lease or unrestricted development. To the contrary, FLPMA requires BLM to manage and protect surface resource values in conjunction with developing mineral resources. The Federal Onshore Oil and Gas Leasing Reform Act of 1987 requires the Secretary of the Interior to "regulate all surface-disturbing activities conducted pursuant to any lease issued under this Act, and shall determine reclamation and other actions as required in the interest of conservation of surface resources." The draft EIS/RMP is consistent with these requirements.

Comment: 1. Alternative 3 severely and needlessly limits energy production. 2. The Preferred Alternative is based on a limited RFD that one could argue is outdated. Any Record of Decision should be based on a more accurate RFD based on the size and scope of both the Jonah Field and Pinedale Anticline. 3. The Preferred Alternative is not consistent with the mineral leasing act especially in the areas designated for "minimal development". 4. The Record of Decision must evaluate the positive socioeconomic benefits of natural gas development. 5. The Record of Decision must comply with the Energy Policy Act of 2005.

Response: The draft EIS presents four alternatives that range from strong commodity production to strong environmental protection. The plan does take the nation's energy needs into consideration, but it also takes the other resources values within the planning area into consideration, as required by numerous laws and regulations. Alternative 2 purposely addresses enhanced commodity production, whereas Alternative 3 purposely addresses enhanced surface resource protection. Presenting four alternatives was done to meet the NEPA requirement to analyze a reasonable range of alternatives.

The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period.

The Mineral Leasing Act of 1920 states: "All lands subject to disposition under this chapter which are known or believed to contain oil or gas deposits *may* be leased by the Secretary (emphasis added)." It is within the Secretary's authority to designate certain lands unavailable for leasing. The draft EIS/RMP does address the socioeconomic affects of the four alternatives. The effects of natural gas development are part of the analysis. The management recommendations under all four alternatives are compliant with the Energy Policy Act of 2005.

Comment: The BLM should:

1. Update the RFD.
2. Defer site specific mitigations in the RMP.
3. Develop new winter drilling BMPs
4. Improve access for development
5. Ensure the RMP is compliant with the Mineral Leasing Act and the Energy Policy Act of 2005.

Response: The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period. BLM is required under NEPA and CEQ regulations to mitigate impacts to the extent practicable. A blanket deferral of all mitigations in the RMP is not reasonable or practical, nor is it consistent with FLPMA or regulations. The management recommendations under all four alternatives are compliant with the Energy Policy Act of 2005.

Comment: The following items are inappropriate for an RMP in Alternative 3: - Seasonal drilling stipulations. These are outdated techniques. With emerging technologies, wildlife can be protected without the seasonal stipulations. - Mandated directional drilling and clustered development - this should be an important feature in the subsequent project level NEPA processes. - Removes language that allows areas designated for minimal development to become developed if proven to be lucrative. This proposal

goes against the intent of the planning process. - Requirement of cleanest technology: should be utilized during the EIS process - not the RMP.

Response: The draft EIS/RMP is designed to analyze a reasonable range of alternatives. Alternative 3 is designed to provide an enhance level of surface resource protection and therefore a continuation of seasonal restrictions would be appropriate. Timing restriction conditions of approval for wildlife when used appropriately are very useful in maintaining areas for feeding, breeding, and sheltering. The problem is not that they are outdated, but when faced with a heavily developed energy field with constant human presence, noise, and surface disturbing activities, BLM cannot effectively use timing restrictions. There are certain activities such as maintenance actions that cannot be stipulated, and may still disturb wildlife.

Directional drilling and cluster development (e.g., multiple wells from a single pad, centralized production facilities, etc.) are some of the best management practices listed in Appendix 5 of the draft EIS/RMP for use when and where appropriate. They are not appropriate or necessary everywhere or all the time; therefore, it would be inappropriate to mandate their use. Such BMPs would not be appropriate, for example, in the case of an exploratory well in an area with minimal resource concerns and no other well pads or production facilities within a reasonable distance. BMPs, such as directional drilling and "clustered development", would be included in project-level NEPA documents.

The language allowing conversion from Minimally Developed to Intensively Developed is designed to allow for expansion of existing fields, such as the Jonah, Pinedale Anticline, and Big Piney-La Barge until the boundaries of productive areas for these areas are established through delineation wells. Prior to expanding the Intensively Developed Area boundaries, additional NEPA analysis would be required. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

The RMP builds a framework for subsequent project-level NEPA documents. Such a framework includes suggested and required mitigation measures, as well as best management practices. Therefore, it is appropriate for the RMP to set the framework for measures that could reduce impacts to air quality. Please note, however, the ultimate authority over air quality resides with WDEQ and EPA.

Comment: We ask that the RMP require the following:

1. That the BLM require best management practices by all industry operators. These practices should improve and change over the time period of this RMP.
2. Directional drilling as the standard practice for energy drilling the area being planned in this RMP. We have be told by industry experts that directional drilling is standard practice in other countries and is economically possible, especially in environmentally-sensitive areas, as is the case in much of the RMP area.
3. We ask that the RMP specifically outline an Adaptive Environmental Management system or something similar, for addressing unforeseen effects from the activities of increased energy activities.
4. The best possible mitigation practices and policies to address the impacts of the activities the BLM is permitting through this RMP.
5. A slower pace of energy development for the RMP area, to allow Pinedale and fellow Sublette County communities to adequately respond to the impacts that we are already struggling with.

Response: The best management practices listed in Appendix 5 of the draft EIS/RMP would be utilized when and where appropriate. They are not appropriate or necessary everywhere or all the time; therefore, it would be inappropriate to mandate their use. Such BMPs would not be appropriate, for example, in the case of an exploratory well in an area with minimal resource concerns and where there are no other well pads or production facilities within a reasonable distance. BMPs, such as directional drilling and "clustered development", would be included in project-level NEPA documents.

Directional drilling is certainly a best management practice to be used where feasible. Directional drilling is being used on the Pinedale Anticline with lateral reaches out to about ½ mile. Where feasible, horizontal drilling is being used in portions of the La Barge Platform. The viable lateral (horizontal) distance for directional drilling varies with the depth to the productive/target formation(s). That is, the shallower the formation, the shorter the lateral/horizontal distance.

It is neither reasonable nor necessary to have a blanket requirement for directional drilling for all wells. For example, exploratory wells where there are not existing well pads within the technical/economic direction offset distance for the depth of the target formation, where there are no resource concerns warranting offsite location of a well pad, or where other mitigation such as mat pads satisfactorily reduce the impact to surface resources.

While it is not called paced development, Alternatives 3 and 4 do establish concentrated development areas and also do establish areas not available for oil and gas leasing or for surface occupancy for oil and gas development. The unavailable areas would provide respite areas for wildlife and for offsite wildlife habitat augmentation projects. In essence, these scenarios would limit or restrict the overall rate/pace of development in the planning area.

Comment: Page 2-49 "Emphasis in these areas would be on providing contiguous wildlife habitat, providing wildlife refuge areas and migration routes, public land recreation opportunities, opportunities for appropriate non-surface-disturbing activities, and maintenance and improvement of current resource conditions. These areas are comprised of WSAs, which are non-discretionary closure areas for oil and gas leasing, and other areas that would be administratively unavailable for oil and gas leasing." Comment: BLM has not explained why Large Block NSO areas would not provide adequate protection for "administratively closed" areas. Page 2-116 Lands and Realty Management "f. Exceptions to ROW avoidance and exclusion areas (Map 2-32; Table 2-27, p. 2-165) would be considered if the activity would meet the following criteria:

- Not create substantial surface disturbance
- Be located in areas with a high potential for successful reclamation
- Have impacts that would be temporary
- Be compatible with other resource values being protected
- Be beneficial to the resources being managed."

Comment: We are concerned that large avoidance areas will result in wells not being drilled or produced if ROWs are limited. BLM needs to explain how the last criteria can be met along with those activities that are restricted in ROW exclusion areas. BLM also needs to clarify whether these restrictions apply only to major corridors as opposed to much smaller oil and gas lease related flowlines, pipelines and roads.

Pages 2-118, 2-120–122 Prohibition of water disposal pits. Comment: The term "water disposal pit" is undefined, which makes it unclear whether BLM is referring to produced water pits or reserve and completion pits. This term must be clarified. We assume this would not apply to reserve and completion

pits since closed systems are either uneconomic or technically infeasible in many situations and requiring their use would be excessive.

Response: The impact analysis for wildlife resources on page 4-210 of the draft EIS states the Unavailable Area designation *would* protect wildlife habitat from surface disturbing activities; whereas the Large Block NSO designation *could* protect wildlife values. That is exactly what the allowance for exception provides. If an avoidance area must be crossed, and impacts can be addressed reasonably, then an exception can be issued. All valid and existing rights would be honored. If an area has current oil and gas leases, ROWs would be authorized to provide reasonable access and transportation of natural gas products. ROW avoidance and exclusion areas would apply to all ROWs. Definitions for water disposal pits, water evaporation pits, surface discharge, temporary pits, and permanent pits have been added to the glossary in the final EIS.

Comment: The DRMP includes numerous restricted areas but gives very little or no justification for creating them. USQ requests that the basis for prohibiting development or surface use in the following areas be clearly indicated or that the restrictions be deleted. If the restrictions are retained in the FRMP, USQ requests that the BLM Reservoir Management Group (RMG) quantify the magnitude of the lost energy reserves caused by closure of these areas:

1. Large block NSO area such as the large NSO area west of Pinedale in the preferred alternative which may have potential for development
2. Expanded buffer areas around leks, Lander Trail, Sublette Cutoff Trail and New Fork River
3. VRM Class I and Class II areas
4. Areas that are closed to leasing (pg. 4-32)
5. Areas that are identified as unsuitable for surface disturbance or occupancy (pg. 4-32). This is subjective and must be deleted or the areas must be spelled out.
6. Slopes greater than 25% and sensitive soils with slopes greater than 8% (pg. 4-63).

These areas are also designated as right-of-way ("ROW") exclusion areas throughout the DRMP. Again, no justification for the exclusion is given. The maps provided in the DRMP are inadequate and do not allow the reader to determine precisely where the proposed exclusion areas are. BLM must provide justification to support designating these areas as off-limits to pipelines, access roads and other ROWs. This would deny access to existing leases and other valid authorizations. Blanket restrictions that do not allow for case-by-case project analysis are unreasonable.

Response: The rationale for decisions included in the Preferred Alternative of the draft EIS is found in the impact analyses of the various alternatives, which apply different levels of restrictions. The projected lost energy reserves for the referenced restricted management areas are collectively reflected in the recovery estimate for each alternative.

Please see Table 2-27 on pages 2-165 and 2-166 of the draft EIS, which describe avoidance and exclusion areas per alternative in greater detail. An adequate range of alternatives is provided for analysis purposes. Alternatives 2 and 4 are less restrictive than Alternative 3 and all provide for looking at exclusion areas on a case-by-case basis if impacts could be adequately mitigated. All valid existing rights will be honored.

Comment: The document has a poorly developed geological hazards section. Landslides are mentioned, but no further information is provided. The Wyoming State Geological Survey readily has available map coverage of existing and potential landslides for the entire state. Seismic hazards are poorly addressed.

The entire resource area is lumped into a "very high" seismic hazard zone which is incorrect. Once again, the Survey has seismic hazard maps available as does the USGS.

Oil and gas well casing and cementing requirements for the protection of groundwater quality is not addressed. It is mentioned in Chapter 2, where reference is made to Appendices 2 & 5; but, those appendices do not address the issue. Also stated in Chapter 2 is the following quote: "Criteria for determining depth of fresh water are found in Appendices 2 and 5." No information on this topic was found in either appendix. Recent news reports point to hydrocarbon contamination of water wells in the Pinedale and Jonah Field areas; and, oil and gas wells will be an obvious possible source of this contamination.

Impacts to surface owners (private and state) of mineral leasing on the 287,400 acres of nonfederal lands/federal minerals in the resource area appear to be poorly addressed. This split estate issue is of great concern. It should be addressed whether or not it falls within the realm of RMP decisions

Response: The Geologic Hazard Section of Chapter 3 has been revised in the final EIS to incorporate more complete geologic hazard data from Wyoming State Geological Survey databases.

BLM does require operators to use fresh water drilling techniques to drill through all known fresh water aquifers encountered. BLM also requires operators to set surface casing through the fresh water zones and then cement the backside of the surface casing from the total depth of the casing back to the surface to seal the aquifers for the well bore. The following item is being added under the Appendix 5 heading "Reducing Impacts From Fluid Mineral Construction, Operation, and Reclamation": Set and cement surface casings to sufficient depths to protect fresh-water–bearing zones.

The referenced text on page 2-35 of the draft EIS has been changed in the final EIS. A discussion of impacts to private landowners of leasing split estate lands has been added to the final EIS.

Comment: I believe that the resources can be developed and the environment protected in the Upper Green River Valley by implementing a resource management plan that:

- Paces development, including not allowing new major gas fields to be developed until development in existing and expanding fields has been completed;
- Preserves and enforces seasonal drilling stipulations that protect wildlife, and strengthen those shown to be deficient (especially greater buffer distance around sage grouse leks);
- Withdraws important wildlife and scenic areas from future oil and gas leasing availability, including all of the Wind River Front and greater Trapper's Point area, the Ryegrass/ Cottonwood area, the Fontenelle elk winter range, and the upper Green area north of Warren Bridge;
- Mandates the clustering of new infrastructure and the use of directional drilling to minimize industry's footprint on the ground;
- Removes loopholes that allow areas designated for minimal development to become intensively developed and allow surface drilling in No Surface Occupancy (NSO) areas;
- Requires use of the cleanest technologies and environmentally protective practices.

Response: Development rates and infrastructure scenarios are project-level issues that can be addressed through project-level EISs. Seasonal restrictions are already designed to minimize impacts to the target species during crucial life-cycle periods. Permanently setting areas aside from leasing or development is beyond the authority of this RMP. Such "permanent" set-asides/withdrawals require congressional

approval. It is not possible to cluster development until exploration has confirmed the characteristics and extent of the underground resource. The projected boundaries of proposed "Intensively Developed Field" areas is based on our current level of knowledge where high intensity development, in terms of numbers of wells and surface spacing, is occurring or is anticipated to occur. The boundaries are designed to allow intense development within the area, but allow for the maximum level of surface resource protection outside the area. As new delineation wells are developed to define and/or refine the productive limits of the existing fields, or as exploratory wells are developed in areas outside the existing field, it may become necessary to expand the "Intensively Developed" areas. The conversion criterion provides the mechanism to accomplish this in a methodical and systematic manner.

Comment: Page 4-77 Table 4-10, Acres Available for Conventional Oil and Gas Development under Alt. 4 Development potential Alt 1 Alt 4 %change

- Very High 34,760 34,760 0
- High 98,120 103,260 5
- Moderate 481,970 493,530 2
- Low 421,910 404,000 4
- No Potential 0 0 0
- Total 1,036,760 1,035,550

Comment–BLM has failed to disclose how many lease acres and producing wells exist within each of these development potentials. Specifically, it is unknown how many acres in each category are NOT available under each of the alternatives. The acreage under Alternative 4 totals 1,03,5550 while the acreage available under the 4 oil and gas management areas totals 1,219,254 acres. This discrepancy must be rectified.

Page 4-113 "Under continuation of current management (alternative 1), the pace of gas development and production is expected to include a 183% increase in the number of wells between 2006 and 2020. Page 4-127 Under Alternative 4, the pace of gas development and production would be expected to be very similar to the current management situation, with a 181% increase in the number of well between 2006 and 2020 8383 wells in 2020; 85% of those wells are assumed to be federal wells. Estimates are for an average of 372 wells to be drilled a year through 2020 (317 federal and 55 state/private" Comment: 317 wells per year for 20 years equals 6,340 wells; substantially less than the federal well 7,136 RFD figure.

Page 4-244 "Surface use restrictions, such as timing restrictions, could also cause an operator to move to nearby private or state land with no such restrictions, and drill a well that could result in drainage of federal reserves and a loss of federal revenue." Comment: BLM has failed to consider those activities or development that would be deferred or forgone due to the extra costs associated with directional drilling, seasonal closures, and other mitigation requirements. Page 4-250 "The implementation of BLM's mitigation guidelines, restrictions on surface use, continued implementation of healthy rangeland standards, and monitoring efforts would provide protection to soils on federal lands and lands with federal subsurface minerals, which would help reduce cumulative effects." Comment: The relationship of the oil and gas BMPs, operating standards, and oil and gas mitigation guidelines to the healthy rangeland standards is unclear and must be explained.

Response: The number of acres of leased land within each area having hydrocarbon potential has been added to Chapter 3 of the final EIS. The number of acres of land that are unavailable for leasing within each area having hydrocarbon potential are shown in Tables 2-32 and 2-33 of the draft EIS. The RFD does consider those activities or development that would be deferred or forgone due to the extra costs associated with directional drilling, seasonal closures, and other mitigation requirements,, which accounts for the RFD differences between the alternatives. The relationship between BMPs, mitigation guidelines,

restrictions on surface use, and rangeland health standards on page 4-250 of the draft EIS involves each having components or criteria that would reduce impacts to the soils resource. The statement does not intend to compare these components to each other, but rather to show that collectively they would reduce the cumulative impacts to soils. Please note that BMPs and mitigation guidelines are not exclusive to oil and gas development, but are applicable to all surface-disturbing activities.

No Surface Occupancy (NSO), Wildlife Habitat, Seasonal Stipulations

Comment: We understand that No Surface Occupancy is no protection, since pipelines and roads are allowed on NSO land for extraction of minerals on private and state lands.

Response: Pipelines and roads would be allowed for access to private and state lands no matter the classification of BLM lands. BLM is required to provide reasonable access to state and privately owned lands.

Comment: Much of the above area is classified as No Surface Occupancy (NSO) leasing category. We are not confident that this completely protects the surface. The RMP allows it to become available for surface occupancy for a number of circumstances. Most of these circumstances are concerned with mineral extraction and not land protection.

Response: The areas unavailable for leasing have been revised in the final EIS.

Comment: Furthermore, it appears that the majority of all areas are already leased thus almost any area could potentially move into the intensively developed category at any time, jeopardizing protection of wildlife populations and habitats that had previously been nominally afforded. This problem extends to the "large block NSO areas" because narrative on page 4-210 indicates that "conflicts could arise if these areas are determined to have oil or gas drainage issues" and essentially the NSO area designation would be compromised for energy development. NSO designation does not apply to areas within the "large block" designation that have already been leased. Page 2-147 specifically states that in large block NSO areas the "restriction does not violate the leaseholder's/operator's lease rights." The document needs to specify just how much of these large block areas are currently leased. If the vast majority of the planning area is already leased, the specified designations seem to be of little conservation value. If restrictions will apply that effectively protect resources in NSO areas despite the area having been leased, those restrictions should be carefully and clearly explained.

Response: More information about the current leasing status of the unavailable and NSO areas, and how those leases would be managed, has been added to the final EIS.

Comment: Furthermore, the level of BLM's retained authority, rights and obligations and BLM's willingness to exercise those rights should be fully explained if there is to be any assurance of (and claims of) protection of wildlife resources in these NSO areas. Certainly if the BLM can retain the NSO designation on the large block areas as leases expire or are retired, wildlife populations will benefit.

Response: Establishing and managing Large Block NSOs is certainly within BLM's authority. Placing the NSO objective/management opportunity in the RMP, in and of itself, is a statement of BLM's willingness to exercise its authority. Purchasers of NSO leases would do so knowing that they would not be able to occupy the surface to develop wells. NSO designation would apply to new oil and gas leases issued on any and all federal lands *and mineral estates* (regardless of surface ownership) within the respective unavailable or NSO boundary. The NSO designation does not apply to any existing leases (i.e., leases issued prior to the completion of this RMP) that occur within the NSO areas. The issuance of an oil and gas lease gives the leaseholder certain rights. It does *not*, however, give them the right to violate or abrogate any conditions, such as an NSO, under which they purchased the lease.

Comment: "Large Block NSO Areas" would be available for leasing, but subject to a NSO stipulation. 2-48, 2-121. Existing leases would be managed under existing lease terms and stipulations. Id. That said, it appears-but is not absolutely certain; this should be clarified-that existing leases would be subject to somewhat intensive regulation and management, including efforts to protect wildlife habitat, require best management practices (BMP), and the imposition of needed conditions of approval (COA). 2-121. Moreover, the NSO stipulation applicable to new leases in these areas unfortunately is far from absolute; the NSO stipulation could be "lifted" if operators propose such and if it appears drainage of federal oil and gas is occurring. 2-48, 2-121. Furthermore, these lands could be converted to Intensively Developed Fields if the above-mentioned 160-acre per well bottom-hole spacing is reached. Id.

Response: The areas available for oil and gas leasing, and subject to NSO stipulations, have been revised in the final EIS.

Comment: Item: Page 2-47, Section 2.5.2, Oil and Gas Management Areas for Alternatives 2, 3, and 4 "Emphasis in these areas would be on providing contiguous wildlife habitat, wildlife refuge areas and migration routes, public land recreation opportunities, opportunities for appropriate non-surface disturbing activities, and maintenance and improvement of current resource conditions while allowing leasing of the areas for oil and gas production. New oil and gas leases in these areas would be encumbered by NSO stipulations. Oil and gas operators would have the right to explore existing leases. Previously existing leases could be occupied on the surface unless the existing lease carries an NSO stipulation." Comment: How much of this NSO area is currently leased without NSO stipulations? If development is proposed, environmental documentation would be prepared to analyze impacts and to determine operating methods, mitigation, and BMPs to be used in further development of the field. But, would the emphasis in the area remain on non-surface disturbing activities or shift to efficient and complete development of oil and gas? Is this an area where BLM would REQUIRE offsite mitigation?

Response: BLM does not have the authority to require offsite mitigation. Information on how much of the NSO and unavailable areas are currently leased, and how many wells have been developed in these areas, has been added to the final EIS. For areas with existing oil and gas leases, management emphasis on the leased areas could change based on results of drilling and information gained about any subsurface energy resource that may be present. The RMP provides guidance for changes in management emphasis in areas previously leased, if a discovery is made.

Comment: Page 2-180 Alternative 4, conventional gas potential. Comment: BLM fails to discuss how many leases or producing wells currently exist in the newly proposed NSO areas and whether any or all currently have NSO stipulations. In comparing page 4-77 with page 2-180, 34,760 acres are shown as having very high gas potential whereas only 6,520 acres are shown in the table on page 2-180. Does this mean that the remaining 28,240 acres are available for leasing with standard lease terms? Additionally, of the 103,260 acres of high gas potential, 34,890 acres appear leaseable with standard terms and conditions. It also appears that little, if any, of the land classified as moderate potential would be available without special restrictions.

CHAPTER 3 Page 3-37 The planning area contains approximately 1,199,280 acres of federal mineral estate underlying 922,880 acres of federally owned surface and 276,400 acres of private and state lands. Based on the Mineral Report for the planning area, 287,230 acres were nominated and offered for lease between 1996 and 2001. As of June 2004, approximately 1,174 BLM-administered federal oil and gas leases covered 734,020 acres, or approximately 61% of the federal mineral estate in the planning area.

Response: Information on existing leases and producing wells in the unavailable for leasing areas has been added to the final EIS. The Large Block NSO areas have been eliminated in the proposed RMP. Page 4-77 of the draft EIS discusses acres available for leasing; page 2-180 discusses acres unavailable or

NSO. The comparisons made between these two tables are not appropriate. Because of overlap of areas with seasonal limitations with other restrictions, the areas are not additive (see footnote 5 on page 2-182 of the draft EIS).

Comment: APC has reservations regarding the proposed Large Block NSO Areas under Alternative 4, and objects to the significant acreage withdrawn from oil and gas leasing under Alternatives 3 and 4. As the BLM is aware, the lands within the Pinedale Resource Area have significant potential for oil and gas development. See RMP DEIS Map 4-1 and 4-2. Isolated leases will not be developed; responsible operators will only drill in unproven areas after assembling a significant leasehold position. The BLM has previously recognized this need for control of a reasonable acreage block. See Prima Oil & Gas Co., 148 IBLA 45, 51 (1999) (BLM policy to suspend leases when "a lessee is unable to explore, develop, and produce leases due to the proximity, or commingling of other adjacent Federal lands needed for logical exploration and development that are currently not available for leasing"). The BLM decision to close significant portions of the planning area to leasing, or to make significant portions only available with NSO stipulations, will have major impacts upon future exploration and development in the area. The BLM has not adequately studied and disclosed the negative impacts this decision will have upon the nation's domestic energy supply or disclosed the impacts this management approach may have upon the local and regional economies. Further, given the substantial amount of acreage the BLM is withdrawing from oil and gas development, the BLM is required to comply with the withdrawal procedures outlined in FLPMA. See 43 U.S.C. §§ 1702(j), 1714 (2006); 43 C.F.R. § 1610.6 (2006). There is no indication in the DEIS that the BLM has or intends to comply with the mandatory notification procedures outlined in FLPMA. In order to prevent unnecessary litigation or protests to the Director of the BLM, the Pinedale Field Office must comply with the appropriate withdrawal procedures.

Response: The areas available for oil and gas leasing and subject to NSO restrictions have been revised in the final EIS.

Comment: Strengthen seasonal drilling restrictions;

Response: Seasonal restrictions are already designed to minimize impacts to the target species during crucial life-cycle periods.

Comment: I'm very concerned about the BLM's proposed oil and gas development in the upper Green River valley. My first concern is that this is bad energy policy: in 2007 we should be shunning fossil fuels like the plague. However, I should probably be addressing that concern to some other department. My second concern is that this region is an important N-S wildlife corridor, and, like all dry areas, the land is very fragile. I have spent time in the upper Green River valley, and would hate to see a short-sighted energy policy doing long-lasting damage to this delicate and beautiful environment.

Response: The alternatives, including the Preferred Alternative, provide for protection of important wildlife migration corridors, and particularly at bottlenecks along those corridors.

Comment: The conditions of approval for development plans that are completed or in the final planning stages must be supported in the FEIS and eventual ROD. For example, adequate mitigation for the Pinedale SEIS, which is in the final stage of planning, call for BLM to allow currently unleased areas adjacent to the Pinedale Anticline Planning Area to remain unleased until the Anticline crest is developed and again functional for wildlife. To accomplish this, the RMP must designate those unleased areas as Unavailable for Leasing until the wildlife function returns. Similarly, assurances of unleased areas adjacent to the other Intensively Developed Fields in the Field Office Area remaining unleased will almost certainly be needed for mitigation of these fields. We recommend that key habitats (crucial winter

ranges, sage grouse seasonal habitats, specific sensitive species habitats) adjacent to those areas also be designated as Unavailable for Leasing.

Response: The final EIS has been changed to address the unleased areas within and adjacent to the PAPA.

Comment: Objective 8 discusses making other leaseable minerals available for exploration and development if they don't conflict and impact already limited available important habitat areas. If off-site mitigation areas include these lands that have other leaseable mineral it places wildlife in jeopardy once again. These sites, if identified as off-site mitigation areas, truly need to stay development-free.

Response: Other than oil and gas leases, there are currently no leases for mineral development in the planning area. Based on the Pinedale Mineral Occurrence and Development Report, the potential for development of other "leasable" minerals is very low. Additional NEPA analysis and possibly an RMP Amendment would be required before such leases would be issued.

Comment: Page 4-209, paragraph 2, discusses "allocating some forage increases to wildlife" and the establishment of "forage reserves" to mitigate the impact of livestock grazing on wildlife. We find no discussion of the reduction of AUM's anticipated from this re-allocation of forage and suggest that such an analysis be conducted. We also request a map that shows where these "forage reserves" would be located. Paragraph 6 states that "These estimates are close to those projected for Alternative 2, which infers that a high commodity extraction could be attained without removing necessary stipulations and COAs important for the perpetuation of wildlife resources." In the alternative, the removal of certain stipulations and COA's in Alternative 4 will allow a high level of extraction in the most time efficient manner (year round drilling from multi-well pads) rather than extending the development period, possibly resulting in a greater level of species disturbance and displacement. The condensed timeframes provided by Alternative 4 allows the area to settle into the relative quiet of the production phase more quickly, resulting in a benefit to wildlife. Paragraphs 7 and 8 attempt to compare and contrast the impacts of intensive and minimal development. The inference is that intensive development will provided no protection for sage grouse or big game during sensitive periods, when in fact Alternative 4 provides protections for these species "to the extent practicable". We agree that the Intensively Developed Fields scenario will have a greater impact on wildlife when compared to the Minimally Developed Area scenario.

Response: The RMP does not establish specific "forage reserves", but does set the framework for them — see action item k on page 2-119 of the draft EIS. Because no specific reserves are established, a map depicting them cannot be generated. The comparison of Alternatives 2 and 4, in terms of the total number of wells projected for each, is appropriate based on their comparative similarity. The referenced statement is intended to show that Alternative 4 would attain nearly the same number of wells while retaining more mitigation to protect wildlife. Concerning your observations on paragraphs 7 and 8 of page 4-209 of the draft EIS, BLM concurs.

Comment: Page 2-143 Unavailable Areas would be managed for protection of wildlife habitats through indefinite postponement of the availability of lands for oil and gas leasing. Comment: Indefinite postponement of leasing is an unacceptable management approach and is inconsistent with the provisions of BLM national energy policy (chapter 1, page 15) which states, "Public lands shall remain open and available for mineral exploration and development unless withdrawal or other administrative actions are clearly justified in the national interest." Page 2-148 "Leases that are currently encumbered by seasonal restrictions would be subject to additional environmental analysis to decide whether exceptions should be made for new construction. For minimally developed fields, no exceptions to seasonal restrictions for

exploration would be permitted. Comment: BLM needs to describe what types of exceptions will be considered once an area goes into intensively developed status.

Page 2-155 states under "e. Geophysical operations on BLM-administered surface in the Wind River Front Management Area would be restricted to designated roads and trails or to non-vehicle-based methods." Comment: Since ATV's, due to their very design, do not cause any appreciable disturbance or damage, they should never be considered as vehicles subject to any the above limitations. The following clause should be included after the existing sentence in (e.), stating, "ATV operation is considered a casual use activity and therefore considered a non-vehicle based method in this RMP."

Response: It is in the national interest to provide for the continuation of surface resources such as wildlife habitats. Management of Intensively Feveloped Fields is described elsewhere in this section and would be refined at the field development EIS stage.

Comment: The latter quote regarding bird netting is so absurd on another level that it can only be described as stupid. First, netting by definition implies passage of the suns rays, including heat unless its mesh density is so high as to be opaque. Such density is unnecessary to be effective as a bird deterrent. Thus pit evaporation need not be substantially impacted. Second, migratory birds are absent in winter when the cited snow loading problem is invoked. Third, snow flakes in our region are not so large as to accumulate on the mesh with high weight IF the mesh is large enough, but conceding that point, snow events here are rarely unaccompanied by high winds to clear the netting. Even con-ceding that point, operators WILL find a solution if it is necessary to their continuation of business....and that necessity is sorely lacking as a requirement in any of the alternatives discussed.

Response: Netting would need to be of tight enough weave to prevent entry of all sizes of birds, which would increase the shading effect on fluids in the reserve pits. Greenhouses frequently use netting to provide shade while allowing airflow. Netting used on reserve pits on the Pinedale Anticline in 2000–2002 did, in fact, retain snow accumulations that caused the netting to sink into the pit fluids.

Comment: I have a concern about some of the recommendations in the Pinedale RMP. In a general sense, I believe the RMP is too site-specific in the area of land designation specifically in the No Surface Occupancy recommendations for Sage Grouse. The BLM is suggesting an increase in land protection for Sage Grouse where the NSO would grow from 1/4 mile to anywhere from 3 to 4 miles. What is the justification for such a large increase? Are such land use decisions appropriate in an RMP/ Would it be better to review these decision more on a project by project basis? Does science support the NSO designations and has the science been peer review? How much gas production will be lost with expanded NSO stipulation and what are the socioeconomic ramifications?

Response: The draft EIS/RMP is designed to present a reasonable range of alternatives and make projections of the impacts associated with each alternative. Accordingly, the document addresses varying levels of oil and gas leasing and development, as well as varying levels of surface resource protection. Chapter 4 of the draft EIS addresses the anticipated impacts, including socio-impacts, of both the oil and gas development and the resource protection scenarios. Leasing and development would continue to occur in the planning area under each of the alternatives. The recovery estimate for each alternative collectively reflects the projected lost energy reserves for the referenced restricted management areas, including the NSOs. There is only one alternative that analyzes changing the NSO area from ¼ mile to 3 miles. This is a very appropriate land use decision, which rigorous statistical analysis supports, and, if chosen, would be applied throughout the field office for surface-disturbing activities.

Comment: Page Number & Issue:4-66: "In addition, a NSO restriction would be applied to all suitable nesting habitat within 3 miles of active leks (Table 4-3, p. 4-57). This would directly impact fluid mineral

development on 506,530 acres. Fluid mineral development would require offsite methods, and resources beyond the technical and economic capabilities of the offsite method would become unavailable for public use. If the entire 3-mile zone is suitable nesting habitat, this restriction would definitely come to impact hydrocarbon recovery. Existing leases within the NSO area could be developed under the lease terms. The hydrocarbon development potential within 3 miles of the leks varies from low to high for both CBNG and non-CBNG development, with less than 1% in areas with very high hydrocarbon potential and 6% in areas of high hydrocarbon potential. The remaining 93% of the 3-mile NSO restriction is within areas of moderate to low potential for hydrocarbon. Surface disturbance and disruptive activities would be prohibited within 3 miles of active leks from March 15 through July 15. This would potentially prohibit well completion and well maintenance actions on existing wells within 3 miles of those active leks during the restriction period. This would prolong the time to fully develop a field, which in turn would prolong the period that development operations occupy wildlife habitats. The impacts from prohibiting surface disturbance on all greater sage-grouse winter concentration habitat; from limiting well pad development to one well pad per section in greater sage-grouse habitat; and from allowing NSO on crucial big game winter range habitat, within big game migration routes and bottlenecks, or within 825 feet of active raptor nests (1,000 feet for ferruginous hawks), would directly affect oil and gas leasing and development.

As stated previously, fluid mineral development in these NSO areas would require offsite methods, and resources beyond the technical and economic capabilities of the offsite method would become unavailable for public use. Existing leases within the NSO area could be developed under the lease terms. The impact of the one-pad-per-section restriction on oil and gas development could be lessened by implementing exceptions to meet WOGCC spacing requirements. The hydrocarbon development potential of these NSO areas varies from low to high for both CBNG and non-CBNG development." Recommendations: Provide scientific, peer reviewed justification for restrictions. Quantify the amount of oil and gas reserves that would be unrecoverable by increasing the size of the NSO from the current 1/ mile restriction to a 3 mile NSO.

Response: The draft EIS presents four alternatives that range from strong commodity production to strong environmental protection. The plan does take the nation's energy needs into account, but also takes the other resources values within the planning area into consideration, as required by numerous laws and regulations. Alternative 2 purposely addresses enhanced commodity production, whereas Alternative 3 purposely addresses enhanced surface resource protection. This was done to meet the NEPA requirement to analyze a reasonable range of alternatives. The reference text applies to Alternative 3, the environmental protection alternative. As such, it is reasonable to address stronger restrictions to protect wildlife resources. The 3-mile lek buffer is derived from Clait Braun's "Blue Print for Sage-grouse Conservation and Recovery". The recovery estimate for each alternative collectively reflects projected lost energy reserves for the referenced restricted management areas.

Comment: Page Number & Issue:4-73: "The impacts related to fluid gathering systems and migratory bird exclusion devices for pits would be the same as under Alternative 3." Recommendations: Explain and cite source or delete.

Response: The management prescribed in Alternatives 3 and 4 pertaining to fluid gathering systems and migratory bird exclusion devises for pits are the same. The impact analysis in Chapter 4 addresses the anticipated impacts of these prescribed measures. Because the measure would be the same in both alternatives, it is completely appropriate that the Alternative 4 impact section reference the Alternative 3 impact discussion.

Comment: More important, even though BLM states that Large Block NSO areas would be available for leasing with NSO stipulations, the agency will likely) implement the more conservative oil and gas leasing policy (i.e., Large Block NSO areas would be unavailable for oil and gas leasing). Implementing

this more conservative oil and gas leasing policy will restrict the development of new and improved extraction technology and thus prevent the discovery of much needed additional resources. The BLM should consider sensitive areas on a case-by-case basis and remove all express and implied statements indication that Large Block NSO areas would be unavailable for oil and gas leasing.

Response: If BLM adopts an RMP alternative that makes certain lands available for leasing subject to an NSO restriction (whether large-block or site-specific) those lands would then in fact be *available* for leasing. Potential lease purchasers need to be fully aware that they will not be able to occupy the surface within an NSO area. The draft EIS/RMP does consider certain NSOs, such as elk feedgrounds, on a site-specific (case-by-case) basis and others, such as the Large Block NSO, on a broader scale. In both cases, the restrictions would be imposed to protect surface resource values. The areas available for oil and gas leasing, and subject to NSO restrictions, have been revised in the final EIS.

Comment: Page 4-70, 3rd Paragraph Comment: States that "about 205,100 acres would be designated as Large Block NSO Areas". An NSO area is defined as a "Land use allocation or approval restriction used when surface disturbance cannot be mitigated and must be prohibited" (page G-14). Most sections of the RMP state that any resource to be retrieved from an NSO area would be accomplished by directional drilling. Page 2-121 states that "c. The NSO stipulation could be lifted in specific areas if proposed by operators and under the following circumstances: 5. Off-setting wells could be developed directionally from federal lands adjoining the NSO area, if the directional wells would be economically feasible. If a directional well is not economic, but a vertical well would be, the NSO would be relaxed, but only on sufficient area to allow off-setting well(s) to be developed."

The wording is specific in that it states "the NSO WOULD be relaxed." This is not stated anywhere else in the document. Everywhere else in the document it is stated that only directional drilling would be used to recover any resource from an NSO area and that any resource beyond the capabilities of directional drilling would be unrecoverable. It is not feasible, in the exploration phase of development, to drill directional wells. The BLM must be clear on this point and allow Operators to drill vertical wells during the exploration phase of development on NSO areas.

Response: The language on page 2-121 of the draft EIS, item c, is solely intended to address the drainage of federal minerals within the NSO areas through non-federal wells. Language in the final EIS has been changed to drop "if proposed by operators" and now reads: "The NSO stipulation could be lifted to off-set the drainage of federal minerals in specific areas under the following circumstances:".

Comment: Page 4-73, Last Paragraph **Comment:** States that large areas of contiguous sagebrush would be protected, creating a virtual NSO area in a Minimally Developed Area and the impacts would be the same as those described for the 1-mile NSO restriction in the Minimally Developed Areas under Alternative 3 (page 4-65). The wording on page 4-65 is clear that the NSO restriction is from 3/1 through 5/15, but the wording here is confusing It needs to be defined as to how long the NSO restriction would be in place.

Response: The sage-grouse NSO is a year-round surface disturbance restriction within ¼ mile of an occupied lek, and vehicular activity is restricted to existing roads and trails within a 1-mile radius of occupied leks from March 1 to May 15. All other NSOs are also year-round surface disturbance prohibition areas.

Comment: EOG has concerns regarding the creation of the Large Block NSO Areas under Alternative 4, and the significant portions of the planning area made unavailable for future oil and gas leasing under Alternatives 3 and 4. As indicated on Maps 4-1 and 4-2 and Appendix 10, the lands within the Pinedale Resource Area have significant potential for oil and gas development, including coalbed natural gas

development. Although the BLM suggests existing oil and gas leases in these areas may be developed, pgs. 2-82, 2-121 - 122, it will be virtually impossible, and not economically viable to develop isolated leases. Any responsible oil and gas producer who decides to take the risk of exploring a wildcat area must do so only after assembling a large enough block of leasehold acreage so that, if the drilling is successful, it can obtain an adequate return on the high risk dollars invested. The BLM has, in other contexts, recognized this need for control of a reasonable acreage block. See Prima Oil & Gas Co., 148 IBLA 45, 51 (1999) (BLM policy to suspend leases when "a lessee is unable to explore, develop, and produce leases due to the proximity, or commingling of other adjacent Federal lands needed for logical exploration and development that are currently not available for leasing"). The BLM must recognize, study, and report the economic impact its decision to close significant portions of the planning area to leasing, or to make significant portions only available with NSO stipulations, will have upon future exploration and development in the area. The BLM must also study and disclose the negative impacts this decision will have upon the nation's domestic energy supply. The BLM's decision may deprive lessees, the local communities, the State of Wyoming, and the federal government the economic benefits of oil and gas development.

Response: The RFD and the socioeconomic analysis in the draft EIS did consider the impacts of Large Block NSO. The areas available for oil and gas leasing, and subject to NSO stipulations, have been revised in the final EIS.

Comment: By limiting wellpad densities to only one well per 640-acre section, the BLM would significantly reduce oil and gas development across the planning area. Economic and technical limitations associated with directional drilling could effectively eliminate oil and gas development in large areas of the Pinedale Resource Area. Further, directional drilling activities are often unfeasible during initial exploration activities. If imposed, this mandate is effectively the same as a NSO restriction which will reduce exploration activities.

Response: Alternative 3 is designed to analyze more strict surface resource protection/enhancement measures. The restriction also carries the caveat that exceptions could be made to comply with Wyoming Oil and Gas Conservation Commission (WOGCC) spacing rulings. The following changes has been made to this restriction: "To minimize fragmentation of sage-grouse habitats, well pad densities would be limited to one pad per 640-acre section, or one per section for sections smaller than 640 acres, one per lease if the lease is smaller than 640 acres, or one per detached lease parcel segment if the segment is smaller than 640 acres, Exceptions could be granted to comply with WOGCC spacing requirements. This restriction would not be applied to sections, partial sections, leases, or detached lease segments that already contain one or more than one existing well.

Comment: The NSO mitigation guideline is likewise problematic. We are not even certain what the intent is with regard to this guideline. Is this a tool for mitigation above and beyond NSO stipulations placed on lands at the planning stage? Or is it only a tool for removal of NSO stipulations under the RMP? This guideline needs reworking so that its intent is clear and the process for implementing the guideline is clearly defined.

Response: Refer to paragraph 1 in Appendix 3 of the draft EIS for the intent and purpose of the mitigation guidelines. Additional clarification is not needed.

Comment: PAGE: 4-72, SECTION: 4.7.1, RECOMMENDED CHANGE: REVISE if withdrawn; otherwise delete: [Large Block NSO Areas would be available for fluid mineral leasing with an NSO stipulation. Management of existing leases within the Large Block NSO Area would be governed by the stipulations on those existing leases. Postlease actions would be subject to mitigation prescribed by site-specific NEPA analysis and by the mitigation prescribed by this RMP, provided that neither the NEPA

nor RMP mitigation violate the leaseholder/operator's lease rights. The management prescriptions for Large Block NSO Areas applicable to Alternative 4 and as listed in Chapter 2, are essentially the same as those prescribed for the Minimally Developed Areas discussed above; consequently, the impacts would be the same. The impacts would essentially be the same as those described for NSO areas throughout the preceding discussion. Areas beyond the economic and technical capabilities of offsite development techniques would become unavailable for public use] (STRIKEOUT) EXPLANATION: See Comment Ch. 2-#85; Large block NSO is a withdrawal. BLM must withdraw these blocks or allow leasing. Also unlawfully limits rights of access to private minerals. See Comment Ch. 2-#153 Opinion of the Solicitor, Legal Responsibilities of BLM for Oil and Gas Leasing and Operations on Split Estate Lands (April 1988) (concluding that BLM ownership of mineral estate does not permit limits on privately-owned surface).

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: Minerals: Options available to mitigate potential impacts of oil and gas leasing are listed in appendix 7, page A7-1 last 3 lines. The No Surface Occupancy stipulation does not mean what it says. You cannot rent a home to someone and not let them live in it and you cannot lease acreage for oil and gas development and not let them enter onto the area and drill for hydrocarbons if the lessee so chooses. Appendix 7 gives the true insight to the game plan. If the area cannot be protected by normal mitigation measures the NSO stipulation would be applied. If it cannot be protected by NSO and not reachable by normal drilling measures is within 1/2 mile of a drilling site, it should not be leased. In table 2-32, page 2-179 it states that in the large block NSO areas that there are 202,580 acres with moderate hydrocarbon potential, 354,570 acres with low potential and 48,340 acres with no potential. If the resource values are great enough that a block NSO lease stipulation is required to adequately mitigate the impacts on the ground and the area has low potential for hydrocarbons, then why lease it at all? As you can see from the Mesa oil and gas can quickly become the dominant use which precludes even seasonal conditions for ungulates and grouse. Options on the lease include the option of not allowing development of "the entire lease acreage". Since the agreed upon directional limits that are economical on the Mesa is about 1/2 mile this means that you would have to have a lease one mile square with the ability to set up immediately adjacent to that acreage on someone else's surface where split estate is leased (most of the area north of T 33 N.) or within the existing lease. The disturbance has to be moved elsewhere in order to enjoy that lease but in all probability it will be somewhere on the lease acreage.

Response: Your comments were considered in the development of the Proposed RMP final EIS.

Comment: The "No Surface Occupancy" (NSO) designation for the northern portion of the Wind River Front and far Upper Green River Valley was I'm sure intended to fool people into believing that BLM is interested in conserving that area. At first glance, that may be what it looks like, but this is entirely untrue. In BLM's proposal, this designation applies to basically everything north of Pinedale. These areas have been under a minerals leasing moratorium for the last several years for good reason. The NSO designation the BLM proposes only prevents surface occupancy on BLM owned surface rights. However, as I was told by BLM, they WILL lease mineral rights in these areas, regardless of who owns the surface. This simply means that drilling companies WILL be drilling for federal minerals on private property in this area. Once a lease is in place, it constitutes an irrevocable right to which drilling companies may use eminent domain or condemnation to gain access. One BLM official told me they couldn't designate the area "OFF LIMITS" to drilling because there would be too much outcry from private property owners. This is utter nonsense. First of all, this plan has no jurisdiction over privately owned minerals. And second, no property owner I have ever met or heard of wants their property drilled for federally owned minerals. Instead of naming the area No Surface Occupancy or NSO, they might as well name it "this is where we will hurt private property owners the most". This is to say nothing about the fact that the northern Wind River Front and far Upper Green River Valley is arguably the wildest, most remote and

most special area the plan encapsulates. It will be a travesty if any of the Wind River Front is allowed to be industrialized this way. The entire Wind River Front should be permanently off limits to drilling for federal minerals, no matter who owns the surface rights.

Response: Establishing Large Block NSOs is within BLM's authority and does provide protection of surface resources. Lease purchasers would do so knowing that they would not be able to occupy the surface to develop wells. NSO designation would apply to new oil and gas leases issued on any and all federal lands *and mineral estates* (regardless of surface ownership) within the respective unavailable or NSO boundary. The NSO designation do not apply to any existing leases (i.e., leases issued prior to the completion of this RMP) that occur within the NSO areas. You are correct that the issuance of an oil and gas lease gives the leaseholder certain rights. It does *not*, however, give the leaseholder the right to violate or abrogate any conditions, such as an NSO, under which he/she purchased the lease. The leasing moratorium instituted in 1999 was intended to withhold the lands from leasing until the management of these lands and mineral estates could be evaluated through an updated land use plan. The moratorium was never intended to be more than a placeholder until the RMP was revised. The areas available for oil and gas leasing have been revised in the final EIS.

Comment: The terms "moratorium", "no surface occupancy", and "unavailable for leasing" are each used in separate alternatives. How long does a moratorium last? Is it permanent? Does "no surface occupancy" provide complete protection to a residential lot? Why not designate residential properties "unavailable for leasing"?

Response: The moratorium was established through the Pinedale Anticline ROD in 2000 and is not permanent. Only the RMP can contain long-term decisions regarding oil and gas leasing. The unavailable and NSO designations would apply to new oil and gas leases issued on any and all federal lands *and mineral estates* (regardless of surface ownership) within the respective unavailable or NSO boundary. These designations do not apply to any existing leases (i.e., leases issued prior to the completion of this RMP) that occur within the unavailable or NSO areas. Many, but not all, residential properties would be unavailable for leasing in the Proposed RMP. The definitions of "moratorium" and "unavailable for leasing" have been included in the glossary of the final EIS. The definition of "NSO" is included in the draft EIS and final EIS.

Comment: We would like to see the upper Green River, upper New Fork and Hoback Rim areas designated as Unavailable for Leasing in your RMP. We are not confident that No Surface Occupancy will protect these areas. The RMP allows it to become available for surface occupancy for a number of circumstances. Most of these circumstances are concerned with the minerals and not the protection of the land. Maybe if the NSO designation were strengthened, it could be effective.

Response: The areas available for oil and gas leasing have been revised in the final EIS.

Comment: 2. That in critical wildlife winter ranges, winter time activities in the gas fields be limited only to that minimum amount to keep existing facilities operational. This restriction would apply to future drilling activities as well.

Response: Seasonal restrictions do not protect wildlife habitats, because the activities postponed are carried out in the next non-crucial season. When development reaches a density or other point where animals no longer use the habitats, seasonal restrictions do not provide any value.

Comment: The DEIS states "arge Block NSO Areas would be managed for protection of wildlife habitats through offering oil and gas leases with NSO stipulations"and "luid mineral leasing would be allowed within the Large Block NSO Areas, provided the entire lease area was encumbered by a NSO

stipulation." The Service suggests that the Bureau clarify how a lease could be developed if an entire "large block" area is designated as NSO.

Response: Leases issued within an NSO area would carry a stipulation prohibiting surface occupancy within the lease to drill for or extract the leased oil and gas resource. A leaseholder could potentially drill for and extract the leased resource from areas not constrained by the NSO stipulations. NSO lease purchasers would do so knowing that they would not be able to occupy the surface to develop wells. NSO designation would apply to new oil and gas leases issued on any and all federal lands *and mineral estates* (regardless of surface ownership) within the respective unavailable or NSO boundary. The NSO designation does not apply to any existing leases (i.e., leases issued prior to the completion of this RMP) that occur within the NSO areas. The issuance of an oil and gas lease gives the leaseholder certain rights. It does *not*, however, give him/her the right to violate or abrogate any conditions, such as an NSO, under which they purchased the lease. The areas available for oil and gas leasing have been revised in the final EIS.

Comment: Impacts Under Alternative 3: As indicated above, the restrictions placed on oil and gas development under Alternative 3 are far too onerous and unreasonable. The increases in areas unavailable to leasing or only available with NSO or other restrictions, the increases in VRM Class II designations, and the various wildlife stipulations and requirements would significantly retard oil and gas development in the Pinedale Resource Area.

Response: BLM analyzed an appropriate range of alternatives in the draft EIS. It is reasonable to analyze an alternative that could limit future gas development.

Comment: •Employ a staged development approach for oil and gas development to permit ongoing assessment of risks and development of solutions. This approach, as opposed to opening all lands to leasing and development immediately, reduces the potential risk to wildlife while still allowing for the extraction of resources. (The Wilderness Society 2004).

Response: None of the alternatives "open all lands to leasing and development immediately" or even over the life of the plan. Alternatives 3 and 4 address measures, such as making certain areas unavailable to leasing and leasing other areas with an NSO stipulation, which in essence limit or "stage" when or how oil and gas development occurs.

Comment: While significant acreages are proposed for leasing with ostensible NSO stips under Alternative 4 (see DEIS Map 2-4), even more significant exception verbiage exists to allow Surface Occupancy in the No-Surface-Occupancy areas (DEIS p. 2-121) (including considerations such as mineral drainage which could more intelligently be addressed by unitization). Again, clarity, simplicity and honesty make for the best policy. I.e., if the parcels are suitable for development, they should be leased with appropriate stipulations. If they are not appropriate for development, you should not lease them. Related, leasing public minerals with NSO stipulations is a disservice to the public. This action will lead to one of the following: 1) the lessee wastes money (on a federal agency rip-off) and compensates by raising their commodity sales price to the public, or 2) the lessee pays money for the lease and determines to pay private attorneys to fight with publicly-paid attorney for SO rights, costing the public more on both ends (and wreaking more on-going stress upon the Field Office). Clearly neither of these general scenarios benefits the public or our natural resources which you steward. As with split estate, NSO leases proved inherently problematic when I worked for BLM twenty years ago, and they will forever be. Please remove proposal of NSO leases from all alternatives considered.

Response: You are correct that the issuance of an oil and gas lease gives the leaseholder certain rights. It does *not*, however, give him/her the right to violate or abrogate any conditions, such as an NSO, under

which he/she purchased the lease. The leasing moratorium instituted in 1999 was intended to withhold the lands from leasing until the management of these lands and mineral estates could be evaluated through an updated land use plan. It was never intended to be more than a placeholder until the RMP was revised. Concerning management of the Upper Green, the final EIS has been corrected, where appropriate, to reflect the correct well projection for federal wells. The areas available for oil and gas leasing have been revised in the final EIS.

Comment: It is estimated that from 75,000 to 519,000 Bcf of potential natural gas underlying areas proposed in the DRMP as No Surface Occupancy (NSO). BLM fails to discuss how many leases currently exist on newly proposed NSO areas and how the new NSO designation would interact with existing leases. In order to place this significant restriction on development, the BLM should provide adequate justification or the restrictions should be deleted.

Response: Information on existing leases in the oil and gas management areas has been added in the final EIS.

Comment: Under the Preferred Alternative, the statements in the document concerning areas along the Wind River Front that are being considered for no surface occupancy (NSO) and unavailable for leasing do not appear to be binding. I understand that management of public lands on the Wind River Front is complicated by private surface and subsurface ownership. However, it is my understanding that in the largest block of NSO designated area, there are already numerous leases. This designation does not exclude leaseholders from conducting exploration activities. Under existing regulations, if resources are found in the exploration process, leaseholders have the authority to develop minerals despite the NSO designation of the area. More assurances should be given to the state of Wyoming that these areas will remain undeveloped during the life of the RMP. In the alternative, if development is contemplated, it must be done in a manner that is fully consistent with the NSO stipulation.

Response: Information on existing leases in the oil and gas management areas has been added in the final EIS. In addition, further explanation of the method for allowing surface access in these areas has been provided, and the areas available for oil and gas leasing and subject to NSO stipulations have been revised.

Comment: All alternatives presented in the Draft RMP are based on oil and gas development under different scenarios. A true conservation alternative would place equal value on wildlife, livestock, recreation, quality of human life and other resources and not place them in the back seat as all alternatives in this RMP do. For example, your wildlife and fish management objectives and actions are all grouped into: “intensively, minimally, NSO or unavailable areas” as relates to oil and gas development. The reader is led to believe that fish and wildlife are to be managed according to oil and gas industry guidelines. In other words, whatever is left after oil and gas development belongs to the native flora and fauna.

Response: The draft EIS/RMP provides a reasonable range of alternatives. Alternatives 3 and 4 have varying levels of acreage unavailable for oil and gas leasing and make other areas unavailable for surface disturbance for oil and gas development. Both of these scenarios are designed to provide increased protection for wildlife and other values in areas that are not currently affected by oil and gas development. The draft EIS/RMP does provide for multiple-use management on the planning area level.

Comment: If the BLM carries through their preferred Resources Management Plan proposed for the Upper Green River, Upper New Fork and Hoback Rim areas, it will be a disaster, for the following specific reasons: The abundant wildlife will suffer from disturbance of their habitats, feed grounds, corridors and birthing areas. Cattle ranching will lose productive grazing. “No Surface Occupancy” will not provide protection because pipelines and roads could be on NSO land, and industrial facilities and

activity anywhere in these areas can cause all of the destruction listed above. This seems to be the least acceptable time for oil and gas leasing in the Upper Green, Upper New Fork and Hoback Rim. Since the federal government has considered these areas valuable enough to place a moratorium on them, what has changed to make the lifting of this moratorium acceptable?

Response: The leasing moratorium was a place holder instituted to withhold leasing until it could be addressed in this RMP/EIS.

Comment: BLM has not explained how many current leases or how production operations would be affected. Similarly, BLM needs to explain why Large Block NSO areas would not provide adequate protection for "administratively closed" areas. EM is concerned that the large avoidance areas would result in gas resources being lost because ROWs are limited or wells are denied. With respect to the proposed increased use of surface use restrictions, BLM needs to disclose both the developments that would be deferred or forgone due to the extra costs associated with directional drilling, seasonal closures, and other mitigation requirements, and the impacts of the loss of recoverable natural gas resources to consumers.

Response: All existing legal and valid rights would be honored. The areas available for oil and gas leasing, and subject to NSO restrictions, have been revised in the final EIS. It is not possible to know exactly what developments would be deferred or forgone due to the extra costs associated with directional drilling, seasonal closures, other mitigation requirements, and the impacts of the loss of recoverable natural gas resources to consumers until these actions actually result in wells not being drilled or facilities not installed. It is certainly conceivable that this could occur, which is why it is presented as a potential impact. It would be incumbent on the operators/leaseholders to demonstrate to the satisfaction of the Authorized Officer that a COA could not be technically or economically implemented.

Comment: As for the proposed withdrawal of from 13,770 to 65,750 acres of fluid mineral leasing, only those areas with a direct and proven negative impact on native wildlife populations (not feral horses) should actually be considered for withdrawal from any other types of multiple use activity.

Response: All mineral development has at least some negative impact on native wildlife, due to physical site disturbance, noise, human presence, traffic, and disruptive activities. The alternatives attempt to provide balance on a planning area scale between heavily industrialized areas and undeveloped areas more amenable to wildlife occupancy.

Comment: The proposed restriction on new access routes within big game crucial winter range, see RMP DEIS, pgs. 2-146 - 148, may violate existing lease rights and the rights granted to operators of approved oil and gas units. See Southern Utah Wilderness Alliance, 127 IBLA 331, 372 (1993). The BLM should not unreasonably restrict access to federal oil and gas leases or units. CHAPTER 3 - AFFECTED ENVIRONMENT

Response: See revised language in the final EIS that states: "Exceptions could be allowed to provide reasonable access to privately- and state-owned lands, as well as to valid existing federal oil and gas leases."

Comment: • Do not grant significant exceptions to seasonal and temporal occupancy restrictions.

Response: The RMP does not grant exceptions to seasonal or temporal restrictions, but, as required by BLM's planning guidance and the Energy Policy Conservation Act (EPCA), it does provide guidance for evaluating exception requests. Seasonal restrictions do not protect wildlife habitats, because the activities

postponed are carried out in the next non-crucial season. When development reaches a density or other point where animals no longer use the habitats, seasonal restrictions do not provide any value.

Comment: Trapper's Point, Ryegrass/Cottonwood and Fontenelle Elk Winter Range: Consistent with my stated views regarding protection for the Wind River Front, I would encourage the BLM to consider expanded protection for the Trapper's Point, Ryegrass/ Cottonwood and Fontenelle Elk Winter Range similar to the prescriptions outlined in Map 2-3, which depicts the Oil and Gas Leasing Categories for Alternative 3. Retaining unleased surface acreage within these areas for wildlife and other uses, like grazing, makes inherent sense given the scope and scale of already-leased acreage within the Pinedale Field Office.

Response: The Trapper's Point area is unavailable for leasing, as outlined in Alternative 4 of the draft EIS. In addition, in the final EIS, the Ryegrass and Bench Corral (Cottonwood) areas would be unavailable for leasing.

Comment: The following objectives are necessary to propagate Sublette County wildlife populations as we have known them in the recent past. They include the following: 3. Oil and gas leasing, development, and production should be regulated to the extent that wildlife and human populations can adjust and habituate.

Response: Alternatives 3 and 4 have varying levels of acreage unavailable for oil and gas leasing and make other areas unavailable for surface disturbance for oil and gas development. Both of these scenarios are designed to provide increased protection for wildlife and other values in areas that are not currently affected by oil and gas development.

Comment: We find the current federal and state management of our wildlife resources to be reactive, with no clear plans to maintain, improve or restore habitats so vital to the future of our wildlife populations. Accordingly, we insist that the following corrective actions be considered and implemented: 5. Best management practices such as liquid gathering systems and directional drilling should be required on crucial wildlife ranges and not used as a bargaining chip for winter access by industry.

Response: Appendices 3 and 5 of the draft EIS provide best management practices that would be applicable to whatever alternative or modified alternative is ultimately implemented.

Comment: We find the current federal and state management of our wildlife resources to be reactive, with no clear plans to maintain, improve or restore habitats so vital to the future of our wildlife populations. Accordingly, we insist that the following corrective actions be considered and implemented: 8. A detailed. habitat mitigation plan should be prepared prior to authorizing any further Anticline in-field development including:

- Specific land areas targeted with techniques identified and expected results quantified according to habitat and population response.
- Priority. placed on-site mitigation with off site mitigation offered as an alternative.
- Projects should benefit species affected by development, i.e. an off-site duck pond or conservation easement is not appropriate. • Funding sources should be identified and secured.
- All clearances (archeological, livestock permittees, state and WGFD) should be secured.
- Any off-site mitigation should occur within defined herd units affected by Anticline development.

Response: Alternatives 3 and 4 have varying levels of acreage unavailable for oil and gas leasing and make other areas unavailable for surface disturbance for oil and gas development. Both of these scenarios are designed to provide increased protection for wildlife and other values in areas that are not currently affected by oil and gas development. Pinedale Anticline management, including onsite/offsite mitigation, funding, and clearances, is being developed through the supplemental EIS to the ROD to the Pinedale Anticline Project Area (PAPA).

Comment: After reviewing the Draft EIS documentation, I believe the only realistic conclusion is that the Preferred Alternative (4) would have the affect of completing the industrialization of Sublette County that is already well under way. The proposed amount and location of the acreage which would be newly opened to gas development would almost certainly take us to, and beyond, the tipping point for serious air quality degradation, wildlife habitat diminishment, and our ability to absorb the social impacts of this industrialization process.

Response: Alternative 4 certainly does provide for oil and gas development, but it also makes areas unavailable for oil and gas leasing and makes other area unavailable for surface disturbance, both of which provide or maintain important habitats for wildlife. Each of the alternatives projects varying levels of impacts to air quality, wildlife, and socioeconomic values. It is important to remember that the 1988 RMP allowed leasing in the entire planning area, except for the WSAs. The leaseholders/operators have valid and existing rights to develop and produce these existing leases.

Comment: The government's alternative to drill in this area, Alternative 4, would increase the number of gas wells threefold in the upcoming decade. Drilling at this rate will threaten wildlife dramatically and decrease the air quality.

Response: The draft EIS/RMP is designed to present a reasonable range of alternatives and make projections of the impacts associated with each of those alternatives. Accordingly, the draft EIS projects varying levels of impacts to air quality, wildlife, and socioeconomic values, as well as to other resource values. Alternative 4 provides a mid-range of impacts between the higher level of commodity production in Alternative 2 and the higher level of surface resource protection in Alternative 3. Again, it is important to remember that regardless of the alternative ultimately selected, approximately 65% of the federal lands/federal mineral estate in the planning area is currently leased under the 1988 RMP. The leaseholders/operators have valid and existing rights to develop and produce these existing leases.

Comment: We therefore join many other concerned citizens in asking the BLM to choose the alternative that would do the following:

- Set a reasonable pace for drilling;
- Cluster drilling infrastructure so it minimizes impact on the land and wildlife;
- Strengthen seasonal drilling restrictions; and
- Withdraw additional critical areas from development

Response: Alternative 4 would establish different oil and gas management areas, which in essence, would cluster most development in the intensive development areas, other areas would be made unavailable for leasing or new leases would be unavailable for surface occupancy. Development in the Jonah Field would continue as prescribed in the 2006 ROD for the Jonah Infill EIS. The Pinedale Anticline is being developed through clustering multiple wells on pads to reduce the total number of wells pads, roads, pipelines, production facilities. Seasonal restriction would be retained as described under the various alternatives in the draft EIS.

Comment: I am opposed the Alternative #4 which is the preferred alternative of the BLM. This alternative will only escalate the environmental impacts that are already threatening the wildlife corridors and pristine landscape of Sublette County. To protect what is really of the greatest value now and for the future is to designate Green River, upper New Fork, and Hoback Rim areas as Unavailable for Leasing in the RMP.

Response: The RMP is designed to address a reasonable range of alternatives. Alternative 4 would make much of the federal lands and minerals along the Wind River Front, which includes the Upper Green, Upper New Fork River, and Hoback Rim areas, unavailable for new oil and gas leasing or unavailable for surface disturbance. Management of federal lands and mineral estates in the Upper Green are being addressed in the final EIS. It is important to remember that approximately 65% of the federal lands/federal mineral estate in the planning area, including portions of the Upper Green, Upper New Fork, and Hoback Rim areas, is currently leased under the 1988 RMP. The leaseholders/operators have valid and existing rights to develop and produce these existing leases.

Comment: I am afraid drilling companies need to extend the time that drilling takes place and where ever in-fill drilling takes place, must make absolutely sure there is no critical habitat, grouse leks etc. in the area of drilling.

Response: Unfortunately, oil and gas resources and crucial wildlife habitats, including sage-grouse, occur at the same locations throughout the planning area. That is why the draft EIS/RMP addressed a range of alternatives concerning the management of these resources.

Comment: Opening the upper Green River, upper New Fork River and Hoback Rim areas for oil and gas leasing is not acceptable. I live in Hoback Ranches near Bondurant and use these areas for recreation. These areas are of critical importance to clean ground water, wildlife, tourism and ranching. The Green River and its headwaters must be protected. The Rim is a critical wildlife corridor for the entire Yellowstone Ecosystem. There is no immediate need to open these areas to road building and drilling other than to benefit oil and gas developers who can inflate their balance sheets and stock prices. Sublette County north of Daniel needs to be off limits to oil and gas development. “No surface occupancy” does not prevent drillers with access to private/state land from destroying the pristine beauty of this area with roads, pipeline corridors and air pollution.

Response: The draft EIS/RMP does not “open” the Upper Green River, Upper New Fork River, and Hoback Rim areas to oil and gas leasing. Under the current RMP, which was approved in 1988, these areas are open to oil and gas leasing. A leasing moratorium was initiated in 1999 that withholds leasing along the Wind River Front and Hoback Rim area pending the completion of a revision of the 1988 RMP. This draft EIS/RMP constitutes that revision. Alternatives 1 and 2 would retain the referenced area open to leasing; Alternative 3 would make the area unavailable for leasing; Alternative 4 would make portions of the area unavailable for leasing and other portions available for leasing but unavailable for surface occupancy. Management of federal lands and mineral estates in the Upper Green/Hoback Rim are being addressed in the final EIS.

Comment: Regarding oil/gas leasing and drilling and any related production activities, such practices should be strictly limited to areas where other sorts of development exists, whether similar (industrial, etc.) or different (business, recreation areas, tourist facilities, etc.), and/or in foothill/frontal ranges, but not inside the general forest lands whether roaded/trailed/roadless and definitely not “back country” or wilderness areas nor residential subdivision type areas that exist.

Response: Under the various alternatives, the draft EIS identified areas that would be unavailable for leasing, areas where new leases would be unavailable for surface occupancy, areas where development

density would be restricted, areas subject to seasonal restrictions, and areas subject to standard mitigation. Concentrating development in areas adjacent to recreation areas or tourist facilities would likely not be consistent with the management objectives for these areas. The planning area contains forested lands along the foothills adjoining USFS lands along the east slope of the Wind River Mountains, on the Hoback Rim, and on the west slope of the Wyoming Range. The management of these forested lands would be based on all of the resource values they contain, including the potential for mineral development. Under alternatives 3 and 4, large portions of these lands would be unavailable for leasing or new leases would be unavailable for surface occupancy. Lands within the National Forest are beyond the jurisdiction of this RMP. The planning area contains two WSAs, both of which are identified under all alternatives as unavailable for leasing.

Comment: The oil and gas industry is pumping records volumes of gas out of those wells on the Jonah and in the Anticline and they should be held to record standards. They should be required to employee the BEST technology available to reduce impacts on air, water, and the land. For example, a liquids gathering system was proposed as a quid pro quo on the Anticline in exchange for drilling during winter mule deer occupation. If a liquids gathering system results in less impact on the land, air, wildlife and community, it should be required regardless. best management practices really should be the best, and they should be required on all past, current and future oil and gas fields.

Response: The applicability of best management practices varies with site characteristics, resources affected, and the type of development proposed. Specific mitigations and management practices for the Jonah and Anticline fields are determined through the specific NEPA and permitting processes for those fields.

Comment: I would like to see areas of concentrated development with reseeding and a thorough clean up before other areas are explored. While I oppose winter drilling due to disruption of wintering wildlife and the haze and inversions that diesel fumes create, if it is unavoidable, then drilling rigs and service trucks should run on clean burning natural gas instead of diesel. Careful attention to migration routes for deer and antelope should preclude development in those areas. I would also like to see more BLM and EPA inspectors hired to make sure that any environmental hazards are caught early before they can damage the aquifers, wildlife, or air quality. The efforts of Questar to use pipelines to remove condensate in order to decrease truck traffic should be commended and required by all operators. Stiff penalties for environmental spills or violation of agreed upon drilling practices should be instituted and enforced. Again, a much needed role for both BLM and EPA inspectors.

Response: Alternatives 2, 3, and 4 would designate intensive or concentrated development areas. Additionally, one or more alternatives in the draft supplemental EIS for the Pinedale Anticline also provide for concentrated development areas. The RMP also lays the framework for reclamation. Project-specific NEPA analysis would give more specific reclamation guidance. Holders of existing leases have valid existing legal rights to develop and produce those leases. BLM cannot prohibit a leaseholder in one area from developing his/her lease until a leaseholder or holders in another area complete reclamation operations. Alternatives 3 and 4 contain management actions designed to protect big game migration. Installation of liquids-gathering systems is certainly a BMP to be used where possible, but like many BMPs, it is not a measure applicable to all wells. Many wells in the planning area do not produce sufficient volumes of condensate and/or produced water to warrant a gathering system.

Comment: Based on over a decade of involvement by many of our partner groups in the federal process of developing oil and gas in the Northern Rockies, our first principle for responsible development is a conservation plan for the area to be developed. We see no such planning process proposed for any alternative for the Proposed RMP. In fact blocks of habitat suggested for such protections as “no surface occupancy” or designation as “unavailable” provide the loophole that such designation may be changed

for a variety of reasons, mostly if oil or gas is found above a certain level. This proposal continues the process we have seen elsewhere in Wyoming and other states where a "few wells" are drilled and development then occurs at the pace and scope desired by the developing company, and management of the rest of the public's interest is relegated to "after the fact" reaction to what is happening. This is an unacceptable process, and does not protect the public's interest in its lands and wildlife.

Response: As directed by the Mineral Leasing Act of 1920, the Federal Land Management and Policy Act of 1976, and the Energy Policy Act of 2005, oil and gas development is one of the resource values that BLM is mandated to manage for public benefit. The alternatives in this RMP make varying allocations of lands available for oil and gas leasing and development consistent with these mandates. Conversion from "unavailable for leasing" status requires additional NEPA analysis and the meeting of a number of criteria before conversion can be implemented. The language for conversion, and the areas available for oil and gas leasing, have been modified in the final EIS.

Comment: How can we create a state office [The Jonah Interagency Office] to mitigate the destruction of sensitive habitat by a massive widespread industrial oil and gas development when we haven't even agreed on how much we are going to destroy? The Jonah Interagency Office's sole responsibility is to create compensatory habitat with $25 million in Sublette County and the surrounding area to offset the occupation of the existing oil and gas field out on the Mesa. How can this be achieved when the very places that could provide this compensatory habitat is being leased out countywide to the same companies destroying the previous habitat? It makes no sense. How is this happening?

Response: The Jonah Interagency Office was established through the Jonah Infill EIS, is consistent with decisions in the current RMP approved in 1988, and pre-dates any decisions that may result from this RMP revision. Alternatives 3 and 4 respectively make 711,920 and 174,410 acres unavailable for oil and gas leasing. Depending on which alternative or combination of alternatives ultimately become the RMP decision, unleased lands would be available for compensatory habitat augmentation.

Comment: 4. Finally, that you lead the Wyoming Congressional delegation in proposing that certain federal lands in the Upper Green River Basin be permanently withdrawn from oil and gas leasing. A precedent for such a withdrawal has taken place recently by the action of the Montana congressional delegation. Such key areas could be the Wind River Mountain's front land, that being below the Wilderness boundary. There also are selected areas along the flanks of the Wyoming Range which should be withdrawn. The Upper Green River Valley Coalition has identified these areas in more detail as having significant wildlife benefits.

Response: The RMP considers many areas that could potentially be made unavailable for leasing. The areas available for oil and gas leasing have been revised in the final EIS.

Comment: The RMP DEIS notes that "[s]urface use and timing restrictions resulting from this RMP cannot be applied to existing leases." See RMP DEIS, pg. 2-8. Unfortunately, the BLM improperly attempts to back away from this statement by suggesting the BLM could impose conditions of approval ("COAs") to "mitigate potential impacts from oil and gas operations." The BLM must not attempt to use site-specific COAs as a means to enforce new management objectives or stipulations on existing leases.

Response: The RMP draft EIS does properly state that BLM cannot retroactively apply new stipulations to existing leases. Federal regulations at 43 CFR 3101.1-2 state: "A lessee shall have the right to use so much of the leased lands as is necessary to explore for, drill for, mine, extract, remove and dispose of all the leased resource in a leasehold subject to: Stipulations attached to the lease: restrictions deriving from specific nondiscretionary statutes; *and such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the*

lease stipulations at the time operations are proposed" (emphasis added). Attaching a timing limitation COA to an APD or Sundry Notice approval is consistent with this regulation.

Comment: In its discussion of directional drilling on page 4-47, the BLM should also discuss information regarding limitations on the BLM's ability to mandate directional drilling. The IBLA has noted that the BLM does not have the authority to require the movement of proposed operations more than 200 meters, unless a nondiscretionary statute is implicated. See Colorado Envtl. Coal., et al., 169 IBLA 137, 144 (2006) (holding that BLM cannot require relocation of a proposed well by 400 meters); see also 43 C.F.R. § 3101.1-2 (2006). The BLM properly notes that directional drilling increases costs and results in lost resources when casing cannot be brought to the bottom of the hole. See RMP DEIS, pg 4-49.

Response: We recognize that BLM cannot retroactively impose new "stipulations" on existing oil and gas leases; however, 43 CFR 3101.1-2 does give the authorized officer the authority to impose such reasonable measures as may be required to minimize adverse impacts to other resource values, land uses, or users not addressed in the lease stipulations at the time operations are proposed. Regulations also give the leaseholder or operator the right to appeal imposed requirements he/she believe are not "reasonable measures".

Comment: The basis for the Agency's Preferred Alternative appears overly tailored to the concerns of a very small minority. To wit, the Pinedale Field Office natural gas fields have a combined estimated reserve of 7 trillion cubic feet, equating to far less than 1% of U.S. fossil fuel reserves. In terms of global fossil fuel (including oil, coal, cbm, etc.) reserves, these natural gas reserves are simply too minor to rate on charts. And this of course does nothing to address technically recoverable alternative energy capacities. At the same time, the BLM Pinedale Field Office/Sublette County is the non-migratory home of the most concentrated populations of sage grouse in the world, a sensitive species which BLM purports to be trying to avoid ESA listing of. The area includes far more than a few percent of the species global reserve. Furthermore, BLM¬PFO administered lands provide the majority of limiting habitat (crucial winter range) for multiple big game species inhabiting the v-shaped mountain ranges beyond the Rockies-bound planning area. The relative significance of various resources should be placed in pertinent context. Once this is done, the management alternatives presented should be weighed relative to current and anticipated human adaptation potential.

Response: Based on Department of Energy (Boswell et. al. 2002b) estimates, the Pinedale Field Office has 421 trillion cubic feet (TCF) of gas in place. The estimated recoverable reserves just from the Jonah Field and the Pinedale Anticline are in excess of 30 TCF, about 25.8 TCF recoverable from the Pinedale Anticline (June 2006 article by Diane Freeman in AAPG Explorer, volume 27, number 6, page 14) and 10 TCF from Jonah (EnCana's public website http://www.encana.com/operations/usa/wyoming/jonah/index.htm). DOE's Energy Information Administration's "U.S. Crude Oil, Natural Gas, and Natural Gas Liquid Reserves 2005 Annual Report" puts Pinedale number 2, Jonah number 6 and Fogarty Creek (Riley Ridge) number 19 in the top 100 fields in the United States ranked by proved reserves of gas. (http://www.eia.doe.gov/pub/oil_gas/natural_gas/data_publications/crude_oil_natural_gas_reserves/current/pdf/appb.pdf). As directed by FLPMA, BLM has a mandate to manage the federal lands under its jurisdiction for multiple use. This means on a broad scale and not necessarily on a project-by-project basis. The alternatives in the draft EIS/RMP do provide a range of multiple-use management opportunities. This includes Alternative 4, which would designate certain areas "unavailable for oil and gas leasing", other areas available for leasing subject to NSO stipulations, and areas open to less restrictive surface disturbance requirements.

Comment: The BLM must not lease any lands along the Wind River Front, and in the areas which have already been leased (like the Anticline Field and Jonah Field), the BLM must follow through with

directional drilling implementation, phased development (with sufficient rest-no drilling/activity zones and proper restoration areas), and no further winter drilling activities on big-game winter range.

Response: Under Alternatives 3 and 4, the federal lands and mineral estates under BLM's jurisdiction along the Wind River Front would be unavailable for leasing. The entire Jonah Field and the vast majority of the area within the boundary of the Pinedale Anticline EIS (July 2000) are currently leased and the leaseholders/operators have valid existing rights to develop and produce those leases. See the final EIS for management of the unleased lands within the PAPA EIS boundary. The decision record for Questar Year-round Drilling EA provides for a certain level of drilling within the mule deer crucial winter range within the PAPA EIS area.

Comment: Defer site specific mitigations in the RMP. Develop new winter drilling BMPs. Improve access for development.

Response: Proposed site-specific mitigation measures, BMPs, and access for development as specified in the draft EIS are appropriate.

Comment: In critical habitat, drilling should wait for new and improved drilling. Also if directional drilling is more expensive so be it if I have to pay more for my natural gas in order to protect wildlife, outdoor recreation and scenic view.

Response: Oil and gas development and drilling technologies are continually evolving. Directional drilling is being used on the Pinedale Anticline with lateral reaches out to about ½ mile. Directional drilling, mat pads, and other surface disturbance and human presence reduction measures are being used in the Jonah Field. Where feasible, horizontal drilling is being used in portions of the La Barge Platform. However, because each of these fields coincide with broad areas of important wildlife habitats, it is not possible to achieve reasonable development of the oil and gas resources without occupying portions of the important habitats.

Comment: PAGE: 2-226 SECTION: RECOMMENDED CHANGE: EXPLANATION: Area is entirely leased NSO in large block does not conform to NSO criteria and is an unlawful withdrawal. See Comment Ch. 2-26-28; 86.

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: PAGE: A7-3 SECTION: RECOMMENDED CHANGE: Revise RMP to conform. Appendix 7 states: The NSO stipulation is intended for use only when other stipulations are determined insufficient to adequately protect the public interest. The land management plan/NEPA document prepared for leasing must show that less restrictive stipulations were considered and determined by the authorized officer to be insufficient (i.e., show a reason that the NSO stipulation is needed). The planning/NEPA record must also show that consideration was given to a no-lease alternative when applying an NSO stipulation. An NSO stipulation is not needed if the desired protection would not require relocation of proposed operations by more than 200 meters (43 CFR §3101.1-2). The legal subdivision, distance, location, or geographic feature, and resource value of concern must be identified in the stipulation and be tied to a land management plan and/or NEPA document. Land description may be stated as—

- The "Entire Lease"
- Distance from resources and facilities such as rivers, trails, and campgrounds
- Legal description
- Geographic feature such as a 100-year floodplain
- Municipal watershed, percent of slope, and the like EXPLANATION: This paragraph correctly states policy but not followed in RMP.

Response: The RMP identifies NSO areas that are consistent with Appendix 7. NSOs are proposed for areas where relocating well pads 200 meters or less would not provide the desired surface resource protection.

Comment: While methods such as directional drilling may be a viable (albeit limited) option to companies who seek to develop resources under Large Block NSO Areas, to accomplish geophysical exploration over such leases it is necessary for those operations to be conducted directly upon the surface. Therefore, we urge that stipulations allow geophysical operations in these Large Block NSO Areas. It has not been shown that geophysical activity has had a negative impact on any wildlife. In fact, geophysical operations have a near-zero impact on the environment and should be allowed to be conducted in any multiple-use area under BLM's jurisdiction.

Response: Page 2-122 in the draft EIS states: "Geophysical projects, including projects proposed in areas with an NSO restriction, would be analyzed and mitigation developed on a case-by-case basis".

Comment: Therefore, before you open more areas in Wyoming for leasing, please understand clearly that when a lease is developed, every modification to existing road, pipelines, trucking routes, power lines, storage facilites, and refinery upgrades will have an enormous negative effect on air quality, water quality and further decrease wildlife and fish habitat. The impact on the lease site is small compared with the entire human impact that follows each and every lease that is developed.

Response: Lease development beyond exploration operations would require detailed NEPA analysis (EA/EIS) that would address project-related actions. End user modifications (i.e., refinery upgrades, etc.), or even who or where the end product user may be, are not known or predictable at the time of leasing or at the lease development stage. Known and anticipated impacts are addressed through this EIS and through the NEPA project-level development process.

Comment: Page 3-37 Yates objects to the proposal to place very high, high, and moderate potential in an NSO or unavailable categories without proper justification. As it stands in the DEIS, no clear justification has been provided.

Response: The 1988 RMP made certain lands, such as elk feedgrounds, national historic trails, sage-grouse leks, etc., available for oil and gas leasing. NSO stipulations were placed on these lands to protect the associated resource values. This action allowed for oil and gas development and production, but required the extraction operations be conducted from lands outside the NSO. The draft EIS would continue the management of many of these NSO-restricted areas, and under the different alternatives, create others to protect specific important surface resources.

Comment: Page 4-46, 4.7.1, 5th Bullet Implies Large Block NSO areas are unavailable for oil and gas leasing. Page 2-121, however, states that Large Block NSO areas would be available for leasing with NSO stipulations. This is ambiguous and the BLM should clarify.

Response: Bullet 5 on page 4-46 (4.7.1) of the draft EIS states that areas within the Large Block NSOs may be beyond the current technical capabilities of directional or other drilling techniques and therefore certain oil and gas resources within those NSOs may be unrecoverable even though the lands are available for leasing. The areas available for oil and gas leasing, and subject to NSO restrictions, have been revised in the final EIS.

Comment: Page A3-4, No Surface Occupancy Guideline Comment: The BLM does provide for a waiver, exception, or modification of an NSO planning decision, but once in place, the reality is it would take a

Herculean effort to undo an NSO planning decision. Before implementation, the BLM should take a "hard look" at potential NSO areas and they must be supported by valid data.

Response: BLM has taken a hard look at the NSO designations. Scientific wildlife studies show that certain wildlife occurrences have declined in the Jonah Field and on the Pinedale Anticline and that certain oil and gas operations have displaced winter wildlife in the Big Piney-La Barge area. Big game and sage-grouse lek monitoring show that big game wintering populations and lek attendance has experienced some increase in certain areas outside of these fields. The NSO and unavailable area designations are intended to provide enhanced wildlife protection in such areas.

Comment: APPENDIX 11 Comment: Without expressly mentioning it, this appendix summarizes the BLM's adaptive management concept. Operators currently monitor several resources using many techniques. The data collected from this monitoring is then submitted to the respective agency for analysis. That's where the process falls apart. The agencies are under-staffed and do not have the manpower to perform the analysis. Appendix 11 discusses data analysis and assessment and implies that the agencies will perform the analysis. Hopefully, the agencies will be able to perform this task, as it is critical to the adaptive management process. Additionally, Operators must enjoy the benefits of adaptive management. For example, if monitoring shows that a two-mile buffer around a sage-grouse lek is too conservative, the BLM should revise its sage-grouse policy to conform to the monitoring results.

Response: The intent of adaptive management is to augment restrictions when studies show that they are not achieving the desired results. It is also intended to relax restrictions when the monitoring indicates that the desired results can be achieved without the restriction(s) or with less restrictive measures.

Comment: There are some areas within the greater whole that are so important and so sensitive for wildlife, historic, and aesthetic values that they should be withdrawn from any further leasing now or in the future. One of these is the Wind River Front from the greater South Pass area north to the New Fork Lakes and the Upper Green River. The southern part of this whole area is not only critical sage grouse habitat but is a significant national historic area, including The South Pass and the Lander Cut-off of the Oregon Trail.

Response: The South Pass area is outside of the planning area and therefore outside the jurisdiction of this RMP. The areas available for oil and gas leasing have been revised in the final EIS. Management of federal lands and mineral estates in the Upper Green are being addressed in the final EIS. It is important to remember that approximately 65% of the federal lands/federal mineral estate in the planning area, including portions of the Upper Green, Upper New Fork, and Hoback Rim areas, is currently leased under the 1988 RMP. The leaseholders/operators have valid and existing rights to develop and produce these existing leases.

Comment: In regard to the sage grouse, I note that some of the latest research points to the recognition and protection of "core habitat areas" as a means of saving the species. Other withdrawal areas are the Trapper's Point area and the attendant and critically important antelope migration corridors, the Fontenelle area, and parts of the Ryegrass and Cottonwood areas.

Response: The areas available for oil and gas leasing have been revised in the final EIS.

Comment: Rather than passively accepting or allowing the creation of high density well fields in areas that the BLM has determined should be managed to "provid[e] the maximum level of environmental protection," 2-19, BLM can and must set limits on the density of permissible development in Unavailable and Large Block NSO Areas to allow it to maintain the management focus it has determined is appropriate in these areas. Presumably at a minimum well pad density should not be allowed to exceed a

density of one pad per 160 acres in these areas, and in many areas, such as big game crucial winter ranges, big migration corridors, big game parturition areas, the scenic and historic corridor along the Lander Trail, and Class II visual resource management areas, as well as many other areas, the acceptable well density should be set at a lesser density. This again is particularly true relative to the acceptable level of surface disturbance.

Response: The basic intent for management of the unavailable and NSO areas is to have no well development in these areas. The caveat to allow leasing to occur within the unavailable area and/or well pads to be constructed within the NSO areas is predicated on BLM's responsibility to ensure proper collection of royalties for the extraction of federal minerals. In the event BLM determines that non-federal wells are draining federal reserves, BLM is obligated to curb the loss. This is typically done through developing offsetting wells; hence the need for the caveat. It is not possible at the RMP stage to determine the level of development (i.e., well density) necessary for the cessation of the drainage of federal minerals.

Comment: EOG is particularly concerned that Alternative 3 is inconsistent with its existing lease rights. As noted above, the vast majority of EOG's leases in the Big Piney/La Barge area are not subject to existing seasonal stipulations and development operations are only subject to the limitations in 43 C.F.R. § 3101-1.2. Because the BLM cannot impose seasonal or timing restrictions longer than 60 days on EOG's proposed development operations, Alternative 3, which would essentially mandate seasonal restrictions, is contrary to EOG's existing lease rights. The BLM cannot impose seasonal conditions of approval or limitations on leases issued prior to FLPMA that do not contain seasonal stipulations. See, e.g., Colorado Environmental Coal., et al., 165 IBLA 221, 227 (2005) (determining that the holder of an oil and gas lease issued prior to the enactment of FLPMA may develop the leasehold to the extent authorized by the issuance document). As recognized by the IBLA, the "authority conferred by FLPMA is expressly made subject to valid and existing rights, and therefore an RMP prepared pursuant to FLPMA's authority, after lease execution and after drilling and production has commenced, is likewise subject to [the lessee's] valid existing right to exploit its lease, and cannot serve to defeat or materially restrain that right." Colorado Environmental Coal., et al., 165 IBLA 221, 228 (2005) (citing Colorado Environmental Coal., 135 IBLA 356, 360 (1996) aff'd, Colorado Environmental Coal. v. Bureau of Land Management, 932 F.Supp. 1247 (D.Colo. 1996).

Response: BLM does not disagree with the comment that it does not have the authority, once a lease is issued, to impose new stipulations or new restrictions on a lease that exceed the terms and conditions of existing leases. As stated on page 2-8 of the draft EIS, existing rights would be honored. Alternative 3 does not impose new stipulations on existing leases. It does, however, provide the framework for application of COAs to post-lease actions that are determined through project- and/or site-specific NEPA analysis to be necessary for the mitigation of anticipated impacts.

Sufficient case law exists to clearly demonstrate that BLM does have the authority and responsibility to impose new restrictions once a lease has been issued, as long as BLM does not deny development of the lease or totally preclude surface disturbing activities. Therefore, our position and policy is to take a "hard look" at the environmental consequences of a proposed action at the field development and APD stage and, if necessary, require mitigation measures as means of reducing impacts. The Secretary of the Interior has the authority and responsibility to protect the environment of public lands within federal oil and gas leases (Copper Valley Mach. Works, Inc. V. Andrus, 474 F. Supp. 189, 191 (D.D.C. 1979)). The Secretary may impose restrictions on lease terms in fulfillment of this responsibility (Natural Resources Defense Counsel V. Bergland, 458 F. Supp 925, 937 (D.D.C. 1978)).

In various oil and gas lease forms, the Secretary reserves the right to incorporate general standards into the lease aimed at mitigating environmental damage. However, mitigation must be reasonable. Such post-

lease restrictions cannot directly, or indirectly, preclude the development of the lease, absent a no surface occupancy stipulation on the lease. Sierra Club V. Peterson, 717 F. 2d 1409 (1983) provides: "On lands leased without a No Surface Occupancy Stipulation, the Department cannot deny the permit to drill; it can only impose 'reasonable' conditions which are designed to mitigate the environmental impacts of the drilling operation" (p. 1411). It continues: "Once the land is leased the Department no longer has the authority to preclude surface disturbing activities even if the environmental impact of that activity is significant…"

What is reasonable will vary with each individual APD. A "taking" would occur if after a lease, without an NSO stipulation, is issued, the lessee is prohibited from conducting development activities on the leased lands. A "taking" could also occur if COAs imposed at the APD stage are so stringent that it is not practical to conduct operations. It is not the policy of the BLM to utilize unjustified stipulations or COAs.

Comment: BLM has failed to provide any justification for "unavailable areas" designed to protect wildlife habitats. Given the fact that all species in the Field Office area are at target populations, it has been clearly demonstrated that current mitigation measures are effective. This approach appears to be aimed at capitulating to the public and state agencies who do not subscribe to BLM's multiple-use management mandate. Oil and gas is by nature phased as a result of leasing, rig availability, and capital budgets. It is unwarranted for BLM to further control the rate of development by artificially imposing leasing moratoria under the guise of protecting wildlife species.

Response: The Sawyer mule deer study determined that seasonal restrictions on oil and gas development are not effective in retaining mule deer occupation on crucial winter habitat. The study shows a 46% decline in winter mule deer occupation on the Mesa between 1998 and 2006 commensurate with the increasing development and production on the Pinedale Anticline.

Comment: The proposed Oil and Gas Management Areas function as land allocation categories in the RMP. They include Intensively Developed Fields, Minimally Developed Areas, Large Block NSOs, and Unavailable Areas. With oil and gas development as a major land use and having potentially severe impacts on other resources, we support a land allocation system that would help assure that impacts are more certainly avoided and managed on the landscape, and one that allows a major part of that landscape to function properly at any point in time.

However, there is no assurance in any alternative that these particular allocations would persist over the life of the RMP, or that a reliable number of functional acres would remain for other land uses. Any of the allocations could become Intensively Developed Fields through offsets for drainage issues and/or downhole spacings exceeding one well per 160 acres. In total, this could be a significant number of acres over the Field Office area. The Minimally Developed Areas, in particular, make up a large percentage of the Field Office Area, resulting in a high probability for a higher density of wells over a large area. Existing leases within Large Block NSOs and offsets for these areas, in total, could significantly negate the benefits of trying to limit surface disturbance in that allocation. Given the number of non-federal lease-holdings near the Wind River Front, the Unavailable Areas near there could contribute large acreages for offsets.

In order for our agency to more accurately plan for long-term impacts, we encourage that the FEIS contain a more realistic (worst-case) scenario concerning the lands that will likely not be available as functional habitat for wildlife. We suggest an estimate of potential offset areas, and maps that depict the current lease-holdings within each type of allocation area.

Response: The basic intent for management of the unavailable and Larger Block NSO areas is to in have no well development in these areas. The caveat to allow leasing to occur within the unavailable area

and/or well pads to be constructed within the NSO areas is predicated on BLM's responsibility to Ensure proper collection of royalties for the extraction of federal minerals. In the event BLM determines that non-federal wells are draining federal reserves, BLM is obligated to curb the loss. This is typically done through developing offsetting wells; hence the need for the caveat. It is not possible at the RMP stage to determine the level of development (i.e., well density) that would be necessary for the cessation of the drainage of federal minerals. Additional impact discussion has been added to the final EIS.

Until a drainage situation occurs, BLM does not have sufficient data to be able to reasonably project or predict where drainage would occur that may require the developing of offsetting federal wells. Map 1-3 in the draft EIS depicts existing leased federal mineral estate. The map has been updated in the final EIS. BLM considered your suggestion to overlay the different management areas with the existing leased lands, but determined that it would make the map too cluttered and confusing.

Comment: In the scoping comments submitted by Wyoming Outdoor Council, Biodiversity Conservation Alliance, et al., on April 7, 2003, we requested that all future leases for oil and gas drilling be issued with No Surface Occupancy (NSO) stipulations until site-specific analysis is completed. NSO stipulations would allow BLM the maximum flexibility for management in the future of parcels available for leasing. If resource issues should change over the course of a lease, for example, if weather conditions cause vegetation to become scarce for wildlife and surface disturbance must be prohibited, BLM would have retained the ability to prevent surface disturbing activities while still allowing lessees to access mineral resources through directional drilling, etc. Without NSO stipulations at the outset, BLM cedes a portion of its ability to exert maximum management authority in the future where appropriate.

While we disagree with BLM's interpretation that BLM has little authority to prevent surface occupancy once a lease is issued, if this continues to be BLM's position, then it is even more critical that NSO be placed on all parcels available for leasing at the planning stage. This is particularly important with respect to leases that could threaten important wildlife habitat or use areas, water resources, recreation areas, riparian and wetland areas, wild, scenic or recreational river corridors or potential corridors, ACECs, archeological, historical or paleontological resources that have not been fully withdrawn from leasing. Placing NSO stipulations on parcels available for future leasing does not mean that surface occupancy could not be allowed on lease parcels. It simply gives BLM the authority to protect resources should the need arise in the future. We urge BLM in the Final EIS to include NSO stipulations on all parcels which will be available for future leasing.

Response: BLM's policy is to issue leases with the least restrictive stipulations necessary to protect the surface resource values within the lease area. Issuing *all new* leases with an NSO stipulation is not consistent with this policy nor is it consistent with the Mineral Leasing Act of 1920, the Energy Policy and Conservation Act of 2000, or the Energy Policy Act of 2005. The statutes direct the issuance of oil and gas leases for the purpose of developing and producing oil and gas resources in an environmentally sound manner for the public good. Encumbering all new leases with an NSO stipulation would, by and large, not facilitate the "develop and produce" intent of these statutes. Under the various alternatives, the draft EIS/RMP does identify areas to be subject to NSO stipulations. It also identifies areas to be unavailable for leasing.

Comment: We also urge BLM to withdraw certain areas from all future oil and gas drilling and production, including the Ryegrass area, the Cottonwood area, the Fontenelle elk winter range, and the upper Green area north of Warren Bridge. Allowing leasing for oil and gas on 70 percent of the resource area is unacceptable.

Response: The areas available for oil and gas leasing, and subject to NSO stipulations, have been revised in the final EIS.

Comment: This NSO designation applies to basically everything north of Pinedale. Designation only prevents surface occupancy on BLM owned surface rights. However, as I was told yesterday by BLM, they will lease mineral rights in these areas regardless of who owns the surface. This simply means that drilling companies will be coming to drill the federal minerals on private property in this area.

Response: The NSO designation would apply to federal lands and to all federal mineral estates within the NSO area.

Comment: PAGE: 2-47 to 2-48 SECTION: 2.5.2 RECOMMENDED CHANGE: Delete or revise NSO areas EXPLANATION: Large block NSO suffers from a number of technical and legal problems. North block is mostly private land and cannot be enforced. Most of the area is already leased. Map 1-3. Thus there is no "large block NSO." The NSO areas do not correspond to identified habitat areas, thus the stated objective of habitat and migration routes are not supported.

Response: The areas available for oil and gas leasing, and subject to NSO stipulations, have been revised in the final EIS.

Comment: PAGE: 2-48 SECTION: 2.5.2 RECOMMENDED CHANGE: Revise Map 2-29 to remove NSO from private lands. North segment is almost entirely private land and should not be classified as NSO, because BLM lacks jurisdiction. EXPLANATION: As a general matter, NSO is intended to protect specific resources, soils, water quality or endangered species and are traditionally tailored to specific areas within the lease. The RMP use of a NSO block area conflicts with approved use of NSO and is not based on the information found in the RMP.

Response: The RMP only has jurisdiction over the BLM-administered federal lands and minerals within the planning area. The map depicting the Large-Block NSO includes all ownership only for map clarity. It does not intend to imply that private or state minerals are encumbered by the designation.

Comment: PAGE: 2-48 SECTION: 2.5.2 RECOMMENDED CHANGE: EXPLANATION: BLM cannot force a non-lessee to drill an offsetting well or to lease federal land. Drainage discussion fails to address the situation in the north NSO area where most of the land is privately owned. In this situation, BLM cannot claim compensatory royalties, since there is no federal lessee. Moreover, BLM has imposed a leasing moratorium on the federal land so again there is little opportunity for BLM to identify drainage or recover funds to the U.S. Treasury.

Response: You are correct. BLM cannot force a non-lessee to drill an offsetting well or to lease federal land. BLM can, however, force the holder of a lease with NSO restriction to develop an offsetting well under the conditions on page 2-48 of the draft EIS.

Comment: PAGE: 2-49 SECTION: 2.5.2 RECOMMENDED CHANGE: EXPLANATION: About ½ of the land base is privately owned. Map 2-9 implies inaccurately that the area to be withdrawn from mineral leasing is public land. BLM cannot limit development on the private land. See Comment Ch. 2-86 infra.

Response: The RMP only has jurisdiction over the BLM-administered federal lands and minerals within the planning area. The map depicting the Large-Block NSO includes all ownership only for map clarity. It does not intend to imply that private or state minerals are encumbered by the designation.

Comment: PAGE: 2-121, RECOMMENDED CHANGE: REVISE Objective 3 ([Large Block] (strikeout) NSO Areas) Make federal lands and minerals as depicted on Map 2-9 available for oil and gas leasing with NSO stipulations where BLM determines that the soils are hazardous or too steep for development [(205,100 acres)] (strikeout). EXPLANATION: NSO areas need to be based on specific

NSO criteria that justify no surface occupancy. Imposing NSO on an area of land is a withdrawal, State of Wyoming v. U.S. Dept. of Agriculture, 277 F. Supp.2d 1197, 1236 (D. Wyo. 2002) rev'd and vacated on other grounds ("one could not meaningfully explore or drill for oil and gas without access by road into the roadless areas."). As proposed the NSO does not conform to NSO criteria and violates FLPMA withdrawal requirements. RMP can cure this problem only by documenting the need for NSO. As written it does not meet criteria. NSO block does not conform to IM 99-51 drainage guidelines. RMP omits the fact that must of the land in the area is privately owned. As such, BLM cannot force a developer on private land to drill federal land or to lease the adjacent federal land. The drainage rules only work where the adjacent lands are under federal lease. Additionally, where the NSO block areas overlie private minerals, BLM lacks the authority to deny access to develop those minerals. Duncan Energy v. U.S. Forest Service, 50 F.3d 584, 589-91 (8th Cir. 1994) (federal law gave the Forest Service the power to regulate Forest System lands and agreed with the Forest Service that it had the limited authority to determine the reasonable use of the federal surface.) Denial of any surface access is not reasonable regulation.

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: PAGE: 2-147, RECOMMENDED CHANGE: Revise: b. Management actions on existing leases within Large Block NSO Areas would be designed to protect important habitats by excluding surface occupancy and/or disturbance only if consistent with [to the extent this restriction does not violate] (strikeout) the leaseholder's/operator's lease rights. Management actions/projects pursuant to other rights, such as grazing permits and rights-of-way, or projects designed to maintain or improve wildlife habitat would be excluded from this restriction. EXPLANATION: Imposing a new restriction violates the terms of the lease by attempting to introduce new restrictions on the leasehold. Without the change, the leaseholder must show it violates his rights, rather than BLM ensuring that its actions respect those rights. Same action must also be revised to respect other permits granting surface use, such as rights-of-way or grazing permits.

Response: More information about the current leasing status of the unavailable and NSO areas, and how those leases would be managed, has been added to the final EIS.

Comment: PAGE: 4-76, SECTION: 4.7.1, RECOMMENDED CHANGE: REVISE or DELETE [The area would be available for mineral leasing with an NSO stipulation. The MAs managed under the Large Block NSO objectives and actions list the preceding wildlife discussion. Impacts on mineral development and management of existing leases would be the same as those listed in the Large Block NSO Areas impact discussion.] (STRIKEOUT) EXPLANATION: See Comments Ch 2 ##-26-27 (does not meet NSO criteria); compare Appendix 7, A7-3 which sets forth correct BLM NSO policy.

Response: The establishment of Large Block NSO is within BLM's authority. The text as written on page 4-76 of the draft EIS is consistent with BLM's authority. The areas available for oil and gas leasing, and subject to NSO stipulations, have been revised in the final EIS.

Comment: PAGE: G-23 CHANGE: TIMING LIMITATION - A stipulation that prohibits surface disturbing or disrupting activities on all or part of an oil and gas lease during specified times to protect identified resource values during sensitive periods (see also STIPULATION CATEGORY). EXPLANATION: Definition should be revised to clarify that a timing limitation stipulation is a constraint on leases issued under the Mineral Leasing Act that may only apply to portions of a mineral lease.

Response: For the purposes of the RMP, BLM feels the definition is satisfactory.

Comment: PAGE: A5-3 SECTION: RECOMMENDED CHANGE: DELETE [• Belowground wellheads](STRIKEOUT) EXPLANATION: This is an important worker safety issue. It is unlikely that the wellhead will affect sage grouse nest in light of other criteria. BLM cannot put worker safety at issue or impose condition that violates OSHA standards. More importantly, if BLM is really concerned about predation on sage grouse it will support predator control and make it part of RMP. As written, RMP sacrifices worker safety to protect predators of sage grouse.

Response: The use of below ground wellheads is a BMP measure to reduce visual resource impacts. It does not violate OSHA, but does fall under different OSHA standards.

Comment: PAGE: A3-4 SECTION: 2. RECOMMENDED CHANGE: DELETE [Because mitigating operating standards will be identified in the ROD as operational requirements, and not as general lease stipulations, their applicability goes beyond the oil and gas lease to any permitted activity where the requirement is relevant.](STRIKEOUT) EXPLANATION: Regardless of whether they are called mitigation or operational requirements, under MLA, the lease terms and conditions convey the right to use BLM surface for oil and gas development. If restrictions are not in the original contract, BLM cannot modify the lease terms as apparently it proposes to do here. BLM cannot lawfully change lease stipulations. For the same reason, BLM cannot try to use conditions of approval to retrofit new lease terms onto existing leases. See National Wildlife Federation, et. al., 150 IBLA 385, 403 (1999) citing Union Oil v. Morton, 512 F.2d 743, 750-51 (9th Cir. 1975).

Response: The draft EIS states that the rights granted to existing leaseholders would be honored. You are correct, BLM cannot retroactively impose new stipulations on existing leases. However, 43 CFR 3101.1-2 gives BLM full authority to impose conditions on post-lease actions, such as APD approval. The Secretary of the Interior has the authority and responsibility to protect the environment of public lands within federal oil and gas leases (Copper Valley Mach. Works, Inc. V. Andrus, 474 F. Supp. 189, 191; D.D.C. 1979). The Secretary may impose restrictions on lease terms in fulfillment of this responsibility (Natural Resources Defense Counsel V. Bergland, 458 F. Supp 925, 937; D.D.C. 1978). The Federal Onshore Oil and Gas Leasing Reform Act of 1987 requires the Secretary of the Interior to "regulate all surface-disturbing activities conducted pursuant to any lease issued under this Act, and shall determine reclamation and other actions as required in the interest of conservation of surface resources."

Comment: PAGE: 4-187 SECTION: 4.17.1 RECOMMENDED CHANGE: [The extraction of salable minerals would also potentially alter water tables and possibly impact stream channels if development were to take place close to adjacent riparian areas. This would lead to increased sediment loading and siltation, impacting fish populations and their prey base.](STRIKEOUT) EXPLANATION: Not an impact from RMP, just theoretical impacts.

Response: BLM feels the statement is accurate and no revision is needed.

Comment: PAGE: 4-185 SECTION: 4.17.1 RECOMMENDED CHANGE: Continued development in these areas could lead to short-term displacement in [not only](STRIKEOUT) native winter range [abandonment](STRIKEOUT) in the Wyoming Range and [but also a loss of] (STRIKEOUT) high-quality forage until reclamation has successfully returned these ranges to elk habitat. EXPLANATION: Experience in La Barge and Nitchey Gulch suggests that "abandonment" is unlikely. Similarly high quality habitat will not be lost in a permanent sense.

Response: BLM feels the statement is accurate and no revision is needed.

Comment: PAGE: 4-185 SECTION: 4.17.1 RECOMMENDED CHANGE: REVISE In all other oil and gas developments (Appendix 10), the assumption is that there would be between 40- and 60-acre spacing

between well bores. Many of these areas such as the Big Piney/La Barge oil and gas fields have been drilling for more than 50 years, and some of their spacing is much smaller than 40 acres (because the CAP EIS does not have a well spacing requirement). The Big Piney mule deer herd has likely experienced a level of disturbance that has caused it to move away from development but not completely abandon its winter range, similar to the findings of Sawyer (2006). Deer and elk numbers are similar to what they were before development. [However, there is no scientific information that supports that the mule deer herd would maintain its occupancy in these areas if oil and gas activities increase over time.](STRIKEOUT) The elk herds in the Wyoming Range have not experienced a high level of drilling activity or presence in their crucial winter range. Past research has shown that elk were displaced out of the high-quality winter ranges during drilling and construction activities [and did not return until those activities were completed.](STRIKEOUT) EXPLANATION: Omits important information in Sawyer, namely that numbers are at same level. While there may not be long-term studies in Wyoming Range, Steamboat elk herd did return in relatively short time to Nitchey Gulch area (parturition and winter). This is a desert elk herd where there are relatively few of the habitat elements typically said to be necessary for elk, e.g. trees for hiding cover. Nevertheless elk numbers are at an all time high and elk have returned to areas currently producing gas. These facts suggest that the paragraph merits substantial revision to reflect all of the studies, rather than one opinion and selected portions of certain studies. Statement is just not true. Elk returned to La Barge.

Response: BLM feels the statement is accurate and no revision is needed.

Comment: PAGE: 4-75, SECTION: 4.7.1, RECOMMENDED CHANGE: REVISE Existing leases with an ACEC or a MA could be developed under the lease terms. [Postlease actions could be encumbered by additional seasonal or surface use restrictions or could be subject to project relocation, depending on surface resource values, a site-specific NEPA analysis, and the management actions prescribed in the RMP, provided those prescriptions do not preclude leaseholders from legally developing their lease.](STRIKEOUT) The impact of seasonal restrictions (winter range, sage-grouse/raptor nesting, etc.) would be the same as described for corresponding restrictions under Alternative 1. Project relocation impacts would be the same as those described above for similar actions. EXPLANATION: Rules give BLM very limited authority to change well locations or otherwise limit surface use rights. 43 C.F.R. §3101.1-2. Gold Book best management practices are also voluntary. The Gold Book at p. 3 states: “Constraints that are consistent with the rights granted by the lease may be imposed on the location of access roads, well sites, and facility sites or the timing of geophysical exploration, well drilling, or other operations.” Operators may also agree to additional mitigation, typically to reduce impacts and authorize operations under EA rather than EIS. But as stated in the original comment, BLM cannot mandate BMPs that exceed the constraints found in the lease.

Response: Federal regulations at 43 CFR 3101.1-2 give BLM authority to impose stipulations on new leases and restrictions on post-lease actions on existing leases. Washington Office Information Bulletin 2007-119 provides guidance concerning BLM’s authority with regard to 43 CFR 3101.1-2. To resolve these identified issues, BLM stated the following in the same *Federal Register*: “However, it is appropriate to establish minimum parameters within which the Bureau can specify site-specific mitigating measures which, by regulation, are consistent with the lease rights granted a lease. The final rulemaking provides that the Bureau, at a minimum, can require relocation of proposed operations by 200 meters and can prohibit new surface disturbance for a period of 60 days, and such requirements are consistent with lease rights granted. The authorized officer may grant a lease suspension in appropriate cases if new disturbance is prohibited under this section. Similarly, the authority of the Bureau to prescribe “reasonable,” but more stringent, protection measures is not affected by the final rulemaking.”

Comment: PAGE: 4-48, SECTION: 4.7.1, RECOMMENDED CHANGE: REVISE EIS to reflect overlaps among various seasonal closures and cumulative effects. EXPLANATION: EIS fails to disclose restrictions and document that they are the minimum necessary. IM 2005-235; see also IM 2006-97.

Response: See footnote 5 for Tables 2-32 and 2-33 of the draft EIS.

Comment: Later in Appendix 3, the DEIS presents the following direction for evaporation ponds DEIS at A3-8. As with other direction proposed in the DEIS, this Mitigation measure would be discretionary and just states BLM's intent without explaining how it would be accomplished. What kinds of "measures" are available, and how "effective" are they? Which of these "measures" would be required by BLM? Readers are left guessing. It is not enough to make evaporation ponds "unattractive and/or less accessible" to waterfowl and other birds; fully netting is needed [41].

Response: The referenced mitigation is a performance-based measure rather than a prescriptive-based stipulation. The statement has been modified in the final EIS to the following: "Evaporation ponds shall be designed and operated in a manner which deters or prevents access to birds and waterfowl. Pit netting is as example of measure to accomplish this requirement."

Comment: PAGE:2-147,RECOMMENDED CHANGE:. Oil and gas developmental operations would be managed through performance-based stipulations and mitigations provided in Appendix 3. EXPLANATION: Delete a-k. Reliance on performance-based stipulations is meaningless when coupled with command and control terms listed above.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: PAGE: 2-118, RECOMMENDED CHANGE: Delete withdrawal objective: [Objective 4 Approximately 13,770 acres of new withdrawals from locatable mineral entry and land disposal would be pursued to protect cultural, wildlife habitat, and recreational values (Table 2-26, p. 2- 164; Map 2-34).] (strikeout) EXPLANATION: RMP does not document purpose and need for withdrawal in accordance with FLPMA. Law requires that BLM address the 12 factors supporting the withdrawal, none of which is found in the reasons set out in the RMP. BLM has discretion to seek a withdrawal but it does not have discretion not to document whether its request conforms to the statutory criteria.

Response: The 12 factors supporting withdrawal apply only to withdrawals under Section 204 (c) (2), withdrawals over 5,000 acres. No proposed withdrawal exceeds 5,000 acres.

Comment: PAGE: 2-115 SECTION: 2.5.5 RECOMMENDED CHANGE: j. Surface occupancy would be prohibited within [1](strikeout) ¼ mile on either side of the Sublette Cutoff Trail. EXPLANATION: Trail not closed except for ¼ mile. RMP cannot expand without any determination as to significance, guidance, or impacts. Action prejudges situation.

Response: The RMP is designed to formulate management activities concerning the various resources within BLM's jurisdiction in the planning area. Management of historic trails is one of those resources. BLM can impose additional restriction beyond the standard restriction to protect important resource values, as indicated in Chapter 3. The Sublette Cutoff has associated historic sites, such as Names Hill, that warrant additional protection.

Comment: PAGE: 2-3 SECTION: 2.2.1 RECOMMENDED CHANGE: Specific to the oil and gas program, the alternatives in this draft EIS address the availability and allocation of lands for future oil and gas leasing, potential lease stipulations for new leases, and additional mitigation to be considered and

applied during the Application for Permit to Drill (APD) process so long as consistent with lease stipulations. EXPLANATION: While implied elsewhere with reference to recognizing valid existing rights, the RMP needs to clearly state new lease stipulations or new conditions that are inconsistent with the lease terms cannot be applied to existing leases.

Response: The suggested text change has not been incorporated because 43 CFR 3101.1-2 clearly gives BLM the authority to impose reasonable restrictions on post-lease actions, such as APDs, even if such restrictions are not embedded in the lease through stipulation.

Comment: Appendix 3 also discloses that activities allowed under the proposed alternatives will result in negative impacts that reduce big game herd numbers below state target numbers. While BLM commits itself to consulting with WGFD if this is likely to occur, there are no criteria set forth indicating what will trigger consultation. Furthermore, BLM completely exempts itself from requiring mitigation of these effects if there are prior existing rights or the activities are consistent with "multiple use of the public lands." BLM continues to insist, for example, it cannot impose conditions of use after a lease is sold. "It is important to recognize that the authorized officer has limited authority to modify the site location and design of facilities, control of the rate of development and timing of activities, or require other mitigation under sections 2 and 6 of the [standard lease terms] (BLM form 3100-11) and 43 Code of Federal Regulations (CFR) § 3101.1-2." A7-1. This is inaccurate, as BLM still has authority reserved in the lease agreement which permits it to regulate surface disturbing activities to some degree, including imposition of mitigation requirements; and indeed BLM has a duty to protect the natural environment even after a lease has been issued. BLM cannot get out from under this legal duty merely by stating repeatedly in the DEIS that it doesn't have the authority to require mitigation of impacts.

Response: WGFD is a cooperating agency working with BLM on the development of this RMP, as well as on project-level EAs/EISs. WGFD also has a biologist assigned to the Pinedale Field Office to review and work with BLM on mitigation efforts for site-specific projects. The draft EIS/RMP does not state that BLM cannot mitigate proposed actions on existing leases. It does state that BLM cannot preclude a holder of existing lease from exercising his/her legal right to explore, develop, and produce the lease (Note: for the purposes of this RMP, existing lease means those leases in effect at the time the ROD for the EIS/RMP is approved by the Wyoming State Director of the BLM). Per 43 CFR 3101.1-2, BLM certainly does have the authority and does impose conditions of approval on exploration, development, and production activities in existing leases.

Comment: Section 4.7.1 - Leasable Minerals Assumptions: On page 4-46, the BLM suggests as one of its assumptions that post-lease actions, including APDs and ROWS, could be encumbered with new timing limitations or controlled use restrictions from the new RMP. When applying site-specific conditions of approval, the BLM must not impose restrictions that are inconsistent with APC's rights under its existing leases.

Response: Federal regulations at 43 CFR 3101.1-2 gives the authorized officer the authority to "impose such reasonable measures as may be required to minimize adverse impacts to other resource values, land uses, or users not addressed in the lease stipulations at the time operations are proposed." The regulations give leaseholders or operators the right to appeal imposed requirements they believe are not "reasonable measures".

Mitigation, Monitoring, Restrictions, Best Management Practices (BMPs), Conditions of Approval (COAs)

Comment: Furthermore, there is no obligation or authorization in BLM's charter to concern itself with operator cost of doing business. Statements that implementation of emissions mitigation measures will result in greater operating costs 2 or that impacts from cultural resource management actions will increase

well development costs13 or that migratory bird exclusion devices over pits designed to withstand snow loading could impact economic viability of some wells14 have no place in BLM planning.

Response: Federal regulations at 43 CFR 3162.1 state: "The operating rights owner or operator, as appropriate, shall comply with applicable laws and regulations; with the lease terms, Onshore Oil and Gas Orders, NTLs; and with other orders and instructions of the authorized officer. These include, but are not limited to, conducting all operations in a manner which ensures the proper handling, measurement, disposition, and site security of leasehold production; which protects other natural resources and environmental quality; which protects life and property; and which results in *maximum ultimate economic recovery of oil and gas* with minimum waste and with minimum adverse effect on ultimate recovery of other mineral resources (emphasis added). BLM can and does place reasonable restriction on oil and gas operations, but also must be cognizant of the impacts of those restrictions, one of which is reducing the *maximum economic recovery*. The purpose of Chapter 4 is to identify impacts of the various actions proposed for the various resources.

Comment: PAGE: 2-120, RECOMMENDED CHANGE: c. Exceptions would be considered to allow year-round drilling and development operations on new and existing leases in the Jonah, Pinedale Anticline, Big Piney-La Barge, Deer Hills, and Castle Creek oil and gas fields that are currently encumbered by seasonal restrictions. Such exceptions would be subject to additional environmental analysis to assure consistency with RMP. [and the leaseholder/operator implementing offsetting mitigation such as, but not limited to: habitat enhancement; development of a liquids (condensate and produced water) gathering system to reduce truck traffic; remote telemetry; drilling of multiple wells from new and existing pads; directional drilling; noise reduction for drilling and completion operations; flareless completion; tier 4 or better emission equipment; bussing of crews; concentration of development; closed drilling systems; use of transportation plan that reduces road density; compensation mitigation; and monitoring of wildlife populations.] (strikeout) EXPLANATION: Seasonal conditions listed in RMP not based on criteria found in rules or Gold Book. These need to be deleted. Waiver of seasonal lease stipulation need not and should not be conditioned on assuming some other expensive condition. Nor does the action require that the offset be connected to the basis for the seasonal stipulation. These are just a list of arbitrary new conditions. They cannot be defended and should be dropped.

Response: The stipulations, mitigation, and COAs in the RMP are rooted in the Wyoming BLM Standard Oil and Gas Lease Stipulations issued under an Instruction Memorandum (IM) in the mid-1980s and in BMP IMs 2005-033 and 2007-021 issued by the BLM Washington Office. The Gold Book is a guideline. It is not a ruling. Federal regulations at 43 CFR 31001.1-2 give BLM the authority to impose restrictions on post-lease actions, such as APDs.

Comment: The BLM must also recognize that there are technical and economic limitations to the COAs and stipulations the agency suggests, particularly on existing leases. The BLM lacks the authority to impose mitigation measures that are not technically or economically feasible. Once the BLM has issued an oil and gas lease conveying the right to access and develop the leasehold, the BLM cannot later impose unreasonable mitigation measures that take away those rights. See Conner v. Burford, 84 F.2d 1441, 1449-50 (9th Cir. 1988); 43 C.F.R. § 3101.1-2 (2006) (BLM can impose only "reasonable mitigation measures . . . to minimize adverse impacts . . . to the extent consistent with lease rights granted"). There is no indication or analysis in the RMP DEIS whether many of the proposed objectives are technologically and economically feasible. For example, BLM's requirement to minimize noise-generating activity could be construed as requiring the imposition of significant mitigation measures, regardless of their feasibility. See RMP DEIS, pg. 2-101-102.

Response: Federal regulations at 43 CFR 3101.1-3 state: "The authorized officer may require stipulations as conditions of lease issuance", and as previous stated, 43 CFR 3101.1-2 gives the authorized officer the

authority to impose such reasonable measures as may be required to minimize adverse impacts to other resource values, land uses, or users not addressed in the lease stipulations at the time operations are proposed. The regulations give leaseholders or operators the right to appeal imposed requirements they believe are not "reasonable measures".

Comment: The federal oil and gas lease grants the lessee the right to extract the oil and gas resource. If BLM deems it necessary to place additional restrictions on the rights of lessees in order to protect environmental resources, stipulations are appended to the lease. Stipulations clarify BLM's intent to protect known resources or resource values. The lessee is required to conduct operations in a manner that minimizes adverse [environmental] impacts and take reasonable measures deemed necessary by the lessor (BLM) to accomplish this intent. These prudent measures are applied through a Condition of Approval (COA) during the permit process for oil and gas development.

The COAs must be reasonable. This means they must be technically possible to accomplish, and they must allow the exercise of lease rights. They must also be plainly worded and justified by the NEPA process. A COA must not prevent an applicant form proceeding with development for either economic or technical reasons."

Comment–Exceptions to COAs will be granted only if implementation is technically infeasible, or (2) is economically prohibitive, or (3) an environmentally preferable alternative is available; and the alternative proposed by the lessee/permittee fully satisfies the objective/outcome of the lease stipulation or operating standard. This has the potential to prohibit the operator from exercising lease rights in situations where implementing a COA renders the project uneconomic, which must be avoided.

Response: The referenced exception process is found in Appendix 3 of the draft EIS and is prefaced with the statement, "The permitting process, in conjunction with the greater flexibility afforded by the proposed performance-based lease stipulations and operating standards that are focused on resource management objectives, should result in the need for fewer exceptions", which has been modified in the final EIS to the following, "The permitting process, in conjunction with the greater flexibility afforded by the proposed performance-based lease stipulations and operating standards that are focused on resource management objectives, as opposed to employing a broad range of prescriptive restrictions, should result in the need for fewer exceptions."

This exception process does not prohibit an operator's right to develop his/her lease. In fact, the draft EIS emphatically recognizes and acknowledges leaseholder rights, see page 2-9. To help ensure that an operator's rights are protected, Appendix 3 describes the exception process. It also sets the criteria that must be met before an "exception" to a lease stipulation or operating standard would be granted.

Comment: All alternatives create the illusion that oil and gas development cannot be regulated once leases are let. We all know better as evidenced in the original Pinedale RMP when BLM legally applied Conditions of Approval on APDs for existing leases to protect wildlife habitat.

Response: You are correct. BLM can apply certain conditions of approval on APDs. Federal regulations at 43 CFR 3101.1-2 state: "A lessee shall have the right to use so much of the leased lands as is necessary to explore for, drill for, mine, extract, remove, and dispose of all the leased resource in a leasehold subject to: Stipulations attached to the lease; restrictions deriving from specific nondiscretionary statutes; and such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations at the time operations are proposed. To the extent consistent with lease rights granted, such reasonable measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures."

Comment: I propose the Record of Decision be void of the following concepts:

1. Seasonal drilling stipulations. I support the development of new technologies and best management practices that protect wildlife without restrictive seasonal stipulations.
2. Mandated directional drilling and clustered development in an RMP. Such stipulations are more appropriate in subsequent project level NEPA processes.

Response: The RMP builds a framework for subsequent project-level NEPA documents. Such a framework includes suggested and required mitigation measures, as well as best management practices. As such, it is appropriate for the RMP to set the framework for measures that could reduce impacts

Comment: Despite these clear instructions, the Pinedale RMP appears to make several management decisions that are most appropriately left to site-specific authorizations. For example, under both Alternatives 3 and 4, the BLM appears to impose specific operational limitations on oil and gas development, including the use of on-lease water disposal pits (Alternatives 3 and 4) and the mandatory imposition of best management practices (BMPs) regardless of their applicability or feasibility (Alternative 3, pgs. 2-81 - 2-83). Compare Alternative 4, pg. 2-120 (BMPs will be applied to the extent possible and practicable). The BLM should not utilize the land use planning process to impose site-specific conditions of approval or unreasonably limit future management actions by including limiting language in the Pinedale RMP.

Response: The management actions proposed in the alternatives are appropriate for the land use planning level. The document says that BMPs would be applied to protect resources, not that BMPs would be required regardless of their usefulness. BMPs by their nature are analyzed and applied on a site-specific basis.

Comment: There needs to be an effort to mitigate what has happened in the Jonah and Anticline fields to wildlife. The Wind River Front and the Upper Green is the prime area to mitigate what has happened to the industrial zone once known as open, undisturbed desert.

Response: Management of federal lands and mineral estates along the Wind River Front and in the Upper Green are addressed in the final EIS.

Comment: We support mandatory use of new science-based technologies for restoration, clustering industrialization, directional drilling and other ways to minimize impacts in developed fields. Those alone will not sustain wildlife, landscapes, air and water or our way of life. We need and demand more and better planning before projects are developed to weigh and balance other important resource values against the payoff from more drilling. Some measure of development prerogative must be foregone by a slower pace, phased development and permanent withdrawal of important areas from development if BLM is to truly manage for multiple uses in the Pinedale RMP area. The use of more ACEC descriptions would be appropriate to protect areas of known importance.

Response: The RMP sets the framework for project- and site-specific NEPA analysis and provides the impetus for the use of BMPs. Not all BMPs are appropriate or necessary in all situations all the time. The project- and site-specific NEPA would determine the appropriate measures for that project. The various alternatives in the draft EIS/RMP provide opportunities for withholding areas from oil and gas leasing on a long-term basis. Consistent with the overall objective for each alternative, the RMP does identify a variety of ACECs.

Comment: Let’s insist on the best technology and practices from our operators, not just tinkering in the new technologies. Why not raise the bar and work ethics of the gas industry?

Response: Appendices 3, 5, and 18 of the draft EIS do establish best management practices to be used. Specific implementation of such practices would be developed through site-specific or project-specific NEPA documents.

Comment: Reclamation: There is no substantive information in the reclamation discussion in Appendix 3. Based on the magnitude and extent of projected impacts to big game animals resulting from energy development alone, the BLM must provide a more thorough discussion of reclamation. Standards, seed mixes, invasive weed control and time for recovery all need to be discussed. A large part of persistence of big game populations in the Pinedale Resource Management Area will depend upon the success of returning disturbed areas to productive sagebrush communities. Reclamation to a functional sagebrush community will be a slow and challenging task in the arid environs characteristic of the Pinedale Resource Management Area. The DEIS (4-182) indicates that impacts from buried pipelines could last up to 30 or 40 years and Baker (2006) reports a 50-100 year time frame for recovery of a sagebrush community. In order to fulfill the disclosure mandates of NEPA, the BLM must provide a more thorough, realistic discussion of reclamation requirements and limitations.

Response: The RMP establishes the framework for reclamation processes, but is not intended to provide site- or project-specific standards or procedures. Specific standards, seed mixes, invasive weed control, and recovery time would be developed through project-level EAs or EISs. Appendix 3 has been revised in the final EIS.

Comment: 5) Adopt and strictly enforce meaningful mitigation and monitoring requirements

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

Comment: 7) Require industry to reclaim all disturbed areas and provide sufficient bonds to protect taxpayers from cleanup and restoration costs.

Response: Reclamation of all disturbed areas is required. Bonds are not required for oil and gas development and BLM does not have the authority to institute this requirement.

Comment: The BLM also appropriately recognizes that "[s]urface use and timing restrictions resulting from this RMP cannot be applied to existing leases." See RMP DEIS, pg. 2-8. The BLM, however, attempts to limit this statement by suggesting the BLM could impose conditions of approval ("COAs") to "mitigate potential impacts from oil and gas operations." The BLM must not attempt to use site-specific COAs as a means to enforce new management objectives or stipulations on existing leases. The BLM cannot adjust a lessee's valid and existing rights. Congress made it clear when it enacted FLPMA that nothing therein, or in the land use plans developed thereunder, was intended to terminate, modify, or alter any valid or existing property rights. See 43 U.S.C. § 1701 (2006).

Response: Federal regulations give the BLM the authority to impose COA on post-lease actions. Specifically, 43 CFR 3101.1-2 states: "A lessee shall have the right to use so much of the leased lands as is necessary to explore for, drill for, mine, extract, remove, and dispose of all the leased resource in a leasehold subject to: Stipulations attached to the lease; restrictions deriving from specific nondiscretionary statutes; *and such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations at the time operations are proposed*" (emphasis added). Attaching a timing limitation COA to an APD or Sundry Notice approval is consistent with this regulation.

Comment: Section 2.3.16 - Compensation (Offsite) Mitigation: Past BLM policy makes it clear offsite mitigation must be voluntary. "Offsite mitigation is to be entirely voluntary on the part of the applicant." Instruction Memorandum 2005-069 (Sept. 30, 2006). The BLM cannot require offsite mitigation. Offsite mitigation is rarely appropriate for oil and gas projects. Oil and gas development is a central part of its mission, and the federal lessees are required to maximize oil and gas on their leases. Mineral development is a designated principal and major use of BLM land under FLPMA. 43 U.S.C. § 1702(1) (2006). The BLM in Wyoming long ago recognized that "compensation, as a form of off-site mitigation, is not to be a routine operation of BLM in Wyoming." See BLM Wyoming Instruction Memorandum WY-96-21 (Dec. 14, 1995) (emphasis added). The BLM must redraft Section 2.3.16 to clearly indicate that offsite compensation must be voluntary and that offsite mitigation is not appropriate for every natural gas development project.

Response: The RMP alternatives make no attempt to make offsite mitigation a requirement. A statement clarifying Section 2.3.16 of the draft EIS has been added in the final EIS.

Comment: I therefore strongly oppose this Alternative and support instead Alternative 3 with the following revision included in its final form: • Mitigation measures must be concrete, binding, have distinct time frames for achievement, have clear accountability for expenses. and be successful or else heavy fines will be incurred and leaseholder rights restricted. Fines shall be directly used to buyback leases in undeveloped areas or for development of renewable energy sources.

Response: Mitigation measures are, in fact, binding, not only on permittees, leaseholders, ROW holders, project proponents, etc., but also on BLM. Where applicable, mitigation does typically have implementation time frames. Depending on the specific mitigation, time frames typically have target implementation dates. Unless BLM is funding a mitigation measure, BLM does not have jurisdiction over how much or how little is spent on it. BLM does, however, have jurisdiction over whether or not the implementation meets the intended objective. BLM does have jurisdiction to require bonds, to attach bonds, issue notices of violation, issue trespass notices, issue shut down (cease and desist) orders, and in the case of oil and gas operations, make monetary assessments for certain violations. *BLM does not* have the authority to retain the monetary assessments, or to obligate them in any way. This includes funding lease buybacks or development of renewable energy sources. Such monetary obligations reside with Congress and the President.

Comment: I therefore strongly oppose this Alternative and support instead Alternative 3 with the following revision included in its final form: • Mitigation will be monitored by third parties, not affiliated with or represented in any way by Energy company employees (i.e. PAWGs with energy representatives included and directed by federal restraints are NOT adequate means of monitoring the success of mitigation measures). The public shall be kept informed of the monitoring parties' findings on a monthly basis.

Response: This is not a planning-level decision, but is one that could typically be initiated and implemented through project-level EAs or EISs. Regardless of who performs the mitigation monitoring, BLM retains full authority and responsibility for ensuring that parties conducting the monitoring are qualified, that the monitoring meets the required standards, and that the results are accurate. Much of the mitigation monitoring is completed on an annual basis. It is neither reasonable nor practical to provide monthly disclosures.

Comment: 5) Adopt and strictly enforce meaningful mitigation and monitoring requirements.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

Comment: While we prefer the management plan laid out in Alternative Three, we believe it needs improvements to truly reflect your multiple use mandate and to provide the necessary protection for the significant cultural resources under your control. Therefore, we would urge you to adopt the following additional safeguards to Alternative Three: • Insist that industry employ the cleanest technologies and the best environmentally protective practices.

Response: These suggestions are not something that would result in planning-level decisions, but they certainly could be initiated and implemented through project-level EAs or EISs. BLM is required to adhere to the Clean Air Act, but does not have the regulatory authority to mandate permittees, leaseholders, ROW holders, or project proponent adherence. That regulatory authority resides with the EPA and Wyoming DEQ. Appendix 5 of the draft EIS provides a listing of best management practices that would be applicable to whatever alternative or modified alternative is ultimately implemented.

Comment: BLM must develop requirements on industry that will require it to invest at least three percent of those revenues in environmental repair of damages done, in development of methods to continually reduce environmental damages done, and finally, in research and development designed to bring on line radically improved methods and equipment that will produce continually lessening environmental damages. Absent that, the RMP must stipulate that industry will not be allowed outside the Jonah and the PAPA.

Response: It is beyond BLM's authority and the authority of this plan to require industry to invest any specified amount on reclamation. BLM does have the authority and does require operators to reclaim the surface disturbance caused by their operations. Additionally, BLM has the authority and does require operators to post bonds to ensure their compliance. Valid leases issued under the current RMP must be honored. BLM does not have the authority to prohibit development of valid existing leases.

BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the numbers presented in the draft EIS are current, valid, and applicable. The draft EIS presents four alternatives that range from strong commodity production to strong environmental protection. The plan does take the nation's energy needs into account, but also takes the other resources values within the planning area into account, as required by numerous laws and regulations.

Comment: We engage in this lengthy and somewhat detailed review of relevant law and policy so as to emphasize that the BLM certainly has the authority, and indeed an obligation, to fully protect the natural environment even in the 70 percent of the Pinedale Field Office that has already been leased and especially in Unavailable Areas and Large Block NSO Areas because the specific, stated objectives of the RMP in these areas are to provide such protection. Clearly the BLM should provide a clear, unequivocal statement of the degree to which it has retained rights under the standard lease form and specify precisely the means by which it will exercise those retained rights so as to meet the management objectives for the various oil and gas management areas specified in the RMP. Absent such clear statements of what precise management will apply to existing leases it is difficult to see how the oil and gas management areas can achieve the stated management direction applicable to them with any assurance.

Response: Page 2-8 states: "based on site- or project-specific environmental analysis, conditions of approval (COA) could be applied at the APD and Sundry Notice stage, and at subsequent development

stages, to mitigate potential impacts from oil and gas operations within existing lease areas, providing the leaseholder's right to develop the lease remains intact."

Comment: Drillers better have to do aggressive and immediate reclamation where an area is no longer in operation due to the shear numbers of wells.

Response: Oil and gas operators are required to reclaim the portions of their disturbance not needed for production operations as soon as possible after drilling operations are completed. Reclamation standards and procedures are evolving and are more explicitly addressed in project-specific NEPA documents.

Comment: Offsite remedial projects are a buy-off and should not replace on-site rehabs. Our "Nations energy/mineral needs are very important, BUT same is true for responsible conservation of "our" resources and protection of "our" private property and equal rights under "our" laws. Many more details/comments could be included herein and above, but such would not become "concise" as required for these general comments/ideas and minimal efforts to explain any oremis/basis therefore.

Response: Implementation of offsite mitigation projects does not absolve leaseholders/operators from reclaiming the disturbance resulting from their operations. Rather, it is intended to augment and/or enhance habitats in offsite areas while the onsite reclamation is being completed and reaches suitable habitat function.

Comment: The BLM sometimes invokes its regulation at 43 C.F.R. § 3101.1-2 (see quote from RMP DEIS cited above) as imposing limits on its ability to condition development, claiming that (in the absence of a stipulation or non-discretionary statute) it can only impose "reasonable measures" demanding no more than that lease operations be moved no more than 200 meters, leasehold operations be prohibited for no more than 60 days, or that operations be moved off the leasehold. This is an incorrect view of this regulation. In adopting this regulation, BLM commented that "the authority of the Bureau to prescribe 'reasonable,' but more stringent, protection measures is not affected by the final rulemaking." Oil and Gas Leasing, Geothermal Resources Leasing, 53 Fed. Reg. 17,340, 17,341 (May 16, 1988). Quite simply, this regulation establishes a floor, not a ceiling. Furthermore, as noted above, the specific terms of the standard lease certainly do not limit BLM's authority to this degree. It may be worth noting that the standard lease form and the regulation were both adopted in 1988; BLM certainly developed one in full recognition of the other. Consequently, the standard lease and the 3101.1-2 regulation must be considered together to determine the BLM's retained rights. The 3101.1-2 regulation does not stand as the sole word as to what constitutes "reasonable measures," and in any event it too hardly constrains the BLM's rights to condition development (reasonable measures "are not limited to" modifying siting or design of facilities, timing of operations, and specification of reclamation, and the specific reasonable measures are "at a minimum" of what is within BLM's authority). Perhaps the BLM recognizes these broad retained rights. In a moment of candor in the RMP DEIS, BLM stated: "The oil and gas lease is a binding agreement between BLM and the lessee that does not authorize subsequent surface disturbing activity. All surface disturbing activities . . . require additional authorization(s) issued subsequent to leasing." A3-2. The BLM should expand on this statement so as to make clear that it also retains-and will exert-the various rights described herein.

Response: As page 2-8 of the draft EIS states, holders of existing oil and gas leases have a valid legal right to explore, develop, and produce the lease. As provided in 43 CFR 3101.1-2, BLM does have the authority to impose "reasonable restrictions" to post-lease actions where the lease is not encumbered with stipulations. The draft EIS does provide for opportunities for BLM to mitigate impacts on existing leases — please refer to action items b and c under Objectives 2 and 3 on pages 2-55, 2-82, 2-83, and 2-120, 2-121 of the draft EIS. Page 2-8 states: "Based on site- or project-specific environmental analysis, conditions of approval (COA) could be applied at the APD and Sundry Notice stage, and at subsequent

development stages, to mitigate potential impacts from oil and gas operations within existing lease areas, providing the leaseholder's right to develop the lease remains intact".

Comment: As recognized in BLM Washington Office Instruction Memorandum 2005-069 (Sept. 30, 2006), "Offsite mitigation is to be entirely voluntary on the part of the applicant." The BLM does not have the authority to require offsite mitigation. Further, offsite mitigation is not appropriate for most oil and gas projects. Oil and gas development is an integral part of the BLM's mission. Federal oil and gas leases have not just the right, but the obligation to maximize the recovery of oil and gas resources from public lands, and should not be required to find offsite mitigation every time development operations are proposed. As recognized by the BLM Wyoming State Director in 1995, "compensation, as a form of off-site mitigation, is not to be a routine operation of BLM in Wyoming." See BLM Wyoming Instruction Memorandum WY-96-21 (Dec. 14, 1995). The BLM must redraft Section 2.3.16 to clarify that offsite compensation is entirely voluntary and that it is not appropriate for every natural gas development project within the Pinedale Resource Area.

Further, the BLM should clearly indicate in the RMP that offsite mitigation will be based upon assessments of site-specific strategies designed to ensure long-term species viability rather than the funding of studies and project administration. Finally, the BLM should develop and endorse policies enabling offsite mitigation to be effectively used across agency boundaries.

Response: BLM is bound by the requirements of the cited IM as long as that IM remains in effect. Consistent with the IM, the text at 2.3.16 of the draft EIS, "proposed by the operator", infers that the program is voluntary. To provide further clarity to Section 2.3.16, the following statement has been added to the end of the first paragraph in this section of the final EIS: "Consistent with BLM IM WO-2005-069, the initiation of compensatory (offsite) mitigation is a voluntary action on the part of the applicant."

Comment: I am a property owner in the Green River Ranches area, and am very concerned about the availability of clean water for my land and animals. Make no mistake--I am not against oil drilling in the U.S. I am, however, very aware that the outdated, money saving techniques most oil companies prefer to use when drilling for oil leave the land barren and highly toxic with chemicals and spilled oil. Also, the use of highly toxic chemicals mixed with water at & below ground level--ALWAYS leads to future groundwater and runoff contamination.

Response: The nearest existing federal oil and gas lease to the Green River Ranches area is located on the west side of the Green River about ¾ of a mile west of the Warren Bridge Campground. Under Alternatives 3 and 4, the federal land and mineral estate in the Green River Ranches area would either be unavailable for oil and gas leasing or new leases would be unavailable for surface occupancy. The specifics of drilling operations would be addressed through project-level or site-specific NEPA analysis. BLM does require operators to use fresh water drilling techniques to drill through all known fresh water aquifers encountered. BLM also requires the operators to set surface casing through the fresh water zones and then cement the backside of the surface casing from the total depth of the casing back to the surface to seal the encountered aquifers for the well bore.

Comment: Page 2-13 BLM policy requires that offsite mitigation many only be used on a voluntary basis; however, the implication is that approval will be denied without it. When offsite mitigation is being considered as a design feature of the applicant's submission, BLM's NEPA analysis should: 1) evaluate the need for offsite mitigation, 2) consider the effectiveness of offsite mitigation in reducing, resolving, or eliminating impacts of the proposed project(s), and 3) comparatively analyze the proposal with and without the offsite mitigation. It must also be acknowledged that unless a proposed action would result in "unnecessary and undue" degradation, such mitigation requirements would go beyond BLM's authority to require new mitigation.

Response: BLM must operate in compliance with all applicable laws, regulations, and directives. This includes IM 2005-069 until it expires or is rescinded. The Compensatory (offsite) Mitigation section in Chapter 2 of the draft EIS plainly states: "Compensatory or offsite mitigation *proposed by oil and gas or other operators could* be considered . . ." (emphasis added).

Comment: Appendix 3 sets out mitigation guidelines and operating standards applicable to surface disturbing activities using a performance based approach. Under Draft Pinedale RMP alternatives 2, 3 & 4, mitigation may be required based on environmental analysis conducted during the permitting process for individual or field drilling proposals but is not explicitly required as a condition of obtaining a lease (page A3-1). BLM states that the guidelines may be employed to protect resources during oil and gas exploration, development and reclamation (page A3-2). However, the language used by BLM to describe the operating standards and mitigation guidelines does not adequately describe when, where and what actions are required to meet the desired objectives. Rather, BLM states a desired effect or outcome and then lists multiple possible mitigation actions that may or may not be applied. This lack of clarity undermines BLM's ability to enforce important resource management goals identified in the NEPA analysis and erodes any certainty for industry, the local public, cooperating agencies, and others as to what mitigation exactly will be required with future leasing and development under the new Pinedale RMP.

BLM introduces the use of "performance based stipulations and standards" in place of, and in addition to, more traditional prescriptive based stipulations. BLM states that this change is intended to provide for "the implementation of adaptive management principles."(page A3-1). BLM further asserts that the focus on outcomes for resources "would ensure that mitigations are effective while simultaneously allowing the application of new environmental science to natural resource systems and land use plan decisions. Monitoring would ensure that adaptive management principles are adhered to and that necessary changes to operating standards can be made in a timely and efficient manner." (page A3-1). Incorporation of adaptive management principles by the BLM in mitigation efforts is in theory laudable; however, the interchangeable use of "performance or outcome based objectives" and "adaptive management" leads to confusion about actual requirements and management strategy. When and where are actions required? What actions are necessary for successful implementation? Who is responsible for funding and monitoring and on what timeline? And what happens when desired outcomes are not achieved?

Recommendation: BLM must clear up confusion regarding its mitigation approach by including a straightforward definition of the "performance based approach" to management and how it relates to adaptive management. BLM must then address all aspects of successful adaptive management and provide detailed adaptive process requirements, rather than using it as an empty catchphrase without any substantive procedures and requirements. If the BLM intends to use the performance based approach as a synonym for adaptive management, the RMP must clearly state this and follow through with appropriate use of scientifically recognized adaptive management techniques.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not authorize any on-the-ground activities. To be effective, mitigation must be tailored to the specific project or proposal. Specific mitigation would be designed at the project implementation EIS level and would be included in the ROD requirements for project-level developments such as the Jonah or Pinedale Anticline fields. This mitigation would include the specifics suggested in the comment.

Comment: Page 4-250 "The implementation of BLM's mitigation guidelines, restrictions on surface use, continued implementation of healthy rangeland standards, and monitoring efforts would provide protection to soils on federal lands and lands with federal subsurface minerals, which would help reduce cumulative effects." Comment: Chevron strongly supports the use of voluntary surface BMP's and effective implementation of required surface use mitigation, but the relationship of the oil and gas BMPs,

operating standards, and oil and gas mitigation guidelines to the healthy rangeland standards is unclear and must be explained. BLM has not, and should, discuss ongoing monitoring efforts and their results in the FEIS.

Response: BMPs can be implemented as voluntary measures that the operator commits to as you suggest, but they also can be required by BLM. The referenced text does not directly correlate oil and gas related BMPs or oil and gas mitigation to rangeland health standards. It does correlate surface disturbance mitigation to rangeland health standards. Typically, measures that reduce surface disturbance will help maintain rangeland conditions. Prompt and effective reclamation with appropriate plant species can also augment or enhance rangeland conditions. The monitoring efforts in the text refer to the monitoring of surface disturbance/reclamation efforts to ensure the measures are effective.

Comment: On page 4-46, the BLM suggests as one of its assumptions that post-lease actions including APDs and ROWs could be encumbered with new timing limitations or controlled use restrictions from the new RMP. When applying site-specific conditions of approval, the BLM must not impose restrictions that are inconsistent with EOG's rights under its existing leases. The imposition of restrictions inconsistent with existing lease rights may result in an illegal taking of EOG's existing contract and property rights.

Response: BLM does not disagree with the comment that it does not have the authority, once a lease is issued, to impose new stipulations or new restrictions on a lease that exceed the terms and conditions of existing leases. As stated on page 2-8 of the draft EIS, existing rights would be honored. Alternative 3 does not impose new stipulations on existing leases. It does, however, provide the framework for application of COAs to post-lease actions that are determined through project- and/or site-specific NEPA analysis to be necessary for the mitigation of anticipated impacts.

Sufficient case law exists to clearly demonstrate that BLM does have the authority and responsibility to impose new restrictions once a lease has been issued, as long as BLM does not deny development of the lease or totally preclude surface disturbing activities. Therefore, our position and policy is to take a "hard look" at the environmental consequences of a proposed action at the field development and APD stage, and, if necessary, require mitigation measures as means of reducing impacts. The Secretary of the Interior has the authority and responsibility to protect the environment of public lands within federal oil and gas leases (Copper Valley Mach. Works, Inc. V. Andrus, 474 F. Supp. 189, 191; D.D.C. 1979). The Secretary may impose restrictions on lease terms in fulfillment of this responsibility (Natural Resources Defense Counsel V. Bergland, 458 F. Supp 925, 937; D.D.C. 1978).

In various oil and gas lease forms, the Secretary reserves the right to incorporate general standards into the lease aimed at mitigating environmental damage. However, mitigation must be reasonable. Such post-lease restrictions cannot directly, or indirectly, preclude the development of the lease, absent a no surface occupancy stipulation on the lease. Sierra Club V. Peterson, 717 F. 2d 1409 (1983) provides: "On lands leased without a No Surface Occupancy Stipulation, the Department cannot deny the permit to drill; it can only impose 'reasonable' conditions which are designed to mitigate the environmental impacts of the drilling operation" (p. 1411). It continues: "Once the land is leased the Department no longer has the authority to preclude surface disturbing activities even if the environmental impact of that activity is significant…" What is reasonable will vary with each individual APD. A "taking" would occur if after a lease without an NSO stipulation is issued, the lessee is prohibited from conducting development activities on the leased lands. A "taking" could also occur if COAs imposed at the APD stage are so stringent that it is not practical to conduct operations. It is not the policy of the BLM to utilize unjustified stipulations or COAs.

Comment: BLM claims it fully considered the findings of the Energy Policy Conservation Action ("EPCA") study, in accordance with BLM Instruction Memorandum 2003-233 and 2003-204 (Aug. 4,

2003). Page 2-9 states, "In compliance with EPCA, restrictions and impediments to mineral resource development would be analyzed throughout the planning process with the intent to: Ensure that such mitigation is either statutorily required or scientifically justifiable and is the least restrictive measure necessary to accomplish the desired level of resource protection. The mitigation requirements will be monitored to determine whether more- or less-restrictive measures may be required to accomplish the same goal." BLM has been requiring monitoring in the Pinedale FO for quite some time; unfortunately, no information on what was being monitored has been discussed in the DEIS. We recommend BLM include the results of this monitoring in order to identify any unacceptable or unanticipated environmental effects have occurred and how impacts are projected to be different in the future.

It is evident that BLM failed to utilize the findings of the second EPCA study, "Scientific Inventory of Onshore Federal Land's Oil and Gas Resources and the Extent and Nature of Restrictions or Impediments to Their Development (2006) (EPCA II)." The EPCA II study is even more relevant because it shows that only 15 percent of the lands with oil and gas potential in the Green River Basin are available with standard lease terms and that 76 percent of the same area is subject to moderate to severe restrictions on development which has resulted in 37 percent of the area being closed to development between three and six months of the year while over 9 percent is subject to surface use constraints for nine months. It is clearly evident, based upon the Preferred Alternative, BLM intends to further increase these stipulations, despite the fact that the Pinedale Area is of great important to the nation in terms of its natural gas development potential. We urge the agency to revisit these proposed increases in restrictions with regard to their impact on natural gas development.

BLM's Manual 1624, Planning for Fluid Minerals, specifically directs BLM to demonstrate that the least restrictive lease stipulation offering adequate protection of a resource has been selected. BLM failed to provide this critically important analysis in the planning document. This omission is of critical concern because it indicates BLM has not adequately considered the effect of restrictive lease stipulations or permit conditions of approval (COA) on current and projected future oil and gas activities in the area. Given the fact that the plan will be used to make future decisions on activities, this lack of analysis and justification is a fatal flaw of the DEIS.

Response: BLM is not only required to meet the intent of EPCA, but also a number of other laws and regulations, including FLPMA. The draft EIS/RMP strives to reach a balance of commodity production and resource protection. Alternatives 2 and 4 address measures that would reduce restrictions on oil and gas development, especially in the identified "Intensively Developed" areas.

Comment: An example of an instance where compensation or offsite mitigation could be utilized would be oil and gas field developments where wildlife habitat impacts cannot be satisfactorily mitigated through onsite measures. Compensation mitigation would be used as a tool to address loss of habitat effectiveness when reclamation, best management practices (BMP), and onsite mitigation measures are not adequate to mitigate the impacts of proposed actions. Compensation mitigation would be used as a last choice when developing mitigation measures. Comment: BLM policy requires that offsite mitigation may only be used on a voluntary basis; however, the implication is that permit or project approval will be denied without it. When offsite mitigation is being considered as a design feature of the applicant's submission, BLM's NEPA analysis should: 1) evaluate the need for offsite mitigation, 2) consider the effectiveness of offsite mitigation in reducing, resolving, or eliminating impacts of the proposed project(s), and 3) comparatively analyze the proposal with and without the offsite mitigation. It must also be acknowledged that unless a proposed action would result in "unnecessary and undue" degradation, such mitigation requirements would exceed BLM's authority.

Page 2-14 Activity Plan Working Groups Comment: BLM has not adequately explained why, how or when activity plan working groups would be necessary in connection with oil and gas development

proposals. We are disturbed by the prospect of local, state and federal agencies attempting to reach agreement on how to manage a federal oil and gas project. First, each agency has its own principal mission, which may not coincide with the mission of BLM. Second, each agency has its own planning process and objectives. Obviously the prospect for severe disagreements and delays is real. BLM cannot afford to allow such complications to delay its ability to make reasonable, rational project level decisions. BLM, as the managing agency, must make it clear it has the final say in how a project will move forward. Third, it is necessary to avoid chartering any such group under the Federal Advisory Committee Act (FACA) since it has been clearly demonstrated that the Pinedale Anticline Working Group is not successful. Moreover, industry must not be required to fund any type of working group. We recommend that BLM give this issue more thorough consideration before deciding to implement Activity Plan Working Groups.

Comment–BLM views NEPA as a compliance requirement instead of a process that leads to improved decision-making and public support. For example, although BLM commits to monitoring, Field Offices seldom actually perform monitoring to acquire and incorporate new information after land and resource plans and projects are implemented. Monitoring may provide significant new information; for example, whether anticipated impacts to wildlife occur, or, if required seasonal use stipulations are needed or effective. Comment: We recommend that BLM institutionalize a database clearinghouse where comprehensive data bases would be maintained and available to all. Further, we recommend that BLM:

- Use the most practical and cost effective means to acquire data where gaps exist
- Use cooperative ventures between federal, local, and state agencies and companies
- Publish/make available all data collected under these plans unless collected voluntarily by companies and provided to BLM for internal use only.
- Establish data collection priorities, standards and objectives

Response: The RMP does not imply or require the implementation of offsite mitigation. It only sets the framework for it. Offsite mitigation would strictly be voluntary and would be managed in strict conformance with BLM Washington Office Instruction Memorandum 2005-063.

Comment: PAGE: 2-121, RECOMMENDED CHANGE: DELETE [d. Post-lease actions (APDs, Sundry Notices) would be managed under restrictions and COAs developed through programmatic and/or site-specific environmental analysis.] (strikeout) EXPLANATION: See Comment #80.

Response: Federal regulations at 43 CFR 3101.1-2 give BLM authority to impose restrictions on post-lease actions, such as APDs.

Comment: PAGE: 2-122, RECOMMENDED CHANGE: Delete subsets of ¶b [1. Oil and gas activities would be regulated to mitigate impacts on important wildlife habitats, including big game crucial winter ranges and greater sage-grouse habitats. 2. BMPs would be applied to mitigate impacts on sensitive habitats and other resources (Appendix 5). 3. Post-lease actions (APDs, Sundry Notices) would be managed under restrictions and COAs developed through the appropriate level of additional environmental analysis.] (strikeout) EXPLANATION: See Comment #83. BMPs are voluntary and cannot be required as a condition of approval. Even the Gold Book recognizes the voluntary nature of BMPs. As written, RMP would be used to impose these as mandatory conditions and that exceeds BLM authority.

Response: Federal regulations at 43 CFR 3101.1-2 give BLM the authority to impose stipulations on new leases and restrictions on post-lease actions on existing leases.

Comment: We urge BLM in preparing the FEIS to include specific, meaningful mitigation measures that cannot be waived or excepted in the absence of plainly demonstrated extraordinary circumstances.

Response: BLM land use planning guidelines relative to minerals management specify that land use plans must establish criteria for evaluating waivers, modifications, and exceptions to lease stipulations and COAs.

Comment: PAGE: 2-48 SECTION: 2.5.2 RECOMMENDED CHANGE: DELETE [7. Impacts to wildlife habitat, cultural resources, vegetation, visual, and recreational values would be adequately mitigated.](strikeout) EXPLANATION: This is not a factor when addressing drainage. The sole issue is to protect US Treasury. BLM cannot compel operator of off-setting well to adopt additional mitigation, especially if it would increase costs and negate obligation to drill offsetting well.

Response: BLM disagrees. BLM is mandated to prevent drainage, but is also mandated to manage the resource values under its jurisdiction under the direction of FLPMA. If BLM determines the development of off-setting wells would cause undue or unnecessary degradation to surface resources values, BLM is obligated to mitigate the impact.

Comment: In general the pace and scale of the proposed development in the Pinedale Anticline and Jonah fields has the potential to significantly degrade wildlife habitat, particularly pronghorn crucial winter ranges and migration routes, through the fragmentation of key habitats. We believe that across all of the alternatives, the draft RMP is lacking specific and quantifiable criteria for fluid mineral best management practices in reducing impacts to big game crucial winter range; is insufficient in describing the off-site or compensation mitigation process; and fails to set thresholds for impacts to wildlife. Such thresholds are critical for the appropriate management of pronghorn and should be set by the WGFD to include species-specific parameters below which mitigation measures will automatically be mandated. Measurable population parameters include minimum population size, minimum adult and juvenile survival rates, and minimum fawn:doe and buck:doe ratios.

Response: Because the RMP will not authorize any on-the-ground development, it is not possible to design appropriate mitigation for every type of project that might be proposed in the future. Specific mitigation and reclamation practices are developed at the site-specific project analysis level, for example, in the Jonah and Pinedale Anticline EISs.

Comment: PAGE: 4.46, SECTION: 4.7, RECOMMENDED CHANGE: ADD Best management practices are voluntary. EXPLANATION: See Comment #Ch 2-32.

Response: Offsite mitigation is voluntary, BMPs can be required.

Comment: Beyond assurances of adequate bonding, the RMP needs to provide assurances of adequate funding for monitoring, evaluation and enforcement. Without adequate monitoring, water contamination and other problems will not be discovered, and reclamation bonds will be meaningless. With ten thousand odd gas wells on the horizon, plus widespread ORV use, livestock grazing and a variety of other uses, the Pinedale Resource Area may be the most heavily used tract of BLM real estate in the nation. To keep track of all these uses and developments, BLM needs to devote a large amount of funding to monitoring and enforcement. The operators who are triggering the requirement for more monitoring and enforcement should pay this bill. In comparison to the billions of dollars in revenues the energy companies are earning from the PRA each year, even $10 million per year in monitoring funds would be but a drop in the financial condensate tank.

Response: This is not within the scope or authority of an RMP. An RMP cannot bind Congress to provide any level of funding nor can it direct Congress where to allocate funds.

Comment: The new RMP should also condition funding of actions in the PRA on mitigation, in accordance with 40 C.F.R. § 1505.3(b). Specifically, the RMP should include binding management direction that removes funding for BLM review of new drilling applications in an area when environmental impacts from drilling and production operations in that area are found to exceed allowances, indicating mitigation has not succeeded in controlling the impacts. This would apply to water quality, air quality, wildlife populations and other resources:

Response: This is not within the scope or authority of an RMP. An RMP cannot bind Congress to provide any level of funding nor can it direct Congress where to allocate funds.

Comment: • To minimize risks of contamination from pipeline leaks, require the use of stainless steel pipe and the best available leak detection technology. Pipelines that may be used to convey condensate or produced water should be installed on top of a wide V-shaped double liner.

• The RMP should require monitoring for NORM contamination at facilities in the PRA and other off site facilities that are involved in BLM-authorized oil or gas production in the PRA (including reserve pits, cuttings, sludges, produced waters, evaporation ponds, pipelines, pig insertion/extraction points, etc.). A "well-trained technician is required to make such surveys with confidence" and "laboratory analyses" should be used "to determine accurately the amount of contamination" [30] at 14-15.

Response: These are the types of considerations that typically could be addressed and potentially implemented in project-level NEPA documents. The RMP does provide the framework for these types of mitigations through performance-based mitigation.

Comment: -By 2010, all oil and gas drilling operations in the PRA and other BLM-administered subsurface leases shall make use of no-pit drilling techniques. See, e.g., [55]. In the interim, and for any grandfathered pits in operation after 2010, the RMP should require sufficient monitoring of pits, including evaporation ponds, to prevent overflows (e.g., during storm events, due to icing, from faulty equipment, etc.) and overspray, and to identify leaks.

-Require sprinkler systems used at pits and evaporation ponds to utilize anemometers to automatically shut down the sprinkler pumping system when strong winds would carry contaminated spray beyond the, area protected by liners.

-Require all drilling-related pits (e.g., reserve pits, waste pits, catchment basins, and evaporation ponds) to be removed - along with liners, any sludge contents, and any underlying or surrounding contaminated soils or waters - within 6 months of the time they are no longer needed; furthermore, require the excavated materials (including liners) to be hauled to a permitted hazardous materials disposal facility.

-To protect ground waters from hazmat spills on well pads, require full double-liners under all well pads (not just under pits) for drilling operations in all areas with "moderately high" sensitivity and "medium" sensitivity" aquifers (areas depicted as yellow and green in Figure 3, respectively). This should include processing/de-watering stations as well as condensate and produced water storage tanks. Best (i.e., most durable and protective) available liner materials should be used. If any exceptions are made to allow well pads on lands with "high sensitivity" aquifers (no such exceptions should be made), triple-liners topped with a layer of clay soil (sterile) should be used under all well pads.

Response: These are the types of considerations that typically could be addressed and potentially implemented in project-level NEPA documents. The RMP does provide the framework for these types of mitigations through performance-based mitigation.

Comment: PAGE:2-148,RECOMMENDED CHANGE: l. Oil and gas developmental operations would be managed through performance-based stipulations and mitigations provided in Appendix 3. EXPLANATION: If l then Delete a-k. Reliance on performance-based stipulations is meaningless when coupled with command and control terms listed above.

Response: Implementation of performance-based stipulations provides necessary flexibility while still meeting the various objectives in the RMP.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following:

- Types and quantities of chemicals used in drilling, completion; and stimulation operations in the PRA (including non-federal lands where possible).
- Estimated quantities and types of drilling, completion and stimulation chemicals that remain in the ground.
- The number of reported hazmat releases in and around the PRA, associated with BLM-authorized activities, and the types and estimated quantities of released materials.

Response: This type of project-specific data can vary from field to field and would typically be included in project-level NEPA documents. The oil and gas fields in the planning area do occasionally experience hydrocarbon and/or produced water releases/spills. These are not considered hazmat releases. In the past 5 years, there has been one barrel methanol spill that was reported to BLM. Information on spills can be requested from the BLM Pinedale Field Office. Spills/releases are also reported to WDEQ, which maintains a database.

Comment: PAGE: 2-135, RECOMMENDED CHANGE: Add the following action: BLM will coordinate with the conservation districts in monitoring and enforcing reclamation plans. EXPLANATION: As noted above, the local governments believe that BLM resources are better placed in monitoring and enforcing current rules rather than developing new standards.

Response: BLM will coordinate with a variety of agencies when additional expertise is needed. It is not necessary to state this in the RMP.

Comment: PAGE:2-120, RECOMMENDED CHANGE: DELETE [1. Oil and gas activities would be designed to mitigate impacts on important wildlife habitats, including big game crucial winter ranges and greater sage-grouse habitats. 2. BMPs would be applied to mitigate impacts on sensitive habitats and other resources (Appendix 5).] (strikeout) EXPLANATION: Minimally developed lease area creates regulatory conflicts by attempting to retrofit new lease terms on existing leases or indirectly limiting development on adjacent private lands. In both cases, this is an essentially illegal condition and the local governments believe it should be dropped. BLM lacks any legal authority to impose seasonal or wildlife habitat conditions on existing leases, because BLM cannot lawfully change lease stipulations. For the same reason, BLM cannot try to use conditions of approval to retrofit new lease terms onto existing leases. See National Wildlife Federation, et. al., 150 IBLA 385, 403 (1999) (citing Union Oil v. Morton, 512 F.2d 743, 750-51 (9 Cir. 1975)).

Response: Page 2-8 of the draft EIS emphatically states: "Existing oil and gas or other mineral lease rights would be honored. When an oil and gas lease is issued, it constitutes a valid existing right; BLM cannot unilaterally change the terms and conditions of the lease." Federal regulations at 43 CFR 3101.1-2 give BLM authority to impose restrictions on post-lease actions, such as APDs.

Comment: PAGE: 2-120, RECOMMENDED CHANGE: REVISE e. Ongoing and monitored [Accelerated] (strikeout) reclamation would be implemented to reestablish habitats. EXPLANATION: As noted above, requiring accelerated reclamation is meaningless if there is no monitoring to ensure that it is actually done. The local governments believe that this is a more effective approach.

Response: Specific reclamation standards and monitoring requirements will be developed through project-level NEPA documents.

Comment: PAGE: 2-120, RECOMMENDED CHANGE: Add the following: Enforce and monitor the success of reclamation. EXPLANATION: The RMP does not address efforts to ensure that reclamation is successful. Local governments have found that reclamation is often not successful within the first season and yet there is relatively little attention being paid to this major issue. RMP needs to include steps to make sure that the work is done rather than adding yet one more condition onto energy development.

Response: Specific reclamation standards and monitoring requirements will be developed through project-level NEPA documents.

Comment: PAGE: 2-47 SECTION: 2.5.2 RECOMMENDED CHANGE: ADD Most of the area classified as minimally developed is already under lease or privately owned and therefore not subject to minimal development terms and conditions. EXPLANATION: BLM recognizes that it has limited authority to revise a lease and best management practices including the Gold Book are voluntary not mandatory.

Response: The management actions would apply to new leases.

Comment: The discussion on compensation stipulations needs to include the discussion of management of the production cycle as well as the exploration and drilling cycle over the life of the well(s). The RMP discusses compensation stipulations that must last as long as impacts are expected to occur. With this reasoning, if the life of several hundred or several thousand wells last 20-30 years, then the planning of securing these off-site compensation areas needs to be considered now. Further compensation discussion addressed that impacts occurring on public lands must be addressed but that off-site compensation on private land will not occur. This statement of reasoning should be re-evaluated and the BLM needs to address the landscape management scale in their planning effort. While the BLM deals only with public lands, actions that are approved by the BLM that directly or indirectly impact private lands needs to be considered. For instance, if the increase in the number of wells adversely displaces wildlife populations onto private ranching communities and into private homeowner's backyards due to loss of native habitat, the BLM should be taking responsibility at some level for the cause of these incidents. If there are water quality (groundwater or surface water) issues on private lands that are a result of the increase in drilling on public lands, BLM needs to consider this.

Response: The RMP sets the framework for offsite mitigation. The project-specific opportunities for and the duration of offsite mitigation would be developed through project-level NEPA analysis. Be reminded that offsite mitigation is strictly voluntary for project proponents. BLM policy concerning offsite mitigation, promulgated under BLM-Washington Office Instruction Memorandum 2005-069, does not provide for mitigation on private lands, except a possibility where the private lands involve split estate leases. The text concerning offsite mitigation has been changed to state: "All offsite mitigation proposals

will be subject to all of the terms and conditions in BLM-Washington Office Instruction Memorandum 2005-069.”

Comment: With most large oil and gas companies experiencing record profits (e.g., Ultra 15% increase in 1St quarter of 2007; Questar 10% in 1" quarter; Shell 5.7% in 1" quarter), there is absolutely no justification for not requiring industry to carry the load, both in terms of preventing significant impacts through mitigation and in terms of funding mitigation after impacts have occurred. Industry should be paying the costs of monitoring as well. It should not be the public which bears the costs for these expenses. We have said it before and we will repeat it again, whatever BLM reasonably asks industry to do, it will do. The profits to be realized are too great not to, and industry knows this. If BLM mandates directional drilling, or clustered wells, or completely centralized gathering systems, or a slower pace of drilling, industry will comply-not because it doesn’t have any choice, but because it knows it will still reap record profits from the public lands. As the Western Governors Association and others recognize, there must be a balance and so far BLM has refused to introduce a proper balance into the proposed RMP. Programs such as the Healthy Lands Initiative should not be funded by the taxpayers; this is the responsibility of those using the public lands.

Response: Mitigation and monitoring requirements must be designed to mitigate impacts or determine the effectiveness of the mitigation. An operator’s profit margin has absolutely no bearing on what level of mitigation is or is not required. Concerning a resource management balance, the draft EIS addresses a reasonable range of alternatives that set different balance scenarios. The alternatives are consistent with BLM’s public land, natural resource, and mineral resource mandates.

Comment: Last, with regard to the minerals operating standards, Appendix 3 contains some provisions that are important and which should be made mandatory. Specifically, these provisions and our comments are provided below: “Each new lease would be reviewed on its own merits to ensure the appropriate protective measures/stipulations are applied (see Appendices 2, 5, 12, and 18.” A3-8. In regard to oil and gas drilling, protections specified in Appendices 2, 5, 12 and 18 must be fully applied at the leasing stage when BLM has the maximum bundle of rights to condition development and protect the natural environment. We ask BLM to commit to applying the provisions in these Appendices at the leasing stage as needed. In addition to any “performance-based” guidelines BLM chooses to adopt, there must be “prescriptive” standards to ensure BLM’s legal duty to protect the natural environment is fulfilled. “Drilling of multiple well bores from a single well pad could reduce impacts to wildlife by reducing the number of surface locations and surface area disturbance.” A3-8. Clustered well pads, as well as directional drilling, must be required by BLM, with exceptions granted only where it is clearly and convincingly demonstrated by the lessee that it is technically non-feasible or that greater damage to the environment would occur by using these methods. Economic feasibility and temporary lack of equipment, for example, should be given little, if any, consideration. They are simply costs of doing business on public lands.

“Experimental methods to maintain or reclaim wildlife habitat or improve reclamation science are encouraged to be tested on small areas within the planning area. When scientifically proven effective for a reclamation objective, these methods may be incorporated into proven reclamation methods.” A3-8. Commercial users should be required to engage in and fund experimentation to achieve successful and permanent reclamation of wildlife habitat. “Reclamation” should mean full and successful restoration or improvement of wildlife habitat to its original pre-disturbance condition, using only native species. Evaporation ponds should be eliminated entirely and central collection systems should be required.

Response: Appendices 2, 3, 5, 12 , and 18 of the draft EIS provide BLM with a variety of mitigation measures/BMPs to be applied to new oil and gas leases, as well as to post-lease and other surface disturbing activities where resource values exist that warrant such application. BLM fully intends to apply

the referenced measures where warranted. Alternatives 2, 3, and 4 establish performance objectives. Performance-based standard allows project proponents an opportunity to develop measures that would meet the objective. Should BLM determine that the proponent's measure would not meet the objective, BLM retains the authority to impose prescriptive measures.

Directional drilling/clustered development (i.e., multiple wells from a single pad, centralized production facilities, etc.) are some of the best management practices listed in Appendix 5 of the draft EIS/RMP for use when and where appropriate. They are not appropriate or necessary everywhere or all the time, therefore it would be inappropriate to mandate their use. An example where such BMPs would not be appropriate would be an exploratory well in areas with minimal resource concerns and no other well pads or production facilities within a reasonable distance. BMPs, such as directional drilling and "clustered" development, would be included in project-level NEPA documents.

It is appropriate for the draft EIS/RMP to set successful reclamation objectives. It is not appropriate for the RMP to mandate the testing of experimental methods. BLM will certainly work with all project proponents to develop and implement effective reclamation. Effective reclamation may very well involve testing new procedures. It is important for planning documents to have sufficient flexibility to allow the testing of new technologies; however, it is not appropriate for a planning document to have a blanket mandate to implement such technologies.

Wilderness and Roadless Areas

Comment: Our government talks about funding renewable energy sources yet still focuses on opening new expanses of wilderness for drilling. I understand renewable energy is not completely economical yet, and therefore we must still uphold our oil addiction. However, we must handle this situation in Yellowstone responsibly. Yes we need the oil, and yes there is a way to extract without hurting the ecosystem. Cluster the drills, use anti-erosion techniques to limit the impact roads have on the environment. Also, don't let this oil reserve become our crutch. Please continue to fund renewable energy resource. There is a way for mankind to coexist with our planet. Through technology we can accomplish this goal and generations to come and experience our wonderful planet. You've been privileged enough to experience this beautiful earth in your lifetime as I have, let us not ruin it for our children.

Response: This RMP does not propose or anticipate development of wells in any WSA. There are no wilderness areas in the planning area. Development rates and infrastructure limitation scenarios are project-level issues that would be addressed through project-level EISs.

Comment: Yellowstone stands alone as our premiere national park but its ecosystem is being threatened by the proposed Upper Green River development as a gas field. This cannot be allowed to happen. As I understand it, much of this gas leasing is in inventoried roadless areas. Despite the Bush's administration's opinion, the federal courts have upheld the Roadless Rule protecting these lands. It is therefore illegal to exploit much of this land anyway.

Response: No inventoried roadless areas are located within the planning area or would be leased for oil and gas under the Pinedale RMP.

Noise, Visual Resource Management (VRM), Air Quality, Water Quality, Contamination

Comment: The BLM should eliminate the noise restrictions within Intensively Developed Fields. The BLM has not justified the potentially onerous restrictions, or demonstrated that such restrictions are technically or economically feasible. With respect to existing leases, the BLM lacks the. authority to impose mitigation measures on oil and gas leases that are not technically or economically feasible. Once

the BLM has issued an oil and gas lease conveying the right to access and develop the leasehold, the BLM cannot later impose unreasonable mitigation measures that take away those rights. See Conner v. Burford, 84 F.2d 1441, 1449-50 (9th Cir. 1988); 43 C.F.R. § 3101.1-2 (2006) (BLM can impose only "reasonable mitigation measures…to minimize adverse impacts…to the extent consistent with lease rights granted").

Response: Existing valid legal rights will be honored. Federal regulations at 43 CFR 3101.1-2 give BLM the authority to impose reasonable restrictions on post-lease authorizations, such as APDs and Sundry Notices. BLM considers noise restrictions as meeting the "reasonable restriction" requirement. The restriction is based on the data in the Matt Holloran sage-grouse study. It would be incumbent on the operator to demonstrate to BLM that the directional drilling of a certain well or wells would be technically or economically infeasible.

Comment: The BLM should eliminate the noise restrictions within Intensively Developed Fields. The BLM has not justified the potentially onerous restrictions, or demonstrated that such restrictions are technically or economically feasible.

Response: Sage-grouse studies indicate that increased noise appears to affect sage-grouse attendance on leks. Based on this, BLM feels this mitigation is warranted in certain situations. Affected parties have the opportunity to demonstrate that a given application of the restriction would not be economically or technically feasible.

Comment: Intensively Developed Fields: The BLM should eliminate the noise restrictions within Intensively Developed Fields such as the PAPA. The BLM has not justified the potentially onerous restrictions or demonstrated that such restrictions are technically or economically feasible. With respect to existing leases, the BLM lacks the authority to impose mitigation measures on oil and gas leases that are not technically or economically feasible. Once the BLM has issued an oil and gas lease conveying the right to access and develop the leasehold, the BLM cannot later impose unreasonable mitigation measures that take away those rights. See Conner v. Burford, 84 F.2d 1441, 1449-50 (9th Cir. 1988); 43 C.F.R. § 3101.1-2 (2006) (BLM can impose only "reasonable mitigation measures . . . to minimize adverse impacts . . . to the extent consistent with lease rights granted").

Response: BLM feels noise restrictions are both reasonable and necessary to mitigate impacts to residents in the vicinity of the development, as well as to wildlife using the area. NEPA and CEQ regulations require BLM to disclose, and to the extent practicable mitigate, anticipated impacts. Again, regulations afford a leaseholder/operator the opportunity to appeal restrictions they believe are not reasonable.

Comment: The resource management plan should mandate air emission controls and establish a stringent emissions cap. It should also eliminate loopholes to waive surface protections, and strictly define management objectives and monitoring and mitigation measures.

Response: Air emissions and air quality are regulated by the Wyoming Department of Environmental Quality, as delegated by EPA. BLM does not have the authority to establish emission controls and caps.

It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

Comment: Not enough, if any, concerns or attempt to alleviate air quality from massive ongoing petroleum activity is available or planned. This area contains world class fisheries and water of quality good enough seven downstream states fight to get a taste. To subject the Green River valley to prevailing

winds full of exhaust emissions from the diesel powered exploratory and production equipment is criminal. It is well know that such emissions are the essential constituent that produces acid rain that not only compromises heavily streams and lakes, but also directly impedes vegetation and habitat growth. The Wyoming Range is essentially a basin surrounded by 3 high mountain ranges and oilfield activity occurring is this sink will not allow the BLM to manage for its basic mandate, that of "Multiple Use" as there will be no other use such as hunting, tourism, recreation, even agriculture once the quality of these lands has been degraded by development, roads, and pipelines, traffic, etc.

Response: The draft EIS/RMP does provide for multiple use. Please note that mineral development is also one of the uses under BLM's multiple-use mandate.

Comment: Impacts Under Alternative 4, Preferred Alternative: The BLM must also revise the acres of lands that will be subject to VRM II restrictions across the planning area. As the BLM admits on page 4-72, VRM I and II areas "would be largely unavailable for mineral development." By imposing VRM I and II restrictions on approximately 30% of the resource area, the BLM is essentially foreclosing oil and gas development in those areas, particularly in areas of the PAPA where APC owns existing leases.

Response: The purpose of Chapter 4 is to disclose anticipated impacts, which page 4-72 of the draft EIS does for VRM impacts to mineral development in VRM I and II areas. Please note that the VRM I areas are the two existing WSAs within the planning area. Also please note that page 4-72 discloses that under Alternative 4 much of the VRM I and II areas would be unavailable for leasing, would be in areas available for leasing with NSO stipulation, and/or are in areas with low potential for oil and gas development. Further, be reminded that page 2-8 of the draft EIS states: "Existing oil and gas or other mineral lease rights would be honored. When an oil and gas lease is issued, it constitutes a valid existing right; BLM cannot unilaterally change the terms and conditions of the lease. Existing leases would not be affected by new closures and/or areas administratively unavailable for lease, and restrictions could not be added to existing leases. Surface use and timing restrictions resulting from this RMP cannot be applied to existing leases. Existing leases would not be terminated until the lease expires. However, based on site- or project-specific environmental analysis, conditions of approval (COA) could be applied at the APD and Sundry Notice stage, and at subsequent development stages, to mitigate potential impacts from oil and gas operations within existing lease areas, providing the leaseholder's right to develop the lease remains intact."

Comment: Page Number & Issue:4-49: "Emission mitigation would be required under all alternatives to reduce impacts on air quality and visibility. The best available drill rig technologies would be utilized to lessen rig emissions. This would result in a reduction of air quality impacts from oil and gas development operations. However, implementing these requirements could result in greater operating costs and could make some resources less attractive to develop. If future analysis determines that the mitigation has not been sufficiently effective to prevent emissions from oil and gas exploration and development from exceeding national or Wyoming ambient air quality standards, the development of additional wells could be in jeopardy." Recommendations: Delete paragraphs, as they are subjective statements.

Response: BLM believes the paragraphs are pertinent to informing the public of planned mitigation and their *anticipated* impacts.

Comment: The fact that the operators are required to cement the well to a depth far below the upper aquifers is comforting. However, I am still uncertain that our current testing for TPH-GRO instead of the more expensive BTEX is a prudent practice. There were lengthy discussions in our meetings about the most appropriate testing and the consensus in the group was that TPH would be adequate. I was not entirely happy with this conclusion since my research on the issue led me to a Ministry for the Environment New Zealand web site that made the following comment regarding TPH testing: "TPH

methods that do not use purge-and-trap or headspace analysis (eg, the New Zealand oil industry method) will not cover benzene or n-hexane, etc., because the extraction methods can involve loss of volatiles. The limitations of the analytical method should therefore be considered when interpreting the analytical results". My biggest concern is to make sure that Benzene, a potent carcinogen linked to leukemia, does not contaminate the drinking water of humans or livestock. The EPA in 40cfr141.32 have declared Benzene to pose a risk to humans at a level of only 0.005 parts per million. Ethyl benzene (at 0.7 ppm), Toluene (at 1 ppm), and Xylene (at 10 ppm) all pose a threat to Kidneys, Liver and the Nervous system of humans and animals. I would like to see at least a percentage of domestic wells tested for BTEX as the original BLM ROD so appropriately stated.

Response: BLM coordinates with WDEQ and WOGCC with sampling parameters for various activities and has the authority to require specific tests. BTEX samples could certainly be required where deemed necessary and would be addressed through project-specific NEPA documents.

Comment: Page Number & Issue:4-167: "There would be a large number of additional water and mineral production wells added over the life of the plan, primarily in concentrated areas in and around gasfields, which would create an expanding potential for contamination or mixing of aquifers beyond that which presently exists." Recommendations: Provide citation and provide support for conclusions.

Response: The statement is based on the assumption that the projected increase in oil and gas wells over the life of the plan will require an increase in the number of water supply wells to drill and complete those oil and gas wells. The text is being changed in the final EIS to read: "There would potentially be an increase is the number of additional water and mineral production wells added over the life of the plan, primarily in concentrated areas in and around gas fields. By virtue of more water well bores into the fresh water bearing zones, there would be an inherent increase in the chance of exposure to aquifer contamination and aquifer mixing."

Comment: The BLM indicates on page 2-44 of the RMP DEIS that it may impose NSO restrictions within 1/a mile or the visual horizon of historic trails. The BLM cannot impose restrictions on existing leases that are inconsistent with vested lease rights. This is particularly true with respect to EOG's leases, which predate the potential restrictions. Additionally, this potential restriction is inappropriate because in many cases the visual horizon is literally several miles away and could restrict access to huge sections of existing leases, thus depriving EOG of its existing lease rights and depriving the nation from much needed domestic energy supplies. The imposition of restrictions, if unreasonably, could even rise to the level of a taking in violation of the U.S. Constitution.

Response: The referenced statement is a direct recapitulation of text from the existing RMP approved in 1988. Alternative 1 would continue implementation of the decisions in the 1988 plan. NEPA requires the consideration/analysis of a No Action alternative. For the purposes of the draft EIS/RMP, continuing the management prescriptions in the 1988 plan is the No Action alternative and as such it is included verbatim from the 1988 ROD. The referenced text is not a new requirement. All leases issued subsequent to the approval of the 1988 ROD within ¼ mile or the visual horizon (*whichever is closer*) of contributing sections of historic trails contain this stipulation (emphasis added). The stipulation cannot be retroactively applied to any leases issued prior to approval of the 1988 ROD. However, as prescribed in 43 CFR 3101.1-2, BLM can apply COAs to post-lease actions.

Comment: The second major loophole that would detract from the potential protections of Alternative 3 are the provisions that would allow 'lifting' of the nominal protection of an Unavailable Area designation if drainage of oil and gas is determined to be occurring.5 A number of provisions are provided as to how and when this designation could be "lifted" in a drainage situation, but they are inconsistent and thus create confusion. Compare 2-48 (Large Block NSO provisions), 2-49 (Unavailable Areas provisions that

appear less protective than the Large Block NSO provisions), and 2-83 (Unavailable Areas provisions that differ from the analogous provisions on page 2-49). The BLM should engage in a careful analysis of when and where drainage is likely to be a problem. Is drainage already determined to be a problem anywhere in the Pinedale Field Office? Given that in at least some areas natural gas production is coming from "tight sands" and very disconnected pockets (lenses) of natural gas, drainage would seem to not be a real issue in at least some areas. And at a minimum, if significant drainage is determined to be occurring, the RMP should establish that the first tier response to deal with this issue will not be lifting the unavailable for leasing designation, rather the first response should be to seek to capture the gas through drilling from an area with existing development, likely through directional drilling. Furthermore unitization should be pursued for the area in question as it would allow the BLM to require coordination in the extraction of natural gas underlying multiple contiguous leases - potentially negating the need for lifting of RMP protections.6 That is, all options for maintaining the area as unavailable for leasing should be explored first prior to lifting this designation; designating these areas as free from future leasing is the management direction BLM has determined is most appropriate and it should aggressively seek to maintain that status and management direction. Additionally, prior to lifting any such designation the BLM should provide in the RMP that any such modification will be subject to full compliance with NEPA, including provisions for public participation in the decision-making.

Response: The criteria to be considered for lifting the unavailable designation have been updated in the final EIS. BLM does not have sufficient data to be able to reasonably project or predict where drainage would occur that may require the developing of offsetting federal wells. BLM does have the authority to form federal units. It does not have the authority to force holders of state or private leases to join a federal unit. Consequently, the drainage language is appropriate. The RMP states that additional NEPA analysis would be required before the unavailable designation could be lifted.

Comment: Even the best management direction will not prevent all impacts. Accidents happen, and unforeseen events happen. To ensure such incidents are fully corrected, the new RMP must include strong requirements to clean-up contaminants that may affect water resources. I ask the BLM to adopt the following remediation-related management direction in the new RMP:

-For any potentially harmful chemicals proposed for use in drilling, completion, stimulation, refinement or production operations, require the applicant to demonstration there is an existing remediation method available to fully address any potential release. If the applicant cannot demonstrate the existence of adequate remediation methods, the RMP should require BLM to deny use of the chemicals in question.

Response: Spill clean-up is already required by state and federal regulation. Companies are required to post Material Safety Data Sheets (MSDSs) for all chemicals used on location, which address treatment of the chemical.

Comment: -Allow operators to use bioremediation strategies only where past experience has demonstrated the proposed bioremediation method can be successfully used to decontaminate waters or soils affected by the chemicals in question, in a climate similar to the PRA's.

Response: Bioremediation is already available to operators. Projects would be addressed on a site-specific, case-by-case basis. Regulations already require that remediation be successful. Operators must continue the remediation effort until it meets the requirement for success.

Comment: - To reduce acidification and other air pollutant depositional impacts in high elevation lakes, the new RMP should require the use of timeless completions of wells throughout the PRA. To reduce acidification and other air pollutant depositional impacts in surface waters, the RMP should also require

no-pit drilling by 2010. Under current direction, large quantities of HCl and other acids used in completion and stimulation end up in pits where they evaporate and contribute to depositional pollution.

- Require full netting over all pits and evaporation ponds to avoid waterfowl mortality [41].

- To discourage illegal dumping of produced waters, the RMP should declare that when a company (including employees or equipment) is found to have participated in illegal dumping of produced waters, any applicable leases/permits will be revoked and the company will be permanently barred from conducting business on BLM lands in the future. Similar direction should be included for illegal dumping of sludges, contaminated soils, etc.

Response: These are the types of considerations that typically could be addressed and potentially implemented in project-level NEPA documents. The RMP does provide the framework for these types of mitigations through performance-based mitigation. The comment regarding illegal dumping of produced water is beyond the scope of the RMP.

Comment: Require monitoring of storm water runoff from well pads and oil and gas support facilities to determine the extent to which they are contributing to surface water contamination.

Response: These are the types of considerations that typically could be addressed and potentially implemented in project-level NEPA documents. It is neither reasonable nor practical to require such monitoring for each individual well pad, but could be appropriate on a drainage basis.

Comment: Where other oil and gas production facilities using hazardous materials are located in BLM lands, the RMP should require similar protections against ground water (and surface water) contamination as are required for well pads and pits. In particular, gas treatment/dehydration/refinement stations should have full double liners and should not be allowed in areas with highly sensitive aquifers. Where such support facilities would be constructed on state or private lands, the RMP should require BLM to work with other permitting agencies to have the facilities lined to protect water contamination. Because nearly all of the oil and gas development in the region is occurring under BLM leases and APD approvals, it is reasonable for the RMP to include direction to eliminate or reduce off-site indirect impacts of these BLM actions.

The RMP should require companies working in oil and gas exploration and production (including fracing and incidental support services) to report all releases of hazardous materials. Even though spills of small quantities do not need to be reported to the EPA or DEQ, the BLM has the authority to require such spills to be reported as a condition of operating in the PRA. Due to the cumulatively large number of small "non-reportable" spills occurring in the PRA, reporting small spills is necessary to evaluate cumulative impacts.

Response: Reports of releases of hazardous material are governed by CERCLA. Companies are already required by regulation to report spills of 10 barrels or larger. Companies routinely report all spills to BLM. These are the type of considerations that typically could be addressed and potentially implemented in project-level NEPA documents. The RMP does provide the framework for these types of mitigations through performance-based mitigation.

Comment: -Require drilling operators to install surface casing from the surface through the entire Wasatch aquifer.

-Prohibit the use of known or suspected carcinogens, mutagens, developmental toxicants, reproductive toxicants, and neuro-toxicants in drilling, completion and stimulation fluids when oil or gas wells would pierce Class I, Class II or Class III ground water aquifers.

-Prohibit the use of drilling, completion and stimulation fluids that contain other chemicals with known or suspected health risks (e.g., liver and kidney toxicants) when potential release concentrations into domestic-use ground waters could cause long-term toxicity or health effects.

-Encourage operators to use non-toxic (i.e., "green") chemicals for drilling, completion, stimulation, refinement and production operations. This may involve financial incentives and/or relaxed stipulations that would otherwise apply.

-Where an operator refuses to use non-toxic chemicals for gas production activities, re-quire that operator to add inert, long-lived "tracer" molecules to drilling, completion and stimulation fluids that would allow - even when present in very low concentrations - de-termination of the source(s) of ground water contamination. Ideally, each operator and possibly each well cluster should be required to use a different tracer to allow discrimination between different potential sources of contamination.

Response: BLM, in conjunction with WDEQ and WOGCC, requires operators to use fresh water when drilling through fresh water zones, to set surface casing to depths below the fresh water zones, and to cement the outside of the full length of the surface casing back to the surface. The State of Wyoming has primacy for the management and protection of ground water resources. The RMP discloses potential impacts to those resources so that the agency having jurisdiction can address them.

Comment: Require drilling operators to use techniques that minimize drilling fluid loss (i.e., lost circulation) into ground waters and sedimentary deposits. This should include best available methods for determining when a "formation may ... not be sufficiently competent to sup-port the hydrostatic pressure applied by the drilling fluid and may break down under this hydrostatic pressure..." [20].

Response: BLM, in conjunction with WDEQ and WOGCC, requires operators to use fresh water when drilling through fresh water zones, to set surface casing to depths below the fresh water zones, and to cement the outside of the full length of the surface casing back to the surface.

Comment: Since oil and gas are depletable resources, it is essential to discuss what consequences will result from depleting them at the most rapid possible pace (as BLM is proposing for the Jonah and PAPA fields). On the issue of water resources, ground water is essentially a depletable resource given that recharge rates are so low. Since ground water contamination can be impossible or difficult to correct, potable ground water should also be treated as a depletable resource. Because surface waters are so depleted in the Colorado River Basin - and because so much water would be used in the PRA for gas production and other activities - the agency must devote considerable attention to the conservation potential of surface waters.

Response: The Jonah and Pinedale Anticline are developing the Lance Formation, which is a very dense, tight sand formation with a porosity tighter than concrete. The Lance has about a 9,000 foot overburden zone. The only anticipated result of depleting the formation is the extraction of natural gas. Groundwater conservation and management fall under the jurisdiction of the State of Wyoming Engineer's Office. The RMP sets a framework for managing a variety of resources, as well as for future projects. Impacts to ground water are typically addressed in project-level NEPA documents.

Comment: Even casual observers are aware of the both the benefits and deleterious impacts associated with both of the existing fields; furthermore everyone is aware that the proposed year-round drilling and

increased number of wells going forward for six decades is in some state of BLM decision-making now. It is unreasonable to think that if implemented, this draft mineral plan, no matter which alternative is selected, would not produce adverse air and water impacts at a minimum, and many other environmental, economic, and social impacts as well.

Response: Chapter 4 of the final EIS projects anticipated impacts.

Comment: The Pinedale RMP DEIS indicates on page 2-35 that a "Level II ground water study of the Riley Ridge/La Barge area would be completed to define what additional ground water monitoring and protective measures would be necessary with regard to subsurface activities conducted in the area (such as oil and gas drilling activities)." It is inappropriate for the BLM to attempt to implement a site-specific management decision of this type in an RMP. See BLM Handbook H-1601-1, II.B.2.a, pg 13 (Rel. 1-1693 3/11/05). It is particularly inappropriate for the BLM to impose or develop new requirements as part of the No Action alternative, which as its name suggests, is intended to continue management under existing directives, not new requirements. Further, the BLM has not explained why such additional studies are necessary, why they were not prepared in connection with the RMP revision if necessary, or who would be paying for the study. The BLM should clarify this statement in the Final EIS. To the extent the BLM intends to require oil and gas lessees in the area to pay for such a study, the BLM must explain how or why it believes it has such authority.

Response: The referenced statement is a direct recapitulation of text from the existing RMP approved in 1988. Alternative 1 would continue implementation of the decisions in the 1988 plan. NEPA requires the consideration/analysis of a No Action alternative. For the purposes of the draft EIS/RMP, continuing the management prescriptions in the 1988 plan is the No Action alternative and as such it is included verbatim from the 1988 ROD. The referenced text is not a new requirement. The 1988 ROD does not specify how the study would be funded.

Reasonably Foreseeable Development (RFD)

Comment: Adding over 7,000 new gas rigs over the next 10 to 15 years would put an already fragile ecosystem at even more risk.

Response: The majority of the wells considered in the RFD for the different alternatives would occur as infill wells in areas currently approved for extensive oil and gas development through existing EISs, such as the Pinedale Anticline and Jonah Field. The Jonah Infill EIS approved in March 2006 allows an additional 3,100 wells in that field alone. A high percentage of the projected new wells in the RMP would be drilled from existing well pads.

Comment: The Reasonably Foreseeable Development Scenario: The BLM's Reasonably Foreseeable Development ("RFD") Scenario for the Pinedale Resource Area is inaccurate and already out-of-date. The BLM must revise the RFD Scenario in light of approved and proposed oil and gas development within the resource area. The BLM also needs to include information explaining the purpose of the RFD Scenario and its role in the planning process.

The BLM should include a statement in the Final EIS, the Record of Decision, and the actual Resource Management Plan for the Pinedale Resource Area confirming that the RFD Scenario is not a planning decision or limitation on the level of development that can be authorized within the Pinedale Resource Area. The BLM has previously defined the RFD as the "baseline scenario of activity assuming all potentially productive areas can be open under standard lease terms and conditions, except those areas designated as closed to leasing by law, regulation or executive order." BLM Instruction Memorandum 2004-089, Attachment 1-1 (Jan. 16, 2004). The RFD is neither a Planning Decision nor the "No Action Alternative" in the NEPA document. "In the NEPA document, the RFD based on scenarios adjusted

under each alternative to reflect varying levels of administrative designations, management practices, and mitigation measures." BLM Instruction Memorandum 2004-089, Attachment 1-1 (Jan. 16, 2004).

On several occasions, the Interior Board of Land Appeals has confirmed that the RFD Scenario is not a limitation on development, including at least two decisions regarding the Pinedale Resource Area. The IBLA has made it clear that the RFD Scenario is neither a planning decision, nor a limitation on future development. Wyoming Outdoor Council, 164 IBLA 84, 99 (2004) (holding with respect to the Pinedale RMP that the RFD Scenario does not establish "a point past which future exploration and development is prohibited"); Southern Utah Wilderness Alliance, 159 IBLA 220, 234 (2003) (holding that the Book Cliffs RMP did not establish a well limit); Wyoming Outdoor Council, et al. IBLA No. 2006-155 at *26 (June 28, 2006) (holding that the Pinedale RMP does not restrict the number of wells that can be drilled within the Pinedale Resource Area); Biodiversity Conservation Alliance, et al., IBLA No. 2004-316 at *7 (Oct. 6, 2004) (citing Southern Utah Wilderness Alliance, 159 IBLA at 234) (holding that the "RFD scenario cannot be considered to establish a limit on the number of oil and gas wells that can be drilled in a resource area."). In order to prevent future litigation and appeals, the BLM should include language in the Pinedale RMP itself describing the purpose of the RFD Scenario.

Response: BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the numbers presented in the draft EIS are current, valid, and applicable. You are correct in your statement that an RFD is neither a planning decision nor a NEPA alternative. It is, however, an estimate of activity from which the impact analysis is developed. The definition for the term "Reasonable Foreseeable Development" has been added to the glossary for the final EIS. As stated in Chapter 1, BLM is bound by its governing regulations, including current and valid Instruction Memoranda; consequently it is not necessary to repeat or state their contents in the final EIS.

Comment: the BLM's prediction of future activity appears to be based on the inaccurate prediction that oil and gas activity in the area may begin to decline in 2007 when prices were expected to begin declining, or at least remain flat. See Mineral Occurrence Report, pg. 4-21. In fact, as evidenced by the proposed infill development in the PAPA, exploration and production activity will continue beyond 2007. The Energy Information Administration currently projects that Henry Hub prices for natural gas will range from $5.46 to $7.23 for the years 2007 through 2030. See Energy Information Administration, http://www.eia.doe.gov/oiaf/forecasting.html. The BLM's RFD Scenario must be updated to reflect the trend for increasing, not decreasing natural gas prices.

Response: The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. This RFD does not predict a decline in oil and gas activity beginning in 2007. It states that "these large production volumes assume continued significant rates of drilling and discovery of additional oil and gas." See last paragraph of page 56 of the RFD. Additionally, Table 15 shows future gas production increasing through 2014. These increases in production are directly tied to projected increases in drilling and completion activities.

Comment: Impacts Under Alternative 1, Continuation of Existing Management: The referenced RFD Scenario for Alternative 1 on page 4-52 conflicts with the RFD Scenario set forth in Table 4-2, page 4-48, and Appendix A10. The text on page 4-52 suggests that 7,927 wells from federal minerals will be developed, while the RFD Scenario in Table 4-2 and Appendix 10 states that only 7,192 wells and federal minerals are projected under the BLM's RFD Scenario for Alternative 1. Similarly, on page 4-244 (the cumulative impacts section) the BLM suggests that 7,927 wells will be drilled under the Alternative 1 RFD Scenario. The BLM must correct its RFD Scenario and ensure that it is consistently applied throughout the EIS.

Response: Alternative 1 projections of future federal wells drilled should read 7,192 wells and 8,439 total wells. The final EIS has been corrected, where appropriate, to reflect the correct well projection for federal wells.

Comment: Impacts Under Alternative 2: The RFD Scenario discussed in the text on page 4-58 again appears to conflict with the RFD Scenario for Alternative 2 expressed in Table 4-2 and Appendix A10. On page 4-58 the BLM suggests the RFD Scenario for Alternative 2 is 8,465 wells, while Table 4-2 suggests 7,804 wells.

Response: Alternative 2 federal well projections should read 7,804 wells and 9,051 total wells. The final EIS has been corrected, where appropriate, to reflect the correct well projection for federal wells.

Comment: Finally, the BLM again incorporates a conflicting RFD Scenario for the BLM's cumulative impacts analysis compared to the RFD Scenarios in Table 4-2 or Appendix A10. See RMP DEIS, pgs. 4-244 - 4-247.

Response: Well count projections in Table 4-2 and Table A10-1 of the draft EIS are correct. Incorrect well projections on pages 4-244 through 4-246 of the draft EIS have been corrected to match the well count projections in the subject tables.

Comment: I am concerned that the BLMs reasonable and foreseeable development scenario for the Pinedale RMP is outdated (3 years old) and does not address the 20-25 trillion cubic feet of natural gas believed to be present in the area. The BLM is also not taking our national energy needs into account in its RMP. Please develop a new alternative incorporating our energy needs and the new discoveries and activity in the Pinedale area.

Response: The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period.

Comment: The BLM should make the following changes for a Record of Decision: -Update the RFD to reflect the 20-25 trillion cubic feet of potential gas supplies -Create a new alternative which will allow the full development of the resource -Reduce the seasonal restriction and surface disturbance portions of the Pinedale RMP -Develop new cost effective mitigations which protect other resources such as wildlife, but do not unnecessarily inhibit natural gas development.

Response: The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area, assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period. The draft EIS presents four alternatives that range from strong commodity production to strong environmental protection. The plan does take the nation's energy needs into account,, but it also takes the other resources values within the planning area into account, as required by numerous laws and regulations.

Comment: The RFD that the BLM drafted for the DEIS using data which is outdated and does not consider the gas activity in the area or the discovered 20 - 25 trillion cubic feet of gas within just the Pinedale Anticline.

Response: BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the numbers presented in the draft EIS are current, valid, and applicable.

Comment: The potential resource area information needs to be updated based on new findings and current field production and well results. This would affect all acreage and percentages and would need to be reanalyzed. Deep potential also needs to be updated based on new findings and current field production and well results.

Response: The RFD was based on the best available information at the time it was developed. RMG recently reviewed the projects and determined the estimates are still applicable.

Comment: Alternative 3 severely and needlessly limits energy production. The Preferred Alternative is based on a limited RFD that one could argue is outdated. Any Record of Decision should be based on a more accurate RFD that one could argue is outdated. Any Record of Decision should be based on the size and scope of both the Jonah Field and Pinedale Anticline.

Response: The draft EIS presents four alternatives that range from strong commodity production to strong environmental protection. The plan does take the nation's energy needs into account, but it also takes the other resources values within the planning area into account, as required by numerous laws and regulations. Alternative 2 purposely addresses enhanced commodity production, whereas Alternative 3 purposely addresses enhanced surface resource protection. This was done to meet the NEPA requirement to analyze a reasonable range of alternatives.

The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period.

Comment: With the BLM's DEIS being over 3 years old, I am concerned the Reasonable Foreseeable Development (RFD) is outdated. The RFD states 7,000 wells will be drilled over 20 years, yet the BLM already has applications for projects in the Pinedale Anticline over 4,000 wells and this represents only a small portion of the Pinedale BLM area. It is incumbent on the BLM to develop an RFD equal to the known resource estimated by industry equal to 20 trillion cubic feet of natural gas.

Response: The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period. BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the numbers presented in the draft EIS are current, valid, and applicable. The draft EIS presents four alternatives that range from strong commodity production to strong environmental protection. The plan does take the nation's energy needs into account, but it also takes the other resources values within the planning area into account, as required by numerous laws and regulations.

Comment: Update the RFD to reflect the 20-25 trillion cubic feet of potential gas supplies. Create a new alternative which allow the full development of the resource. Reduce the seasonal restriction and surface

disturbance portions of the Pinedale RMP. Develop new cost effective mitigations which protect other resources such as wildlife, but do not unnecessarily inhibit natural gas development.

Response: The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period.

BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the number presented in the draft EIS is current, valid, and applicable. The draft EIS presents four alternatives that range from strong commodity production to strong environmental protection. The plan does take the nation's energy needs into account, but it also takes the other resources values within the planning area into account, as required by numerous laws and regulations.

Comment: I am concerned that the BLM's reasonable and foreseeable development scenario for the Pinedale RMP is outdated (3 years old) and does not address the 20-25 trillion cubic feet of natural gas believed to be present in the area. The BLM is also not taking our national energy needs into account in its RMP. Please develop a new alternative incorporating our energy needs and the new discoveries and activity in the Pinedale area.

Response: The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period. BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the number presented in the draft EIS is current, valid, and applicable. The draft EIS presents four alternatives that range from strong commodity production to strong environmental protection. The plan does take the nation's energy needs into account, but it also takes the other resources values within the planning area into effect, as required by numerous laws and regulations.

Comment: First, I'm a bit worried about the impact your reasonable foreseeable development (RFD) section might have on our national security - not to mention our state and federal treasuries. We all know that there is a very significant natural gas resource under this area - and we all know that its development is crucial in improving our nation's national security outlook. I believe we need to keep land open for oil and gas development if we're ever going to come close to meeting our nation's demand for gas and oil! Please keep this in mind when revising the RFD section.

Response: The draft EIS/RMP is designed to present a reasonable range of alternatives. Accordingly, the document addresses varying levels of oil and gas leasing and development. Leasing and development would continue to occur in the planning area under each of the alternatives addressed. The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period. BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the number presented in the draft EIS is current, valid, and applicable.

Comment: In some ways it looks like you've gotten too far "in the weeds" in your reasonable foreseeable development numbers and some of the restrictions you're trying to apply to the oil and gas industry. The purpose of an RMP is to chart a general course for a field office - and let project specific EA's and EIS's analyze site by site impacts a project might have. You'd be well served to consult with the industry to determine how much THEY believe can happen over the life of this plan.

Response: The draft EIS/RMP is designed to present a reasonable range of alternatives and make projections of the impacts associated with each of those alternatives. Accordingly, the document addresses varying levels of oil and gas leasing and development. Leasing and development would continue to occur in the planning area under each of the alternatives. Industry was contacted prior to developing the RFD projections.

Comment: The RFD is inadequate. The newly discovered natural gas resource in the Pinedale Anticline justifies an update to the RFD. Each alternative needs a chart describing the recoverable resource. How can we decide which alternative to support if we do not know how much resources will be lost and never recovered?

Response: The draft EIS/RMP is designed to present a reasonable range of alternatives. Accordingly, the document addresses varying levels of oil and gas leasing and development. Leasing and development would continue to occur in the planning area under each of the alternatives addressed. The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period. BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the number presented in the draft EIS is current, valid, and applicable.

Comment: EM urges BLM to use net effects as a metric for managing the oil and gas program instead of well counts because it fits with both BLM's land management mission and the NEPA process. Accordingly, we further urge BLM to establish clear reclamation objectives in the final RMP based on experience from the Green River Basin. Importantly, BLM should affirm in the final RMP that where surface disturbance is less than analyzed in the RMP, more wells can be drilled without exceeding identified impact thresholds. Reclaimed acreage should be excluded from surface disturbance calculations.

Response: Appendix 10 of the draft EIS provides the metric for converting the RFD to acres of projected disturbance. The following has been added to the final EIS: "The RFD is a projection of the number of wells that could potentially be developed under the various alternatives. It is included in the draft EIS/RMP for analysis purposes and is not a cap on the number of wells that would ultimately be developed. The actual number of wells could exceed the RFD if the associated surface disturbance and impacts to other resources do not exceed the analysis thresholds." The RMP establishes the framework for reclamation processes, but is not intended to provide site- or project-specific standards or procedures. Specific standards, seed mixes, invasive weed control, and recovery time would be developed through project-specific NEPA analysis.

Comment: The RFD should take into consideration smaller scale and ongoing field development in addition to new significant projects, and specifically consider the needs of these development and delineation programs in evaluating future RFD adequacy. The BLM should continue considering the affects of long-term surface disturbance rather than number of wells as the governing criteria for determining whether analyzed objectives and reasonable foreseeable development have been exceeded.

However, it is important for BLM to recognize in the RFD and RMP that where surface disturbance is less per well than analyzed in the RMP, more wells can be drilled in many areas without exceeding identified impacts and that restored acreage should be excluded from surface disturbance calculations.

Response: The RFD is based on the anticipated well development across the planning area. It includes exploratory/wildcat well development, as well as the intense infill development in the existing fields. The following has been added to the final EIS: "The RFD is a projection of the number of wells that could potentially be developed under the various alternatives. It is included in the draft EIS/RMP for analysis purposes and is not a cap on the number of wells that would ultimately be developed. The actual number of wells could exceed the RFD if the associated surface disturbance and impacts to other resources do not exceed the analysis thresholds." Once reclaimed areas meet the project- or site-specific reclamation objective they would not longer be considered as disturbed acres.

Comment: EOG also encourages the BLM to redefine its definition of oil and gas potential. In defining areas with low, moderate, high, and very high potential for oil and gas development, as expressed on Map 4-1, the BLM focuses on the number of wells per township. See also Pinedale RMP Mineral Occurrence Report, pg. 4-29 (defining oil and gas potential based upon number of wells per township); RFD Scenario Final Report, pg. 51 (same). In most cases, the number of wells per township does not define the potential for oil and gas development or overall production, but reflects the geologic and reservoir characteristics of the producing formation. For example, the discontinuous, stacked, lenticular sand bodies located within the Jonah and Pinedale Anticline Fields require relatively dense downhole development to recovery the resource present. Other areas of the resource area are still incredibly productive in terms of the overall oil and gas production and potential, but the resource can be recovered using more typical downhole densities. Increased density does not always equate to increased productivity.

Response: Yes, our definition does focus on an average number of wells per township (well density), and does reflect reservoir characteristics of potential producing formations in each area. BLM agrees that it does not necessarily equate to increased well productivity in the areas analyzed, although BLM did project overall productivity associated with existing development and new projected development (Tables 14 and 15 of the RFD Scenario Final Report). BLM used this method in the EIS analysis because BLM needed to analyze the impacts of future development and overall cumulative development of the oil and gas resource. BLM believes that the best way to evaluate the impacts of potential future development is to determine new and cumulative surface disturbance associated with that development. To do that, it is critical to determine the locations of existing development and project locations and densities of future development activities.

Comment: EOG also encourages the BLM to revise the oil and gas potential for portions of the Big Piney/La Barge area. The BLM incorrectly assumes in the Mineral Occurrence Report that future activity in the Big Piney/La Barge area "will depend mainly on industry being able to access surface locations to drill new wells." See Pinedale RMP Mineral Occurrence Report, pg. 4-31. It is not clear if this sentence refers to the entire La Barge Platform, or just the northern extensions that approach Forest Service System lands. In either event, BLM's analysis of future potential does not account for existing inventories of drill sites, proven undeveloped resources, or improvements in oil and gas drilling, completion, and recovery technologies that will almost certainly result in additional activity and production. Improved technology could also result in production from formations that were or are currently considered uneconomic (i.e. shall production). The BLM's information regarding future oil and gas potential is also admittedly out of date, dating back to 2001. In just the last few years there have been significant improvements in technology and understanding of the geology of the area. The BLM also admits that it only conducted a "very limited review of technical data" regarding future oil and gas potential. By separate cover, EOG has attached a map to the Pinedale Field Office and the Reservoir Management Group indicating EOG's current estimates of oil and gas potential in the Big Piney/La Barge area and encourages the BLM to

modify both its oil and gas potential map, and the boundaries of the Intensively Developed Field in the Big Piney/La Barge area.

Response: The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. In that report the reference to the Big Piney/La Barge area and the assumption that future activity "will depend mainly on industry being able to access surface locations to drill new wells" was referring to national forest lands (see page 52 of that report). The discussion for the Big Piney/La Barge area also states that "Drilling in this large area of moderate development potential will vary from relatively dispersed, as many as four well locations per square mile, to local areas of more intense drilling activity. There will also be extensive areas with little or no drilling activity. Some of the drilling in these moderate development potential areas will be for replacement and infill wells in areas where oil and gas production is ongoing" (see page 52 of that report).

Thank you for the map with your estimate of future potential in the Big Piney/La Barge area. BLM had already identified Big Piney/La Barge as an existing area of intensive oil and gas development, with future oil and gas development potential being moderate and with coalbed natural gas having a high to low potential for future development. Since no additional information was presented to indicate future development potential is higher than estimated for that entire area, BLM chose not to change our projections at this time.

BLM agrees that improvements in oil and gas drilling, completion, and recovery technologies will result in additional drilling activity and production. The RFD Scenario Final Report does identify a number of advances in technology that have increased exploration, development, and production efficiency and projects that these trends will continue. Please see the "Review of Exploratory and Production Activity and Operations" discussion in the subject report for specifics on technological advances. BLM also agrees that proven resources need to be accounted for. A review of available information on proved oil and gas reserves within the field office area is located in the section titled "Assessments of Oil and Gas Resources". Also, all active existing and proposed new oil and gas development projects were reviewed and considered when BLM's projections of future development potential were made. Information provided in the RFD Scenario Final Report regarding technology and understanding of the area, as well as future oil and gas potential, was updated with the latest available information. That information was current to September 2006. BLM believes that it is sufficiently current for use in this document.

Comment: As discussed in more detail below, the RFD Scenarios for each of the alternatives used to qualitatively analyze potential air quality impacts in Appendix A19 conflicts with the RFD Scenarios expressed in Table 4-2, page 4-48, and Appendix A10. In each case, the RFD Scenarios utilized in the BLM's air analysis are higher than the scenarios in Table 4-2 and Appendix A10. For example, the air quality RFD Scenario anticipates 6,456 wells under Alternative 3, while the RFD Scenario for Alternative 3 in Table 4-2 and Appendix A10 is only 5,924 wells. The BLM must explain and correct this inconsistency.

Response: The tables are consistent. The RFD in Table A19-4 in Appendix 19 of the draft EIS projects the number of wells for all mineral jurisdictions within the planning area; whereas Table 4-2 and Table A10-1 in Appendix 10 only provide an RFD projection for federal wells. Table A10-7, like Table A19-4, projects an RFD for all mineral jurisdictions.

Comment: The BLM's Reasonably Foreseeable Development ("RFD") Scenario for the Pinedale Resource Area is woefully out-of-date and inaccurate. The BLM needs to include information explaining the purpose of the RFD Scenario and its role in the planning process. The BLM must also significantly update and revise the RFD Scenario in light of approved and proposed oil and gas development within the

resource area. EOG has attached hereto and incorporates herein by this reference, a detailed report regarding the sufficiency of BLM's RFD Scenario Final Report. As analyzed in detail in the attached report, the BLM's RFD Scenario Final Report did not comply with the BLM's requirements under Washington Office Instruction Memorandum 2004-089 (January 16, 2004) or the BLM's Land Use Planning Handbook H-1624-1, Planning for Fluid Minerals Resources, chapter III, B.1, 2, 4, (Release 1-1583, 5/7/90), as modified.

Response: Information provided in the RFD Scenario Final Report regarding technology and understanding of the area, as well as future oil and gas potential, was updated with the latest available information. That information was current to September 2006. BLM believes that it is sufficiently current for use in this document.

Comment: In order to prevent future litigation and appeals, the BLM must include language in the Pinedale RMP itself describing the purpose of the RFD Scenario, and the fact that the RFD Scenario is not a planning decision or limitation on future development.

Response: The following has been added to the final EIS: "The RFD is a projection of the number of wells that could potentially be developed under the various alternatives. It is included in the draft EIS/RMP for analysis purposes and is not a cap on the number of wells that would ultimately be developed. The actual number of wells could exceed the RFD if the associated surface disturbance and impacts to other resources do not exceed the analysis thresholds." You are correct in your statement that an RFD is neither a planning decision nor a NEPA alternative. It is, however, an estimate of activity from which the impact analysis is developed. The definition for the term "Reasonable Foreseeable Development" has been added to the glossary for the final EIS.

Comment: Further, the BLM must update the RFD Scenario in light of the BLM's recent approval of the Jonah Infill Drilling Project ("JIDP") in March of 2006, and the proposal from the Pinedale Anticline operators to significantly increase development. The unrestricted RFD Scenario for the Pinedale Resource Area anticipated a total of 7,903 wells drilled from up to 5,687 wells on federal minerals. The JIDP approved the drilling and development of 3,100 wells from 3,100 pads, and the BLM recently released a SDEIS for the Pinedale Anticline area proposing the approval of 4,399 wells from 250 new well pads (over the 700 producing wells/wellpads authorized in the PAPA ROD in 2000). The operators in the South Piney area have also proposed at least 210 coalbed natural gas wells, a proposal currently being studied by the BLM. Thus, at the very least, the BLM is aware of 7,709 wells that have been permitted or actually proposed, before the RMP has even been approved. This level of development surpasses the BLM's anticipated levels of development under Alternatives 1, 3, and 4, and is only a few wells below the unrestricted RFD Scenario or the RFD Scenario for Alternative 2.

As evidenced by the BLM's Mineral Occurrence Report, the BLM did not anticipate the increased level of development in both the Jonah and Pinedale Anticline Fields. The Mineral Occurrence Report states that only 1,250 additional wells will be drilled in Jonah Field, and that only a total of 1,800 wells (1,100 more than approved in the PAPA ROD) will be drilled in the Pinedale Anticline Area. See Mineral Occurrence Report, pg. 4-31. The projected levels of development in Jonah Field and the Pinedale Anticline are thus, very inaccurate. In the Pinedale Anticline area alone, the BLM's projection is off by 2,599 wells.

Response: The draft EIS/RMP is designed to present a reasonable range of alternatives. Accordingly, the document addresses varying levels of oil and gas leasing and development. Leasing and development would continue to occur in the planning area under each of the alternatives addressed. The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development

environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period. BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the number presented in the draft EIS is current, valid, and applicable.

Comment: The referenced RFD Scenario for Alternative 1 on page 4-52 conflicts with the RFD Scenario set forth in Table 4-2, page 4-48, and Appendix A10. The text on page 4-52 suggests that 7,927 wells from federal minerals will be developed while the RFD Scenario in Table 4-2 and Appendix 10 states that only 7,192 wells are projected under the BLM's RFD Scenario for Alternative 1. Similarly, on page 4-245 (the cumulative impacts section) the BLM suggests that 7,927 wells will be drilled on federal minerals under the Alternative 1 RFD Scenario. The 7,927 well figure appears to represent the number of non-coalbed natural gas wells that will be drilled on all mineral types in the BLM's 2006 RFD Scenario Final Report, but that is not indicated in the text on pages 4-245. See RMP DEIS, pg. 2-245; compare to BLM RFD Scenario Final Report, Table 13. Because the BLM is intending to analyze the cumulative impacts of development in Section 4.19.8, the BLM should include the entire RFD Scenario for federal and non-federal minerals as expressed in Table 13 of the BLM RFD Scenario Final Report. The BLM must correct its RFD Scenario, and ensure that it is consistently applied throughout the EIS.

Response: The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. In that report, the reference to the Big Piney/La Barge area and the assumption that future activity "will depend mainly on industry being able to access surface locations to drill new wells" was referring to national forest lands (see page 52 of that report). The discussion for the Big Piney/La Barge area also states that "Drilling in this large area of moderate development potential will vary from relatively dispersed, as many as four well locations per square mile, to local areas of more intense drilling activity. There will also be extensive areas with little or no drilling activity. Some of the drilling in these moderate development potential areas will be for replacement and infill wells in areas where oil and gas production is ongoing" (see page 52 of that report).

Thank you for the map with your estimate of future potential in the Big Piney/La Barge area. BLM had already identified Big Piney/La Barge as an existing area of intensive oil and gas development, with future oil and gas development potential being moderate and with coalbed natural gas having a high to low potential for future development. Since no additional information was presented to indicate future development potential is higher than estimated for that entire area, BLM chose not to change its projections at this time.

BLM agrees that improvements in oil and gas drilling, completion, and recovery technologies will result in additional drilling activity and production. The RFD Scenario Final Report does identify a number of advances in technology that have increased exploration, development, and production efficiency and projects that these trends will continue. Please see the "Review of Exploratory and Production Activity and Operations" discussion in the subject report for specifics on technological advances. BLM also agrees that proven resources need to be accounted for. A review of available information on proved oil and gas reserves within the field office area is located in the section titled "Assessments of Oil and Gas Resources". Also, all active existing and proposed new oil and gas development projects were reviewed and considered when BLM's projections of future development potential were made. Information provided in the RFD Scenario Final Report regarding technology and understanding of the area, as well as future oil and gas potential was updated with the latest available information. That information was current to September 2006. BLM believes that it is sufficiently current for use in this document.

Comment: Once again the RFD Scenario discussed in the text on page 4-58 conflicts with the RFD Scenario for Alternative 2 expressed in Table 4-2 and Appendix A10. On page 4-58 the BLM suggests the RFD Scenario for federal minerals under Alternative 2 is 8,465 wells, while Table 4-2 suggests 7,804 wells. The BLM's cumulative impacts analysis on page 2-245 is similarly incorrect because it suggests 8,465 wells will be drilled on federal minerals in the Pinedale Resource Area.

Response: Alternative 2 federal well projections should read 7,804 wells and 9,051 total wells. The EIS has been corrected, where appropriate, to reflect the correct well projection for federal wells.

Comment: Finally, the BLM again incorporates a conflicting RFD Scenario for the BLM's cumulative impacts analysis compared to the RFD Scenarios in Table 4-2 or Appendix A10. See RMP DEIS, pgs. 4-244 - 4-247.

Response: The final EIS has been corrected, where appropriate, to reflect the correct well projection for federal wells.

Comment: In the Draft EIS, BLM notes most of the increase is the result of oil and gas exploration and development. Oil and gas development is expected to nearly quadruple from an estimated 2,173 in 2001 to 8;383 in 2021. Further, approximately only 61% of the Federal mineral estate is leased (page 3-39). It is unclear, however, how this estimate was calculated. Based on a combined total of approximately 8,700 wells (including existing and proposed development) projected in the recent Jonah Infill and Pinedale Anticline EIS's, EPA is concerned that the Draft BS may have underestimated the number of wells that will be developed in the Pinedale RMP and we recommend BLM provide a detailed explanation of how the development was estimated in the Final EIS.

Response: The 61% leased figure is based on the acres under lease as of June 2004 compared to the total federal mineral estate in the planning area. The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period. BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the number presented in the draft EIS is current, valid, and applicable.

Comment: We support BLM's approach of considering the effects of long-term surface disturbance rather than numbers of wells as the governing criteria for determining whether analyzed objectives and reasonable foreseeable development have been exceeded. However, it is important for BLM to recognize in the Reasonable Foreseeable Development scenario (RFD) and Resource Management Plan (RMP) that where surface disturbance is less per well than analyzed in the RMP, more wells can be drilled in many areas without exceeding identified impacts and that reclaimed acreage will be excluded from surface disturbance calculations.

Page A10-1 states: "Approximately two-thirds of the projected wells would occur in the Jonah and Pinedale Anticline Fields. The Pinedale Anticline would be developed with multiple wells per pad on an average surface spacing of 4 to 6 well pads per square mile (120- to 160-acre surface spacing per pad). The Jonah Field would predominantly be developed with single well pads at an average of 64 pads per square mile (10-acre surface spacing per pad). The greater Big Piney-La Barge area, Castle Creek Field, and the rest of the planning area would be developed with single well pads on an average surface spacing of 16 or fewer well pads per square mile (40-acre surface spacing per pad)."

• The RFD provides for 4,671 conventional gas wells from 4,671 pads on 40 acre spacing (16 wells per section). This includes Riley Ridge, Jonah, Big Piney La-barge and the rest of the planning area excluding Jonah.

• One-third of 7,136 wells equals 2,376 wells reasonably foreseeable for these areas (two-thirds of 7,136 wells equals 4,759 wells); 4,759 wells for Jonah and Pinedale leaves 1,600 wells for Pinedale considering that 3,100 wells were approved for Jonah. The 2006 ROD for the Pinedale Anticline approved 900 well pad locations and authorized the completion of 700 wells.

• Additionally, Appendix 10 indicates that only Pinedale would have multiple well pads and Jonah and the rest of the area would use single well pads. 5,136 wells on single well pads are shown in the RFD; subtracting the 3,100 approved for Jonah leaves 2,036 wells RFD for the rest of the area.

Clearly, our primary concern is that the number of wells and their associated surface disturbance projected by the RFD is low and does not reflect the actual oil and gas development projected to occur during the planning period of 2001 through 2020. The RFD for the DEIS was finalized in September 2006. The Pinedale Field Office (FO) also developed a Mineral Occurrence and Development Potential Report (Mineral Potential Report), which was finalized in January 2003. The RFD draws upon the conclusions reached in the Mineral Potential Report. The 3-year time frame between the development of the Mineral Potential Report and the RFD and the insufficient information upon which they are based are responsible for the inaccurate conclusions reached by the RFD.

The RFD and Mineral Potential Report do not accurately project future conditions. The RFD is fundamentally flawed because it failed to include all the available data at the time it was written in 2006. Although the 2003 projections of well development were revised in the RFD, the methodology and procedures used to project 7,136 wells are not disclosed in the RFD. More importantly, the Mineral Potential Report, upon which the RFD was based, was not revised with more recent information from Resource Management Plan Planning Area (RMPPA) operators.

It is critical that BLM revise the RFD and Mineral Potential Report with the most current data available to provide the basis for a more accurate RFD in the final EIS. We are puzzled that the Pinedale FO did not contact the RMPPA operators for their estimated projections as soon as it was realized that the protracted time frame for development of the DEIS had rendered the Mineral Potential Report inaccurate. The RFD could have been revised to provide an updated projection of future well development rather than attempt to “fix” some of its deficiencies using pre-2003 information. The 2006 RFD and 2003 Mineral Potential Report contain the following deficiencies:

- They were written without complete evaluation of all available data, especially current data and projections from the RMPPA operators.
- They do not provide a basis for a realistic cumulative effects analysis by underestimating the number of wells that will be drilled during the planning period.
- The RFDs did not consider how economic factors drive the development and/or use of new/unconventional technologies, resulting in well count/surface disturbance projections that are too low.
- They do not address or allow for future activities based upon new development or unanticipated circumstances.
- They lack a quantitative evaluation of produced water disposal issues, specifically the drilling of disposal wells.
- • They lack a quantitative evaluation of the effects of commingling, well life and resulting plugged and abandoned (P&A) wells.

In consideration of the significant restrictions on the oil and gas industry as a result of decisions proposed in the DEIS, the underestimated projected well count and associated surface disturbance for the 20-year planning period precludes a thorough, balanced analysis of minerals development in the DEIS. As such it will render the resultant management decisions invalid well before the 20-year planning period ends. Therefore, it is crucial that an updated RFD and analysis be included in the Final EIS.

OIL AND GAS CHAPTER 1 Page 1 Table 1-1 "Almost 400,000 acres (one-fourth of the planning area) are not subject to the restrictions and mitigation proposed in the RMP." Comment: While we recognize BLM has no jurisdiction on non-Federal lands, it is not uncommon for BLM mitigation measures to be adopted by other agencies. Therefore, BLM needs to explain how it will coordinate with Wyoming Fish and Game, WOGCC, and other government entities to provide consistency across jurisdictions. The DEIS claims anticipated impacts that could affect RMP decisions on these lands are included in the cumulative impact analysis; however, they are not specifically identified.

Response: The final EIS has been updated to provide further explanation of the RFD for oil and gas. The final RFD report completed in September 2006 is the most up-to-date analysis of the oil and gas resource in the planning area and has precedence in the draft EIS over earlier analyses. Other oil and gas development environmental analyses recently prepared or proposed within the planning area assume full field development of the oil and gas throughout the life of the field. The RFD estimates a reasonable and foreseeable scenario for development for only the 2001 through 2020 period. BLM's Wyoming State Office Reservoir Management Group (RMG) recently conducted a review of the RFD (June 28, 2007) and concluded that the number presented in the draft EIS is current, valid, and applicable.

Comment: PAGE: 2-15 SECTION: 2.3.17 RECOMMENDED CHANGE: REPLACE [• Impact level approaching that documented in the impact analyses made from reasonably foreseeable actions in an RMP or previous Activity Plan analysis](strikeout) • The energy development is approaching the impact levels addressed in the Reasonable and Foreseeable Development evaluation EXPLANATION: This is not a project or plan amendment. It appears to mean that development impacts are approaching those in the RFD.

Response: BLM feels the referenced text on page 2-15 of the draft EIS is accurate. The RFD is not a cap, it is an analysis threshold. If operators can develop more wells than the RFD without exceeding the impact thresholds for air emission, surface disturbance, etc., then it can be exceeded. Conversely, the impact thresholds are reached before the RFD projection is reached, the fewer wells could be developed without an RFD revision and additional impact analysis.

Comment: On several occasions the Interior Board of Land Appeals has confirmed that the RFD Scenario is not a limitation on development; including at least two decisions regarding the Pinedale Resource Area. In these decisions, the IBLA has made it clear that the RFD Scenario is not a planning decision, nor is it a limit on future development. Wyoming Outdoor Council, 164 IBLA 84, 99 (2004) (holding with respect to the Pinedale RMP that the RFD Scenario does not establish "a point past which future exploration and development is prohibited"); Southern Utah Wilderness Alliance, 159 IBLA 220, 234 (2003) (holding. that the Book Cliffs RMP did not establish a well, limit); Wyoming Outdoor Council, at al IBLA No. 2006-155 at. *26 (June 28, 2006) (holding that the Pinedale RMP does not restrict the number of wells that can be drilled within the Pinedale Resource Area); Biodiversity Conservation Alliance, et al., IBLA No. 2004-316 at *7 (Oct. 6, 2004) (citing Southern Utah Wilderness Alliance, 159 IBLA at 234) (holding that the "RFD scenario cannot be considered to establish a limit on the number of oil and gas wells that can be drilled in a resource area."). As indicated by the number of decisions cited above, the purpose of the RFD Scenario continues to be a source of confusion and litigation. In order to reduce such confusion and litigation, the BLM should include language in the

Pinedale RMP itself describing the purpose of the RFD Scenario, and the fact that the RFD Scenario is not a planning decision or limitation on future development.

Response: Text on page 2-9 of the draft EIS that states: "The RFD predicts future mineral development within the planning area" has been changed to "The RFD predicts future mineral development within the planning area. The RFD provides a projection of the number of wells and well pads that would be developed under each alternative for the purpose of determining surface disturbance levels and impacts to surface resources, air quality, socio-economics, etc. The RFD is not a cap or limit on the number of wells that can be developed; however, the impact projections based on the RFD do become a development threshold. If wells in excess of the RFD cannot be developed without exceeding the impact threshold then they can be allowed."

Comment: PAGE: 4.48, SECTION: 4.7.1, RECOMMENDED CHANGE: Redo RFD analysis to conform to IM. EXPLANATION: BLM IM requires BLM to set out RFD in number of wells and acres. Neither the RFD set out in Appendix 10 nor the DEIS conforms. Format further frustrates understanding of impacts, since it does not show surface disturbance, a key factor for energy development.

Response: Page 4-48, Table 4-2 of the draft EIS provides BLM's estimate of the total number of well locations, by alternative, for federal minerals. Pages 4-114 and 4-115, Table 4-13 provides BLM's estimate of total number of wells (federal, state, and private) across all alternatives. In Appendix 10, Table A10-1 provides the total number of well pads by alternative; Table A10-2 provides initial surface disturbance for federal lands; Table A10-3 provides long-term disturbance for federal lands; Table A10-8 provides initial disturbance for all mineral ownerships; and Table A10-9 provides long-term disturbance for all mineral ownerships. The RFD conforms to Instruction Memorandum 2004-089, Policy for Reasonably Foreseeable Development (RFD) Scenario for Oil and Gas. It is a separate document and is only referenced within this EIS.

Comment: PAGE: 4.48, SECTION: 4.7.1, RECOMMENDED CHANGE: Incorporate summary of RFD in FEIS EXPLANATION: FEIS has no discussion of RFD in any meaningful way and as discussed, Appendix 10 fails to conform to IM 2004-89 and must be revised entirely. See Comments Appendices.

Response: A description of the RFD has been added to the minerals section (Section 2.3.6 of the draft EIS) of the Actions Common to All Alternatives. The RFD conforms to Instruction Memorandum 2004-089, Policy for Reasonably Foreseeable Development (RFD) Scenario for Oil and Gas. It is a separate document and is only referenced within this EIS.

Comment: PAGE: 4-77, SECTION: 4.7.1, RECOMMENDED CHANGE: DO RFD analysis and tables EXPLANATION: FEIS does not follow IM 2004-89 guidelines (which are binding on BLM) for RFD. The tables fail to show number of wells, and surface disturbance. This is a fatal flaw because it also means that the FEIS does not meet EPCA direction that BLM disclose restraints on oil and gas leasing and document that these are the least restrictive. IM 2004-234; IM 2006-197.

Response: The RFD conforms to Instruction Memorandum 2004-089, Policy for Reasonably Foreseeable Development (RFD) Scenario for Oil and Gas. It is a separate document and is only referenced within this EIS. Page 4-48 of the draft EIS, Table 4-2, provides our estimate of the total number of well locations, by alternative, for federal minerals. Pages 4-114 and 4-115, Table 4-13, provides BLM's estimate of the total number of wells (federal, state, and private) across all alternatives. In Appendix 10: Table A10-1 provides the total number of well pads by alternative; Table A10-2 provides initial surface disturbance for federal lands; Table A10-3 provides long-term disturbance for federal lands; Table A10-8 provides initial disturbance for all mineral ownerships; and Table A10-9 provides long-term disturbance for all mineral ownerships.

Comment: PAGE: SECTION: RFD RECOMMENDED CHANGE: REVISE entirely to conform to IM 2004-089. EXPLANATION: RFD appendix does not conform to the guidelines and criteria required. Specifically the RFD does not describe the surface disturbance by number of wells and acres nor is it possible to readily compare the alternatives.

Response: The RFD conforms to the guidance provided in Instruction Memorandum 2004-089, Policy for Reasonably Foreseeable Development (RFD) Scenario for Oil and Gas. It is a separate document and is only referenced within this EIS. In Appendix 10: Table A10-1 provides the total number of well pads, by alternative, for all federal land, and wells are listed in parentheses; Table A10-2 provides the associated initial surface disturbance for federal lands; and Table A10-3 provides the associated long-term disturbance. Table A10-7 provides the total number of well pads, by alternative, for all mineral ownerships, and wells are listed in parentheses; Table A10-8 provides the associated initial disturbance; and Table A10-9 provides the associated long-term disturbance.

Comment: PAGE: SECTION: RECOMMENDED CHANGE: Incorporate revised and conforming RFD into Chapter 4 of FEIS EXPLANATION: At best the reader finds himself trying to do the math to determine the relative amount of surface disturbance. The fact that the RFD incorporates directional drilling does not change the obligation to properly follow the IM direction.

Response: The subject Bureau memorandum is intended to provide guidance to assist in preparing these types of fluids determinations. Well pads and associated wells are described in Tables A10-1 and A10-7 of the draft EIS, while the disturbance associated with these pads and wells is described in Tables A10-2, A10-3, A10-8, and A10-9.

Comment: I hope the energy companies will not find the document too restrictive in some of the sections. I am also concerned about the data you have used. It is my understanding that the newest numbers for the overall acreage, the current field production and well results are much higher than expected. Therefore you should probably rework your Reasonable Foreseeable Development Scenario. It is very likely that with the higher numbers a compromise between the energy companies and the environmentalists may be easier achievable.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: I urge the BLM to remove the unnecessary drilling restrictions and stipulations, which you have written as alternatives in the Resource Management Plan Environmental Impact Statement. And I hope you consider the economic benefits, which would come from extracting these important resources. Please redo the reasonable foreseeable development plan using updated numbers before you move forward with the RMP.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: hope the energy companies will not find the document too restrictive in some of the sections. I am also concerned about the data you have used. It is my understanding that the newest numbers for the overall acreage, the current field production and well results are much higher than expected. Therefore you should probably rework your Reasonable Foreseeable Development Scenario to more accurately reflect the resource that is out there. By accurately stating the resource your agency will position

Wyoming to continue providing our nation with reliable clean burning natural gas to heat our homes and power our economy.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: One is that some are saying the data you used appears to be out-dated. I have heard recently that the area of the natural gas field is much larger than initially expected and that the current field production and well results are much better than predicted. This means that you need to rework your Reasonable Foreseeable Development numbers.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: For one I do not even know why the RMP has to be so site-specific. I always thought such a document needs to be general in nature. And then there is one more problem I have found. The numbers are old. I mean the numbers for the acreage, current field production and well results. There is a lot more natural gas there than they originally thought. Please fix your plan and make it friendlier to the energy companies!

Response: The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document. The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: How can you expect them to make a profit if the access to one of the largest natural gas fields in the country is so limited? Some of these restrictions definitely have to taken out, especially the seasonal ones. This would make a seasonal workforce necessary, which in turn would be a big disadvantage for the area. You have a lot of wrong numbers in this draft RMP. From what I understand many of the numbers for the current field production and well results have been revised.

Response: Access to the Pinedale Anticline field, if that is what you mean, is not restricted by the RMP. BLM does not have the authority to prohibit development of existing valid oil and gas leases. The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: An RMP needs to be general in nature and you have made it site-specific. That should be the job of an EA or EIS! I also think you need to check the numbers of your Reasonable Foreseeable Development section. I am almost certain that they are totally outdated. You need to rework them. I understand that the acreage is much larger than initially thought and the field production and well results are also.

Response: The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document. The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: A few things however bother me with the plan. For one I am concerned that you must use correct data for your Reasonable Foreseeable Development Scenario! In addition, the restrictions in the alternative sections are not warranted. They need to be removed. Otherwise it will be impossible for the energy companies to develop the area and still make a profit. Site Specific considerations can be reviewed on a project-by-project basis. Our country needs the energy and we need to find a way to supply it. The development of the Pinedale Anticline is one way to do so.

Response: The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document. The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: Another note, are you sure that the numbers used for the Reasonable Foreseeable Development Scenario are correct? I was under the impression that the recent data is quite different, in fact it is supposed to be much larger. This doesn't add up with recent studies I have seen.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: Overall it is a good plan; however, you need to place equal emphasis on the energy development section of the RMP in relation to the other sections contained within. I also believe Reasonable Foreseeable Development numbers need to be updated based on current information including updates in project-specific EIS/EAs and other available known data. Old information of potential resource areas needs to be updated based on new findings and current field production and well results. This would affect all acreage and percentages, which would need to be reanalyzed. Deep potential needs to be updated based on new findings and current field production and well results. The BLM should investigate and analyze the impact to the American public that would result in leaving the valuable oil and gas resource undeveloped, especially under Alternative 3.

Response: Appropriate emphasis is placed on energy development in the draft EIS. The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing. The impacts of Alternative 3 are expressed through the reduction in RFD and related reductions in tax and other revenue that would accrue.

Comment: I am writing you today because it seems pretty obvious to me that Bureau of Land Management drafted the DEIS using data which is out-dated. We need to consider the current energy situation we are in when establishing the scenario for future development. It is so important to have an accurate estimate of the existing development numbers and of future development in order to insure that energy development proceeds in a manner that is environmentally friendly and responsive to our energy needs. When you have the accurate information it will bring about smart economic growth and rational environmental stewardship. I believe it is in the best interest to reanalyze the RFD before continuing with this Resource Management Plan.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: I'd like to see you reconsider the reasonable foreseeable development numbers you've proposed. To me, they don't seem realistic.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: 1. Revise your RFD number. It's too low and it's not realistic. 2. Reevaluate your sage grouse study. It just doesn't make sense. Have a fresh set of eyes check it out.

Response: 1. The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing. 2. BLM did not conduct any sage-grouse studies for the purpose of the RMP revision. Sage-grouse studies were conducted by gas companies and independent researchers.

Comment: One of the things that could end with an illegal Pinedale Resource Management Plan would be the intentional misstatement of inventoried gas supplies in the Pinedale Resource planning area. Since the current projections were made much has been learned about the potential in the area and the production levels. New and updated information on the reasonable and foreseeable development forecast must be used no matter what alternative is ultimately selected. Please make sure this problem of understated resource reserves is addresses.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: In your RMP, i think you've done a pretty good job on some things, but a quick glance at your RFD leads me to believe it needs some serious attention. Did you work with oil and gas companies in developing this? Next, where did you get the data on your sage grouse study? It needs work. Finally, please do NOT implement Alternative 3. This plan goes way too far with imposing unnecessary development restrictions on the industry -- and it fails to balance the need to develop our nation's vast oil and gas reserves.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing. BLM did not conduct any sage-grouse studies for the purpose of the RMP revision. Sage-grouse studies were conducted by gas companies and independent researchers. The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document.

Comment: Also, the numbers you've used for resource management areas seem to be outdated. I would encourage you to work with the industry to get their most recent data when compiling these guidelines. Be realistic about it. Make sure that your RFD is at least somewhat realistic. You can accomplish this by talking to people with expertise about the resource.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: You need to find ways to reduce impacts to the environment while ensuring reasonable, consistent access to oil and gas companies. You can accomplish these tasks by utilizing tools such as year round drilling. This approach helps to improve worker safety and it actually winds up having less of a long term impact on the wildlife. Those sort of "win, win" situations are the ones you should be looking

for. The other thing you can do to help stabilize our "bust, boom" economy is develop a realistic, long term reasonable foreseeable development scenario. This will encourage long term investment in our area -- and have a huge socio-economic impact.

Response: The ideas provided are analyzed in the draft EIS. The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: The reason the BLM is in this position is because the agency has misstated the reasonable and foreseeable development scenarios and underestimate how much gas is in the ground. Recent production has revealed new data and the numbers used for the DRMP projections must be revised upward or could likely see legal challenges as lots of assumptions are being placed on the RFDS.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: I am also concerned because I do not see an analysis on how much resource can be recovered under each category of each alternative. It is important to analyze how much resource is recovered under each category of each alternative for NSO, VRM, and all set-asides.

Response: The different RFD numbers for each alternative are based on adjustments made for varying restrictions placed on oil and gas development and leasing. BLM's Wyoming State Office Reservoir Management Group retains the RFD calculations.

Comment: Because the anticipated levels of oil and gas development drive many of the more substantive impacts with respect to air quality, disturbance, and social and economic conditions, the timeframe for the projected/assumed oil and gas development and analysis framework should be clarified. The document does not clearly define the timeframe for the development assumptions and the associated assessment. Section 1 addresses the ROD for the existing RMP and the considerable changes that have occurred since the ROD. However, neither Section 1 nor 2 describe the analytical timeframe associated with the current RMP update. Indications of the oil and gas development timeframe, apparently 2001 to 2020, appear in Section 4 and Appendix 26. However, even those statements leave unanswered questions such as, whether or how the long-term, continuing effects of production extending beyond 2020 are considered? Also, is the point of departure for the impact assessment 2000 or 2006? This is an issue with respect to how the level of activity and remaining number of wells to be drilled are addressed (see item #2 below).

Response: The draft EIS/RMP purposely does not set a specific "life of plan" limit. It does use an analysis base of 2001–2020 for impact determination. Trying to predict impacts beyond 2020 would be highly variable and highly speculative. Based on ever changing technologies and public demands on the resources addressed in the plan, projecting impacts beyond 2020 would be futile. As depicted in Table A10-1 of the draft EIS, the starting point for the RFD is 2001.

Comment: Item: Appendix 10 – Surface Disturbance Associated with Oil and Gas Activities Comment: We support BLM's approach of considering the affects of long-term surface disturbance rather than number of wells as the governing criteria for determining whether analyzed objectives and reasonable foreseeable development have been exceeded. However, it is important for BLM to recognize in the RFD and RMP that where surface disturbance is less per well than analyzed in the RMP, more wells can be drilled in many areas without exceeding identified impacts and that restored acreage should be excluded from surface disturbance calculations.

Response: BLM acknowledges the actual size and distance varies for wildcat/exploratory wells to infill wells in an existing field and also that they vary from field to field, but for the analysis purposes of the draft EIS/RMP, the across-the-planning area averages included on page 4-4 of the draft EIS are adequate. As you state, the long-term surface disturbance is the limiting criterion for oil and gas development under the draft EIS/RMP and larger pads equate to fewer wells, whereas smaller pads could equate to additional wells, providing they fall within the limits analyzed for other resources such as air emissions.

Comment: The draft plan is overwhelmingly focused on minerals. There is no accurate documentation of current conditions and impacts on the Anticline and the Jonah field, yet these fields are an undeniable component of the planning area for the PRMP. The BLM planning area, as reported by BLM itself, includes 922,880 acres of public lands on the surface and almost 1.2 million acres of subsurface. The Jonah Field and the Pinedale Anticline are on the order of 230,000 acres or approximately 25% of the PRMP planning area. The impacts from these gas fields have a present and future effect on the entirety of the planning area and the larger region that includes, but is not limited to, residential areas, ranches, wilderness areas, national parks and forests, lakes, valuable recreational lands and more.

Response: The draft EIS/RMP analysis and data are for the planning area as a whole. Analysis and data specific to the Jonah and Pinedale Anticline are found in the field development EISs for those fields and are not repeated in the draft EIS/RMP. The RFD does include the projected development in the Jonah and Pinedale Anticline fields, and, therefore, the impact analysis does reflect the impacts associate with these fields.

Comment: Finally, the BLM's prediction of future activity appears to be based on the inaccurate prediction that oil and gas activity in the area may begin to decline in 2007 when prices were expected to begin declining, or at least remain flat. See Mineral Occurrence Report, pg. 4-21. In fact, as evidenced by the recent approval of the JIDP, the proposed infill development on the Pinedale Anticline, and the potential development for infill drilling activities on the western portion of the resource area, exploration and production activity will be buoyed beyond 2007. The Energy Information Administration currently projects that Henry Hub prices for natural gas will range from $5.46 to $7.23 for the years 2007 through 2030. See Energy Information Administration, http://www.eia.doe.gov/oiaf/forecasting.html. The BLM's 2006 RFD Scenario Final Report partially contradicts and updates the information from the 2003 Mineral Occurrence Report noting that prices will likely remain between $5.00 and $8.00 for the foreseeable future. See, RFD Scenario Final Report, pg. 45. There is no indication exploration and production activities in the Pinedale Resource Area will not continue, or even increase, over the next several years. The BLM's RFD Scenario must be updated to reflect this reality.

Response: Yes, the definition does focus on an average number of wells per township (well density), and does reflect reservoir characteristics of potential producing formations in each area. BLM agrees that it does not necessarily equate to increased well productivity in the areas analyzed, although BLM did project overall productivity associated with existing development and new projected development (Tables 14 and 15 of the RFD Scenario Final Report). BLM used this method in the EIS analysis because it was needed to analyze the impacts of future development and overall cumulative development of the oil and gas resource. BLM believes that the best way to evaluate the impacts of potential future development is to determine new and cumulative surface disturbance associated with that development. To do that it is critical to determine the locations of existing development and project locations and densities of future development activities.

Socioeconomics

Comment: EnCana has concerns regarding the creation of the Large Block NSO Areas under Alternative 4, and the significant portions of the planning area made unavailable for future oil and gas leasing under Alternatives 3 and 4. As indicated on Maps 4-1 and 4-2 and Appendix 10, the lands within the Pinedale

Resource Area have significant potential for oil and gas development, including coalbed natural gas development. Although the BLM suggests existing oil and gas leases in these areas may be developed, pgs. 2-82, 2-121 122, it will be virtually impossible, and not economically viable to develop isolated leases. Any responsible oil and gas producer who decides to take the risk of exploring a wildcat area must do so only after assembling a large enough block of leasehold acreage so that, if the drilling is successful, it can obtain an adequate return on the high risk dollars invested. The BLM has, in other contexts, recognized this need for control of a reasonable acreage block. See Prima Oil & Gas Co., 148 IBLA 45, 51 (1999) (BLM policy to suspend leases when "a lessee is unable to explore, develop, and produce leases due to the proximity, or commingling of other adjacent Federal lands needed for logical exploration and development that are currently not available for leasing"). The BLM must recognize, study, and report the economic impact its decision to close significant portions of the planning area to leasing, or to make significant portions only available with NSO stipulations, will have upon future exploration and development in the area. The BLM's decision may deprive lessees, the local communities, the State of Wyoming, and the federal government of the economic benefits of oil and gas development:

Appropriately, the BLM indicates that operators would not be required to drill of setting wells in the large-block NSO Areas if the costs of completing and producing those wells would exceed the value of the resource being drained by adjoining state or private eases. See RMP DEIS, pg. 2-48. The BLM should make it clear that this exception: NSO applies to existing leases within areas unavailable for leasing under either Alternative 3 or 4. The BLM must accept the loss of minerals, economic activity, and tax revenue associated with a decision to make significant areas of the planning area unavailable for lease, or only available with unduly restrictive NSO stipulations.

Response: Limiting areas available for oil and gas leasing could limit exploration and revenues for the county, state, and federal governments in the future. This eventuality is discussed in the impact analysis in Chapter 4. BLM is not required to manage the public lands to generate the greatest possible dollar return. The alternatives analyzed attempt to provide balanced resource use on a landscape scale.

Comment: I think the BLM failed to consider what the economic implications to the area would be, if this large natural gas field would fail to be developed, because major energy companies do not want to invest in something so restricted.

Response: The analysis of economic impacts in Chapter 4 of the draft EIS was based on the RFD scenario for oil and gas, which projected the level of development that would occur under each alternative given the proposed land use restrictions.

Comment: Alternative 3 inappropriately limits oil and gas development. The BLM would effectively foreclose oil and gas development in the Pinedale Resource Area outside of the PAPA and the Jonah field. As the BLM is aware, mineral exploration and production is identified as a principal or major use of federal lands under FLPMA. 43 U.S.C. § 1702(1) (2006). Under Alternative 3, 711,920 acres would be unavailable for leasing, 307,450 acres would be available only with NSO stipulations, and another 339,570 acres would be available with unreasonable seasonal or controlled use stipulations. Over 268,030 acres of land with moderate, high, or very high potential for oil and gas would be made unavailable for leasing, and 237,590 acres with moderate, high, or very high potential for development would be available only with an NSO stipulation.

The removal of vast areas of land from future oil and gas development and potential restrictions on existing lease Alternative 3 also significantly restricts the amount of domestic energy available to the nation. If enacted, Alternative 3 would deprive the nation of 3,322 billion cubic feet (BCF) of natural gas and 27,000,000 barrels of oils compared to Alternative 2. 1 BCF of natural gas is the average annual amount used by 13,700 Wyoming households. See Energy Information Administration (2002 use rates).

The adoption of Alternative 3 would also cause the loss of 2,282 jobs and the loss of 2.3 billion dollars in mineral tax revenue. The BLM cannot adopt an alternative that would devastate economic development, reduce domestic energy supplies, and devastate the local tax base.

Even in Intensively Developed Fields such as the PAPA, the BLM's management direction unnecessarily limits the recovery of energy supplies. See RMP DEIS, pg. 2-81, Action b.l . APC believes BLM land in the Pinedale Resource Area can be effectively managed for both resources. The BLM's consideration of exceptions to stipulations allowing year-round drilling only when the operators have offered offsite mitigation is tantamount to requiring offsite mitigation in order to effectively develop oil and gas resources and avoid cyclical oil and gas development. See RMP DEIS, pg. 2-82. The BLM and impacted communities have a significant interest on dependent and reliable work forces; the BLM should strive to avoid seasonal surges and busts. Further, as noted above, the BLM cannot require offsite mitigation.

Response: BLM analyzed an appropriate range of alternatives in the draft EIS. It is reasonable to analyze an alternative that could limit future gas development.

Comment: It would be very helpful if the BLM would investigate and analyze the impact to the American public that would result in leaving the valuable oil and gas resource undeveloped before proceeding with an implementation of the DRMP.

Response: The draft EIS/RMP does project the total estimated oil and gas volumes to be produced under each alternative (i.e., 19,104 BCF of natural gas and 157 million barrels of oil under Alternative 1; 20,052 BCF of gas and 157 million barrels of oil under Alternative 2; 16,730 BCF and 130 million barrels under Alternative 3; and 19,168 BCF and 150 million barrels under Alternative 4). Leaving these volumes of gas and oil in the ground would reduce the product available to the American public to the extent projected in these estimates. The effect would be potential increased shortages and increased cost to the consumer for product derived from other sources. The exact increase in cost is not predictable.

Comment: The impact alternative 3 would have on our economy, if it actually would be left in the final RMP. If the major energy companies decide not to invest in the development of the Pinedale project because of all the restrictions and stipulations, the local region would loose valuable tax revenues and consumer spending from all the jobs, which would not materialize.

Response: The draft EIS analyzes the impacts anticipated with each alternative, including the anticipated socioeconomic impacts associated with Alternative 3. Whether or not companies would discontinue operations in the planning area would be purely speculative and therefore was not specifically addressed. It is important to remember that regardless of the alternative ultimately selected, approximately 65% of the federal lands/federal mineral estate in the planning area is currently leased under the 1988 RMP. The leaseholders/operators have valid and existing rights to develop and produce these existing leases.

Comment: I am very worried that imposing restrictions and stipulations on drilling in the Pinedale Anticline will stop companies such as Shell, Ultra and Questar from going ahead with harvesting this rich natural resource. I hope you will consider my opinion and decide to remove the restrictions, therefore making it profitable for the companies interested in this project to invest in it.

Response: The draft EIS analyzes the impacts anticipated which each alternative, including the anticipated socioeconomic impacts associated with Alternative 3. Whether or not companies would discontinue operations in the planning area would be purely speculative and therefore was not specifically addressed. It is important to remember that regardless of the alternative ultimately selected, approximately 65% of the federal lands/federal mineral estate in the planning area is currently leased

under the 1988 RMP. The leaseholders/operators have valid and existing rights to develop and produce these existing leases.

Comment: In regards to mitigations and restrictions, I believe the BLM must weigh the net loss of revenue. We should balance other resource needs but understand all economic impacts. For these reasons, I strongly believe Alternative 3 is too restrictive.

Response: The draft EIS/RMP does address the socioeconomic effects of the four alternatives. The effects of natural gas development is part of the analysis.

Comment: Over stringent mitigations will result in a net economic loss to the community and country that would come from imposing drilling restrictions. I hope the BLM will develop a new alternative to meet our energy needs.

Response: The draft EIS/RMP is designed to present a reasonable range of alternatives and make projections of the impacts associated with each of those alternatives. Accordingly, the document addresses varying levels of oil and gas leasing and development and the anticipated socioeconomic impacts to and from oil and gas leasing/development. Leasing and development would continue to occur in the planning area under each of the alternatives.

Comment: Most importantly wrong with this RMP is the seasonal restriction portion. By creating a short window for activity in an area, BLM will essentially be creating a transient workforce through the implementation of this guideline. This type of employment pattern will be detrimental to what would have otherwise been an economic stimuli for Wyoming with the employment opportunities energy development will create. Secondly, these restrictions will severely reduce the production output needed to be profitable for the companies in the area.

Response: BLM is required to manage the federal lands and mineral estates under its jurisdiction for multiple use. The RMP builds a framework for subsequent project-level NEPA documents. Such a framework includes suggested and required mitigation measures, as well as best management practices. As such it is appropriate for the RMP to set the framework for measures, including the use of seasonal restrictions, that could reduce impacts. Alternatives 2, 3, and 4 would designate Intensive Development Areas where seasonal restrictions would be relaxed.

Comment: The lack of analysis of the potential benefits of slowing development makes it especially interesting to note that later in the RMP DEIS, in Section 4.6.3 "Cumulative Impacts by Resource Category," (page 4-241 to 4-242) the BLM does do some analysis of the potential benefits of speeding up development. And it is not surprising, given the one-sided treatment of the oil and gas industry in the Draft EIS that the costs of speeding development have been ignored.

The analyses in the RMP assume that drilling will take place over 20 years. Experience elsewhere in the region indicates that it is often the case that development occurs much more rapidly. For example, in the Jonah Field, the 20-year projected total was reached within 5 years. More rapid development results in greater habitat fragmentation (Sawyer et al. 2005), higher levels of air and water pollution (Gauthier-Warinner 2000, USGS 1996), greater social disruption in surrounding communities, and fewer agency resources for the monitoring and enforcement needed to prevent these negative impacts (U.S. GAO 2005, Western Organization of Resource Councils 2005).

By definition, boom towns are the result of rapid development, and this development has been shown to have many negative impacts to the communities inundated by oil and gas drilling (Freudenburg 1992, Freudenberg and Gramling 1994, Guilliford 1989, Goldsmith 1992, Humphrey et al. 1993, Limerick et al.

2002, Pederson Planning Consultants, 2001, Pinedale Anticline Working Group, 2005, Smith 1986). These negative impacts include increased cost to private land owners and residents, increased cost to local governments, and overall economic instability and a loss of economic diversity.

The current oil and gas boom has generated significant costs to communities in the West. For example in the Powder River Basin, landowners are spending thousands of dollars on attorneys in order to attempt to protect their property, often to no avail, as these areas have seen dramatic declines in property values (Pederson Planning Consultants 2001). A recent study in La Plata County, Colorado found that coalbed methane wells there resulted in a decline in property values of 22 percent (BBC Research and Consulting 2001).

As noted in the comments submitted by the town of Pinedale on the BLM's Supplemental EIS for oil and gas development on the Pinedale Anticline, residents' quality of life also suffers during accelerated oil and gas development. These costs must be accounted for in the analysis. Surveys of residents in Western communities indicate that people choose to live in this region because of the scenery, recreation, lifestyle, and clean air and water rather than economic factors such as jobs or low taxes (McLeod et al. 1998, Porter et al. 2004). These amenities are diminished when oil and gas drilling increases in pace and scale. The loss of amenities and the economic impacts created by this loss must be acknowledged and accounted for in the analysis for the Pinedale area, and especially the potential increased costs associated with rapid drilling

Response: The final EIS has been updated to include an alternative to significantly slow the pace of development. The alternative was considered but eliminated from detailed analysis because BLM does not have sufficient authority to apply this concept. The areas unavailable for leasing have been updated in the final EIS. These changes will impact the pace of oil and gas development. However, this RMP will not affect the pace of development in existing developed fields.

Comment: Accelerated oil and gas development has left many counties and communities unable to pay for or finance the increase in public service costs or the cleanup cost after the bust. We have every reason to believe that similar costs and burdens will be placed on the communities in the Pinedale area, especially if the drilling takes place rapidly. The timeframe for leasing or development of these public lands should take into account the potential impact that rapid development will have on the local community and should be implemented in such a way as to minimize these impacts, not according to the demands of the oil and gas industry. Recommendations

1. The BLM must expand its RMP analysis so that phased development is fully described and considered as a way to protect the other multiple uses of the public lands in the Pinedale area. Specifically, BLM must describe and consider how approaches like limiting new leasing and firm (i.e. non waivable) surface density requirements can be used to slow the overall pace of new development over the RMP planning period.

a. In order to make a complete analysis of the impacts of phased development, the agency must make an assessment of the benefits of phased development, which includes the potential community benefits and the potential benefits of the added environmental protection that will result from slowing oil and gas development under a phased development or leasing plan.

2. When estimating the potential benefits of rapid oil and gas development in the Pinedale area, the BLM must show these benefits as net rather than gross (that is these analyses should reflect the costs as well).

a. The increased public service and infrastructure costs, the increased loss of wildlife habitat, and the other environmental costs associated with more rapid oil and gas development have already been well

documented in the Pinedale area (see the comments submitted by the town of Pinedale for the Pinedale Anticline Project Areas SEIS). These cost must be fully accounted for in the Final EIS. See the attached document "The Economic and Social Impacts of Oil and Gas Development" for further information on the costs of oil and gas development.

Response: The final EIS has been updated to include an alternative to significantly slow the pace of development. The alternative was considered but eliminated from detailed analysis because BLM does not have sufficient authority to apply this concept. The areas unavailable for leasing have been updated in the final EIS. These changes will impact the pace of oil and gas development. However, this RMP will not affect the pace of development in existing developed fields.

Comment: If all the energy companies want to develop the Pinedale Anticline and follow all the restrictions you are putting on them in the alternative section, they will probably not make a profit. It is unlikely they will take the project on if they will not profit from it. We will not have a good energy supply for our country and economic development for the region. Just think what it would mean for the area if all the jobs necessary to develop such a project would come here! The economic impact would be incredible. I urge you to look at the RMP again. Please take out the restrictive alternative sections and allow the energy companies to do their job.

Response: The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document.

Comment: Where is the acknowledgment that Sublette County has lost the most agricultural lands of any county in the State? There were approximately 19,000 acres developed for residential uses in the county from 1990-2004? Of these 99.5 percent occurred in the unincorporated parts of the county, and most on what the American Farmland Trust identifies as prime ranchland, most of which is split estate. The implication of that loss is a major land use issue in the Pinedale planning area. Together, the non-farm trend plus the South Rim Unit and the 230,000 acres of the Anticline and Jonah Field are pushing 30% OF WHAT???, The housing trend is forecast to continue driven by relocations and natural gas development's housing demand (unlike the previous growth that was driven by second home demand). There are many implications for what dispersed housing outside Pinedale proper on water well/septic systems will mean in conjunction with a draft RMP that prefers mineral sprawl to any other future for Sublette County. The competing land uses for housing and recreation, and sprawling gas development in this Pinedale RMP document are on a collision course.

Response: It is not within the authority of BLM to prohibit private lands being sold for subdivision development. However, impacts of population increase and expanding housing development are addressed in the socioeconomic impacts analysis in Chapter 4.

Comment: The RMP does not seem to address the potential impacts of Split Estate leasing on areas developed since the 1993 RMP, i.e., Hoback Ranches, Bridger Estates, Boulder etc. Protection of recreational, wildlife and cultural areas is addressed which is good, but the impact on residential areas is not addressed.

Response: Analysis of impacts of development on rural subdivisions has been added to the final EIS.

Comment: Unincorporated municipalities or zoned rural subdivisions. Particularly since mineral potential is low in most of these areas, and 70 % of the RMP area is already leased, there should be no leasing in unincorporated municipalities or zoned rural subdivisions. Doing so would cause serious health and welfare problems for our community, already struggling to stabilize from current boom impacts.

Response: This would only provide "selective protection" for those residential properties with underlying federal minerals that are not currently leased and could provide "protection" for some residential properties with leased federal minerals should those leases expire without the lease being developed. It would not provide any protection for residential properties with underlying private mineral estates, nor would it provide protection for residential properties developed in the future on lands within underlying federal minerals. It is also contrary to the intent of Congress when it established the various laws that allowed for the transfer/patent of federal lands to private entities, but retained the mineral estates in federal ownership to be developed for overall benefit of the American public at large.

Comment: I understand that environmental groups, funded by out-of-state foundations are trying to lock off huge areas in the Pinedale management area. This is bad for Wyoming, Bad for Pinedale, and bad for America.

1. It is bad for Pinedale in that there will be a huge loss in the local taxes, spending and development that will occur with an industry slowdown.

2. It will be bad for Wyoming because of the lost tax revenue to the state and schools systems.

3. It will be bad for American because is will add to the control that despots already have over the free world with the gas and oil reserves they currently control.

PLEASE make sure that all these issues are addresses in the final RMP. If the BLM is going to lock away valuable, clean burning natural gas then the agency sure better do a good job at explaining why.

Response: BLM does not have the authority to prohibit development of existing valid oil and gas leases and no "locking away" of proven resources is contemplated.

Comment: Please consider what impact a development of this large natural gas field could have on the local economy and Wyoming itself, not to speak of the nation altogether. Remove or at least modify the stipulations and restriction from your document and let the energy companies work out the problem directly with the environmentalist.

Response: The alternatives and analysis provided in the draft EIS are appropriate for a land use plan-level document.

Comment: I am very much aware of the impact that oil and gas drilling has made on the economy, and I do realize that they have cleaned up their act in recent years, somewhat. But no, they cannot guarantee that they can go in pristine areas with their large equipment and come out again without having done damage.

Response: It is true that development for oil and gas will always have impacts. These impacts are analyzed in Chapter 4.

Comment: The draft plan does not acknowledge the dramatic and well documented non-energy related shocks to the whole Yellowstone region. Sublette County is typical of the story. Analyses shows how unprepared the economies of a 25 county region, including and most intensively Sublette County, are to meet the challenges of the future. (See the Yellowstone Business Partnership 2007 publications, which are incorporated here by reference). These challenges come in the form of meeting, for example, the needs of a rapidly aging population at a time when the economies of these counties share an over- reliance on volatile construction wages. An aging population requires a retail and service economy, including medical services and transportation. At-home care and independent living rather than retirement home care is the

trend driven by the high cost of health care services and increasing numbers of seniors. Reliance on excessive mineral development and building construction wages in the local economy renders the county ill-prepared for the future and the draft RMP needs to take these and other socio-economic impacts associated with the alternatives presented into account—as required by NEPA. The answer to these problems is not entirely money. The PRMP-DEIS, essentially a land use plan, addresses none of these critical 21st Century issues even though there is data readily available in this class of information.

Response: The socioeconomic impact analysis has been expanded and updated in the Final EIS to more fully address these and other social and economic issues.

Categorical Exclusions (CX)

Comment: Item: Page 1-15, Section 1.5.2, Bureau of Land Management Energy and Non-Energy Mineral Policy "The Energy Policy Act of 2005 encourages energy efficiency and conservation; promotes alternative and renewable energy sources; reduces dependence on foreign sources of energy; increases domestic production; modernizes the electrical grid; and encourages the expansion of nuclear energy." Comment: Discussion of the categorical exclusions contained in the Energy Policy Act and how those provisions can be applied to subsequent oil and gas drilling and development is missing from the analysis and discussion in the RMP. In reviewing an Application for Permit to Drill (APD), Surface Use Plan of Operations, or pipeline application involving a proposed activity that fits into one of the five categories, an appropriate CX can be applied. Comment: BLM is continuing to process more applications each year. Continuing approvals at these high levels, while performing necessary monitoring and evaluating the effectiveness of mitigation measures, requires BLM to make efficient use of the CX provisions and to change how it processes APD's in the intensively developed areas vs. minimally developed and restricted areas. Some possibilities are:

- Allowing use of Categorical Exclusions for sundry notices and Applications for Permits to Drill on multiple-well pads.
- Establishing monitoring as a priority to track land use plan and project implementation. A system for tracking and coordinating monitoring within and among agencies needs to be developed, along with improvements in coordination among agencies for data exchange and research.
- Electronic filing, processing, and approval of APDs and Sundry Notices should be encouraged. This reduces the amount of data entry done by BLM staff and allows more effort to be devoted to processing

Response: The use of the Categorical Exclusions under The Energy Policy Act of 2005 is provided by statute under the Act and therefore does not require an RMP decision to implement. The Pinedale Field Office routinely processes authorizations under one of the five statutory Categorical Exclusions where appropriate. Likewise, establishing monitoring and tracking measures is already under BLM's authority and in many cases has already been instituted. A RMP decision is not needed to establish monitoring or tracking systems.

Intensively Developed Fields, Minimally Developed Areas, and Traditional Leasing Areas

Comment: Page 2-143 "Approximately 175,750 acres in Intensively Developed Fields would be available for intensive fluid mineral leasing, exploration, development, and production; approximately 672,470 acres designated as Minimally Developed Areas would be available for restricted fluid mineral leasing, exploration, development, and production; about 205,100 acres would be designated as Large Block NSO Areas; and 156,900 acres would be designated as Unavailable Areas for leasing, exploration, development, and production" "The planning area would be divided into three distinct, noncontiguous,

wildlife management zones for the purpose of oil and gas activities." Comment: The boundaries of the Intensively Developed Fields under Alternative 4 are inadequate. It is crucial for BLM to include more developed lands in the western portion of the resource area in this category. It is confusing that the lands adjacent to and within the Big Piney/La Barge CAP are not designated as an Intensively Developed field. We recommend that the lands within Townships 28 - 30 North, Ranges 112 – 113 West be included within the Intensively Developed field category. This omission is of concern because the entire western portion of the Pinedale Field Office area has very high potential for oil and gas development, and the above-referenced lands have been producing oil and gas for 100 years.

BLM's analysis in the Mineral Occurrence and Development Potential Report for the Pinedale RMP (2003) at Figure 3-7 more accurately defines the boundaries of the Big Piney/La Barge area and the significant oil and gas development that has taken place in the area. The Mineral Occurrence report indicates that "moderate development potential is anticipated in a large area of the La Barge Platform, at approximately T25-29N, R112-113W, and in the central and north parts of the RMPPA [Resource Management Plan Planning Area]. The north part of this moderate development potential extends onto USFS lands." Comment: While the above discussion clarifies that the management zones are intended to protect wildlife from oil and gas and specific mitigation guidelines and operating standards for each resource are presented in Appendix 3 and apply to each of the management areas; overall, it is unclear how oil and gas development on existing leases will differ in these management areas. It is also unclear how operations on future leases will differ between the intensively and minimally developed areas.

Response: The Intensively Developed Fields classification is intended to address areas with intense surface impacts due to oil and gas developments. The areas are drawn to include all areas affected by these impacts. Provisions for expanding the Intensively Developed Fields are intended to recognize future expansion of surface-impacting activities in the fields. The Intensively Developed Fields provide, for example, for wildlife seasonal and other restrictions to be relaxed in areas of intensive or dense development. It would not be appropriate to relax wildlife seasonal stipulations in areas where gas development exists but with lower impact levels where traditional wildlife seasonal habitats are still widely used.

Comment: The BLM should increase the size of the Intensively Developed Field designation in the vicinity of Jonah Field given the potential for development in that area. Additionally, the BLM should revise other aspects of its preferred alternative that are too restrictive.

Response: The Intensively Developed Fields are intended to deal with current development, not potential for development. Methods for increasing the size of the fields as appropriate are provided.

Comment: Alternative 3 needs to be modified to close potential loopholes (one example: allowing areas that would be protected under the plan to be converted to unprotected areas if well-density exceeded a certain threshold -- this is certainly managing for industry!); nonetheless, Alternative 3 would go far toward protecting air and wildlife in the Upper Green.

Response: The projected boundaries of proposed "Intensively Developed Field" areas is based on our current level of knowledge about where high intensity development, in terms of numbers of wells and surface spacing, is occurring or is anticipated to occur. The boundaries are designed to allow intense development within the area, but allow for the maximum level of surface resource protection outside the area. As new delineation wells are developed to define and/or refine the productive limits of the existing fields or as explorative wells are developed in areas outside the existing field, it may become necessary to expand the "Intensively Developed" Areas. The conversion criterion provides the mechanism to accomplish this and do so in a methodical and systematic manner. The language for conversion has been modified in the final EIS.

Comment: With these area designations in all alternatives, there is a caveat that the designation could change to "intensively developed" when bottom-hole spacing exceeds one well for each 160 acres. The DEIS needs to specify the area from which this well density is calculated. Is it a lease area or the entire area specified on maps 2-7,8 and 9?

Response: The discussion of how areas could be converted to Intensively Developed Fields has been clarified in the final EIS.

Comment: Narrative on page 2-54 indicates that conversion of an area designation to "intensively developed" would require development of either an EA, SEIS or an EIS. The EA process would be inadequate in this case because when considered separately, with no cumulative impact assessment, a "Finding of No Significant Impact" (FONSI) would likely result. But, if a series of lease areas were considered in total such as in the EIS process, combined impacts and cumulative effects would be more realistically evaluated. The RMP should provide that no area classification changes will be made without a complete SEIS or EIS. To do otherwise abrogates the BLM's responsibility under NEPA and violates public trust.

Response: Determination of the level of NEPA analysis required to convert a specific area to "intensively developed" would depend on the area proposed and the resources affected. BLM would complete the necessary analysis to comply with NEPA. It would be inappropriate to specify the type of NEPA compliance required at this time, because it is not possible to evaluate the impacts until a proposal is made.

Comment: The BLM must also provide for sufficient flexibility within the Intensively Developed Field. Based on APC's review of map 2-9, it appears the BLM has only designated the so-called core of the PAPA as an Intensively Developed Field. APC is currently testing wells and planning additional development designed to demonstrate the productive capability of lands outside the core area. Operations on APC's leasehold on the west side of Pinedale Field and within the Two Buttes Unit may be adversely impacted if all the lands within the unit and on the west side of the field are not included within the Intensively Developed Field boundary.

Response: The draft EIS provides for the Intensively Developed Fields to be expanded as appropriate based on future development or discoveries.

Comment: The BLM should modify the boundaries of the Intensively Developed Fields under Alternative 4 to include areas outside of the proposed core area discussed in the PAPA SDEIS. The BLM should also redefine the boundaries of the Intensively Developed Fields and based on the most recent and current data APC is currently testing and planning wells outside the core area, if productive, the BLM must increase the size of the core area. The BLM must allow sufficient flexibility for the core area of the PAPA to increase in size as additional wells are drilled. In many ways, operations on the edges of the PAPA core area are still exploratory in nature. Finally, the BLM should review Map 2-9 to ensure that the Expanded Year-Round drilling area proposed by the Wyoming Game and Fish Department and some of the other operators in the PAPA is properly mapped as the PAPA Intensively Developed Field.

Response: The draft EIS provides for the Intensively Developed Fields to be expanded as appropriate based on future development or discoveries.

Comment: As with the NSO and attendant exception I allowance list, the Alternative 4 Oil & Gas Management Areas map (DEIS Map 2-9) is deceiving to the average reader. Vast portions of the map are shaded in dark gray, labeled "Minimally Developed Area", leading the reviewer to believe that under this Alternative, only "minimal" oil & gas development would be permitted. But, the Preferred Alternative

description specifies that °Lands in this area could convert to "Intensively Developed Fields" when bottom-hole well density exceeds 1 well per 160 acres. Conversion cowl require preparation of a field development EA, EIS, or supplemental EIS" (DEIS p. 2-121). Permitting conversion to environmentally less protective management status upon industry demand is poor policy. This loophole should be closed: these areas should be labeled Open to Development. and thresholds for NEPA analysis should be defined in the RMP.

Response: The "Minimally Developed Area" label has been changed to "Traditional leasing Areas" to more accurately describe the leasing conditions and potential development of the area. The projected boundaries of proposed "Intensively Developed Field" areas is based on our current level of knowledge where high intensity development, in terms of numbers of wells and surface spacing, is occurring or is anticipated to occur. The boundaries are designed to allow intense development within the area, but allow for the maximum level of surface resource protection outside the area. As new delineation wells are developed to define and/or refine the productive limits of the existing fields or as explorative wells are developed in areas outside the existing field is may become necessary to expand the "Intensively Developed" areas. The conversion criterion provides the mechanism to accomplish in a methodical and systematic manner. The language for conversion has been modified in the FEIS.

Comment: While we prefer the management plan laid out in Alternative Three, we believe it needs improvements to truly reflect your multiple use mandate and to provide the necessary protection for the significant cultural resources under your control. Therefore, we would urge you to adopt the following additional safeguards to Alternative Three: • Close the loopholes that could allow minimally developed areas to become intensively developed and that could allow surface drilling on areas originally designated for no surface occupancy; and,

Response: The projected boundaries of proposed "Intensively Developed Field" areas is based on our current level of knowledge where high intensity development, in terms of numbers of wells and surface spacing, is occurring or is anticipated to occur. The boundaries are designed to allow intense development within the area, but allow for the maximum level of surface resource protection outside the area. As new delineation wells are developed to define and/or refine the productive limits of the existing fields or as explorative wells are developed in areas outside the existing field, it may become necessary to expand the "Intensively Developed" areas. The conversion criterion provides the mechanism to accomplish this and do so in a methodical and systematic manner. The language for conversion has been modified in the final EIS.

Comment: Alternative 3 needs to be modified to close potential loopholes (one example: allowing areas that would be protected under the plan to be converted to unprotected areas of well-density exceeded a certain threshold

Response: The projected boundaries of proposed "Intensively Developed Field" areas are based on our current level of knowledge where high intensity development, in terms of numbers of wells and surface spacing, is occurring or is anticipated to occur. The boundaries are designed to allow intense development within the area, but allow for the maximum level of surface resource protection outside the area. As new delineation wells are developed to define and/or refine the productive limits of the existing fields or as explorative wells are developed in areas outside the existing field, it may become necessary to expand the "Intensively Developed" areas. The conversion criterion provides the mechanism to accomplish this and do so in a methodical and systematic manner. The language for conversion has been modified in the final EIS.

Comment: 1. Page 2-47: Under Alternatives 2, 3 & 4, it appears that three types of oil and gas management areas would be established. These management areas are not fixed areas (spatially) and the

Minimally Developed and No Surface Occupancy Areas could be reclassified as Intensively Developed Areas. What criteria would be used to reclassify areas and what assurances are there that the entire planning area would not become an Intensively Developed area? With much of the planning area already leased we are concerned that the protections previously provided by the other area MDP and NSO classifications would be lost and big game populations and habitats adversely affected.

Response: The language allowing conversion from minimally developed to intensively developed is designed to allow for expansion of existing fields, such as the Jonah, Pinedale Anticline, Big Piney-La Barge, until the boundaries of productive areas for these areas are established through delineation wells. Prior to expanding the Intensively Developed Area boundaries, additional NEPA analysis would be required. The language for conversion has been modified in the final EIS. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: A supportable alternative would firmly, without loopholes driven solely by well density, protect the Wind River Front areas now undeveloped, Trapper's Point, the Warren Bridge sections (a migration area second only in importance to Trapper's Point), the Hoback Rim and adjacent habitats from Lookout Mountain to Pass Peak, the entire Bench Corral/Cottonwood/Ryegrass sage complex, and sensitive habitats and landscapes outside the current intensively developed areas.

Response: The language allowing conversion from minimally developed to intensively developed is designed to allow for expansion of existing fields, such as the Jonah, Pinedale Anticline, Big Piney-La Barge, until the boundaries of productive areas for these areas are established through delineation wells. Prior to expanding the intensively developed area boundaries, additional NEPA analysis would be required. The language for conversion has been modified in the final EIS. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

The area between Lookout Mountain and Pass Peak is on National Forest land and is beyond the jurisdiction of this plan. Under Alternative 3, the remaining referenced areas would be unavailable for leasing. Alternative 4 would also designate the Wind River Front south of Pinedale, Trapper's Point, and the Warren Bridge SRMA (which includes the Warren Bridge migration bottleneck) unavailable for leasing. The Wind River Front and Upper Green/Upper New Fork would be unavailable for surface occupancy (excluding existing leases). Management of the Upper Green/Upper New Fork, Ryegrass, and Bench Corral has been reevaluated in the final EIS.

Comment: The following are things that I would like to see in the RMP:

- Withdraw important wildlife and scenic areas from future leasing (the Wind River Front, Trapper's Point area, Ryegrass/Cottonwood area, Fontenelle elk winter range, and all areas north of Daniel, all areas in the leasing moratorium area, and all wildlife migration corridors, winter ranges and parturition areas)
- Allow leases to expire in the above areas
- Cluster new infrastructure, use directional drilling, and use the cleanest and environmentally-friendly technology available
- Remove loopholes that would allow areas designated for minimal development to become intensely developed. Do not allow any leasing in NSO areas.

Response: Permanently setting areas aside from leasing or development is beyond the authority of this RMP. Such "permanent" set asides/withdrawals require congressional approval. It is not possible to cluster development until exploration has confirmed the characteristics and extent of the underground

resource. It does not take BLM action to allow leases to expire. If enough time passes, they expire. We cannot mandate that they expire faster. Unless the leaseholder drills a producing well, they will expire. The projected boundaries of proposed "Intensively Developed Field" areas is based on our current level of knowledge about where high intensity development, in terms of numbers of wells and surface spacing, is occurring or is anticipated to occur. The boundaries are designed to allow intense development within the area, but allow for the maximum level of surface resource protection outside the area. As new delineation wells are developed to define and/or refine the productive limits of the existing fields or as explorative wells are developed in areas outside the existing field, it may become necessary to expand the "Intensively Developed" areas. The conversion criterion provides the mechanism to accomplish this and do so in a methodical and systematic manner. The language for conversion has been modified in the final EIS.

Comment: First, Yates is concerned about the BLM's implementation of four development areas: Intensively Developed Oil and Gas Fields, Minimally Developed Areas, Large Block NSO Areas and Unavailable Areas. This is a new management strategy for the BLM and it appears to be based on politics rather than sound scientific data. Yates is not necessarily opposed to the creation of management areas, but the agency should include a Moderate Development Area and the areas should be supported by scientific data. Additionally, the Large Block NSO and Unavailable Areas should be considered on a case-by-case basis because setting aside large areas for no surface occupancy and no development will restrict the development of new and improved extraction technology and thus prevent the discovery of much needed oil and gas resources.

Response: The "Minimally Developed Area" designation is intended to provide for oil and gas development opportunities in areas outside the intensively developed fields such as Jonah, Pinedale Anticline, Castle Creek Unit, and Big Piney-La Barge and in essence serves as a moderate development area between the intense development areas and areas recommended that they not be available for leasing or not be available for surface disturbance. Scientific wildlife studies show that certain wildlife occurrences have declined in the Jonah Field and on the Pinedale Anticline and that certain oil and gas operations have displaced winter wildlife in the Big Piney-La Barge area. Big game and sage-grouse lek monitoring shows that big game wintering populations and lek attendance has experienced some increase in certain areas outside of these fields. The Large Block NSO and unavailable area designations are intended to provide enhanced wildlife protection in such areas. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: All areas of scenic and recreational value including the entire area east of highway 191 should be off limits to oil and gas leasing. The greater Trapper's Point area, the Ryegrass/ Cottonwood area, the Fontenelle elk winter range, and the upper Green area north of Warren Bridge all should be off limits to leasing. Also, any federal minerals that underlie private land should at least be designated with No Surface Occupancy stipulations.

Response: Under Alternative 3, the referenced areas would be unavailable for leasing. Alternative 3 also designates most private lands with underlying federal minerals as unavailable for oil and gas leasing or unavailable to surface occupancy. These designations cannot affect the right to develop and produce any existing leases in these areas. The language allowing conversion from minimally developed to intensively developed is designed to allow for expansion of existing fields, such as the Jonah, Pinedale Anticline, Big Piney-La Barge, until the boundaries of productive areas for these areas are established through delineation wells. Prior to expanding the intensively developed area boundaries, additional NEPA analysis would be required. The areas available for oil and gas leasing, and subject to NSO restrictions, have been revised in the final EIS. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: Page Number & Issue:2-120: "lternative 4,Management Objectives and Actions Objective 1 (Intensively Developed Fields) "Make federal lands and minerals within existing oil and gas fields (175,750 acres) available for intensive oil and gas leasing, exploration, development, and production (Map 2-9). Actions c. Exceptions would be considered to allow year-round drilling and development operations on new and existing leases in the Jonah, Pinedale Anticline, Big Piney La Barge, Deer Hills, and Castle Creek oil and gas fields that are currently encumbered by seasonal restrictions. Such exceptions would be subject to additional environmental analysis and the leaseholder/operator implementing offsetting mitigation such as, but not limited to: habitat enhancement; development of a liquids (condensate and produced water) gathering system to reduce truck traffic; remote telemetry; drilling of multiple wells from new and existing pads; directional drilling; noise reduction for drilling and completion operations; flareless completion; tier 4 or better emission equipment; bussing of crews; concentration of development; closed drilling systems; use of transportation plan that reduces road density; compensation mitigation; and monitoring of wildlife populations. 1. This exception would not be applied to seasonal (timing limitation) protection measures for T&E and migratory bird species unless analysis demonstrates that these species would not be affected or that anticipated impacts would be mitigated in accordance with USFWS requirements. d. BMPs would be applied to mitigate impacts on sensitive habitats and other resources (Appendix 5) to the extent possible and practicable. e. Accelerated reclamation would be implemented to reestablish habitats. f. On-lease water disposal pits would not be allowed." Recommendations: This is too restrictive for project specific application. Technologies and processes should be evaluated for application on a site-specific basis rather than a blanket application.

Response: Under all four alternatives, the RMP provides for energy development for the life of the plan (i.e., at least through 2020). It also builds a framework for subsequent project-level NEPA documents. Such a framework includes suggested and required mitigation measures, as well as best management practices. As such, it is appropriate for the RMP to set the framework for measures that could reduce impacts.

Comment: The range of alternatives in the DEIS is arbitrarily limited and unduly constrains BLM's management options. For example, Alternative 1 carries forward the current management actions; Alternative 2 attempts to show the effects of oil and gas operations with few additional restrictions; Alternative 3 focuses on preservation, the most restrictive management, while Alternative 4, the preferred alternative, represents an attempt to reconcile potential conflicts. Clearly, only Alternative 4 is viable as a preferred alternative, however, it provides BLM constrained, and, therefore, narrow management options. Moreover, in order to demonstrate an adequate range of alternatives, Alternative 4 relies upon management tools that are unsuitable to facilitate reasonable multiple use activities, such as grazing, oil and gas exploration and development and motorized recreation.

Yates urges that BLM include in the Final EIS a revised preferred alternative that affords BLM with greater flexibility to more reasonably address the needs of all uses on public lands. The new preferred alternative would utilize a broader variety of management options available to manage oil and gas and other activities without the excessive limitations required in Alternative 4 and without the lack of management options identified in Alternative 2. For example, Yates recommends that BLM include a management area that would provide for moderate development areas in addition to intensive and minimal development areas. This would provide a better balance than the "all or nothing" approach adopted by BLM in the DEIS. Additionally, a revised preferred alternative could reduce the use of highly restrictive stipulations, including seasonal and no surface occupancy to areas where they are actually justified. Yates recommends that this new preferred alternative be crafted as a blend of Alternatives 2 and 4. As such, the revised alternative would not require a supplemental EIS because it would draw upon the elements of the alternatives already analyzed in the DEIS.

Response: The RMP does provide a reasonable range of alternatives and does meet BLM multiple-use management requirements. Please be reminded that the multiple-use requirements of FLPMA do not require BLM to manage each and every acre under its jurisdiction for multiple use, but do require multiple-use management on a logical unit or landscape level. The "Minimally Developed Area" designation is intended to provide for oil and gas development opportunities in areas outside the intensively developed fields such as Jonah, Pinedale Anticline, Castle Creek Unit, and Big Piney-La Barge and in essence serves as a moderate development area between the intense development areas and areas recommended that they not be available for leasing or not be available for surface disturbance. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: The Draft RMP distinguishes between "Intensively Developed Oil and Gas Fields," where emphasis is on development of oil and gas, and "Minimally Developed Areas," where all uses will be accommodated and new leases will include terms and stipulations to limit impacts on the environment and wildlife habitats. (page 2-47). However, the Draft RMP also provides for Minimally Developed Areas to be converted to Intensively Developed Fields – automatically if exploration reaches a down-hole well density of one well every 160 acres or in other "instances" based on some undefined conditions (emphasis added). Id. While portions of the Draft RMP discuss environmental documentation that "would be prepared to analyze impacts and to determine operating methods, mitigation, and BMPs" that would apply to development areas (page 2-48), the more detailed discussion of the alternatives only states that conversion of these areas "could" require preparation of environmental analysis. (pages 2-83 and 2-122).

The conversion of an area to become an intensively developed field will require a environmental analysis. The National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 et seq., dictates that the BLM take a "hard look" at the environmental consequences of a proposed action and the requisite environmental analysis "must be appropriate to the action in question." Metcalf v. Daley, 214 F.3d 1135, 1151 (9th Cir. 2000); Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 348 (1989). The analysis conducted in the Draft RMP for the alternatives does not include an assessment of the direct, indirect and cumulative impacts of the intensive development of areas currently identified for minimal development in the context of the other aspects of the alternative. Accordingly, the RMP must require a thorough NEPA analysis if an area is to be converted, including identifying BMPs and other mitigation measures.

Response: At the RMP stage it is not possible to know whether or where Minimally Developed Areas may actually be developed to the level to trigger consideration for conversion. Therefore, it is not possible at the RMP stage to accurately determine what the level of expansion may be or what the site-specific impacts of the expansion/conversion would be. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: Also, the standards set for conversion invalidate the NEPA analysis of the alternatives in the Draft RMP. Based on the geologic structure of the gas reservoirs, as discussed above, it is likely that any exploration with promising results will ultimately lead to at least 160-acre bottom-hole density. Therefore, by using this standard, BLM is essentially committing to converting these areas, if any profitable gas is found in these areas. In addition, the potential to convert areas based on some other undefined standard further undermines the meaning of this designation. NEPA requires federal agencies to consider and disclose to the public all direct, indirect, and cumulative impacts of its actions. 42 U.S.C. § 4332(2); 40 C.F.R. § 1508.9. The Draft RMP does not discuss or disclose the true impacts of the alternatives that include the likelihood of conversion based on 160-acre bottom-hole density. The Draft RMP also does not (and cannot) discuss the true impacts of the alternatives that include conversion based on broad and undefined standards for conversion. Failure to disclose and discuss impacts violates NEPA. See, e.g., Johnston v. Davis, 698 F.2d 1088, 1095 (10th Cir. 1983) (revision of an EIS may be necessary to provide "a reasonable, good faith, and objective presentation of the subjects required by NEPA.");

National Audubon Society v. Department of Navy, 422 F.3d 174, 185-87 (4th Cir. 2005) ("The hallmarks of a 'hard look' are thorough investigation into environmental impacts and forthright acknowledgment of potential environmental harms"). The RMP envisions the use of directional drilling to reduce surface impacts. Therefore, the standard should be based on maximizing the use of directional drilling and allow conversion only where, even with directional drilling and following additional NEPA analysis for a site specific field plan, surface spacing of greater than 160 acres is shown to be needed to effectively develop the resource.

Recommendation: As a preliminary matter, both new and existing leases in the Minimally Developed Areas should include Conditions of Approval to minimize the impacts of exploration and development. The Draft RMP should clearly state that if conversion occurs for an entire field, then an EIS will be prepared and BMPs and other mitigation measures identified and applied. The RMP's current standards for conversion (i.e. automatically converted at 160 downhole spacing and converted for "other instances"), as well as the RMP's analysis of the environmental impacts of the alternatives, do not comply with NEPA. Finally, the RMP designated Minimally Developed Areas to provide multiple use opportunities. Thus, the RMP must set out a clear and meaningful standard (such as 160 acre surface spacing, maximal directional drilling already used, and new NEPA analysis) to be met before allowing any conversion of these areas to Intensively Developed Fields. The opportunity for conversion under any lesser or other, undefined standard must be removed from the RMP.

Response: At the RMP stage it is not possible to know whether or where Minimally Developed Areas may actually be developed to the level to trigger consideration for conversion. Therefore, it is not possible at the RMP stage to accurately determine what the level of expansion may be or what the site-specific impacts of the expansion/conversion would be. The EIS does not imply that the conversion would be performed absent NEPA, but specifies that the appropriate environmental analysis would be conducted. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: Page 2-20 Yates does not necessarily object to dividing the area into emphasis areas. However, as pointed out previously in these comments regarding the inadequate range of alternatives addressed in the DEIS, Alternative 4 fails to provide an adequate range of management options. BLM needs to establish one more area that provides for Moderately Developed Areas that would give priority to exploration activities in currently leased areas while protecting wildlife or other values. In doing so, BLM's management will be more efficient and will not result in violations of valid existing lease rights. BLM must also acknowledge that oil and gas activities do not have the impacts on wildlife alluded to in the DEIS. The agency has failed to justify the need for large block NSO areas to protect wildlife habitat. According to Chapter 3, all population trends are stable or up for big game animals. Clearly, no new measures, particularly large blocks of NSO, are necessary to protect big game species since existing practices have ensured the health of the species.

Response: The RMP does provide a reasonable range of alternatives and does meet BLM multiple-use management requirements. Please be reminded that the multiple-use requirements of FLPMA do not require BLM to manage each and every acre under its jurisdiction for multiple use, but do require multiple-use management on a logical unit or landscape level. The "Minimally Developed Areas" is a designation for areas that would be available for oil and gas leasing and development with standard lease stipulations and timing limitation and controlled surface use restrictions where appropriate. It provides a level of management between the Intensively Developed designation and the Unavailable/Large Block NSO designations. Although the document refers to it as minimally developed it could just as easily be called moderately developed. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Scientific wildlife studies show that certain wildlife occurrences have declined in the Jonah Field and on the Pinedale Anticline and that certain oil and gas operations have displaced winter wildlife in the Big Piney-La Barge area. Big game and sage-grouse lek monitoring show that big game wintering populations and lek attendance has experienced some increase in certain areas outside of these fields. The large block NSO and unavailable area designations are intended to provide enhanced wildlife protection in such areas.

Comment: Page 2-143 From a project approval standpoint, it is unclear what changes would result when an areas is "moved to Intensively Developed Field status.

Response: As currently written, once an area converts from the Minimally Developed designation to the Intensively Developed status, it would be managed under the "Intensively Developed Field" scenario described in Chapter 2 of the draft EIS. Please note that the conversion would be subject to additional NEPA analysis (i.e., EA or EIS), which could impose additional restrictions. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: Intensively Developed Fields would include not only the Pinedale Anticline and Jonah Fields but also the Big Piney-La Barge, Deer Hills, and Castle Creek fields. Map 2-9. Exceptions to protective stipulations so as to allow year-round drilling and development would be considered. 2-120. Lands subject to these provisions would cover nearly 11 percent of the total land surface in the Pinedale Field Office and 20 percent of the federally-owned surface lands administered by the BLM in the Pinedale Field Office. 1-1, 2-120 to 2-122. Allowance would be made for these intensively developed areas to be "enlarged as appropriate." 2-47. Yet, the Draft RMP fails completely to define the process by which this enlargement could be done and this undefined allowance makes it impossible for the RMP DEIS to fully and effectively evaluate the geographic extent and environmental impacts under the "intensively developed" management regime.

Response: The draft EIS does provide criteria for the conversion from "Minimally Developed" to "Intensively Developed." Additional clarification has been incorporated into the final EIS. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: Minimally Developed Areas would also be available for new leasing. 2-120. Likewise, existing leases could be developed under their lease terms. Id. And if development in the "Minimally Developed" area reached one bottom-hole well per 160 acres, or an even lesser density under vaguely defined circumstances, the area could be converted into an Intensively Developed Field. 2-47, 2-121. No explanation is given as to why 160-acre spacing was chosen as the trigger for re-classification or why it is based on bottom-hole well density rather than well spacing on the surface, which has far more relevance to most if not all environmental impacts.

Response: The 160-acre conversion trigger is based on the WGFD report Minimum Programmatic Standards Recommended by the Wyoming Game and Fish Department to Sustain Important Wildlife Habitats Affected by Oil and Gas Development (Steve Tessman, et. al., May 24, 2004) which states that habitat effectiveness significantly degrades when well densities exceed four wells per square mile. Bottom-hole spacing was used as the metric because the disruptive activity associated with developing wells is very similar whether they be multiple wells on a pad or individual wells on tighter surface spacing, Sawyer's study shows that the human activity is as much or more of an impact than the actual loss of habitat. Additional clarification has been incorporated into the final EIS.

Comment: The most critical need relative to the improvement of Alternative 3 so as to make it satisfactory as the RMP for the Pinedale Field Office is to close the loopholes that currently make the

nominally Unavailable Areas (606,500 acres) potentially available for development, perhaps even at intensive levels .4 There is no assurance intensive development will not occur due to loopholes in the nominal protection, and thus this otherwise somewhat strong provision may be illusionary. The BLM should eliminate this possibility. The two loopholes that must be closed were mentioned above. First, the provision allowing conversion of these "unavailable" lands to an Intensely Developed Field if down-hole well spacing reaches one well per 160 acres must be eliminated. Second, the provisions allowing this designation to be "lifted" if drainage of oil and gas is determined to be occurring must modified.

Response: BLM is required to ensure proper collection of royalties for the extraction of federal fluid mineral products. BLM, however, does not have the authority to assess charges on the drainage of federal minerals extracted through non-federal wells, such as wells on state or private mineral estates. Consequently, the caveat to allow wells to be developed in the unavailable area is essential to offset non-federal wells draining federal mineral resources. Additional clarification concerning the conversion to Intensively Developed has been incorporated into the final EIS.

Comment: In addition to evaluating the number of wells within a section, EOG encourages the BLM to also consider the age and historical extent of oil and gas production as well as the potential for oil and gas development when designating Intensively Developed Fields. The Big Piney/La Barge CAP area has been producing oil and gas for almost 100 years; oil and gas development is more than just an ongoing activity in the area, it is part of the area's culture and history. EOG strongly encourages the BLM to designate Intensively Developed Fields using both existing oil and gas development, the potential for oil and gas development, and the historical context of development.

Response: The Management Situation Analysis, which is part of the RMP process, provides the historical perspective of oil and gas development in the planning area. This document can be found at http://www.blm.gov/rmp/wy/pinedale/documents_MSA.html. The Intensively Developed Field designations are based on existing and anticipated development. The RMP also provides for conversion of areas to the Intensively Developed Field designation if the listed criteria are met.

Comment: A. No Surface Occupancy and Unavailable Designations: We have strong concerns about the effectiveness of designation of areas as No Surface Occupancy Areas under the DEIS, particularly in light of the fact that NSO areas can be changed to surface-disturbance areas for oil and gas development under certain circumstances: if a producing well is "causing drainage of the oil or gas resource" and if down-hole density reaches one well on 160 acres or higher density. In the latter instance, lands under an NSO designation could become Intensively Developed Fields. Even though the management emphasis for NSO areas would be on environmental protection, particularly wildlife habitat, these lands would still be available for leasing and also be subject to the loopholes mentioned above. This would leave these lands ultimately unprotected, despite their initial designation as NSO. These two loopholes must be closed. These same two loopholes also apply to lands which would be designated as Unavailable Areas for oil and gas leasing. Where lands are designated Unavailable Areas, they must be kept that way. Otherwise, there is little purpose to such designation and the entire management plan becomes a sham.

For every effort BLM makes to provide conservation measures, it supplies loopholes, exceptions, waivers, etc., to nullify the effectiveness of such measures. This must be changed in the RMP FEIS. At a minimum, the two loopholes must be closed. In addition, BLM first needs to acknowledge that it has the authority to not allow well density to exceed the 160-acre threshold that would permit an NSO or Unavailable area to be converted to an Intensively Developed Field. And then BLM needs to exercise its authority to prevent any surface disturbance which would conflict with its stated management emphasis in those areas. In areas with special resources and needs, such as big game crucial winter range, migration corridors, and parturition areas, well density should be even lower than the 160-acre threshold. Attachments enclosed (list of references).

Response: BLM is required to ensure proper collection of royalties for the extraction of federal fluid mineral products. BLM, however, does not have the authority to assess charges on the drainage of federal minerals extracted through non-federal wells, such as wells on state or private mineral estates. Consequently, the caveat to allow wells to be developed in the unavailable area is essential to offset non-federal wells draining federal mineral resources. BLM acknowledges that it has the authority to approve or deny converting Minimally Developed, Unavailable, and/or NSO areas to Intensively Developed Fields. The final EIS provides revised criteria for considering conversions. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: Even in Intensively Developed Fields, the BLM's management approach strikes an inappropriate balance between wildlife resources and the recovery of much needed energy supplies. See RMP DEIS, pg. 2-81, Action b.l. Alternative 3 is also significantly flawed because it does not recognize the Big Piney/La Barge CAP area as an Intensively Developed Field. The Big Piney/La Barge CAP is one of the oldest oil and gas producing areas in the entire planning area and must be designated as an Intensively Developed Field. Similarly, exceptions allowing year-round drilling should be authorized within the Big Piney/La Barge CAP area, and the western section of the planning area in general.

Response: The draft EIS/RMP is designed to present a reasonable range of alternatives and make projections of the impacts associated with each of those alternatives. Accordingly, the draft EIS projects varying levels of impacts to air quality, wildlife, and socioeconomic values, as well as to other resource values. Alternative 4 provides a mid-range of impacts between the higher level of commodity production in Alternative 2 and the higher level of surface resource protection in Alternative 3. Excluding the Coordinated Activity Plan (CAP) area from Intensively Developed Field designation was purposely done to provide the range of alternatives. The CAP area has been developed under the Minimally Developed (management under seasonal stipulation) scenario since the approval of the 1988 RMP and the decision record for the Big Piney-La Barge CAP in August of 1991. Even under Alternative 3, "Existing oil and gas or other mineral lease rights would be honored."

Comment: The BLM must modify the boundaries of the Intensively Developed Fields under Alternative 4 to include more developed lands in the western portion of the resource area. In particular, lands adjacent to and within the Big Piney/La Barge CAP are not within an Intensively Developed Field. The lands within Townships 28 - 30 North, Ranges 112 - 113 West should be included within the Intensively Developed Field category. The BLM's analysis demonstrates that the entire western portion of the resource area has potential for oil and gas development, and the above lands have been producing oil and gas for 100 years. Further, the BLM's analysis in the Mineral Occurrence and Development Potential Report for the Pinedale RMP (2003) more accurately defines the boundaries of the Big Piney/La Barge area and the significant oil and gas development that has taken place in the area. See Mineral Occurrence Report, Figure 3-7. The analysis in the Mineral Occurrence report further indicates that "[m]oderate development potential is anticipated in a large area of the La Barge Platform, at approximately T25-29N, R112-113W, and in the central and north parts of the RMPPA [Resource Management Plan Planning Area]. The north part of this moderate development potential extends onto USFS lands." See Mineral Occurrence Report, Figure 3-7. The BLM must increase the size of the Intensively Developed Fields under Alternative 4.

Response: BLM does not agree that the referenced area needs to be changed to Intensively Developed. Alternative 4 allows for conversion of lands designated as "Minimally Developed" to the "Intensively Developed" when the stated criteria are met. The areas identified as "Minimally Developed" currently have well development at levels that are less than the criteria for conversion. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: The BLM's management of Intensively Developed Fields and Minimally Developed Areas must be revised under Alternative 4. Throughout the description of the alternative the BLM suggests that oil and gas development will be managed to minimize impacts, noise, grouse predation, etc. The BLM must insert the word "reasonably" before the word minimize each time it appears in Alternative 4. Failing to do so could be construed as creating absolute management obligations for the BLM, thereby limiting its management flexibility and potentially subjecting the BLM and oil and gas operators to increased litigation by groups and individuals opposed to oil and gas development. The BLM must recognize that there are technical and economic limitations to the COAs and stipulations that can be applied, particularly to existing leases. The BLM lacks the authority to impose mitigation measures on oil and gas leases that are not technically or economically feasible.

Response: BLM disagrees that it is necessary to revise the prescribed management for the Intensively Developed Fields and Minimally Developed Areas. The prescribed management is consistent with the laws and regulations guiding BLM's management of the public lands and minerals under its jurisdiction. It is also not necessary to insert "reasonably" proceeding before "minimize" in the referenced text because the term "minimize" is analogous to reduce and infers flexibility. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: Finally, the Pinedale RMP DEIS fails to provide the requisite "hard look" at the environmental impacts of each alternative. Specifically, under the Preferred Alternative, "Minimally Developed Fields" and "Large Block NSO Areas" will simply be converted to "Intensively Developed Fields" when bottom-hole well density exceeds 1 well per 160 acres. This outcome is controlled by private industry not the agency charged with managing these public resources. In addition, the No Surface Occupancy (NSO) and unavailable designations of "Large Block NSO Areas" and "Unavailable Areas" could be lifted and specific areas leased if development on adjacent state or private mineral estate is determined to be draining federal oil and/or gas resources. Again, management decisions are left in the hands of private parties who have no responsibility to conserve wildlife and other public values of these lands. Because of these loopholes, intensive oil and gas development may ultimately cover much more of the planning area than originally predicted3 rendering the DEIS's analysis of environmental impacts meaningless.

Response: The draft EIS does not state that "Minimally Developed Fields" and "Large Block NSO Areas" will *simply* be converted to "Intensively Developed Fields" when bottom-hole well density exceeds one well per 160 acres. The draft EIS states that "Minimally Developed Fields" and "Large Block NSO Areas" *could* convert to Intensively Developed and that this could require a field development EA, EIS, or supplemental EIS. The NEPA requirement relative to conversion has been changed to the following in the final EIS: "Conversion would require preparation of additional NEPA analysis and public involvement." Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: The discussion of actions (in Minerals Management) that include converting lands to Intensively Developed Fields when bottom-hole well density on pre-existing lease exceeds one well per 160 acres is mystifying. Shouldn't the consideration be place on surface density rather than bottom-hole well density?

Response: The 160-acre conversion trigger is based on the WGFD report Minimum Programmatic Standards Recommended by the Wyoming Game and Fish Department to Sustain Important Wildlife Habitats Affected by Oil and Gas Development, (Steve Tessman, et. al., May 24, 2004) which states that habitat effectiveness significantly degrades when well densities exceed four wells per square mile. Bottom-hole spacing was used as the metric because the disruptive activity associated with developing wells is very similar whether they are multiple wells on a pad or individual wells on tighter surface

spacing. Sawyer's study shows that the human activity is as much or more of an impact than the actual loss of habitat. Additional clarification has been incorporated into the final EIS.

Comment: Does phased development mean a move from NSO to "intensively developed" after wells are completed? It appears incorrect to say that different levels of development are/will be allowed in minimally developed areas vs. intensively developed areas. Moreover, it is inappropriate for BLM to attempt to impose phased development because such development is already phased due to the nature of the business, including timing of capital investments, rig availability, etc. The artificial phased approach proposed in the Preferred Alternative will simply force increased development in certain areas, which could have greater, but avoidable, impacts. Page 2-2 "Exploration of new and existing leases could result in a discovery. When exploration of an oil or gas reservoir reaches a down-hole well density of one well every 160 acres, the area would become an Intensively Developed Field. Environmental documentation would be prepared to analyze impacts and to determine operating methods, mitigation, and BMPs to be used in the efficient and complete development of the field. Conversion could require preparation of a field development EA, EIS, or supplemental EIS" Comment: We recommend that BLM clarify whether restrictions will be eased as an area progresses from NSO to "minimally developed" to an "intensively developed area" since the stated objective for intensively developed is on efficient and complete development and production of the oil and gas resource. Page 2-11 Visual Resources Management "Projects of all types within established visual resource management (VRM) class areas would be generally required to conform to the objectives and characteristics of the VRM classification."

Comment–As discussed on Page 2-8, "When an oil and gas lease is issued, it constitutes a valid existing right; BLM cannot unilaterally change the terms and conditions of the lease. Existing leases would not be affected by new closures and/or areas administratively unavailable for lease, and restrictions could not be added to existing leases." This same caveat also applies to changes in Visual Resource Management classifications. It is counterproductive for the agency to impose a Class I or II VRM on areas already involved in oil and gas development. It appears that the imposition of VRM I or II restrictions on over 258,610 acres of the planning area is designed to thwart oil and gas development, even on existing leases. We recommend BLM revise the Preferred Alternative to ensure such conflicts are avoided, especially on current leases and within existing oil and gas fields. Additionally, BLM must analyze the socioeconomic effect such designations would have upon the planning area, including an accounting of the loss of mineral production and revenues. Page 2-13 Compensation (Offsite) Mitigation "Compensatory or offsite mitigation proposed by oil and gas or other operators could be considered and analyzed in future environmental documents as possible mitigation for proposed activities within the planning area. Proposed offsite mitigation would be described and analyzed for effectiveness in detail on a project-specific basis. Planning for offsite mitigation would be performed in coordination with local government agencies".

Response: Phased development in the context of Table 2-1 of the draft EIS means that under Alternatives 3 and 4, the entire planning area would not be available for development at the time. Intensive development would occur in the "Intensively Development Area", a less intense level of development would occur in the "Traditional Leasing Area", and no development would occur in the "Unavailable Areas". The conversion language and the areas available for leasing and subject to NSO stipulations have been changed in the final EIS. The RFD, hence the socioeconomic impact to oil and gas development, does reflect the VRM classifications (i.e., the RFD for the various alternatives is reduced based on the restrictions imposed on oil and gas leasing/development through the given alternative). Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: Page 2-20 "The planning area would be divided into four areas for management of oil and gas leasing and development (Map 2-9). Intensively Developed Fields would be managed for intensive oil and gas activities while protecting wildlife habitats to the extent practicable. Minimally Developed Areas

would be managed for protection of important values during oil and gas exploration, but would provide opportunity for intensive oil and gas activities. Large Block NSO Areas would be managed for protection of wildlife habitats through offering oil and gas leases with NSO stipulations. Unavailable Areas would be managed for protection of wildlife habitats through indefinitely postponing the availability of lands for oil and gas leasing. Transportation planning would be required in all areas to reduce road density, duplication of routes, and unnecessary routes." Comment: We do not necessarily object to dividing the area into emphasis areas. However, as pointed out previously in these comments regarding the inadequate range of alternatives addressed in the DEIS, Alternative 4 fails to provide an adequate range of management options. BLM needs to establish one more area that provides for Moderately Developed Areas that would give priority to exploration activities in currently leased areas while protecting wildlife or other values. In so doing, BLM's management will be more efficient and avoid violations of valid existing lease rights. BLM must also acknowledge that oil and gas activities do not have the impacts on wildlife alluded to in the DEIS.

Response: BLM feels the draft EIS/RMP does provide a reasonable range of alternatives. The term Minimally Developed Area has been changed in the final EIS to more accurately describe the leasing situation in these areas. The Traditional Leasing Area is a designation for areas that would be available for oil and gas leasing and development with standard lease stipulations, timing limitation, and controlled surface use restrictions where appropriate. It provides a level of management between the Intensively Developed and the Unavailable designations.

Comment: Page 2-47 "Emphasis in these areas would be placed on efficient and complete development and production of the oil and gas resource. Mitigation of impacts through stipulations and BMPs would be applied, and operations would be conducted in a way that would facilitate ultimate reclamation of the field. Specific mitigations, conditions of approval, BMPs, and reclamation requirements for each Intensively Developed Field would vary depending on the resources affected and the characteristics of the proposed field development. As gas or oil fields expand or exploration reaches beyond the delineated area, Intensively Developed Fields could be enlarged as appropriate."

Comment–Management of oil and gas operations in intensively developed fields must recognize the need for efficient and complete development by allowing year-round drilling and development operations on new and existing leases in Intensively Developed areas, particularly when drilling multiple wells from a single pad. We recommend that BLM allow project on-sites to take place at any time of year to facilitate year-round drilling in these areas. Page 2-47 "Emphasis in these {Intensively Developed} areas would be placed on efficient and complete development and production of the oil and gas resource. Any new leases issued would have lease terms in accordance with management objectives and stipulations as determined in the environmental document authorizing the field (Environmental Assessment [EA] Decision Record or EIS ROD). Comment: This statement is confusing. It is unclear whether the stipulations identified in RMP/ROD would be placed on new leases or whether BLM anticipates new leases to be issued with new stipulations as a result of a FIELD DEVELOPMENT EA or EIS. Regardless of whether BLM chooses to delay leasing in certain areas, the leasing analysis and appropriate stipulation guidelines must be addressed by the RMP analysis. It is unacceptable to expect industry to fund leasing analyses as a part of a field development NEPA analysis.

Page 2-47 "Emphasis in these areas would be on providing contiguous wildlife habitat, wildlife refuge areas and migration routes, public land recreation opportunities, opportunities for appropriate non-surface disturbing activities, and maintenance and improvement of current resource conditions while allowing leasing of the areas for oil and gas production. New oil and gas leases in these areas would be encumbered by NSO stipulations. Oil and gas operators would have the right to explore existing leases. Previously existing leases could be occupied on the surface unless the existing lease carries an NSO stipulation." Comment: BLM has failed to disclose how much of the proposed NSO areas are currently

leased without NSO stipulations. It is unclear whether the emphasis in the area remains on non-surface disturbing activities or whether it will shift to efficient and complete development of oil and gas. Is this an area where BLM would REQUIRE offsite mitigation?

Page 2-47 "Emphasis in these areas would be on traditional multiple use management, and accommodating all approved uses to the extent possible. New oil and gas leases would be issued with lease terms and stipulations designed to minimize the impact of oil and gas exploration activities on the environment and wildlife habitats. Oil and gas operators would have the right to explore existing and new leases. COAs could be applied to individual APDs where necessary to minimize the impacts of exploration. Oil and gas operations in these areas would conform to the management objectives and actions described in the RMP for each alternative, including timing and distance limitations, noise restrictions, human presence limitations, restrictions on placement of permanent or tall structures, and spacing of exploratory wells.

Exploration of new and existing leases could result in a discovery. When exploration of an oil or gas reservoir reaches a down-hole well density of one well every 160 acres, the area would become an Intensively Developed Field. Environmental documentation would be prepared to analyze impacts and to determine operating methods, mitigation, and BMPs to be used in the efficient and complete development of the field." Comment: Even if the field develops to Intensive and emphasis would be placed on efficient and complete development and production of the oil and gas resource, the same requirements, COAs, and other actions required for minimally developed areas would still be employed unless changed through subsequent NEPA. BLM needs to clarify how it will facilitate such changes in the FEIS.

Response: The draft EIS/RMP does provide an opportunity for year-round drilling operations in areas designated as Intensively Developed. Page 2-120 of the draft EIS, Objective 1, Action Item c. states: "Exceptions would be considered to allow year-round drilling and development operations on new and existing leases . . ." The referenced statement on lease stipulations is revised as follows: "Any new leases in an Intensively Developed Area would be issued with lease terms in accordance with management objectives and stipulations in the guiding NEPA document for the Field/Intensively Developed Area (e.g., if the guiding NEPA document authorized year-round drilling and development operations, then the new lease would be issued absent season limitation stipulations)." Leasing analysis would not be conducted through field development NEPA documents. However, leases issued subsequent to the development NEPA document for an Intensively Developed Area would be issued consistent with the management objectives and restriction in that "field development EA/EIS". The draft EIS/RMP does not emphatically state how many leased acres are currently encumbered with NSO restrictions; however, Map 1-3 depicts leased lands and Map 2-1 shows current NSO areas. The management emphasis would preclude surface disturbance within the NSO. Mineral extraction would be allowed from areas outside the NSO. As directed by BLM Washington Office IM 2005-063, compensatory mitigation is voluntary, not *required*. The conversion from Minimally Developed to Intensively Developed would require a conversion-specific NEPA document, which would specify the management of the conversion area. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: Page 2-120 "Exceptions would be considered to allow year-round drilling and development operations on new and existing leases in the Jonah, Pinedale Anticline, Big Piney-La Barge, Deer Hills, and Castle Creek oil and gas fields that are currently encumbered by seasonal restrictions. Such exceptions would be subject to additional environmental analysis and the leaseholder/operator implementing offsetting mitigation. Comment: Exceptions should be considered for all intensively developed areas. On the other hand, why consider exceptions? Since the goal in intensive areas is the efficient development of gas, BLM should allow year-round drilling on multiple well pads and other similar efficiencies in all areas designated for intensive development. We are concerned that "offsetting" mitigation will be required when other suitable means may be available.

Page 2-122 "Provide opportunities for geophysical and geologic data acquisition while mitigating impacts on important resource values. Actions:

a. Geophysical data gathering methods that involve only casual use of the surface (as defined in 43 CFR §3150) would be permitted throughout the planning area.
b. Vehicle-based geophysical activities would be assessed on a case-by-case basis.
c. The use of surface and/or above-ground (Poulter shot) explosive charges for geophysical exploration would be assessed case-by-case.
d. Geophysical projects, including projects proposed in areas with an NSO restriction, would be analyzed and mitigation developed on a case-by-case basis."

Comment–Since it is stated in (a.) that "geophysical data gathering methods that involve only casual use" shall be permitted, (b.), (c.) and (d.) are redundant and should be deleted. As currently stated, the methods to be used are adequately defined within the definition of "casual use". However, the term "case-by-case basis" is used to eliminate the useful guidelines of the definition of "casual use", offering decision-making latitude that need not be included in this process. There is no reason to complicate that which is already uncomplicated. Since the definition of "casual use" allows for "activities that involve practices which do not ordinarily lead to any appreciable disturbance or damage to lands, resources, and improvements", and ATV's, due to their very design, do not cause any appreciable disturbance or damage, ATV's should never be subject to such limitations. Therefore, the following clause should be included after the existing sentence in (a.), "ATV operation is considered a casual use activity in this RMP."

Page 2-120 "Intensively Developed Fields Make federal lands and minerals within existing oil and gas fields (175,750 acres) available for intensive oil and gas leasing, exploration, development, and production " Page 2-143 "Intensively Developed Areas would be managed for intensive oil and gas activities while protecting habitats and minimizing direct, indirect, and cumulative impacts on the extent practicable When development of a newly-discovered oil or gas resource reaches a down-hole well density of one well every 160 acres, the area would become an Intensively Developed Field." Comment: BLM needs to explain whether and how mitigations, COAs, BMPs, and reclamation requirements for each well will change once an area is reclassified as intensively developed.

Response: The referenced text has been updated in the final EIS. A blanket exception is not appropriate because there may be specific areas within Intensively Developed Areas with functioning wildlife habitat that would warrant precluding an exception. The casual use definition in 43 CFR 3150 states: "Casual use means activities that involve practices which do not ordinarily lead to any appreciable disturbance or damage to lands, resources and improvements. For example, activities which do not involve use of heavy equipment or explosives and which do not involve vehicular movement except over established roads and trails are casual use." The operations discussed in items b, c, and d do not meet the criteria for casual use and therefore are not redundant. Operations that meet the casual use definition would be allowed. Depending on the location and intensity of ATV use, it may or may not be considered casual use. It would likely not be considered casual use on a steep erosive slope, in some wetland/riparian areas, in visually sensitive areas, in WSAs, etc.

Concerning the conversion to Intensively Developed, the terminology has been changed in the final EIS from "the area would become" to "the area could become". How mitigations, COAs, BMPs, and reclamation requirements for each well would change once an area was reclassified to Intensively Developed would be determined through the area-specific NEPA analysis for the conversion.

Comment: Page A7-4 "A waiver, exception, or modification may be approved if the record shows that circumstances or relative resource values have changed or that the lessee can demonstrate that operations

can be conducted without causing unacceptable impacts and that less restrictive stipulations would protect the public interest." Comment: The RMP should recognize that while the described activities may require exceptions in minimally developed or exploratory areas, exceptions for well drilling operations, well completion operations, regularly scheduled workover operations, geophysical exploration, etc., must not be required for intensively developed areas; these activities should be monitored and, if not carried out responsibly, additional requirements or restrictions could be imposed in the future

Response: A blanket exception is not appropriate because there may be specific areas within Intensively Developed Areas with functioning wildlife habitat that would warrant precluding an exception. Imposing additional requirements or restrictions in the future, because an operator did not act responsibly, is analogous to closing the barn door after the horses are already out.

Comment: Item: Page 2-2, Section 2.2.1, Alternatives Development Process "Exploration of new and existing leases could result in a discovery. When exploration of an oil or gas reservoir reaches a down-hole well density of one well every 160 acres, the area would become an Intensively Developed Field. Environmental documentation would be prepared to analyze impacts and to determine operating methods, mitigation, and BMPs to be used in the efficient and complete development of the field. Conversion could require preparation of a field development EA, EIS, or supplemental EIS." Comment: We recommend that BLM clarify whether restrictions will be eased as an area progresses from NSO to minimally developed to intensively developed.

Response: Conversion to Intensively Developed would require additional analysis that will guide the management and restrictions for the conversion areas, see revisions and clarifications to the conversion criteria in the final EIS.

Comment: Item: Page 2-143, Section 2.5.5, Wildlife and Fish Habitat Management "Minimally Developed Areas would be managed for protection of important values during oil and gas exploration but would provide opportunity for intensive oil and gas development. Should a discovery (development) be made and proceed to development, these lands would be moved to Intensively Developed Field status and would be subject to mitigation to minimize direct, indirect, and cumulative impacts of such activities." Comment: From a project approval standpoint, it is unclear what changes would result when an areas is "moved to Intensively Developed Field status."

Response: In general, BLM anticipates that Intensively Developed areas would be subject to reduced seasonal restrictions, such as winter drilling afforded to Questar through the decision record for the Questar Year-round Drilling Proposal. See action item c under Objective 1 on page 2-120 of the draft EIS.

Comment: Pg 2-47 to 2-49 2.5.2 Oil and Gas Management Areas for Alternatives 2, 3, and 4 Intensively Developed Oil and Gas Field designation should be based on greater than 160 acre SURFACE spacing not down-hole spacing as stated in the draft RMP. The use of multiple well pads should be encouraged; as currently written the use of multiple well pads is discouraged. Surface disturbance, not subsurface geology, should dictate the level of management (i.e. stipulations, BMPs', COA's, etc.) applied to surface operations.

Response: BLM believes using bottom-hole spacing as the metric is appropriate. The 160-acre conversion trigger is based on the WGFD report Minimum Programmatic Standards Recommended by the Wyoming Game and Fish Department to Sustain Important Wildlife Habitats Affected by Oil and Gas Development (Steve Tessman, et. al., May 24, 2004) that states that habitat effectiveness significantly degrades when well densities exceed four wells per square mile. Bottom-hole spacing was used as the metric because the disruptive activity associated with developing wells is very similar whether they are

multiple wells on a pad or individual wells on tighter surface spacing. Sawyer's study shows that the human activity is as much or more of an impact than the actual loss of habitat. Additional clarification has been incorporated into the final EIS.

The draft EIS/RMP sets the framework for implementation of a number of BMPs, including directional drilling and multiple well pads. Specific implementation would be developed through project-level NEPA analysis. Surface resource values and the anticipated impacts to those values are the guide for instituting BMPs and other mitigation. Subsurface geology has no bearing on the implementation of surface protection measures.

Comment: EnCana also supports the flexibility provided in this management approach. Allowing areas that are not currently intensively developed to be managed as Intensively Developed Fields if downhole density exceeds 1 well every 160 acres allows for jw(Nfd S potential development in currently unknown or undiscovered areas. This flexibility also allows for improvements in technology that may facilitate increased development in existing and older fields, or in areas where development was not previously economic or feasible.

Response: The conversion criteria has been modified and clarified in the final EIS.

Comment: The BLM should modify the boundaries of the Intensively Developed Fields under Alternative 4 to include more developed lands surrounding Jonah Field. The BLM's analysis demonstrates that the entire area surrounding Jonah Field has high potential for oil and gas development, including up to 500 wells per township. See RMP DEIS, Map 4-1. The BLM must increase the size of the Intensively Developed Fields under Alternative 4 to coincide with any and all areas that have high potential for oil and gas development.

Response: The Intensively Developed Area boundaries target the areas where intensive development is occurring. The RMP does provide opportunities for the expansion of designated Intensively Developed Areas when certain criteria are met; therefore it is not necessary to include all very high or high development potential areas at this time.

Comment: EPA's primary concern is when, and if, intensely developed areas emerge or enlarge, that the appropriate NEPA analysis is completed at that time and includes a comprehensive cumulative impacts analysis. In Chapter 2, the draft EIS indicates that expansion of intensely developed fields and reclassification of minimally developed fields or NSO areas would occur on a case-by-case basis and with proper environmental documentation. Elsewhere (page 2-143), the draft EIS states "Should a discovery be made and proceed to development, these (minimally developed) lands would be moved to intensely developed field status." EPA is concerned by the possibility that intensely developed fields could expand piecemeal, in a case-by-case, APD-by-APD basis, without the opportunity for a full environmental cumulative impact analysis. White this may not be BLM's intent, we recommend the Final EIS clarify the process for expansion of areas that are managed for intense energy development and the additional NEPA analysis that would be completed

Response: Additional clarification on conversion criteria has been added to the final EIS.

Comment: The most recent Draft Supplemental EIS prepared for the Pinedale Anticline, an "intensely developed field", disclosed potential cumulative impacts to air quality and to wildlife, which if unmitigated, could be significant. Given the magnitude of the potential impacts from "intensely developed fields" in proximity to highly sensitive natural resources, EPA recommends that BLM complete a comprehensive cumulative impact analysis for any expansion of an "intensely developed field" or new "intensely developed field". It is unclear from the Draft EIS, if and when these intensely

developed fields expand, how BLM will meet the management goals for wildlife, vegetation, and multiple use management detailed in the Draft EIS.

Response: Additional clarification on conversion criteria has been added to the final EIS.

Comment: Additionally, by making allowance for conversion of areas to Intensely Developed Fields, the BLM must ensure the RMP EIS considers the environmental impacts of such a conversion. The RMP EIS currently provides no analysis of the impacts of such a conversion. This must be corrected in the final EIS. The BLM clearly anticipates such conversions, otherwise it would not have made the rather specific provisions it has made for such conversions. Consequently the environmental impacts of these conversions must be considered in the RMP EIS.

Response: The analysis reflects the current size of the oil and gas management areas (Map 2-9). An RMP amendment and additional NEPA analysis would accompany any conversion.

Year-round Drilling

Comment: Because I've seen it done effectively elsewhere, I want you to also explore the option of utilizing year-round drilling/access to help reduce long term impacts of development. It's just silly to tell companies that they can't work in some seasons -- even if those seasons are more conducive to development. It's a safety and a wildlife issue.

Response: It is reasonable to apply stipulations to protect surface resources when permitting gas development or other industrial activities. The draft EIS provides flexibility for year-round drilling to be contemplated in developing intensive gas fields, such as the Pinedale Anticline.

Comment: Page 2-120 "Exceptions would be considered to allow year-round drilling and development operations on new and existing leases in the Jonah, Pinedale Anticline, Big Piney-La Barge, Deer Hills, and Castle Creek oil and gas fields that are currently encumbered by seasonal restrictions. Such exceptions would be subject to additional environmental analysis and the leaseholder/operator implementing offsetting mitigation " Comment: Chevron believes that the Pinedale RMP and the WY BLM in general should include the option of reduced intensity, year-round drilling as an RMP development option for any field in which the operator makes the necessary operating and technology commitments and surface resource impacts would overall be reduced.
Response: With the exception of seasonal restrictions for sage-grouse nesting in the minimal disturbance area, Alternative 2 does not impose seasonal restrictions and therefore meets the request for consideration of a year-round drilling option in reduced intensity areas.

Comment: I hope that when you finalize the new plan it will be clear that energy exploration and production activities will have year-round access to the permitted lands. It seems to me that there will be less impact on wildlife resources especially if the construction and drilling activities can be started and finished as quickly as possible. It doesn't make any sense to start one season, then shut down, then come back to finish the project the next season. That scenario would double the impact on wildlife.

Response: BLM is required to manage the federal lands and mineral estates under its jurisdiction for multiple use. The RMP builds a framework for subsequent project-level NEPA documents. Such a framework includes suggested and required mitigation measures, as well as best management practices. As such, it is appropriate for the RMP to set the framework for measures, including the use of seasonal restrictions, that could reduce impacts. Alternatives 2, 3, and 4 would designate intensive development areas where seasonal restrictions would be relaxed.

Comment: Studies have been conducted in our own state and in Utah that show year round production has less of an impact on wildlife not to mention many other benefits.

1. Year round production allows for more carefully planned drilling programs.

2. Year round production allows for safer drilling programs because workers are able to live in the same place year round resulting in a more stable community

3. Year round drilling programs create a more stable economy by helping to minimize the peaks and valleys in production.

Finally it helps wildlife by reducing truck traffic and avoiding the rushed hustle and bustle of a short windowed drilling season.

Please consider implementing a year round program as you finalize the Pinedale RMP.

Response: The draft EIS provides flexibility for year-round drilling to be contemplated in developing intensive gas fields, such as the Pinedale Anticline.

Clustering Drilling, Directional Drilling, Phased Development

Response: "Clustering" is currently occurring on the Pinedale Anticline and to a lesser extent in the Jonah Field where multiple wells (sometimes as many as 32) are developed from a single well pad. Anti-erosion techniques, such as crowning and ditching roads, installing silt barriers, gravelling or hard surfacing roads, and installing cross-drain culverts are routinely implemented through permits to drill and ROW grants.

Comment: Any and all petrochemical development in this area should strive to fit in with existing ecology. Automated drills and wells serviced from helicopters and/or by horsemen would eliminate degradation by roads in wilderness areas; slower development would be both less intrusive and more efficient as the wildlife continues to draw spectators and wellheads don't displace natural scenery.

Comment: You should be CLUSTERING commercial drilling.

Response: Development rates and infrastructure scenarios, such as clustering wells, are project-level issues that can be addressed through project-level EISs. "Clustering" is currently occurring on the Pinedale Anticline and to a lesser extent in the Jonah Field where multiple wells (sometimes as many as 32) are developed from a single well pad.

Comment: This message is to tell you that personally I am absolutely and totally against any further gas well development in the Green River Valley. If I had my way that's the way it would be. But if the Bush administration has its maniacal way in this at least withdraw more environmentally critical areas from the plan. Also minimize the environmental impact by carefully planning and concentrating the drill sites and strengthen the seasonal drilling restrictions to further minimize the adverse effects on wildlife during the breeding seasons. And slow the pace for well development.

Response: Development rates and infrastructure scenarios are project-level issues that can be addressed through project-level EISs. "Clustering" or concentrating drill sites is currently occurring on the Pinedale Anticline and to a lesser extent in the Jonah Field where multiple wells (sometimes as many as 32) are developed from a single well pad. Seasonal restrictions are already designed to minimize impacts to the target species during crucial life-cycle periods.

Comment: While we prefer the management plan laid out in Alternative Three, we believe it needs improvements to truly reflect your multiple use mandate and to provide the necessary protection for the significant cultural resources under your control. Therefore, we would urge you to adopt the following additional safeguards to Alternative Three:• Minimize the industry footprint by mandating clustered infrastructure and directional drilling;

Response: Clustering infrastructure and directional drilling are certainly best management practices to be employed where technically and economically feasible. They are project-level issues that can be addressed through project-level EISs. "Clustering" is currently occurring on the Pinedale Anticline and to a lesser extent in the Jonah Field where multiple wells (sometimes as many as 32) are developed from a single well pad.

Comment: The BLM correctly notes that directional drilling is taking place in the planning area. The BLM also notes on pages 3-41 - 3-42 and 4-49, 4-51 that directional drilling is not always technically or economically feasible. According to the RMP DEIS, EnCana's success with directional drilling in Jonah Field has been relatively limited. Approximately 85% of the directional wells drilled in Jonah Field between 2002 and 2005 resulted in stuck casing, and subsequently the loss of 11.95 billion cubic feet of natural gas. Although directional drilling can be an appropriate tool in limited circumstances, it is not appropriate in every oil and gas field or for every operator. The BLM must also consider the significant economic costs associated with directional drilling; the BLM cannot impose unreasonable or uneconomic restrictions on existing leases.

Response: The impact analysis in Chapter 4 does acknowledge that increased cost associated with directional drilling could render some wells non-economic and some fluid mineral resources unrecoverable. The RMP sets the framework for directional drilling to be considered in project- and site-specific project analysis. It is neither possible nor reasonable at the RMP stage to predict whether or not a given directional well would be successful and economicly viable. Different formations, different formation depths, the horizontal offset distance, and natural gas prices all play into determining whether or not a directional well would be successful. It would be incumbent on the operator to demonstrate to BLM that directional drilling of a particular well or wells would be technically or economically infeasible.

Comment: One development design that is not considered an alternative is what I call cluster development. This involves creating phased development areas that are prioritized according to the resources available and the habitat affected. There would be, for example, eight phases overlaying the county in the highest potential development areas. Three of these phases are already occupied and under intense development. Within those phases minerals would be explored through cluster developments that would concentrate intense drilling technologies and densities to a small footprint allowing a larger buffer zone around it. Several clusters within a phase are developed at one time. However, it is limited to allow for, "room to roam" between the clusters. No other clusters would be allowed to be developed until the previous clusters were being reclaimed. The overall development of these clusters within the phases would move from south to north progressively. This would essentially allow for reclaimed areas to become 'rested' successfully by decreasing the amount of activity around those reclaimed areas. The eight phase areas would also open and close from south to north as well. In a sense this would look like a gradual progression, a march of lights from the south to the north that would leave a wake of reclaimed pads that would look like a tilled up field. Instead of widespread impacts, the intensity would be contained and allow for reclamation efforts and mitigation attempts to be successful instead of just being acts of good faith. The cluster development sites would have the directional reach for a circumference of almost a mile around under the surface, looking like an underground cone leading up to the surface point. Between these surface points of the cluster sites there could be unoccupied corridors of approximately two miles. We have the technology to do this and if it isn't applicable here in our area when these

companies are making record profits, then I ask, "where?" This would reduce the amount of roads needed, allow for wildlife, and slow the rate at which pollutants would be released.

Response: While it is not called clusters or clustered development, Alternatives 3 and 4 do establish concentrated development areas and also do establish areas not available for oil and gas leasing or for surface occupancy for oil and gas development. The unavailable areas would provide respite areas for wildlife and for offsite wildlife habitat augmentation projects. It is not possible to cluster development until exploration has confirmed the characteristics and extent of the underground resource.

Comment: Item: Table 2-1, Page 2-2, Section 2.2.1, Public Comments and Their Treatment in the Draft EIS "Phased development strategies are included in Alternatives 3 and 4. The planning area would be divided into three or four areas (depending on alternative) for management of oil and gas leasing and development. Different levels of development would be allowed within each area, which would allow for phased development of the planning area." Comment: A definition of phased development needs to be specifically included in the RMP. Phased development can include a number of scenarios. Does phased development mean the move from NSO to "intensively developed" after wells are completed? It appears incorrect to say that different levels of development are/will be allowed in minimally developed areas vs. intensively developed areas

Response: This table is meant to be a short summary of public concerns and how they are treated in the draft EIS. Individuals should refer to the chapters in the document for more discussion. Discussion of how the NSO and unavailable areas provide for phasing development has been added to the final EIS.

Comment: 3) Cluster oil and gas development in concentrated areas and fully reclaim them before developing any other gas fields such as new CBM wells in the foothills of the Wyoming Range

Response: It is not possible to cluster development until exploration has confirmed the characteristics and extent of the underground resource.

Comment: 3) Cluster energy development in concentrated areas and fully reclaim them before proceeding with development of other gas fields.

Response: It is not possible to cluster development until exploration has confirmed the characteristics and extent of the underground resource.

Comment: I propose the Record of Decision be void of the following concepts:

1. Seasonal drilling stipulations. I support the development of new technologies and best management practices that protect wildlife without restrictive seasonal stipulations.

2. Mandated directional drilling and clustered development in an RMP. Such stipulations are more appropriate in subsequent project level NEPA processes.

Response: BLM is required to manage the federal lands and mineral estates under its jurisdiction for multiple use. This draft EIS does address reduced restrictions in the areas analyzed as available for intensive oil and gas development. Development rates and infrastructure scenarios, such as clustering wells, are project-level issues that can be addressed through project-level EISs. More detailed site-specific analysis does occur through project-level analysis documents, i.e., EAs and EISs.

Comment: Because directional drilling and centralized facilities with related technologies and improvements allow fewer surface locations and more efficient operations, along with advanced reservoir

engineering technologies and instrumentation that are available to better define fluids production characters/parameters from wells/reservoirs, including improved equipment applications, the BLM should strictly limit surface locations to the minimum number each with maximum wells drilled directionally; with well depths and geological structures like Jonah and Pinedale Anticline, wells can easily be kicked 1/2 to 3/4 mile (or more) horizontally from surface locations. Also for this reason, buffer zones of 1-mile (or more) should be required near townsites, residential properties/sub-divisions , wherein no drilling production activity on the surface should occur.

Response: Directional drilling and centralized facilities are certainly best management practices to be used where feasible. Directional drilling is being used on the Pinedale Anticline with lateral reaches out to about ½ mile. Directional drilling, mat pads, and other surface disturbance and human presence reduction measures are being used in the Jonah Field. Where feasible, horizontal drilling is being used in portions of the La Barge Platform. The viable lateral (horizontal) distance for directional drilling varies with the depth to the productive/target formation(s). That is, the shallower the formation, the shorter the lateral/horizontal distance. Establishing a 1-mile buffer around townsites, subdivisions, etc., in many instances is beyond BLM's jurisdiction. In many cases the lands and mineral estate within the 1-mile buffer are state or privately owned. Where the federal mineral estate does occur within the suggested buffer, much of it is already leased and the leaseholder has rights to develop and produce the minerals.

Comment: It is generally the rapid changes in population in the initial years following the opening of an area for oil and gas development that results in the dissatisfaction often noted in boom towns (Smith et. al 2001, Brown et. al 2005, Goldsmith 1992, Guilliford 1989, Merrifield 1984, Kittredge 1987, Kelly 1980). Mitigating these impacts is difficult, as the appropriate level of increased capacity for services is difficult to determine since the increased demand is likely to be temporary when development is rapid (Merrifield 1984). One way for the residents of the Pinedale area to gain some control over these impacts is if the BLM implements a phased leasing or development that controls the scale and pace at which drilling occurs.

Response: The RMP does identify areas under the various alternatives that would be unavailable for leasing, which would constitute a form of phased leasing.

Comment: PAGE: 4.47, SECTION: 4.7.1, RECOMMENDED CHANGE: Revise discussion of directional drilling for accuracy. EXPLANATION: RMP fails to address feasibility and lack of feasibility for directional drilling and the unavailability of large blocks of land classified as NSO.

Response: See the directional drilling discussion on pages 4-49 and 4-71 of the draft EIS.

Comment: PAGE: 4-49, SECTION: 4.7.1, RECOMMENDED CHANGE: REVISE to address that a failed directional well can preclude recovery. EXPLANATION: Failed directional drilling can also preclude recovery of the targeted area.

Response: This is implied in "diminished well production."

Comment: The DEIS correctly recognizes that directional drilling can reduce impacts to surface resources, such as vegetation, soil, livestock grazing, wildlife habitat, and visual and recreational values. Also, centralizing surface locations may reduce fragmentation of wildlife habitat and disturbance of surface vegetation and soils. Fewer miles of roads and pipelines may be necessary; and in some cases, facilities such as reserve pits have been shared among multiple well pads. However, directional drilling can substantially increase the costs required to develop wells due to increased drilling time, sticking of casing at the bends in the well-bore, and loss of a percentage of wells (when sticking or other drilling problems cannot be remedied). In addition, seasonal restrictions may be a deterrent to or may completely

preclude directional drilling in cases where drilling one or more directional wells from a single pad would take longer than the seasonal drilling window allows. Accordingly, rather than merely allowing multiple wells from a single pad, it would be preferable that BLM actively support such development by allowing drilling without seasonal restrictions, by placing more high potential areas in the intensively developed category, and instituting other incentives.

Response: The RMP (Alternatives 2 and 4) does address options for reducing seasonal restrictions for surface disturbing activities. See action item c under Objective 1 on pages 2-82 and 2-120 of the draft EIS.

Comment: Recommendation 5: The management alternatives presented in the Draft RMP are not balanced and should be changed to remove the bias toward oil and gas extraction. Given the substantial negative impacts already affecting and likely to continue affecting wildlife and sage steppe habitat the final alternative must, at a minimum, ensure more protection of natural resources. With BLM having already leased over 70% of the resource area and permitted several large gas fields -including new infill expansions, more compromise is inappropriate. Instead, a more conservative and restrictive approach is needed. The Pinedale RMP should be amended to incorporate a system for clustered and phased development allowing for added protection for habitat and wildlife by geographically clustering development and phasing production and restoration over a longer period of time.

Response: The draft EIS/RMP meets the requirement to address a reasonable range of alternatives. As stated in Table 2-1 on page 2-2 of the draft EIS, "Phased development strategies are included in Alternatives 3 and 4." The bulk of the oil and gas development anticipated over the life of the plan would occur or in essence be geographically clustered in the Jonah Field, on the Pinedale Anticline, or in the Big Piney-La Barge area. The implementation period for the development of a given field would be addressed in project-level NEPA documentation.

Comment: We urge BLM to develop a plan that includes paced development at a much slower pace than the current frantic pace of intense development. Such a plan should not allow major new gas fields to be developed until existing and/or expending fields have been fully completed. BLM should require clustering of new wells, the use of directional drilling, the centralizing of facilities (including liquid gathering facilities), use of remote monitoring, use of best and cleanest technology available (including Tier 2 (or better) drilling rigs), remote monitoring, and buried lines, to minimize the footprint and other impacts to air, water, wildlife, habitat, and other resources.

Response: As stated in Table 2-1 on page 2-2 of the draft EIS, "Phased development strategies are included in Alternatives 3 and 4." Directional drilling/clustered development (i.e., multiple wells from a single pad, centralized production facilities, etc.) are some of the best management practices listed in Appendix 5 of the draft EIS/RMP to be utilized when and where appropriate. They are not appropriate or necessary everywhere or all the time; therefore, it would be inappropriate to mandate their use. An example where such BMPs would not be appropriate would be an exploratory well in areas with minimal resource concerns and no other well pads or production facilities within a reasonable distance. BMPs, such as directional drilling and "clustered" development would be included in project-level NEPA documents.

Comment: In its discussion of directional drilling on page 4-47, the BLM should also discuss information regarding limitations on the BLM's ability to mandate directional drilling. The IBLA has expressly determined that the BLM does not have the authority to require the movement of proposed operations more than 200 meters, unless a nondiscretionary statute is implicated. See Colorado Envtl. Coal., et al., 169 IBLA 137, 144 (2006) (holding that BLM cannot require relocation of a proposed well by 200 meters); see also 43 C.F.R. § 3101.1-2 (2006). The BLM properly notes that directional drilling

increases costs and results in lost resources when casing cannot be brought to the bottom of the hole. See RMP DEIS, pg 4-49. The BLM should also note that directional drilling can lead to increased air emissions by as much as 20% as compared to vertical drilling given the increased drilling times and load factors on drilling rig engines. See, e.g., JIDP ROD, pg. 13.

Response: The air quality analysis acknowledges that directional drilling can increase drill rig emissions. Based on the following documentation from the Wyoming State Director Review (SDR) of a Yates request to overturn a field office decision, BLM can require that projects relocate more than 200 meters. The SDR states, "Through the rulemaking process, it has been determined BLM can require the movement of oil and gas operations of less than 200 meters, and restrict activities for less than 60 days and be consistent with lease rights, no matter when the lease was issued." These regulations are codified at 43 CFR 3101.1-2, Surface Use Rights, and were developed to resolve uncertainty concerning the Bureau's authority within the terms and conditions of the standard lease form to control site-specific environmental impacts [53 FR 17341]. However, as the preamble to the regulations notes: "authority of the Bureau to prescribe 'reasonable' but more stringent protection measures are not affected by the final rulemaking" [53 FR 17341] and further states, "IM 92-67 explains that any relocation greater than 200 meters, timing restrictions greater than 60 days, or mitigation that would render a proposed operation uneconomic or is technically unfeasible is not considered to be consistent with a lessee's rights and cannot be required absent a lease stipulation, unless it is determined that such mitigation is required to prevent unnecessary or undue degradation of public lands or resources. Mitigation required to prevent unnecessary or undue degradation under FLPMA is within the terms of the lease, since all leases are subject to applicable laws and regulations."

Geology, Tectonics, Fracing, Geophysical Operations

Comment: Geoseismic operations should have stipulations placed on timing. This timing adherence should also include hunting seasons, as geoseismic activity is highly intrusive.

Response: All geophysical projects require NEPA analysis, which will develop project-specific mitigation requirements. All four alternatives in the draft EIS place limitations on geophysical operations. Alternative 1 states, "All acreage in the planning area would be subject to various appropriate limitations…" Alternatives 3 and 4 state, "Geophysical projects would be designed and implemented to minimize impacts to wildlife habitats." Based on the project-specific NEPA analysis "appropriate limitations" and "minimize impacts to wildlife habitats" can certainly include the implementation of seasonal restrictions. To provide clarification, the text in the final EIS has been revised to state: "Geophysical activities would be designed and implemented to minimize impacts to wildlife habitats through means such as the imposition of surface-use, seasonal, and/or other appropriate mitigation developed through project-specific NEPA analysis."

Comment: Section 3.7.2 structure and tectonics does not expand upon the impacts of cracking and chemical injection in and around fault zones which may increase geologic earthquake activity due to the reduction of friction along fault zones from these chemicals and well activities.

Response: The referenced section is in Chapter 3, the Affected Environment, and consequently would not contain any discussion about impact. Concerning oil and gas development inducing earthquakes, there is one documented case in Colorado where water injection under extremely high pressure contributed to an earthquake. There are no documented cases of fraccing operations causing earthquakes. There have been thousands of frac jobs performed within the Jonah Field, Pinedale Anticline, and Big Piney-La Barge area with no documented earthquakes.

Comment: I therefore strongly oppose this Alternative and support instead Alternative 3 with the following revision included in its final form: • Cleaner drilling techniques must be mandated, along with

other environmentally sound practices such as employee busing, directional drilling, disclosure of substances used in fracing fluids and the usage of off-shore fracing compounds which are less detrimental to soil and groundwater. These techniques must be used exclusively, even if they are more expensive, and not only used as bargaining chips for Operators to waive drilling restrictions and/or stipulations.

Response: These suggestions do not constitute a planning-level decision, but certainly could be initiated and implemented through project-level EAs or EISs. BLM is required to adhere to the Clean Air Act, but does not have the regulatory authority to mandate permittees, leaseholders, ROW holders, or project proponent adherence. That regulatory authority resides with the EPA and Wyoming DEQ.

Comment: the RMP leaves open the possibility of removing NSO stipulations and/or making Unavailable Areas available for leasing if development on "adjacent state or private mineral estate is determined to be draining federal oil and/or gas resources to the extent that drilling on off-setting federal well(s) is needed to address the drainage situation." (pages 2-48 and 2-49). This exception language is unprecedented, not necessary and should be removed from the Final RMP.

The gas reservoirs in this area are "tight sands," characterized by enclosed formations that require fracturing in order to be economically producible. See, e.g., Jonah Infill Project Final Environmental Impact Statement, January 2006, page 67. In light of the challenges inherent in simply accessing sufficient areas of these reservoirs to make them economically worthwhile to drill (which has also been the justification for reduced well-spacing requirements), the risk of drainage from adjacent mineral estate occurring, let alone reaching a level requiring an off-setting well, is extremely low.

Further, if there is a concern with the potential for drainage, then the BLM should seek to form units to permit development of resources and allocation of proceeds. As stated in BLM's handbook on unitization, the purposes of unitization is to "pool mineral interest ownership in an entire geologic structure or area" so that "exploration, development, and production can proceed in the most efficient and economical manner." (H-3180-1, page 2-10). Units are established based on "structural, stratigraphic, or other limiting geologic parameters." Id. Units can include non-federal lands. (43 C.F.R. § 3181.4). In addition, participating areas in units can be limited based on those initially producing and then expanded if needed to include additional areas. (H-3180-1, pages 2-12 through 2-16).

Having the Pinedale RMP take this unitization approach to address drainage concerns would be consistent with BLM policy and decisions elsewhere. BLM resource management plans have required formation of units as a way to limit surface impacts of development. See, e.g., Record of Decision for Amendment to the RMP for Otero and Sierra Counties, New Mexico, (ROD -available on-line at http://www.nm.blm.gov/lcfo/white_sands_rmpa_eis/docs/PRINTABLEROD-LCFO-FINAL_text.pdf); Draft RMP for Little Snake Resource Area, Colorado (available on-line at: http://www.co.blm.gov/lsra/rmp/index.htm). If BLM has sincere concerns about the risks to federal minerals and these concerns can be validated based on the geology of certain areas, then the RMP can include the Large Block NSO Areas in units and work with leaseholders, including those on adjacent non-federal lands, to require or encourage participation in units and appropriately define participating areas, as well as identifying conditions for revision of those areas based on risks of drainage. Similarly, the RMP could provide for the Unavailable Areas to be added to units if a scientifically supported assessment shows that there is a risk of drainage and no other way to address it.

Recommendation: The Large Block NSO Areas and the Unavailable Areas were identified to meet important needs for wildlife and other users of these public lands. Providing for an exception to both the NSO and the Unavailable classification based on a potential for drainage cannot be supported by the geology of this area, is inconsistent with BLM's approach/decisions elsewhere, and severely undermines the purpose of identifying these areas for more protective management. To the extent that the BLM

believes that there is a risk, then the agency must provide a justification, based on reviewable, high quality data, to show that there is such a risk. For those areas where this "burden of proof" can be met, the RMP should provide for formation of units and delineate participating areas that can be expanded to include Large Block NSO. With respect to the Unavailable Areas, an even higher burden of proof must be met. The RMP can provide for Unavailable Areas to be added to units if a scientifically supported assessment shows that there is a risk of drainage and no other way to address it.

Response: Not all formations in the planning area exhibit the tight sand characteristics exhibited in the Jonah Field and Pinedale Anticline. For example, the Madison Formation in the Riley Ridge Project Area is being produced for one well per section. BLM does have the authority to form federal units. It does not have the authority to force holders of state or private leases to join a federal unit. Consequently, the drainage language is appropriate.

Comment: PAGE: 4.47, SECTION: 4.7.1, RECOMMENDED CHANGE: Revise Map 4-1 to reflect geology rather than Highway 191. EXPLANATION: Map 4-1 identifies the land east of Highway 191 as low potential and the land west of Highway 191 as high potential. Highway is not a geological or mineral potential guide.

Response: Map 4-1 of the draft EIS does not depict Highway 191 as any kind of a boundary. The highways, as well as the towns, are only shown as points of reference. No change it needed.

Comment: PAGE: 4-216 SECTION: 4.18.3 RECOMMENDED CHANGE: Alt. 4 Add vibroseis to list of geophysical exploration techniques

Response: Vibroseis is inclusive in the statement: "Impact from OHV use would be similar to those described in Alternative 3."

Comment: Page Number & Issue:4-63: "Surface disturbance would be restricted on all slopes greater than 25% (124,030 acres) and would be prohibited on sensitive soils with slopes with inclines greater than 8%. The impacts on leasable minerals development from the 25% slope restriction would be the same as those described in the soils and watershed impact discussion under Alternative 1. As with slopes greater than 25%, mineral development on sensitive soils with slopes greater than 8% would necessitate the use of offsite development techniques. Fluid mineral resources in areas beyond the technical and economic capabilities of the offsite methods would be considered unrecoverable. The Milleson Draw, Blue Rim, and Long Island Watershed areas have very low to low CBNG development potential and low to moderate non-CBNG development potential. Red Canyon would be rated very low for CBNG development potential and moderate for non-CBNG development potential. Geophysical operators would be restricted to non vehicle-based methods on slopes greater than 25% and on slopes greater than 15% where sensitive soils occur." Recommendations:Use 2000 PAPA ROD percentage numbers and specifically identify "sensitive soils".

Response: The 2000 PAPA ROD only applies to the Pinedale Anticline project area, while the discussion on page 4-63 of the draft EIS applies to the entire field office; hence, the PAPA ROD acreage would not be appropriate. BLM has initiated a detailed soils survey of the planning area. Once that survey is completed in 2008 or 2009, maps showing specific sensitive areas could be developed. At the present time, sensitive soil determinations would be made on site-specific predisturbance onsite visits.

Comment: It may be possible through such methods as horizontal drilling for industry to develop resources under Large Block NSO Areas. However, prior to drilling, it may be necessary to conduct geophysical exploration over such leases, and these operations have to be conducted on the surface above the leases. Therefore, NSO stipulations should allow geophysical operations in these multi-use Large

Block NSO Areas. Geophysical operations have a short-lived impact on the environment, and should be allowed to be conducted in any multi-use area under BLM jurisdiction. Geophysical data can be invaluable in evaluating the potential for new techniques which can minimize surface disturbance in a given area.

Response: Page 2-122 in the draft EIS states: "Geophysical projects, including projects proposed in areas with an NSO restriction, would be analyzed and mitigation would be developed on a case-by-case basis."

Comment: PAGE: 4-48, SECTION: 4.7.1, RECOMMENDED CHANGE: Restrictions that cause increased well development costs, or that render oil and gas resources unavailable or unrecoverable, can also impact geophysical exploration. EXPLANATION: Incorrectly assumes direct cause and effect relationship, when this omits standard by time.

Response: Text has been changed in the final EIS to the following: "Seasonal and surface use restrictions that cause increased well development costs, or that render oil and gas resources unavailable or unrecoverable, can also impact geophysical exploration."

Comment: PAGE: 4-48, SECTION: 4.7.1, RECOMMENDED CHANGE: REVISE to address other exploration techniques EXPLANATION: Also 1 wildcat well is not the same as geophysical exploration. This paragraph fails to reflect modern geophysical techniques by assuming that exploratory wells are necessary for geophysical work.

Response: The listed techniques are not intended to be all inclusive but rather to provide an example, which the list does.

Water Disposal Pits, Water Evaporation Pits, Surface Discharge

Comment: The DRMP does not have clear definitions of, nor does it even define water disposal pits, water evaporation pits and cuttings/reserve pits. This needs to be clarified in the FRMP so that a clear distinction is made between surface evaporation pits and surface discharge. Specifically, the 7 items on page 2-53, listed below, need to be expanded and clarified:

h. Proposals for water disposal pits would be considered on a case-by-case basis and would be subject to the following requirements:

1. Pits would meet the requirements of Onshore Oil and Gas Order No. 7, the Wyoming Oil and Gas Commission, and the WDEQ.
2. Disposal pits would be placed outside crucial wildlife habitats.
3. Disposal pits would be restricted to VRM Class IV areas.
4. Disposal pits would be bonded to an amount determined by an Authorized Officer.
5. The discharge flow would be matched to hydrological capability of the receiving drainage so that erosion does not result.
6. The discharge flow would be constant rather than in pulses.
7. The discharge would have automatic monitors and shut-offs in the event that the discharge would exceed the drainage flow rate or the water quality standard.

Response: Definitions of water disposal pits, water evaporation pits, and surface discharge have been added to the glossary in the final EIS. The commenter did not explain why the seven items need to be expanded and clarified. BLM believes the current management actions are appropriate.

Comment: Although the BLM would prohibit "water disposal pits" in the planning area under Alternative 4, see RMP DEIS, pgs. 2-118, 2-120 - 122, the BLM does not define the phrase. Is the BLM attempting to prohibit reserve and completion pits which are a normal and integral part of oil and gas development? The BLM cannot restrict the use of reserve and completion pits without unduly restricting operations. Further, the BLM should not attempt to make site-specific decisions in the RMP.

Response: The term water disposal pit has been added to the final EIS. It was not meant to include reserve or completion pits. The management actions proposed in the alternatives are appropriate for the land use planning level. The document says that BMPs would be applied to protect resources, not that BMPs would be required regardless of their usefulness. BMPs by their nature are analyzed and applied on a site-specific basis. Language regarding water disposal pits has been revised in the final EIS.

Comment: In order to continue protecting the environment while developing energy, several definitions mush be defined: One area of the RMP that must be clarified is the definitions of issues related to water disposal and water evaporation pits. It is important to make a distinction between surface pits and surface discharge options. The BLM also needs to explain the difference between temporary and permanent pits. These definitions will help ensure that energy development can occur in an environmentally respectful manner.

Response: Definitions for water disposal pits, water evaporation pits, and surface discharge, temporary pits have been added to the glossary in the final EIS.

Comment: The RMP does not clearly define issues related to the disposal of water or evaporation pits.

Response: Additional clarification has been added to the final EIS.

Comment: One area of the RMP that must be clarified is the definitions of issues related to water disposal and water evaporation pits. It is important to make a distinction between surface pits and surface discharge options. The BLM also needs to explain the difference between temporary and permanent pits.

Response: Definitions for water disposal pits, water evaporation pits, surface discharge, temporary pits, and permanent pits have been added to the glossary in the final EIS.

Comment: Please clarify the definitions regarding water disposal and water evaporation ponds.

Response: Definitions for water disposal pits, water evaporation pits, surface discharge, temporary pits, and permanent pits have been added to the glossary in the final EIS.

Comment: The RMP does not clearly define issues related to the disposal of water or evaporation pits.

Response: Additional clarification has been added to the final EIS.

Comment: PAGE: G-8 CHANGE: EVAPORATION POND – An industrial containment area designed to allow [briny](STRIKEOUT) produced water to evaporate by [using solar energy and wind](STRIKEOUT) utilizing natural evaporative processes. EXPLANATION: The definition should conform to the Draft Interstate Oil and Gas Commission study funded by U.S. Department of Energy,

Guide to Practical Management of Produced Water from Onshore Oil and Gas Operations in the United States, Sec. 4.5.1.

Response: For the purposes of the RMP, BLM feels the definition is satisfactory.

Comment: Require operators to post bonds sufficient for full remediation of any potential hazardous material release associated with proposed transport and uses of chemicals for drilling, completion, stimulation, refinement, and other production operations. This must include funding for full remediation of contaminated ground waters, surface waters and soils. "Bonding requirements for operators of sites that manage oil and E&P [exploration and production] waste are generally inadequate to cover costs of surface remediation work with DEQ to ensure adequate bonds for facilities (including produced water storage and treatment facilities) located off BLM lands." [28] at 15. The same is true of most oil and gas operations in the PRA.

Where remediation would require the extraction of contaminated ground waters (or ex-traction of uncontaminated waters to regulate plume movement), require full mitigation of water losses, including possible surface water depletions associated with reduced discharge of ground waters into surface waters.

Require contaminated materials to be placed on fully-lined sites (with best available liners) for remediation, treatment, or storage awaiting transport to a disposal facility. Prohibit EnCana and other operators from storing contaminated materials on bare ground on assumption that "[l]eaching hydrocarbons through the pile to the ground below would take too much time" to contaminate underlying soils and ground water [44]. Require such contaminated deposits to be fully covered to prevent dispersal by wind and rain.

After a containment pit (i.e., reserve pit, waste pit, evaporation pond, or other structure designed to contain fluids that may be potentially hazardous) is removed, the RMP should require that soils under the pit location be promptly tested for contaminants, including but not limited to benzene, PAHs, MTBE, salts, heavy metals. (e.g., chromium), NORM, and other contaminants that may have been held in the pit. The company that constructed and managed the pit shall pay for the testing costs though BLM shall administer the tests with an independent testing company. If tests reveal soils or waters under the pit location have contaminants, all contaminates soils or waters shall be excavated and transported to a permitted hazardous materials disposal facility, also at the pit manager's expense.

Response: Bonding is required under federal regulation. BLM has the authority to adjust bond levels. An RMP decision is not needed. These are the type of considerations that typically could be addressed and potentially implemented in project-level NEPA documents. The RMP does provide the framework for these types of mitigations through the performance-based mitigation. Projects would be addressed on a site-specific, case-by-case basis. Regulation requires remediation to be successful.

Well Production, Well Spacing, Mineral Recovery, General Drilling Issues

Comment: How long will these wells produce, 20 to 30 years? Then what?

Response: Most gas wells in the planning area have an anticipated productive life of 30–50 years. When a well is no longer productive, facilities are removed and the site undergoes final reclamation.

Comment: According to new estimates, the Pinedale BLM contains the second largest natural gas field in the entire nation.

Response: DOE's Energy Information Administration's "U.S. Crude Oil, Natural Gas, and Natural Gas Liquid Reserves 2005 Annual Report" puts Pinedale number 2, Jonah number 6 and Fogarty Creek (Riley

Ridge) number 19 in the top 100 fields in the United States ranked by proved gas reserves. (http://www.eia.doe.gov/pub/oil_gas/natural_gas/data_publications/crude_oil_natural_gas_reserves/current/pdf/appb.pdf).

Comment: Information on mineral resource areas needs to be updated based on new findings and current field production and well results. Lack of information on mineral resources should require that additional analyses be conducted. For example, the total recoverable estimate in the DRMP is 19 TCF in Alternative 4, yet this is less than the current reasonable foreseeable development estimate of 20 - 25 TCF for the Pinedale Anticline alone. Mineral resource data contained in the DRMP/EIS must be accurate and complete.

Response: The information in the draft EIS/RMP is based on the best available data and level of knowledge at the time the analysis was conducted. With rapidly changing levels of knowledge concerning oil and gas resources within the planning area and particularly in the Jonah Field and on the Pinedale Anticline, it is neither reasonable, practical, nor prudent to re-initiate the analysis each time a new piece of information becomes available. If BLM were to re-initiate at each new piece of information, the RMP would likely never be completed. The final EIS has updated the volume of projected recoverable natural gas.

Comment: PAGE: 2-48 SECTION: 2.5.2 RECOMMENDED CHANGE: EXPLANATION: What is the basis for 1 well per 160 acres as the standard for intensive development?

Response: The 160-acre conversion trigger is based on the WGFD report Minimum Programmatic Standards Recommended by the Wyoming Game and Fish Department to Sustain Important Wildlife Habitats Affected by Oil and Gas Development (Steve Tessman, et. al., May 24, 2004) which states that habitat effectiveness significantly degrades when well densities exceed four wells per square mile. Bottom-hole spacing was used as the metric because the disruptive activity associated with developing wells is very similar whether they are multiple wells on a pad or individual wells on tighter surface spacing. Sawyer's study shows that the human activity is as much or more of an impact than the actual loss of habitat. Additional clarification has been incorporated into the final EIS.

Comment: -To minimize losses of shallow-aquifer porosity, infiltration and carrying capacity, require road and well pad construction to be minimized. Operators should be required use the shortest roads and fewest well pads feasible, and to make well pads as small as practicable. Every square yard of surface disturbance should have to. be justified. Just because companies like to use 3-5 acre well pads does not mean BLM should allow so much surface disturbance. The RMP should also require the use of non-prismed roads where practicable (e.g., surface mats that allow truck access without bulldozing or compressing soils).

Response: Operators are already required to use the smallest pads and fewest roads necessary for their operations. Justifying every square yard disturbed is not practical or reasonable; however, the RMP certainly encourages all surface disturbing activities to achieve the smallest footprint necessary.

Comment: As a condition of APD approval, the RMP should require full disclosure of types and quantities of chemicals used for drilling, completion and stimulation operations. If BLM feels public disclosure is not allowed, the RMP should require disclosure to BLM. The RMP should also require operators to report the types and quantities of drilling, completion and stimulation chemicals that remain in ground after operations are completed.

Response: These are issues that are more appropriate for project-level and/or site-specific planning. The Pinedale Field Office does require operators to have material data sheets on locations for all chemicals used.

Comment: PAGE: 2-122, RECOMMENDED CHANGE: 1. Development on adjacent state or private mineral estate developed by a federal lessee is determined to be draining federal oil and/or gas resources to the extent that drilling a well from the surface of the lease is required to address the drainage situation. EXPLANATION: Drainage rules only apply to federal lessees.

Response: You are correct; however, if BLM determines a private or state well is draining federal reserves underlying any existing federal lease, BLM can require the federal leaseholder to drill off-setting wells. If the federal minerals being drained are not leased, BLM can choose to offer the acreage being drained for lease.

Comment: PAGE: 2-118, RECOMMENDED CHANGE: Delete: [I. No new centralized compression facilities would be permitted in the Wind River Front Management Area (approximately 201,240 acres) (Map 2-33). Wellhead compression for individual wells would be considered on a case-by-case basis.] (strikeout), EXPLANATION: Unreasonably limits development and interferes with well development, which BLM cannot do.

Response: BLM disagrees and feels the referenced restriction is totally within its jurisdiction and is necessary to maintain wildlife, VRM, and recreational values in the Wind River Front Management Area. BLM acknowledges it cannot prohibit holders of existing valid leases from exercising their legal rights.

Comment: The BLM has data that would allow the agency to calculate reasonably foreseeable development beyond 2030. Indeed, the PAPA Draft SEIS includes projections of gas field development through 2065. See, e.g., PAPA DSEIS at 4-27 (Table 4.3-11). And BLM estimates the life of the Jonah Infill Project to be 63 to 105 years. See Jonah Infill FEIS, Executive Summary, page 1. It is reasonable to expect far more than 10,000 wells will have been drilled in the PRA by 2065. Since current leases and leases issued under the new RMP will lead to development out to 2065, the BLM should be projecting cumulative impacts out to that year where possible. Each well drilled in the PRA can contribute to ground water and surface water degradation, so the cumulative impacts of all wells - and associated well pads, pipelines, roads, support facilities, and produced water must be fully evaluated by the BLM. The RMP DEIS does not do this. Moreover, even with the limited projections of conventional well development through 2020, the RMP DEIS does not analyze the potential cumulative impacts to water resources from this massive development.

Response: The supplemental EIS projects a production life for the PAPA to 2065. It does project development occurring until that date. The RMP is designed for a lifespan until 2020.

Comment: The assumptions regarding the total number, type and status of future oil and gas wells should be clarified. The information presented regarding future oil and gas development, which is a central issue for the RMP, is unclear and confusing. For example, the narrative in Section 4 indicates a total of 2,979 existing wells, presumably as of the end of 2005. What is unclear is to the derivation of this number, how it relates to the numbers shown in Appendix 26, particularly Table A26-2 and the cumulative development on page 3-40, and whether these all are currently producing or if they include P&A? Also, what is the distribution of the wells by mineral estate ownership (federal, state, and private)? Please provide an explanation or the context for that total because it relates to assessment of impacts for the current time forward. Other information requiring clarification includes references in the document to the number of future wells to be drilled. For example, Table 2-25 indicates a total of 7,192 wells to be drilled on federal mineral estate. The same number appears in Table 4-2. However, the narrative for Alternative

1 (pg. 4-52) cites 7,927 wells on federal minerals. Another example is the 7,804 federal wells for Alternative 2 in Table 4-2 and the 8,465 federal wells Why the difference and which is correct?

Table A26-2 provides information regarding the anticipated distribution of federal versus the combined number state and private wells, as well as the assumed success rate for future wells, though not broken down by well type (CBNG, Anticline, Jonah, other). The data in Table A26-2 suggests that the number of producing federal wells, by alternative, would be 6,325, 6,748, 5,106 and 6,336 wells, respectively. Since the numbers of federal wells affect projected tax revenues, they should be explicitly reported in Section 2 or 4. The projected drilling rates in Table A26-2 appear inconsistent with the average annual numbers of wells drilled described in Table 4-13. The values in Table 4-13 appear to reflect the number drilled and completed from 2001 through 2020, not 2006 to 2020. Is that correct? Should the average numbers of wells and job reported in Table 4-13 reflect the assumed rates for 2007 going forward, not the entire 2001 to 2020 time horizon? Using averages over the entire time horizon understates the potential impacts going forward since historical drilling rates have been lower than the projected average annual rates.

Finally, we are of the understanding that the RMP at least implicitly reflects the drilling assumptions established for the Jonah Infill and Pinedale Anticline projects. If that is true the development rates in Table A26-2 appear inconsistent with that premise as the number of wells shown being drilled between 2007 and 2011 in the RMP is less than the number of wells shown in the two EISs. Furthermore, are the assumed employment effects per well in Table A26-1 consistent with the corresponding assumptions in two project-specific EISs? If not, please explain the differences. This topic arises because Table 4.3-6 of the Pinedale Anticline SEIS indicates a total of 11,182 jobs in 2009 for just 236 Anticline wells, which seems incongruous with the average numbers of jobs for the RMP alternatives shown in Table 4-13 of the RMP/EIS.

Response: The 2,969 wells in 2006 as shown on page 4-113 of the draft EIS is inclusive of the producing wells that existed at the end of 2001 and those wells developed from 2001 to 2006. Table A26-2 does not include the wells the existed in 2001 and only projects the number of wells anticipated between 2001 and 2020. Based on WOGCC databases, about 1,750 producing wells existed at the end of 2001 and 925 producing wells were developed between 2001 and 2006. Table A26-2 has been revised to show that 925 well were developed from 2001 through 2005. Projections for years 2006–2020 have also been revised. Tables 4-13 and A10-1 have the correct projections. The text has been corrected in the final EIS.

It needs to be reiterated that the projected well numbers are *projections* based on a number of assumptions. The actual number of wells may vary from the projection. It is the actual number of wells developed that will ultimately become part of the tax bases. BLM feels that Appendix 26 is the appropriate place for these projections. Tables 4-13 and A26-2 of the draft EIS have been correlated to agree. As stated above, the projected wells numbers are BLM's best estimate of what may occur. They are not an implicit determination of what will actually occur.

Comment: Page 4-4 "Surface disturbance projections for leaseable minerals development assume one well per well pad with a support road and pipeline, for a disturbance projection of 7.1 acres. For each additional well added to a well pad, the total (planning area–wide) surface disturbance projection would decrease by almost 6 acres (i.e., a pad with two wells, support road, and pipeline would have a projected disturbance of 8.4 acres, whereas two individual pads with a single well, road, and pipeline would disturb 14.2 acres). With four wells on a pad, the total projected disturbance would be decreased by 18 acres (i.e., a pad with four wells, support road, and pipeline would have a projected disturbance of 10.4 acres, whereas four individual pads with a single well, road, and pipeline would disturb 28.4 acres). One hundred pads with four wells each and support roads and pipelines would disturb 1,040 acres, whereas 400 individual wells with a single well, road, and pipeline would disturb 2,840 acres." Comment: These assumptions are greater than those used by operators in the greater La Barge Area development. BLM

must acknowledge that experience has shown that surface disturbance to date is less than predicted and future surface disturbances will be reduced even further. Estimates of surface disturbance ranged from 7 acres/well in 1984 to 3+ acres per well in the RMP and 1994 TTHB EA and are expected to average 1 acre/well for future development. Page 4-52 "Contributing segments of the Lander Trail and Sublette Cutoff Trail would be encumbered by a CSU stipulation that prohibits surface disturbance, including geophysical vehicle or shot-hole operations within one-quarter mile or the visual horizon, whichever is closer (geophysical cable laying by hand-crews on foot is allowed)."

Response: BLM acknowledges that the actual size or distance varies for wildcat/exploratory wells to infill wells in an existing field and also that they vary from field to field, but for the analysis purposes of the draft EIS/RMP, the across-the-planning area averages included on page 4-4 of the draft EIS are adequate.

Comment: Even if nothing else were to ever be exploited in the RMP area, the number of wells already approved to be operational over the next 6 decades from existing developed fields cannot be ignored in the planning process. How many wells in total would Alternate #3 include if full field development were to occur and if the expansion of the Pinedale Anticline as industry has proposed were to be approved? How much groundwater and surface water would this consume, along with water needed to support the projected growth in the Pinedale and fringe communities included in the PRMP area? Many other similar questions arise regarding air quality. These are serious matters and require answers.

Response: Alternative 3 projects 5,209 new wells from 3,946 wells pads between 2001 and 2020. This is over and above the 1,800 ± existing dormant and producing wells at the end of 2001. Volume of ground and surface water used has been added to the final EIS.

Comment: Page 4-4 Surface disturbance projections for leaseable minerals development assume one well per well pad with a support road and pipeline, for a disturbance projection of 7.1 acres. For each additional well added to a well pad, the total (planning area–wide) surface disturbance projection would decrease by almost 6 acres (i.e., a pad with two wells, support road, and pipeline would have a projected disturbance of 8.4 acres, whereas two individual pads with a single well, road, and pipeline would disturb 14.2 acres).

With four wells on a pad, the total projected disturbance would be decreased by 18 acres (i.e., a pad with four wells, support road, and pipeline would have a projected disturbance of 10.4 acres, whereas four individual pads with a single well, road, and pipeline would disturb 28.4 acres). One hundred pads with four wells each and support roads and pipelines would disturb 1,040 acres, whereas 400 individual wells with a single well, road, and pipeline would disturb 2,840 acres.

Comment–The BLM should ensure that total net surface disturbance assessments include smaller and mid-range drilling and development programs, in addition to the large scale drilling projects that drive RMP revisions. Roads and access routes developed or improved for energy projects often become dedicated ROV and sportsman access routes, and should on a case-by-case basis be excludable from net disturbed surface acreage.

The draft assumptions for large projects should be based on good faith estimates by the operators; BLM's estimates are greater than used by Exxon for their La Barge Area development. The final plan should recognize that experience has shown that surface disturbance to date is less than predicted and future surface disturbances will be reduced further. Estimates ranged from 7 acres/well in 1984 to 3+ acres per well in the RMP and 1994 TTHB EA and are expected to average 1 acre/well for future development.

Response: The text on page 4-4 of the draft EIS provides a disturbance assumption for analysis purposes and is intended to serve as an average disturbance rate across the planning area. BLM recognizes that in certain areas the disturbance would be less than the projection; however, we also recognize that in other areas, such as a remote wildcat well, the disturbance rate could be substantially greater than the projection. The following statement has been added to analysis assumption for well pad and related disturbance in the final EIS: "Some wells may be developed with less disturbance than these projections, while other wells may result in substantially greater disturbance rates." Regardless of post-development uses of well pad roads/access routes, it still constitutes disturbance on the land and as such needs to remain part of well field development disturbance acreage.

Comment: We agree with Sublette County comments that the tone of the RMP suggests that any oil and gas resources not developed during the life of this plan somehow become lost or irrecoverable. In fact, future revisions of the RMP could facilitate such recovery. One result of this perspective is to value near-term recovery over long-tem recovery, thereby diminishing the potential contributions of energy resource development to long-term economic sustainability of our communities.

Response: The draft EIS/RMP does provide projections that certain management decisions could render oil and gas resources in the affected area non-recoverable. This is based on the proposed decisions under the various alternatives analyzed. It would be speculative, at best, to assume a future planning effort may change a decision thus making resources recoverable in the future. It would be equally speculative to assume that future technologies and/or economic factors would make resources recoverable.

Comment: BLM is also charged with care/conservation of "our" surface and mineral resources, land such drilling/production regulation should require leasees/operators to prove by technologies to BLM, in conjunction/addition to Wyo. O/G Commission, that more wells/locations are necessary (not just acceleration) and should require that all applicable best available technology and equipment be utilized for these activities.

Response: Operators have to obtain down spacing approval from WOGCC. As part of their spacing request, operators must provide sufficient rationale and supporting data. BLM's Reservoir Management Group reviews spacing requests and provides input to WOGCC where federal minerals are involved.

Comment: The analysis in the DRMP does not adequately address the amount of resources that will be potentially unrecoverable under each category of each alternative for No Surface Occupancy and Visual Resource Management Classes as well as any and all management actions which limit oil and gas development. For example, the total recoverable estimate in the DRMP is 19 TCF in Alternative 4 (Appendix 10, page A 10-4). This is less than the current reasonable foreseeable development estimate of 20 - 25 TCF for the Pinedale Anticline alone.

Response: On pages 4-54, 4-55, 4-56, 4-57, 4-61, 4-62, 4-63, 4-64, 4-65, 4-66, 4-67, 4-69, 4-70, 4-71, 4-72, 4-73, 4-74, 4-75, and 4-77 of the draft EIS, BLM indicated potential actions that could cause leasable minerals (including oil and gas) to become unrecoverable. The cumulative impact analysis (section 4.19.8 on pages 4-245 and 4-246 of the draft EIS) projects the amount of oil and gas that will be recoverable during the planning period for all alternatives and estimates the percentage of reduction in oil and gas production due to proposed restrictions. These percent reductions in volumes are considered to be the oil and gas resource that is unrecoverable due to restrictions identified for each alternative for the 20-year planning period that was analyzed.

Yellowstone and Lands Outside the Planning Area

Comment: To drill in Yellowstone is to invite disaster. The volcanic caldera underneath is waiting to erupt and with the world heating up from Global Warming, any more wells is a very dangerous idea.

There is no way of to be safe, other than not to disturb it. 7,000 more gas wells is very dangerous. This promotes a bigger impact on the world than we need right now.

Response: This RMP does not include or apply to any lands in or adjoining Yellowstone National Park.

Comment: Please DO NOT SUPPORT FURTHER DRILLING FOR ANYTHING IN THE YELLOWSTONE PRESERVE. It is unlike anyplace in the world and we need it far more than we need the gas.

Response: This RMP does not include or apply to any lands in or adjoining Yellowstone National Park.

Comment: I understand that the natural gas drilling that is being done in Northern Wyoming - Teton County - is shallow drilling that pumps water out of the aquifer and also kills the vegetation. Water is a more valuable resource than natural gas - unless we've figured out a way to drink gas...we need to reduce our dependence on fossil fuels!

Response: The planning area does not include any part of Teton County, nor are the wells drilled shallow; they range in depth from approximately 8,000 feet to more than 20,000 feet.

Comment: You cannot drill in Yellowstone without upsetting a precarious balance. That is volcanic territory and know one knows what drilling might cause. The ecosystem needs to be left alone. This planet is in enough trouble; do not do this. The planet cannot take much more of mankind's destructive ways. Please look for alternative sources or mass produce ethanol. Green is good-spread green Peace.

Response: Yellowstone National Park is not in the planning area; therefore, the Pinedale RMP/EIS does not propose management actions for this area. There is no current seismic evidence to suggest the magma chamber extends under the planning area.

Comment: I also DO NOT want further drilling in the Hoback basin or the Bridger Teton forest because it will ADVERSELY effect my way of life by changing the rural ranching community to one based on gas development. The Bondurant community would be scarified and totally lose its pioneering community spirit. Please take this letter into consideration when making any decisions involving further oil/gas leasing in and around the Hoback basin and the Bridger Teton Forest. Please direct what power you have as an official to impress upon the BLM and Forest services that we (the tax payers) want a comprehensive plan for our federal lands

Response: BLM does not have the authority to make leasing decisions on the Bridger-Teton National Forest. BLM also lacks authority to prohibit development of existing valid oil and gas leases on BLM-administered lands and mineral estate. The areas available for oil and gas leasing have been amended in the final EIS.

Paleontology, Natural History

General Comment Responses: *No GCRs are associated with this category.*

Comment: PAGE: 4-90, SECTION: 4.8.3, RECOMMENDED CHANGE: REVISE to REMOVE BIAS Physical damage or destruction to paleontological resources could result from trampling by grazing animals (livestock, wildlife or wild horses) or from OHV activities if specific localities or fossils are impacted. EXPLANATION: Arbitrary and capricious to suggest wildlife and wild horses would avoid paleontological objects and livestock would not.

Response: New studies in the planning area have taken a harder look at the impacts on paleontological resources, which include wildlife, domestic animals, and OHVs. The Blue Rim-Ross Butte Management Area is known to hold significant fossil resources, which will have new stipulations under the RMP.

Recreation and Visitor Services

General Comment Responses: *No GCRs are associated with this category.*

Safety Concerns

Comment: A few other considerations follow: BLM/Green River-Warren Bridge Recreation Area Campsites: BLM Campsites #1 and #1 to #3 areas (or further north) are too close to rural residences/subdivisions with houses where people live full time with 1/3 to 3/8 miles and more away. Many people in various size groups from various distances/states day-trip and camp for days in these areas along the river, sometimes entering in darkness when they cannot observe surroundings (even if they thought to look around!), and fire/shoot weapons of various calibers often firing towards such homes without knowing this danger when down in the canyon (they can't control ricochets and in heat of a hunt-antelope and deer and gamebirds-do not know there are homes just over the river ridge and other hills.

Response: You have raised BLM's awareness of area residents' safety concerns. The unsafe use of firearms is a problem BLM must address where appropriate. Public lands are open to legal hunting and the discharging of firearms for other sporting purposes is allowed. BLM is currently increasing the public's awareness of the proper use of firearms within the Warren Bridge River Access Area. New signing and user ethics information will be posted at the access portals. The discharging of firearms within developed recreation sites is prohibited and violators are subject to penalties.

Comment: BLM/Green River - Warren Bridge Recreation Area Campsites: BLM should prevent and not allow firing weapons, or fireworks as also occurs (fire hazards downwind across river), at least not allow shooting until camp #3 or further north and west until the base of Aspen Ridge (on the east side) or further west, putting at least 2 miles from the residence/ranch/subdivision nears.

Response: You have raised BLM's awareness of area residents' safety concerns. The unsafe use of firearms is a problem BLM must address where appropriate. Public lands are open to legal hunting and the discharging of firearms for other sporting purposes is allowed. BLM is currently increasing the public's awareness of the proper use of firearms within the Warren Bridge River Access Area. New signing and user ethics information will be posted at the access portals. The discharging of firearms within developed recreation sites is prohibited and violators are subject to penalties.

Socioeconomic Values

Comment: No mention of hunting and fishing resource use is identified in the recreation and visitor services management discussion. This area is known for providing substantial economic and environmental benefits to local residents and visitors in terms of fishing and hunting activities. Impacts to such recreational activities will be felt by communities, businesses, fishermen, hunters, outfitters, guides, the tourism industry, and many others if the habitat resource is developed beyond its ability for the outdoor user to enjoy the values of this management area.

Response: BLM recognizes the economic and social values associated with sport hunting and fishing within the planning area. Adverse impacts to these activities from development could occur to a greater or lesser degree under all alternatives. The socioeconomic values derived from outdoor recreation pursuits in the planning area are poorly documented due to the dispersed nature of use and the expanse of public lands. Unfortunately, practical assessment methodologies to determine levels of recreation use have yet to be developed that can be applied to typical BLM lands. Please refer to the socioeconomic section of the proposed RMP for additional information related to the economic factors associated with hunting and fishing.

Comment: Recreational use and its economics is also miscast in the DEIS. During the life of this RMP, it will likely be inappropriate, as it may be already, to measure the recreation/economic value of public lands in terms of hunting licenses, for example. As the Greater Yellowstone Coordinating Committee stated in 2006, "A variety of factors will affect recreation demand and preferences over time. Among these are population growth, aging, and income levels; technological changes; and proximity to, and availability of opportunities. Across the Rocky Mountain West participation in walking and wildlife viewing is projected to skyrocket in the years leading up to 2050. In the Yellowstone-Teton Region, (that includes Sublette County), population growth by itself will intensify recreation demands. Between 1990 and 2000 Sublette County population grew 22.2%. While National Park visitors come from all over the world, the majority of visitors to the region's national forests live nearby. The same pattern is true for BLM, state and local government lands… This raises questions about how our public lands can best accommodate intensifying and changing recreation demands, while sustaining other qualities such as wildlife habitat and water quantity and quality."

Response: The sale of hunting licenses does not measure the value of recreation. However, the sale of hunting licenses does provide an indicator of the number of individuals hunting in the study area, especially if those licenses are for special draw areas. But this only provides a starting point to determine the value of consumptive use (fishing, hunting, etc.) and does not capture the value of non-consumptive use. Therefore, the section addressing the socioeconomic value of recreation has been expanded to make that distinction.

Comment: PAGE: 2-124, RECOMMENDED CHANGE: REVISE Provide substantial personal, community, economic, and environmental benefits to the county, local residents and visitors through recreational uses of the public lands. EXPLANATION: Permit system does not make sense. RMP fails to address demand for recreation and the extent to which BLM fails to meet that demand. Due to Wyoming's unique system of revenue distribution, county receipts are largely limited to sales tax and recreation use plays a major role in that.

Response: The goal as presented in the draft EIS is appropriate.

Off-highway Vehicles (OHV)

Comment: PAGE:2-136 SECTION: RECOMMENDED CHANGE: Delete entire OHV section and rewrite EXPLANATION: The local governments believe that there is increased demand for cross-country recreation. The RMP proposes to remove cross-country travel from public lands except for two small areas. There are two possible solutions: convey land to the county or communities for OHV recreation under the RPPA. Alternatively, BLM needs to delete the entire discussion and effect OHV closures as part of a coordinated activity plan. The RMP fails to properly consider alternatives, fails to consider significant adverse impacts on private land when public land is no longer available for cross-country recreation and completely ignores the increased demand for cross-country recreation. Nor is it accurate for the RMP to call OHV use on existing roads OHV. OHV is defined as 'crosscountry' which does not mean motor vehicle use on existing roads and trails.

Response: BLM recognizes the legitimate need for OHV activities utilizing motorized off-road, cross-country travel. However, public sentiment and BLM transportation and planning guidance does not support unlimited off-road, cross-country motorized travel. Generally, unlimited motorized cross-country travel may be warranted in areas where it does not impact other valuable resources, where conflicts with other recreational activities are insignificant, and where a substantial demand for this type of motorized recreational activity has been demonstrated. OHV use is determined more by the type of vehicle rather than the terrain being used. See the glossary definition in Chapter 7 of the RMP. The comment implies that large areas would be closed to OHV use, which is not the case. Under the Preferred Alternative, only

23,730 acres, mostly in wilderness study areas, would be closed to OHV use. Approximately 771,000 acres would be available for OHV use on existing roads and trails.

Comment: PAGE:2-135 SECTION: RECOMMENDED CHANGE: REVISE Objective 3 Make public lands available for responsible OHV use where appropriate to meet demand for OHV recreation use.

Response: The recommended change is redundant since demand is one component included within the context of this objective.

Comment: PAGE: 4-97, SECTION: 4.9.1, RECOMMENDED CHANGE: EXPLAIN BASIS FOR DECREASING OHV USER AREAS The demand for fishing, floating, camping, OHV use, and new technology-based recreation is expected to increase. EXPLANATION: RMP makes arbitrary decisions regarding OHV use in area.

Response: This document does not propose an arbitrary decrease in OHV use. Alternatives vary by OHV designation with corresponding acreages; however, the vast majority of OHV use designations would remain limited to existing roads and trails. The increase in demand for the majority of traditional recreation pursuits is an accepted assumption given expected population increases and advancements in recreational equipment technologies, most commonly motorized equipment.

Comment: PAGE: 4-97, SECTION: 4.9.1, RECOMMENDED CHANGE: To address the anticipated increase in demand for OHV recreation, BLM will accept R&PPA applications for county or city sponsored OHV areas. EXPLANATION: Closure of much of planning area to OHV and the rest reclassified as limited OHV use cannot be justified in light of admissions throughout FEIS that there is increased demand and only site-specific resource issues. Local governments suggest that BLM instead allow them to assume management for OHV use under RPPA, 43 U.S.C. §869.

Response: BLM has determined that unlimited off-road use is not appropriate in the planning area. Transferring the lands to another agency ownership for the purpose of allowing unlimited off-road use would be irresponsible. The Preferred Alternative would close less than 24,000 acres, approximately 2.5% of the planning area, to OHV use. It is incorrect to portray areas limited to existing roads and trails as closed to OHV use.

Comment: PAGE: 4-108, SECTION: 4.9.7, RECOMMENDED CHANGE: Establishing the Big Piney, LaBarge and Mount Airy OHV Open areas could provide substantial benefits and reduce user and resource conflicts. EXPLANATION: Restore size of Mount Airy to 7000 acres. RMP makes significant reductions in OHV areas open, while FEIS acknowledges that there is an increase in demand for OHV recreation use.

Response: The Mount Airy OHV Open Area and Desert General Open Area remain as actions for consideration under Alternative 1. The potential increase in recreation demand for motorized recreation use is not solely predicated upon unlimited off-road motorized use. BLM recognizes the legitimate need for OHV activities utilizing motorized off-road, cross-country travel. However, public sentiment and BLM transportation and planning guidance does not support unlimited off-road, cross-country motorized travel. Generally, unlimited motorized cross-country travel may be warranted in areas where it does not impact other valuable resources, where conflicts with other recreational activities are insignificant, and where a substantial demand for this type of motorized recreational activity has been demonstrated.

Comment: PAGE: 4-160,K RECOMMENDED CHANGE: REVISE Reducing OHV Open areas by 244,140 acres and increasing the amount of area, by 124,980 acres, in which OHV use is limited to designated roads and trails would reduce the level of vegetation disturbance compared to Alternative 1.

The displaced recreation users will make grater use of private lands which are primarily along rivers and stream thus causing greater environmental harm. EXPLANATION: EIS needs to disclose this direct outcome of decision to ignore demand for OHV recreation.

Response: The recommended change is not appropriate because there is no available information indicating that a potential increase in OHV use, and any associated impacts on private lands, could be attributed to land use decisions considered in the RMP.

Comment: PAGE: 4-107, SECTION: 4.9.7, RECOMMENDED CHANGE: Recreational lands acquisitions could be less because of no net loss in private land restrictions. In addition, fewer acres would be available for withdrawal. This could cause a moderate reduction in dispersed recreation protection afforded by this lands management action. OHV closures and reclassification will be mitigated by opportunities for local governments to lease public land under R&PPA for OHV areas.

Response: The recommended change is not appropriate because the action of withdrawals does not explicitly reduce access for motorized OHV use.

Wildlife, Hunting

Comment: PAGE: 3-137, SECTION: 3.18.2, RECOMMENDED CHANGE: CCC Ponds. During the Great Depression, the Civilian Conservation Corps (CCC) had a camp on the south end of Fremont Lake. The CCC's project was to construct an irrigation ditch to serve the county and some ponds to retain water. Through the cooperative efforts of the Pinedale Middle School, USFS, Sublette County Conservation District, and BLM, today this area has been set aside as a local recreation haven. Opportunities in the area include hiking, fishing, wildflower and wildlife viewing, and mountain biking. The Pinedale Pedestrian Pathway connects the area to Pinedale. Mule deer also cross through this area using both public and private land [bottleneck] (STRIKEOUT) as they migrate across the south end of Fremont Lake. Beautiful mountain views are a backdrop to this glacial landscape. EXPLANATION: As is true for Trapper's Point, since game animals ignore fences and cannot read signs, it is not a "bottleneck" for game animal migration.

Response: Migration bottlenecks occur naturally and are created by topography, not necessarily by fences. The CCC Ponds area is a documented bottleneck on the mule deer migration route along the base of the Wind River Mountains.

Comment: PAGE: 4-99, SECTION: 4.9.3, EXPLANATION: Not clear why energy development will impair commercial hunting or hunting recreation. Game numbers are at all time highs and no data show decrease in big game numbers.

Response: Game numbers are not at all-time highs; many populations are below objective. Energy development impacts hunting through gradual reduction in game population resulting from loss of winter range.

Socioeconomics

General Comment Responses:

Comments:

- There is the argument that many people are prospering from this surge in population and increase in spending. However, the reality is that we have an increase in a population that is temporary, that comes with an increase in crime, drugs, and health care needs. Our infrastructure and ability to serve this population is overwhelmed. Many local business and ranches cannot compete with the wages offered in the field and are struggling to make ends meet.
- Long term damage is being done to the community thrown up housing developments, drugs (meth) in the community, etc. Wildlife has short term and long term damage being done, car and truck collisions, poaching, etc. and soil disturbance, drill pads, roads, housing developments, etc.

Response: Social effects are addressed in Sections 4.10.4 and 4.10.5 of the draft EIS.

Comments:

- Rapid oil and gas development has a number of negative socio-economic consequences that are not adequately recognized in the RMP EIS-the RMP EIS tends to emphasize positive aspects of oil and gas development while discounting or ignoring negative consequences.
- Additionally, I feel the RMP does not reflect the positive socioeconomic benefits natural gas development has on Wyoming and on the United States. Wyoming benefits greatly from the high paying jobs and increased tax revenue while the county benefits from the new supplies of domestic energy. I hope a new RMP alternative will reflect this reality.
- The record of Decision must evaluate the positive socioeconomic benefits of natural gas development.

Response: The analysis of socioeconomic impacts in the draft EIS presents both positive and negative impacts of intensive gas development. The discussion of impacts associated with each alternative has been enhanced in the final EIS, where necessary, to provide the reader with a balanced analysis of all impacts.

Comments:

- You don’t even disclose what kind of impacts the local governments will face, other than increased revenues from mineral royalties. Won’t there be costs to local government as well? What kind of costs? How do the costs vs. revenues compare? How do you expect the local government to make any decisions from a document that doesn’t even disclose that extremely basic information? What about impacts to the local economy? What about impacts to non-mining related businesses? What about impacts to the cost of living?
- We believe that the draft RMP/EIS does not meet the standards for clarity and a reasonable assessment of foreseeable socioeconomic effects. The analysis is too generalized, focuses on the perceived “economic benefits” of energy resource development while inadequately addressing the costs, economic and otherwise, to local governments, service providers and communities faced with the challenges associated with rapid growth and development and the subsequent

adjustments to post-development contractions. The apparent foundation for the latter seems to be the premise that RMP is intended to cover the next 15-to-20 years.

- We contend that the NEPA requires assessment of long-term impacts of an RMP and the land use decisions to be made during its life even when such effects extend beyond the expected life. We also believe that the RMP/EIS should reflect a high degree of internal consistency with the site-specific analyses for the Jonah Infill and Pinedale Anticline.
- While those statements acknowledge that impacts will occur, they fall short of capturing the magnitude, intensity and severity of impacts as required by NEPA. It overlooks issues such as the potential jurisdictional and timing mismatch between impacts on demands for services and revenue accrual, and challenges faced by service providers, such as recruiting and retaining employees to expand services. Furthermore, the discussion treats the seasonality of energy related development as a "mitigating" factor rather than a dimension of the development that imposes particular challenges for local businesses, governments and service providers.

Response: A review was conducted of the Ecosystem Research Group's Sublette County Socioeconomic Impact Study. This review was used to expand the narrative summarizing the infrastructure needs associated with the oil and gas boom forecast under each alternative.

Comments:

- The costs associated with the ecological damage due to oil and gas roads must be included in the analysis of plan alternatives involving oil and gas drilling and oil and gas projects. The agency must also include a detailed analysis of the costs associated with monitoring and enforcement of increased recreation use of expanded road mileage as part of the NEPA analysis. The costs for road maintenance must also be accounted for in the NEPA process.
- Wildlife habitat fragmentation results in both market and non-market costs. These costs must be analyzed as part of the NEPA process for oil and gas development.
- When proposing oil and gas development, the agency must fully examine and account for the risks and costs associated with water depletion, loss of native fisheries and fisheries restoration, the additional costs of noxious weed mitigation, and the costs associated with the building and potential failure of artificial water retention structures.
- The agency must assess the adequacy of funding and staffing to achieve the required safety enforcement for an oil and gas development. If inadequate funding and/or staff resources might prevent thorough enforcement and monitoring, this needs to be made clear and the costs associated with the additional impacts must be analyzed as part of the NEPA process.

Response: A benefit-cost analysis would be required to fully analyze all the benefits and costs associated with a major oil and gas driven boom. Because the quantification of the non-market impacts are considered outside the scope of the analysis used for the RMP, all the benefits and costs cannot be quantified. Therefore, a benefit-cost analysis under these circumstances would be incomplete and will not be conducted for this RMP.

Unique Comments:

Comments on Document/Suggested Changes

Comment: I have a number of important questions regarding Table A26-2.

1. First off, why is this extremely important table not in the main body of the document and instead buried in the 26th appendix? A data table of this utility must be inserted in the main body of the document.

Response: Table A26-2.1 is included in the draft RMP Appendix because it constitutes supplementary information supporting the socioeconomic impact analysis. It is only an estimate of the number of wells that might be completed annually based on the Reasonable Foreseeable Development.

Comment: I have a number of important questions regarding Table A26-2.

3. What proportion of each alternative's well count in Table A26-2 is comprised by activity on the Jonah and the Anticline fields? What proportions are comprised of wells drilled elsewhere? Please provide separate columns under each alternative in Table A26-2 that indicates the number of wells predicted to be drilled on both the Jonah and Anticline each, as well as some sort of summary as to where the predicted location will be of wells drilled outside these areas. Somebody obviously had to take this into consideration when they made the table, why not share it with us?

Response: The final report of September 26, 2006, Reasonable Foreseeable Development Scenarios for Oil and Gas Activities on Federal Lands in the Pinedale Field Office, Wyoming, explains how the baseline well count was determined (see section titled "Projected Non-Coalbed Oil and Gas Drilling," and Figure 22, Figure 23, Table 9, and Table 10). The discussion in the Surface Disturbance Section of the same report projects that approximately two-thirds of all new wells in the baseline well count would be drilled within the Jonah and Pinedale Anticline areas. The discussion in the Reasonable Foreseeable Development scenarios for RMP Alternatives 1, 2, 3, and 4 Section of the same report explains how well counts were determined for each alternative. Calculations of well count, for each alternative, were made for the entire Field Office area; no specific calculation of projected well count for the Jonah and Pinedale Anticline areas was made. This EIS is intended to look at cumulative impacts associated with development and restrictions on development for the entire Field Office area. Maps 4-1 and 4-2 of the draft RMP do provide a picture of approximate well density for new wells drilled for all parts of the Field Office area.

Comment: I have a number of important questions regarding Table A26-2. It is my understanding that the projected well counts on the Jonah and the Anticline fields will remain largely the same regardless of which management alternative is ultimately implemented. Why is there nearly a 25% drop in drilling activity between Alternative 3 and the other Alternatives, when the overwhelming majority of drilling currently takes place and is predicted to take place on the Jonah and Anticline? Where would these 25% of wells be located under alternatives 1, 2, and 4, where they would instead be restricted under alternative 3? 25% is a huge number, when you are talking about overall scales as large as the Jonah and the Anticline. Why, exactly, does the well count drop 25% under Alternative 3? Obviously, someone must have some idea, otherwise it wouldn't be in the table. If this 25% of wells drilled would in fact be located in the Jonah or Anticline, why would they be restricted under Alternative 3?

Response: Projected well counts in the Jonah and Pinedale Anticline areas would not remain the same, regardless of management alternative. Map 2-3 of the draft RMP portrays large parts of the Field Office as being either "unavailable for leasing" or with "no surface occupancy" under Alternative 3. These types of restrictions can have a significant impact on the potential for future oil and gas development. When this map is compared to Map 4-1 and Map 4-2 of the draft RMP, these significant types of restrictions are also seen to affect these two areas, thus their application would reduce well counts even within the Jonah and Pinedale Anticline areas. Under Alternative 3, the reduction in number of wells drilled would be due to large parts of the Field Office area (including the Jonah and Pinedale Anticline areas) having significant levels of proposed restrictions. Section 4.7.1, Assumptions, on page 4-46 of the draft RMP, assumes that "leasable mineral resources would be considered unrecoverable in areas designated unavailable for

leasing. They would also be considered unrecoverable in areas open to leasing but where surface use constraints prohibit development operations on areas larger than can be technically and economically developed from offsite locations (e.g., Large Block No Surface Occupancy [NSO] Areas). Leasable mineral resources within leased in-holdings would be considered recoverable."

Comment: I have a number of important questions regarding Table A26-2.

5. Furthermore, can the restricted wells under Alternative 3 in fact be presumed to be eventually drilled at a later date beyond 2020? Would Alternative 3 stop the drilling of 25% of the wells, or would it just slow it down? In essence, would the pace of development change under Alternative 3, or would simply the amount of wells available for development change? If the pace of development does change, why?

Response: Section 4.7.1, Assumptions, on page 4-46 of the draft RMP, assumes that "leasable mineral resources would be considered unrecoverable in areas designated unavailable for leasing. They would also be considered unrecoverable in areas open to leasing but where surface use constraints prohibit development operations on areas larger than can be technically and economically developed from offsite locations (e.g., Large Block NSO Areas). Leasable mineral resources within leased in-holdings would be considered recoverable." It also assumes that "directional drilling would not be able to extract all hydrocarbon resources within Large Block NSO Areas beyond viable offset distances. For the purposes of this document, resources more than one-half mile inside the boundary of an NSO area would be considered unavailable for hydrocarbon extraction." Finally, it assumes that "directional drilling can result in unrecoverable hydrocarbon resources in cases when the drill stem gets irretrievably stuck and the production casing cannot be set to the bottom of the production formation." In these instances, the resource would not be developed. Alternative 3 would affect a portion of the projected well count reduction by affecting pace of development. See first paragraph under section titled "impacts under alternative 3" on page 4-61 of the draft RMP for further discussion.

Comment: I have a number of important questions regarding Table A26-2. Why do the projected well counts for the Jonah Infill and Anticline SEIS's exceed the well counts listed on table A26-2 of the RMP SEIS? If I recall correctly, and conservatively, the Jonah Infill SEIS projects about 3,000 new wells from 2006 to about 2018, and the Pinedale Anticline DEIS projects about 4,000 new wells from about 2007 to about 2024 = or about 7,000 new wells between now and about 2024, with only a few hundred drilled between 2020 and 2024. Yet, on Table A26-2, you list less than 5,000 wells being drilled between 2006 and 2020 - there seems to be at least 1,000 wells missing from Table A26-2, not even counting all the wells drilled outside those two fields!

Response: The subject EISs analyze full field development for these areas for the life of these fields. The well counts used for each alternative in this EIS are derived from the final report of September 26, 2006, Reasonable Foreseeable Development Scenarios for Oil and Gas Activities on Federal Lands in the Pinedale Field Office, Wyoming. That report is based on a reasonable, technical, and scientific estimate of anticipated activity based on the best available information and data for the period 2001 through 2020. It may not assume full field development for all fields for the 2001 through 2020 period. Full field development for some areas is assumed to not occur until some time after 2020. The pace of development may also be slowed for some of these areas. Additional proposed restrictions (especially those in Alternative 3) can reduce the number of wells to be drilled or slow the pace of development. The September 26, 2006, report also assumes that the pace of development within the Field Office area will be affected by such things as increased development costs, decreased or fluctuating gas prices, lack of infrastructure, and competition in the region for drilling rigs and drilling crews.

Comment: SECTION 4.10.4 - PAGE 4-112 First Paragraph (continued from page 4-111): The discussion on the SETG needs to be amended. From a historical perspective, the SETG discussion is accurate,

although the SETG had no power to actually "mitigate" socioeconomic effects (as is stated in the last sentence of that paragraph), but only recommend mitigation actions. It should be noted in this section that the BLM ultimately refused to implement any of the SETG recommended mitigation actions. But today, going forward, the SETG as well as the entire PAWG is no longer functioning. This should be stated. To describe or infer that the SETG and the PAWG process are "on-going" in anyway would be inaccurate. The BLM has not been able, despite numerous attempts, to hold a PAWG quorum for months. The SETG has not met for over a year and has no plans to do so in the future. To be accurate, you should consider the PAWG and the SETG as no longer functioning, although there is the possibility and desire for the formation of a new PAWG or SETG in the future. Please revise this.

Response: The Pinedale Anticline Working Group (PAWG) continues to function, as does the Socioeconomic Task Group (SETG).

Comment: IMPACTS TO COST OF LIVING UNDER EACH ALTERNATIVE: The RMP DSEIS seems to analyze the increase in wages that can be expected from various alternatives, but does not address the cost of living. The cost of living throughout the region has been increasing congruently with increases in natural gas development. The cost of living in the region is at least 16% higher than the state average, and has been rising faster than the state and federal averages. 1. Will the increased wages offset a possible increase in cost of living?

2. What types of inflationary pressures will be caused (or not caused) by each alternative?

4. How will the cost of goods and services change under each alternative?

"See Graphs Attached"

Response: The final EIS has been revised to include discussion of the real changes in per capita income and average family earnings based on cost of living indices published by the State of Wyoming.

Comment: IMPACTS ON QUALITY OF LIFE FOR ALL ALTERNATIVES: In the section "Impacts on Quality of Life" for all the alternatives, the document simply discloses there will be "impacts" quality of life, housing, recreation, etc. What kind of impacts? Positive impacts? Negative Impacts? By the way, just using the word "impact" does not in fact actually count towards as any kind of meaningful disclosure or discourse.

Response: The final EIS has been revised to discuss the anticipated change in quality of life resulting from the intense oil and gas development. But it should be noted that impacts cannot always be described as negative or positive. In other words, positive impacts to one individual may be considered negative by another. Therefore, this discussion will focus on the extent of the impacts rather than whether they are negative or positive.

Comment: IMPACTS ON COMMUNITY STABILITY AND CONNECTIVENESS Same with the Impacts on Community Stability and Connectiveness sections under all alternatives: The word "impact" is used profusely throughout this section under all alternatives, but a description of the kind, nature, or severity of the "impact" is not disclosed. For example, "Under the current management scenario, there are expected to be impacts on housing (both rentals and owned real estate) from population growth and the seasonal influx of workers." (Page 4-118) What kind of impacts? What kind of impacts?

Response: The final EIS has been revised to expand the discussions of community stability and connectiveness.

Comment: SECTION 4.10.07 PAGE 4-124 ALTERNATIVE 3 - IMPACTS ON REGIONAL EMPLOYMENT In this section you state: "Under Alternative 3, management actions within the planning area would be expected to cause a reduction in growth in regional employment compared to Alternative 1. Over the 20-year study period, employment would be expected to average approximately 8,000 direct, indirect, and induced jobs per year, which is approximately 2,300 fewer jobs per year than are expected under Alternative 1." (Page 4-124) What is the comparison between the employment now, and under Alternative 3? Employment would still increase, would it not? This should be disclosed.

Response: A table has been added to the final EIS that compares the anticipated average annual employment for each alternative with the current employment.

Comment: In chapter 4, the BLM recognizes that economic impacts will "likely occur" to employment and income, tax revenues, demand for housing and government services as well as the social fabric of communities, yet fails to provide detailed information. To fully disclose the economic effects and gain an appreciation for mitigation needs, a more comprehensive treatment is necessary. Full disclosure should include:

- Changes in population over the planning horizon,
- Changes in demographics including age and ethnicity,
- Employment by sector,
- Income by sector,
- Average earnings by sector,
- Tax revenue by municipal, state and federal jurisdictions,
- Direct, indirect and induced effects by sector, including multipliers,
- Increased housing needs for owned and rental units,
- Demand for recreation,
- Demand for forest resources,
- Anticipated trends in crime
- Infrastructure requirements according to population,
- Current utilities (water, sewage, power, gas, communications, etc.)
- Increased demand for utilities,
- Transportation corridors (current and future demand),
- Social services: current and future demand [such as, domestic abuse service organizations, (Sublette County Sexual Assault and Family Violence Task Force), schools, police, fire, medical, etc.].

Response: There was a review of the Ecosystem Research Group's Sublette County Socioeconomic Impact Study. This review was used to expand the narrative summarizing the infrastructure needs associated with the oil and gas boom forecast under each alternative. It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted and where BLM has the authority to require mitigation.

Comment: The DEIS states (p.4-234) that "not all issues identified for direct or indirect impact assessment in this RMP Draft EIS are analyzed for cumulative effects." This section goes on to qualify the lack of cumulative effect analysis incorrectly stating that, "cumulative effects are commonly examined at a more qualitative and less detailed level than are direct and indirect effects."

Response: The cumulative impact analysis has been revised in the final EIS.

Comment: The full range of affected resources in the DEIS are neither fully presented nor considered. Furthermore, the BLM fails to provide a full suite of cumulative effects that collectively examine the outcomes of the BLM's proposed actions in spite of the recognition of the importance of such analysis: Throughout this chapter, the terms "impact" and "effect" are used interchangeably. Impacts can be direct, indirect, or cumulative. Although impacts may be perceived as positive (beneficial) or negative (adverse), those determinations are left for the reader of this document to make. Table 4-1 provides an overview of the general types of impacts discussed in this chapter. (p 4-2)

Response: The cumulative impact analysis has been revised in the final EIS.

Comment: Why is there no section on the Impacts to the Economy? Certainly, you must have a section on impacts to the local economy. The effects to the local economy go far, far beyond increases in earned income or employment figures. Your entire analysis on the overall economic impact of all alternatives is as follows: "Therefore, proposed development on BLM-administered lands would continue to be an important economic driver for southwest Wyoming." (Page 4-116). Occasionally, throughout the different alternatives, you offer a few caveats (usually regarding employment) that describe one small facet of the potential impacts to the local economy: One example of a small facet is as follows: "An increase in oil and gas development activity would be expected to result in increased employment. However, employment associated with recreational activities would be expected to decline under this alternative (an approximately 7% reduction in recreation employment from Alternative 1) as a result of a reduction in recreational visitor days and increases in oil and gas activities. Employment associated with grazing operations would be expected to increase under this alternative (a 45% increase compared to Alternative 1) with its increased grazing opportunities." (Alternative 2 - Impacts to Regional Employment - Page 4-121).

1. How will the entire non-mining-related business sector fare under Alternatives 1, 2, 3, and 4? What about service industries? What about construction industries? What about retail industries? Will these businesses do better because of the increased gas field workforce buying goods in Sublette County? Or will they do worse because of rising inflation, and all their workers leaving to work in the gas field as thousands of more high-paying jobs are created out there?

2. How will the recreation and tourism industry fare with 75%-90% of the area's motel rooms on a given night currently being rented by gas field workers (why is this not mentioned?), how will Alternatives 1, 2, 3, and 4 effect the tourism industry above and beyond employment?

3. Data from the Bureau of Labor Statistics shows that the number of employers and employees from the food, entertainment, retail, and recreation industries has either declined or remained largely stagnant in the last 6 years despite huge increases in population and income. Please include the BLS's Quarterly Census of Earnings and Wages data 2 showing this trend. Will they decline further under Alternatives 1, 2, 3, and 4? Or will they somehow "turn the corner" and take advantage of rising incomes and population by finding workers and less-expensive retail space?

4. Will the cost of labor increase for non-mining related small businesses? What about the costs of goods and materials needed by small businesses?

Response: The final EIS has been revised to include a comprehensive discussion by alternative regarding the anticipated impacts to the local economy from intensive oil and gas development.

Comment: IMPACTS TO COST OF LIVING UNDER EACH ALTERNATIVE: The RMP DSEIS seems to analyze the increase in wages that can be expected from various alternatives, but does not address the cost of living. The cost of living throughout the region has been increasing congruently with

increases in natural gas development. The cost of living in the region is at least 16% higher than the state average, and has been rising faster than the state and federal averages4.

1. Will the increased wages offset a possible increase in cost of living?
2. What types of inflationary pressures will be caused (or not caused) by each alternative?
3. How will the cost of goods and services change under each alternative?

Response: The final EIS has been revised to include discussion of the real changes in per capita income and average family earnings based on cost of living indices published by the State of Wyoming.

Comment: IMPACTS ON QUALITY OF LIFE FOR ALL ALTERNATIVES: In the section "Impacts on Quality of Life" for all the alternatives, the document simply discloses there will be "impacts" quality of life, housing, recreation, etc. What kind of impacts? Positive impacts? Negative Impacts? By the way, just using the word "impact" does not in fact actually count towards as any kind of meaningful disclosure or discourse. IMPACTS ON COMMUNITY STABILITY AND CONNECTIVENESS Same with the Impacts on Community Stability and Connectiveness sections under all alternatives: The word "impact" is used profusely throughout this section under all alternatives, but a description of the kind, nature, or severity of the "impact" is not disclosed. For example, "Under the current management scenario, there are expected to be impacts on housing (both rentals and owned real estate) from population growth and the seasonal influx of workers." (Page 4-118) What kind of impacts? What kind of impacts? SECTION 4.10.07 PAGE 4-124 ALTERNATIVE 3 - IMPACTS ON REGIONAL EMPLOYMENT In this section you state: "Under Alternative 3, management actions within the planning area would be expected to cause a reduction in growth in regional employment compared to Alternative 1. Over the 20-year study period, employment would be expected to average approximately 8,000 direct, indirect, and induced jobs per year, which is approximately 2,300 fewer jobs per year than are expected under Alternative 1." (Page 4-124) What is the comparison between the employment now, and under Alternative 3? Employment would still increase, would it not? This should be disclosed.

Response: The final EIS has been revised to discuss the anticipated change in quality of life resulting from the intense oil and gas development. But it should be noted that impacts cannot always be described as negative or positive. In other words, positive impacts to one individual may be considered negative by another. Therefore, this discussion will focus on the extent of the impacts rather than whether they are negative or positive. The final EIS has been revised to expand the discussions of community stability and connectiveness. A table has been added to the final EIS that compares the anticipated average annual employment for each alternative with the current employment.

Comment: Shouldn't the BLM have to determine in greater detail the socio economic impact that Alternative #3 has on our local, state and national economy. Part of the National Environmental Policy Act requires that economics of a project be considered: shouldn't the negative impacts also be described. The main part of my comment that you need to respond to is this: What is the economic cost to America if Alternative 3 is selected? What federal mineral, direct taxes, state severance and state taxes will be lost when land is taken out of production?

Response: The socioeconomic impact analysis presented in the draft RMP is appropriate for the level of specificity of an RMP. No alternative proposes taking lands "out of production". Lands in the unavailable areas that are currently leased would become unavailable gradually as those leases expire. BLM does not have the authority to prohibit development of existing, valid oil and gas leases. The impacts of selecting Alternative 3 are presented through the reduction in the oil and gas RFD and resulting reductions in employment, taxes, etc.

Comment: I am opposed to Alternative # four which is the preferred alternative of the BLM. This alternative will only escalate the environmental impacts that are already threatening the wildlife corridors and pristine landscape of Sublette County. To protect what is really of the greatest value now and for the future is to designate Green River, upper New Fork, and Hoback Rim areas as Unavailable for Leasing in the RMP.

In my opinion the RMP only glosses over the socioeconomic impact escalated drilling would have on Sublette County. The focus of this section is on the economics, more jobs, more money, but little is said about sociological impacts on the communities. Does anyone in BLM really understand what the current impacts are? A lot of sociological impacts is happening outside of the field that the BLM doesn't care?

Response: The areas unavailable for leasing have been revised in the Final EIS and include some of the areas mentioned in this comment.

The discussion of socioeconomic impacts has been expanded in the Final EIS. Although economic data are generally available, data and information on some social impacts are difficult to obtain. Information gathered by Sublette County has been used extensively in the revision of the socioeconomic impact analysis.

Comment: The section of the RMP noted on page 4-129 cites, "Some stakeholder groups such as conservationists, non-motorized recreational groups and other wildlife protection groups would likely perceive a decreased quality of life as a result of well drilling and field development." This statement is too narrow in scope to be correct. As noted earlier in the same RMP, a survey done several years ago by Rice University noted that the majority of Pinedale residents believed there would be a decrease in the quality of life, from full field rapid energy development.

Response: The revision of the socioeconomic impact analysis in Chapter 4 of the proposed RMP final EIS addresses these issues.

Comment: Economic Analysis The RMP has pandered to "lifestyles" for ranchers while ignoring the actual contribution of the livestock grazed on the PFO to the local and regional economy. The Fish and Wildlife Service publishes reports on the value of wildlife-associated recreation that shows values of hundreds of millions of dollars to billions of dollars of revenue related to hunting, fishing and wildlife watching in each western state. In addition, the cost of polluted water, loss of watershed storage due to soil compaction and loss of herbaceous cover are not counted in the costs of livestock grazing. As the reference below shows, in actuality, rural communities as well as livestock permittees depend on other sources of income. Laws require that public lands be administered in the long-term interests of the American people and not a handful of stockmen, who are permittees, on the public lands. Livestock permittees are a small minority of livestock producers in the eleven western states and are insignificant in their numbers or their economic contribution to the States, their local and regional economies. Their numbers and contribution pale in comparison to the natural values of our public lands. Dr. Thomas Power, Chairman of the University of Montana's Economics Department, in Wuerthner and Matteson (2002) points out the minimal economic contribution of federal public lands livestock grazing to local, state and regional economies in the West. That reference can be found on-line at: http://www.publiclandsranching.org/htmlres/PDF/wr_TAKING_STOCK.pdf Dr. Power also points out that the majority of public lands livestock producers depend on non-agricultural sectors of these local, state and regional economies for employment, not livestock production. It is not in the public's interest to blindly continue livestock grazing at unsustainable stocking levels in order to provide a short-term benefit to this small minority, while ignoring the values displaced by livestock grazing. The PFO RMP Economic analyses should include consideration of this information and the following: • costs of administration • costs of installation and maintenance of range improvements borne by the BLM and/or funded by county

range improvement funds • grazing fees collected and their distribution to various entities • grazing fees collected and net return to the Forest Service and the American people, and separate out the dollars returned to grazing permittees and local counties. • value of livestock grazing gross revenue to the permittee at current market rates • value of wildlife-associated recreation (DOI 2002) • loss in value of wildlife associated recreation to livestock grazing by using equivalent AUMs consumed by livestock as applied to wildlife needs (AUMs) and economic benefits • cost of soil erosion and loss of groundwater recharge and streamflow • cost of water pollution • the net contribution of the individual livestock operations under consideration to the county and regional economy • compare the individual livestock operation in dollars and jobs to the local, state and regional economy and report what percentage this allotment comprises of this total • compare these various economic values with other economic and employment sectors at those local, state and regional levels.

Response: BLM manages the land for multiple use, which allows many different activities on public land as mandated by Congress. Grazing is one of those activities. The ranching industry provides market and nonmarket values to Sublette County and the planning area. To the extent possible, these issues are discussed in the socioeconomic impact analysis section of Chapter 4. Livestock grazing management actions in the plan are designed to prevent or mitigate impacts to other resources.

Oil and Gas

Comment: The oil and gas developers have proven (to us) that they are not environmentally responsible. They do not even bother to pick up their garbage along the highways. This task seems to be up to the local citizens, and we are tired of it.

Response: Oil and gas operators are required to clean up and manage their own trash. However, it is an unfortunate truth that any increase in population will also increase the number of individuals who are careless with trash. The impact of accumulating trash along highways and other areas has been added to the impact analysis.

Comment: This proposal calls for an increase of 4,400 more wells which are almost ten times more than the current amount. With the ramped up drilling and removal of year around stipulations the wildlife would be greatly impacted. Not only would the native ground species such as sage grouse be impacted but also the big game animals which this part of Wyoming is noted for. Already recent studies show a correlation between mule deer population decline and increased gas and oil activity.

Response: Currently, there are approximately 3,000 wells in the planning area. The draft EIS analyzes impacts that could be expected if approximately 8,000 additional wells were drilled. Chapter 4 presents a discussion of impacts to sage-grouse, mule deer, and other wildlife species.

Comment: The BLM should develop and analyze a “no additional leasing” alternative in order to provide a true baseline from which to compare the rest of the alternatives. When the BLM assumes that leasing will continue along a certain trajectory it incorrectly assumes that these development activities are the “status quo” and biases the comparison of the alternatives toward those which favor development by presenting the opportunity costs of protecting other multiple values under an assumption that they represent a “loss” to the oil and gas industry. This is not the case if the areas have not yet been leased. Rather additional leasing (regardless of whether it occurs under the current RMP or the new one) should be analyzed as a “gain” for the oil and gas industry with potential costs to other multiple use values that provide direct and indirect benefits to the local and regional economy.

The socioeconomic analyses conducted for the Draft EIS focus almost exclusively on the potential benefits of increased oil and gas drilling in the Pinedale area. In fact on page 4-109 this is made explicit in the first assumption, stating that the analysis assumes that “Economic benefits to the socioeconomic

region of influence (ROI) would accrue from BLM-influenced activities…" There is no corresponding assumption of cost to the socioeconomic region of influence. The analysis completely ignores some of the findings on these costs that the BLM actually presents in its discussion of the current conditions. Absent in the analysis is any concrete estimate of the potentially enormous costs to the local communities of expanded oil and gas development. See Morton et al. 2002 for more details on the potential costs of oil and gas development. These costs are not mere abstractions. The communities of the Pinedale area have been experiencing many economic and environmental costs over the last six years, as detailed in their comments to the BLM on the proposed expansion of oil and gas drilling on the Pinedale Anticline submitted to the agency earlier this year. These costs include the increased traffic from the oil and gas fields – which increases wear and tear on the area's roads necessitating additional public expenditures. Increased traffic also results in more accidents, which means greater demand for emergency services such as police, ambulance and hospital services. This increased traffic also means there is a need for additional traffic-related law enforcement efforts. These are but a few of the socioeconomic costs associated with increased oil and gas drilling. Other negative impacts include the documented difficulty that local business are experiencing in hiring and retaining employees, increased housing costs, increased costs of other goods and services, and an overall loss of the quality of life that long-time residents and newcomers alike have come to appreciate in the area. The analysis fails to adequately address these and other costs and thus presents a biased picture of the long-term impacts of the proposed management.

Response: The no additional leasing alternative was considered but eliminated from detailed analysis (see page 2-3 of the draft RMP). Projected well counts in the Jonah and Pinedale Anticline areas would not remain the same regardless of management alternative. Unavailable for leasing and NSO restrictions can have a significant impact on the potential for future oil and gas development. Under Alternative 3, the reduction in number of wells drilled would be due to large parts of the Pinedale Field Office area having significant levels of proposed restrictions. There was a review of the Ecosystem Research Group's Sublette County Socioeconomic Impact Study. This review was used to expand the narrative summarizing the infrastructure needs associated with the oil and gas boom forecast under each alternative.

Comment: I SUPPORT the BLM's proposal to increase natural gas production in the Pinedale Anticline, in the Upper Green River Valley. This drilling will contribute to the overall security and economic stability of the United States, will bring in Federal and State revenues, and if managed in an environmentally responsible manner will have minimal negative impact on the environment.

Response: BLM manages the land for multiple use. This allows many different activities on public land as mandated by Congress.

Comment: Alternative 3 (map 2-3) offers the most protection for Pinedale's views to not become industrialized, but even that alternative allows drilling right next to town. The Town of Pinedale asks that there not be leasing within a two-mile area of town borders, to not only preserve the town's character-a direct influence on our economic life- but drilling within such close proximity could adversely affect public health and well-being. We do not support the industrialization of the views of the Pinedale area. This would have a direct (and costly) detrimental economic impact on many of the other businesses and real-estate values of Pinedale.

Response: Lands within 2 miles of the town of Pinedale fall generally into two categories. Some are included in areas that would be unavailable for leasing under the Preferred Alternative. The rest are lands already leased and included in the Pinedale Anticline development area. BLM does not have the authority to prohibit development of existing, valid oil and gas leases. Viewsheds are an important non-market value which are considered and should be considered in the socioeconomic section. However, BLM must honor the rights of oil and gas leaseholders.

Comment: What are the socioeconomic impacts of Alternative 3? a. How will impact domestic supplies of energy? b. What will be the impacts on Wyoming's economy when compared to Alternative 2?

Response: A table has been added to the final EIS that shows the percentage of natural gas produced under each alternative compared to the current total domestic demand and supply for natural gas in the United States. With regard to the socioeconomic impacts associated with Alternative 3, there is a discussion of the impacts from intense oil and gas development, but it does not quantify the non-market impacts from that same development. That would require a study designed to calculate those values, which is beyond the scope of this analysis.

Comment: I read with some concern that Alternative 3 in the Pinedale plan will prohibit gas exploration and production on a significant portion of those public lands. I think BLM should investigate the impact that this non-development might have on our country. How much money will our local, state, and federal governments lose if we don't develop these resources?

Response: From the numbers in Table 4-14, the difference from the Preferred Alternative would be about a $2.2 billion reduction in total production. However, the reduction in the value of production of Alternative 3 only tells part of the story. Other sectors may benefit from less energy development, and non-market impacts from development have been shown in other studies to be substantial. The non-market impacts have not been quantified for this effort because they were considered outside the scope of the RMP analysis.

Comment: Please register my objection to the adoption of Alternative 3 in the proposed Pinedale District RMP without adequate study of the lost natural gas production and negative socioeconomic impacts on our area. The nation is dependent on more domestic energy supplies and Wyoming is dependent on energy extraction for jobs and a growing tax base.

Response: A table has been added to the final EIS that shows the percentage of natural gas produced under each alternative compared to the current total domestic demand and supply for natural gas in the United States. With regard to the socioeconomic impacts associated with Alternative 3, there is a discussion of the impacts from intense oil and gas development, but it does not quantify the non-market impacts from that same development. That would require a study designed to get at those values, which is beyond the scope of this analysis.

Comment: The area south of Pinedale has 1000s of wells that have had serious effects: Community – meth labs with all the social ills that relate to this – theft, violent crime, etc. as noted in Alexandra Fuller's New Yorker article

Response: This comment is addressed in Sections 4.10.4 and 4.10.5 of the draft RMP, "The PAWG and SETG identified a number of social issues and impacts associated with the current level of oil and gas production in the area, which is expected to continue with the current management situation. The prevalent social impacts occurring in the area from the relatively rapid gas industry development are categorized as follows: (1) impacts on community stability and connectiveness; (2) impacts on quality of life; and (3) impacts on social and community services. The SETG also identified a number of critical social issues or community factors — housing, crime and drugs, education, emergency response and social services, and traffic — that could potentially have social impacts from the continued management of the planning area. These impacts are addressed within one of the three categories identified above."

Comment: Drilling has already caused social ills with the population/worker/money explosion (meth labs and meth use has gone wild).

Response: This impact is addressed in Sections 4.10.4 and 4.10.5 of the draft RMP. Drilling has contributed to increased crime, population increases, and increased tax revenues.

Comment: The BLM must update its socioeconomic evaluation for the Pinedale Resource Area given the increased pace of development in the area. Table 4-13 indicates that the BLM assumed that between 255 (Alternative 3) and 377 (Alternative 2) federal wells will be drilled within the planning area each year. The BLM's analyses in the PAPA SDEIS and the JIDP EIS indicate a much higher rate of development, at least for the next several years. The PAPA SDEIS assumed that up to 305 wells could be drilled each year, see PAPA SDEIS, pg. 2-27, and the JIDP EIS anticipates up to 250 wells per year, see JIDP FEIS, pg. 2-18.

Response: The rate of development used in the RMP is designed to estimate the possible impacts for planning purposes. It is meant to gauge what we would expect to happen under each management alternative.

Comment: The socio-economic impacts of forgoing resource development should also be fully analyzed in the DRMP/EIS. The economic impacts of restricting access to vital energy resources at the local, state and national levels should be analyzed in the DRMP/EIS.

Response: Closing the planning area to new leasing of federal minerals, specifically oil and gas, was considered as a method for resolving conflicts with other resource values and uses. The federal mineral estate in much of the planning area has already been leased (734,000 acres), and large portions of the area (176,000 acres) are developed. This proposal was eliminated from further analysis. Closing the entire planning area to new oil and gas leasing would eliminate development and production activities in areas where conflicts can be mitigated, or where conflicts do not exist. This action is, therefore, not reasonable in light of the nation's dependence on oil and gas to meet energy demands.

Comment: The economic and social impact from the current development is too much for three counties to handle at the current pace of development. The planned management will put even more pressure on an already tight housing market not to mention how the development will drive up the price of land. The cost of living in Sublette County will become extremely high for people that do not make a living from the oil and gas industries. The new resource management plan does mot consider the economic and social impacts to the surrounding counties considering the influx of people, increased cost of living, greater dependency and demand on emergency first responders, most of which are volunteers, and more roadside trash that is also picked up by volunteers.

Response: A narrative and new table have been added to Chapter 3 of the final RMP that show the historical real per capita income and average family income adjusted by the cost of living index developed by the State of Wyoming for both the impacted area and the State of Wyoming. A new narrative has been added to Chapter 4 that discusses the anticipated per capita income and average family earnings for the impacted area based on the high cost of living being driven by oil and gas development.

Comment: We, the taxpayers, do not see much benefit from all this drilling. Our air if full of smog, our roads congested, our wildlife diminished, our taxes have gone sky high, the local businesses cannot find employees, housing is unavailable, the oil field works send their money back home, it doesn't go back into the local economy, crime is higher.

Response: Personal observation and the anticipated impacts are covered in the draft RMP.

Comment: In my opinion the RMP only glosses over the socioeconomic impact escalated drilling would have on Sublette County. The focus of this section is on the economics, more jobs, more money, but little

is said about sociological impacts on the communities. Does anyone in BLM really understand what the current impacts are? O is the attitude because a lot of sociological impact is happening outside of the field that the BLM doesn't care.

Response: The social impacts are discussed in the draft RMP EIS on pages 4-128 to 4-130, including impacts on population, impacts on community stability and connectiveness, impacts on quality of life, and impacts on social and community services.

Comment: Appropriately, the BLM indicates that operators would not be required to drill off-setting wells in the large-block NSO Areas if the costs of completing and producing those wells would exceed the value of the resource being drained by adjoining state or private leases. See RMP DEIS, pg. 2-48. The BLM must make it clear that this exception also applies to existing leases within areas unavailable for leasing under either Alternative 3 or 4. The BLM must acknowledge and disclose the loss of minerals, economic activity, and tax revenue associated with a decision to make significant areas of the planning area unavailable for lease, or only available with unduly restrictive NSO stipulations.

Response: The discussion of drainage and off-setting wells in the unavailable areas has been revised in the final EIS.

Comment: The BLM must update its socioeconomic evaluation for the Pinedale Resource Area given the increased pace of development in the area. Table 4-13 indicates that the BLM assumed that between 255 (Alternative 3) and 377 (Alternative 2) federal wells will be drilled within the planning area each year. The BLM's analyses in the JIDP EIS and the PAPA SDEIS indicate a much higher rate of development, at least for the next several years. The JIDP EIS assumed that up to 250 wells could be drilled each year, see JIDP FEIS, pg. 2-18, and the PAPA SDEIS anticipates up to 305 wells per year, see PAPA SDEIS, pg. 2-27. Given the potential for increased development in the Big Piney/LaBarge area as well, the BLM's rate of development appears inadequate.

Response: The numbers of wells in Table 4-13 of the draft RMP are averages over the life of the plan. They are what BLM expects to happen over a Reasonable Foreseeable Development scenario. The rate of development used in the RMP is designed to estimate the possible impacts for planning purposes. It is meant to gauge what we would expect to happen under each management alternative. When specific drilling and development proposals are received from the holders of oil and gas leases, BLM provides more specific analysis of the company's proposed actual drilling rates; for example, in the Jonah and Pinedale Anticline EISs.

Comment: Wyoming has the highest incidence of worker-related deaths in the United States. This is due primarily to the oil and gas industry and other extractive industries in the state. We urge BLM to the extent possible to include provisions in the RMP which will address this alarming statistic and offer greater protection for Wyoming's workforce.

Response: BLM does not have the authority to regulate staffing and operation of drilling rigs. But a table and narrative have been added to Chapter 3 of the final EIS that shows the deaths related to oil and gas activity that have occurred since the beginning of the oil and gas boom in the study region.

Comment: The agency should not rely exclusively on a deterministic, single value resource estimate due to the high risk an uncertainty with such estimates. According to Rose (2001), "Single-value estimates...predict an outcome that is possible, usually optimistic, and nearly always wrong." A better approach is to base estimates of gas and oil resources on a probabilistic range of values based on different levels of confidence. A probabilistic range of values more accurately portrays the risk and uncertainty inherent in industry estimates of undiscovered gas and oil resources. Reliance on a single value estimate

does not comply with NEPA because it fails to use a range of values in order to fully consider the risk and uncertainty inherent in oil and gas estimates.

In addition to a range of probabilistic resource values, estimates of economically recoverable resources must be made based on a realistic range of prices in order to account for the uncertainty in forecasting future prices. Figure 1 shows historic prices for oil and gas in the U.S., and the potential volatility of these prices. To account for price uncertainty, USGS scientists use high and low price scenarios when estimating economically recoverable resources. We recommend a similar approach, including using USGS data for estimating undiscovered oil and gas resources.

Response: The EIS provides an estimate of environmental impacts that could ensue if varying numbers of oil and gas wells were developed. The numbers of wells analyzed are not limits, but reasonable estimates of development generated to be used in the impact analysis. If development were to proceed to the point that impacts exceed those presented in this EIS, further NEPA analysis would be necessary.

Comment: Please review the RAND Corporation reports (LaTourette, et. al 2002, and 2003; Vidas et. al, 2003) detailing methods to estimate economically recoverable resources. We also request that the agency review Attanasi (1998) which describes methods used by the USGS to estimate economically recoverable resources for all the basins analyzed in the Energy Planning and Conservation Act's (EPCA) 2002 Assessment. It should be noted that the RAND analyses include some environmental cost, however, because they exclude non-market costs, USGS estimates are just the starting point to determine whether undiscovered gas is economically viable to extract. The RAND and USGS documents both demonstrate the feasibility of making estimates of economically recoverable resources and provide useful guidance on methodology.

Response: The EIS provides an estimate of environmental impacts that could ensue if varying numbers of oil and gas wells were developed. The numbers of wells analyzed are not limits, but reasonable estimates of development generated to be used in the impact analysis. If development were to proceed to the point that impacts exceed those presented in this EIS, further NEPA analysis would be necessary.

Comment: We request that the agency make realistic assessments of the likely production curves along with the expected rate of development and production for the type of resources to be produced, and that all estimates of local revenues be made on an annual basis which reflects the expected annual production.

Response: The draft RMP provides an estimate of environmental impacts that could ensue if varying numbers of oil and gas wells were developed. The numbers of wells analyzed are not limits, but reasonable estimates of development generated to be used in the impact analysis. If development were to proceed to the point that impacts exceed those presented in this EIS, further NEPA analysis would be necessary.

Comment: The agency must base analyses of the impacts of oil and gas development proposals on estimates of economically recoverable resources, rather than technically recoverable resources. We formally request that the Reasonably Foreseeable Development scenario be based on economically recoverable amounts of oil and gas, not technically recoverable oil and gas. We formally request that estimates of jobs and income and local and state revenues be based on economically recoverable amounts of oil and gas, not technically recoverable oil and gas.

Response: The EIS provides an estimate of environmental impacts that could ensue if varying numbers of oil and gas wells were developed. The numbers of wells analyzed are not limits, but reasonable estimates of development generated to be used in the impact analysis. If development were to proceed to the point that impacts exceed those presented in this EIS, further NEPA analysis would be necessary.

Comment: The agency must make accurate and realistic estimates of gross and net revenues. We requests that the agency determine all applicable Federal, state and local tax laws (including exceptions and reductions) and that these laws and regulations be used to make realistic and accurate estimates of net tax revenues from oil and gas production. Revenue estimates must be made based on economically recoverable resources rather than technically recoverable - and must include the environmental and community costs from drilling and production.

Response: The tax revenues have been estimated and reported in the draft RMP.

Comment: The derivation of the "Average Number of Jobs Supported Per Year" should be documented more fully. The information presented in the Draft EIS regarding the number of wells to be drilled and the workforce assumptions for gas exploration and development (Table A26-1) don't appear consistent with the results portrayed in Table 4-13. Estimates of the numbers of jobs supported by each alternative, as presented in Table 4-13, is dependent upon the mix of wells, the extent of seasonal limitations, and assumptions regarding the time required to mobilize, place, drill and complete a well. Information regarding those assumptions is not presented in the Draft EIS or appendices. It is not clear whether the numbers shown are direct oil and gas employment, or total employment (compare the presentation here to that in the Pinedale Anticline, e.g., 34.2 jobs for an Anticline well to 47.4 jobs in the Pinedale Anticline Draft SEIS – Pg. 4-18). Furthermore, even if the numbers presented in the narrative accurately reflect the estimates, the table and narrative should acknowledge the seasonal fluctuations in drilling and exploration employment that occur in the region, and the potential that the seasonal peaks would be higher than the annual averages.

Response: The narrative has been updated in the final EIS.

Comment: What time period is covered by the economic analysis, e.g., average numbers of workers and the discounted net present value of future earnings and tax revenues? Footnotes to some tables suggest these values only extend through 2020. However, with the exception of CBNG, the typical well lives extend beyond 20 years, but at diminished rates of production. The declining long-term production has implications for employment and tax revenues that must be acknowledged in the RMP. Tables 4-13 and 4-14 include several annual averages and net present values (NPVs) of future monetary values. The time period associated with the projected oil and gas production levels and monetary values underlying the NPVs is unclear. Of particular concern is the representation of the average number of jobs associated with oil and gas production, the total labor earnings, and the future royalties and revenues to be derived. While the presentation may be accurate in terms of representing an arithmetic mean, it ignores the potential year-to-year variability, peaking and inevitable contraction in employment and tax revenues, and subsequent effects on social and economic conditions, that correspond with the drilling assumptions in Appendix 26. For example, production related employment is relatively low at present, but would increase over time. As a consequence, the average numbers of production related jobs shown in Table 4-13 likely underestimate the potential production employment in the latter years. A year-by-year summary of production, the value of production, development and production employment, and tax revenues should be included Appendix A-26.

Response: The economic analysis covers the planning period through 2020. The final EIS has been updated to include information on employment and earnings by year and alternative.

Comment: I am also concerned that your EIS process has failed to adequately assess and address the serious socio-economic and human health impacts of oil and gas development in the region. The media (New Yorker Magazine, Washington Post) has provided information on widespread meth-amphetamine use and dealing, increased crime and violence, inflationary pressures on local economies, and serious threats to historic rural ranching lifestyles. After the development is over, along with the boom wages for

workers and profits for drug dealers, what will the beautiful Sublette County be left with? Adverse impacts to human health will clearly result from oil and gas development in the upper Green River area, and your failure to develop an adequate health impacts assessment as part of your planning process should be cause to return to the scoping level of plan development. As it stands the draft is flawed and gives the impression that a poor and ill-considered decision has already been made!

Response: This comment is addressed in Sections 4.10.4 and 4.10.5 of the draft RMP: "The PAWG and SETG identified a number of social issues and impacts associated with the current level of oil and gas production in the area, which is expected to continue with the current management situation. The prevalent social impacts occurring in the area from the rapid growth in the gas industry development are categorized as follows: (1) impacts on community stability and connectivity; (2) impacts on quality of life; and (3) impacts on social and community services. The SETG identified a number of critical social issues or community factors — housing, crime and drugs, education, emergency response and social services, and traffic — that could potentially have social impacts from intense oil and gas development in the planning area." And while these impacts are addressed within one of the three categories identified above, the narrative has been expanded to include the impacts from substance abuse, crime, and education.

Comment: The BLM's socioeconomic analysis in the Pinedale RMP undeniably demonstrates the crucial role oil and gas development plays in the economic well being of Sublette County and the entire state. The BLM's decisions the Pinedale RMP could result in devastating impacts to the regional economy, including the loss of over 2;200 jobs and the loss of 2.3 billion dollars in tax revenue. Given these economic realties the BLM cannot select Alternative 3

The BLM must update its socioeconomic evaluation for the Pinedale Resource Area given the increased pace of development in the area. Table 4-13 indicates that the BLM assumed that between 255 (Alternative 3) and 377 (Alternative 2) federal wells will be drilled within the planning area each year. The BLM's analyses in the JIDP EIS and the PAPA SDEIS indicate a much higher rate of development, at least for the next several years. The JIDP EIS assumed that up to 250 wells could be drilled each year, see JIDP FEIS, pg. 2-18, and the PAPA SDEIS anticipates up to 305 wells per year, see PAPA SDEIS, pg. 2-27. Given this level of development, the BLM's analysis does not appear to be accurate.

Response: The numbers of wells in Table 4-13 are averages over the life of the RMP. They are what we expect to happen over a Reasonable Foreseeable Development (RFD) scenario. The rate of development employed in the RMP is used to estimate the possible impacts for planning purposes. It is meant to gauge what BLM would expect to happen under each management alternative and does not approve any wells.

Comment: Finally, the BLM needs to capture the economic costs to Wyoming in Alternative 3. Anotherwards, if not production occurs would the decreased or lost production cost?

Response: The impacts of selecting Alternative 3 are presented through the reduction in the oil and gas RFD and resulting reductions in employment, taxes, etc.

Comment: You see, there are a lot of people who make their living around here in the energy industry. When you're writing plans like the Pinedale RMP, you absolutely need to consider the plan's impact on our local economy. I believe that if you set a correct RFD (which you haven't done -- but need to) you will attract large scale investment that is crucial to our collective future.

Response: The RFD was reviewed prior to publication of the draft EIS and accurately portrayed projected future development at the time of publication. The RFD has been evaluated again for inclusion in the final EIS to incorporate changes in areas available for leasing.

Comment: ...in the spirit of protecting our heritage, economy and way of life that I oppose alternative 3 and that if is selected I want a detailed socioeconomic analysis in the Final RMP that quantifies just how much economic disruption will occur in Pinedale resulting from the resources that are locked away from production.

Response: The impacts of selecting Alternative 3 are presented through the reduction in the oil and gas RFD and resulting reductions in employment, taxes, etc.

Boom and Bust Economy

Comment: Additionally, and perhaps more importantly, the resource "bomb and bust" economy that is attendant to this type of development will negatively impact the local communities in ways that they may never recover.

Response: From Chapter 1 of the draft RMP: "Both Sweetwater County and southern Sublette County have experienced energy booms and busts, as early as the 1860s and as recently as the 1980s. Many residents welcome the boom times and the related funding these times generate for county budgets and improvements in infrastructure. Because many of these communities have already experienced resource extraction boom-bust cycles, a Socioeconomic Task Group (SETG) was formed to analyze the impacts of these cycles and develop suggestions for their mitigation. Although this group has been disbanded, it did prepare a study chronicling the historical impacts from the oil and gas boom. It also included recommendations designed to help the impacted communities and counties proactively accommodate the expected rapid growth and associated impacts produced by a major oil and gas driven boom." To accurately portray the issues associated with a "boom and bust" cycle, an enhanced narrative has been added to the socioeconomics impact analysis, which provides more discussion of what can be expected under each alternative with regard to both the "boom" and the "bust".

Comment: At a time when global economies are driving demand for resources it would appear to make sense to add more drilling to this region. However, when taken in context of the local population the only result has been short term employment for interstate persons, inflation and pollution. We have seen the boom and bust cycles and the damage that over exuberance in development plans cause both local and state economies. There is no denying the short term impacts are very beneficial but long term fundamentals are sacrificed for a myopic policy.

Response: Within the context of Pinedale, increased drilling has resulted in many short-term drilling crews coming into the area to work. This, in combination with the intense level of economic activity, has impacted the area, resulting in housing shortages, increased real estate values, substance abuse issues, law enforcement issues, air pollution issues, wildlife issues, etc. The Chapter 4 narrative has been expanded to specifically address all of these impacts.

Comment: Another major concern is the economic future of Sublette County. The gas boom has, for the most part, had a positive impact on the local economy and infrastructure. However, the inevitable end of the boom may be closer than we think. Certainly if the energy companies are allowed to drill all they want, they'll be done and onto the next town as fast as you can say condensate. While many people here would be thrilled to see that happen, one of the community's mainstays would take a major hit. Tourism has always provided a significant amount of income to the residents of Sublette County. Personally, as someone who has worked for local outfitters, I know first hand that some people are choosing other destinations for their next hunting or fishing trip because of the drastic changes brought on by the boom. Where will our tourism industries stand in five years after we've drilled 5,000 more wells?

Response: Looking at table A26-2, the major development activity of drilling wells starts to decrease in all alternatives in 2013. While it is unclear whether or not this is a large enough decrease in economic

activity to create a "bust", the history of energy-driven development throughout the West would lead one to the conclusion that a "bust" is inevitable. A discussion regarding the anticipated "boom and bust" cycle associated with each alternative has been added to the Socioeconomic section in Chapter 4.

Tourism has provided a significant amount of income to the residents of Sublette County. The impact and extent of reduced tourism money flowing into the region as a result of increased oil and gas development is hard to quantify. Furthermore, tourism is spread over a number of industries (hotels, restaurants, and retail trade for example), but the increased economic activity being driven by the oil and gas sector overwhelms all other sectors. Therefore, when oil and gas activity tapers off there will be a noticeable economic decline in the impacted area. This discussion covering the boom and bust that is anticipated has been added to the final RMP impact analysis in Chapter 4. The extent of the recovery in the tourism industry, however, is unclear.

Comment: Also having industry in the valley will inevitably lower property values, because the property will not seem to be so pristine as it is now seen.

Response: The gas "boom" will increase property values because of an inadequate supply of housing, which has been described in the RMP. In addition to supply constraints, however, the long-term impact on real estate sales, especially second home sales, is unknown.

Comment: I am also angry that BLM allows mining, logging and drilling for less than fair market rates. The commercial companies should be required to pay for all damages to the properties and fair market royalties when they are allowing to drill, mine or log.

Response: BLM manages the land for multiple use. This allows many different activities on public land as mandated by Congress.

Comment: A recent article in The New Yorker (2/5/07) found a direct correlation between the dramatic rise in crime and meth use in the Pinedale area and gas development. So in addition to ruining the environment, it is also ruining the community.

Response: This comment is addressed in Sections 4.10.4 and 4.10.5 of the draft RMP: "The PAWG and SETG identified a number of social issues and impacts associated with the current level of oil and gas production in the area, which is expected to continue with the current management situation. The prevalent social impacts occurring in the area from the relatively rapid gas industry development are categorized as follows: (1) impacts on community stability and connectiveness; (2) impacts on quality of life; and (3) impacts on social and community services. The SETG also identified a number of critical social issues or community factors—housing, crime and drugs, education, emergency response and social services, and traffic—that could potentially have social impacts from the continued management of the planning area. These impacts are addressed within one of the three categories identified above."

Comment: Energy, I might add, that Sublette County residents pay at least double compared to consumers farther down the pipeline. Sublette County's infrastructure was not designed to accommodate the amount of activity that is currently present in our midst.

Response: A draft study has been prepared by Ecosystem Research Group (ERG), which addresses issues related to the oil and gas boom. This study has been referenced in the final EIS. Also, an expanded narrative has been added to the document that summarizes discussions BLM has had with the impacted towns and counties regarding their assessment of infrastructure costs associated with oil and gas development.

Comment: Don't indicate "dissatisfaction" with decreased quality of life... Accept responsibility for our citizens with your "decisions". Justify the economic imbalance and havoc regarding our needed "service" workers in our community and the workers in the gas fields, the "temporary boom" majority of population not integrating into our community's culture, the fast rising housing, property and food costs, the huge impact on medical services, schools and law enforcement, also increased truck traffic on our roads with the safety implications and road kill (human and wildlife)! State what you can do to reduce meth use and crime increases and animal poaching, emphasizing expectations of responsibility and accountability by the gas industry!

Response: The draft EIS provides an appropriate analysis of the economic impacts of RMP decisions.

Comment: With big game and sage-grouse already impacted by energy development in the Upper Green, and the community of Pinedale being adversely impacked by the impacts of the boom - with increased drug and alcohol abuse, grounded schools, stressed infrastructure and worsening air quality - enough is enough.

Response: These concerns are included in the RMP as well as some positive impacts.

Comment: We believe the DEIS is vulnerable for two reasons: (1) Social and Economic issues were not listed as a major "planning issue" (p. 1-6), and (2) The trends and cycles of energy development that has occurred periodically within the planning area did not appear in the DEIS.

Response: The social and economic issues associated with a major oil and gas boom are a byproduct of the management decisions described in the RMP. But the purpose of the RMP itself does not include managing the social and economic issues associated with those decisions.

Comment: The last area that needs to be discussed is the impact that occurs when these developments bring an influx of people into the state to drill the wells, build the roa, pipelines, operate heavy equipment, drive trucks to and from the gas/oil locations and operate and maintain the oil/gas fields. They cause further degrading of the environment. These new people require new homes that must be built, new sewer and water lines, and new power and phone lines. Because the old roads are not adequate to handle the increased traffic, they must be rebuilt or new ones constructed. New schools, new businesses and the entire infrastructure must be enlarged to meet the new demand. The increase in service and industrial industries that is necessary brings more demands on the environment. Another factor that must be taken into account is that his enlarged population demands more areas for recreation, which means they operate snow machines, all terrain vehicles, motorcycles, boats, campers and pickup trucks and they all burn more gasoline that pollute the air and water and have an enormous negative effect on Wyoming's big game wildlife, fish, small game and upland birds.

Response: The narrative discussing the housing needs associated with each alternative has been expanded and organized within the socioeconomic section for each alternative. Population increases are discussed in Section 4.10.5 of the draft RMP EIS. Increases in the level of population driven by an oil and gas boom increase the demand on the infrastructure. A draft study has been prepared by ERG that addresses this issue, and the study has been referenced in the final EIS of the proposed RMP. It is difficult to quantify the anticipated increased demand for recreational opportunities. The final EIS has been revised to include this information.

Comment: I would like to see a slower pace of drilling. Once the drilling is finished a lot of sales taxes will cease. The town of Pinedale does not receive production taxes so this will be hard on the town to maintain the population and improvements that were made during the boom times.

Response: A discussion of the impacts of industrial booms and busts has been added to the final EIS.

Comment: In Sublette Co. we do not have the infrastructure to accomodate the large numbers of people coming here to work.

Response: A draft study has been prepared by ERG that addresses the budgetary issues related to oil and gas booms. This study has been referenced in the final EIS.

Comment: SECTION 4.10.4 - PAGE 4-112 IMPACTS COMMON TO ALL ALTERNATIVES First Paragraph: In the short introduction, you list a number of potential socioeconomic impacts. What about changes to the local economy? What about changes to the local government? You mention tax revenue, what about tax expenditures? Please include the changes to both the mining and non-mining sectors of the economy, as well as changes to the local government.

Response: A narrative has been added to the RMP that discusses the increased demand for services created by a major oil and gas driven boom. This discussion will focus on the increased revenue coming into the impacted areas balanced against the increased demand imposed on the impacted communities and counties for services created by the boom itself. It will also point out the fact that there are uncertainties regarding the extent of both the boom and and the bust. These uncertainties increase the risk to the impacted area when major financial commitments are made in the face of the bust. Because the bust places a long-run burden from those financial commitments on the residents who remain in the area after the bust occurs.

Comment: The DEIS is an incomplete document due to the lack of long term trend socioeconomic characterization and analysis. There are clearly some adverse socioeconomic impacts resulting from energy development on public lands under the BLM authority. As NEPA defines EISs as disclosure documents, these impacts must be fully examined and reported in the FEIS. Without having socioeconomic impacts as a planning issue it is impossible to carry out the intent of NEPA.

Response: There was a review of the Ecosystem Research Group's Sublette County Socioeconomic Impact Study. This review was used to expand the narrative summarizing the infrastructure needs associated with the oil and gas boom forecast under each alternative. It is not necessary to identify socioeconomic impacts as a planning issue in order to develop an appropriate impact analysis.

Comment: It would be very difficult (say, in a court of law) for the BLM to argue that it did not know that there will be a "bust". That is to say, an economic downturn associated with the completion of the labor-intensive "development" phases of natural gas extraction. Everybody knows there will be some sort of downturn associated with the end of the development phase. What kind of downturn? It is hard to say. It could be a minor downturn, perhaps because of the inherent attractiveness of the area and the fact that the majority of the gas field workforce here has remained non-resident in nature; however, history tends to tell us otherwise. In fact, one could argue (and many do) that the socioeconomic impacts associated with "the bust" will be even greater than the impacts from "the boom".

Response: There has been a narrative added to the document that discusses the anticipated boom and bust cycle associated with the oil and gas drilling anticipated in the study area. The discussion of the bust will focus on the fact that the analysis highlighted in Table A26-2 of the draft RMP indicates that the major development activity of drilling wells will slack off in all alternatives in 2013.

Comment: Oh, wait, you don't even mention any kind of economic down turn at all! You don't even mention the bust, much less disclose what kinds of impacts the bust will have. How could you neglect to disclose what is possibly the largest socioeconomic impact this federal action will have? How do you

expect the local community and decision makers to plan for the future and help manage these impacts, if they are not even disclosed in the first place? You don't even disclose what kind of impacts the local governments will face, other than increased revenues from mineral royalties.

Response: There has been a narrative added to the document that discusses the anticipated boom and bust cycle associated with the oil and gas drilling anticipated in the study area. The discussion of the bust will focus on the fact that the analysis highlighted in Table A26-2 of the draft RMP indicates that the major development activity of drilling wells will slack off in all alternatives in 2013. There was a review of the Ecosystem Research Group's Sublette County Socioeconomic Impact Study. This review was used to expand the narrative summarizing the infrastructure needs associated with the oil and gas boom forecast under each alternative.

Comment: If economic factors are not considered, the opportunity costs of all forms of environmental protection will be overestimated. The agency will also likely overestimate the cost of lease stipulations, wilderness designation, and other protective measures if technically recoverable estimates are used. If the oil and/or gas are not economical to extract, there is no adverse impact on resource supplies from protecting wildlife, archeological sites, recreation sites and other public resources with leasing stipulations. Further, an EIS that relies on misleading economic information or fails to include all relevant costs in its economic analysis will violate NEPA, because it does not provide decision-makers and the public a valid realistic foundation on which to judge proposed projects.

Response: An EIS must disclose all the impacts created by an oil and gas boom, including both the positive and negative impacts. The discussion of impacts associated with each alternative has been enhanced where necessary to provide the reader with a balanced analysis of all impacts. However, to quantify the non-market impacts, a non-market study using, for example, the Contingent Valuation Method (CVM) would be required, which is beyond the scope of this effort. In the absence of a CVM study, a comprehensive narrative has been added to the final EIS that subjectively describes the importance of non-market impacts in the context of an intense oil and gas boom.

Comment: What about the economic downturn usually associated with the post-development phase of gas field extraction? Surely, this must be included in your socioeconomic analysis of a management area that includes two of the nation's largest on shore natural gas fields. Right? You admit that the area is in a "boom/bust cycle" on pages 4-111 and 4-112. Even if you planning horizon ends at 2020, the Jonah Field is predicted by the BLM to reach full development well before 2020, while the Anticline is predicted to reach the full development very soon after 2020.

Surely, an impact this enormous, of which the overwhelming majority is due to a BLM management action on federal lands, must be disclosed and closely analyzed to be considered as in compliance with NEPA3, right? I would have to assume that not disclosing the impacts of a widely anticipated economic downturn associated with the "bust" of natural gas development would surely be a violation of NEPA compliance. You might start by answering the following questions:

1. How many jobs will be lost after the gas fields are totally developed? What effect will this have on the local economy?
2. What effect will the downturn have on the housing market?
3. What effect will the downturn have on sales and property tax revenue received by local governments?

Response: The final EIS has been revised to include enhanced discussion of boom and bust cycles.

Comment: What about impacts to local housing prices? Will housing sales and rentals likely increase from Alternatives 1, 2, 3, and 4? What about the cost of constructing a new home? If prices will increase, what effects will that have on attracting professionals to provide the increase of social and community services that you predict will be needed?

COST OF GOVERNMENT, SOCIAL, AND COMMUNITY SERVICES UNDER EACH ALTERNATIVE: All you mention is increased tax revenues to local governments. What about increased operational costs? What a mighty rosy picture, indeed. You can start by answering the following questions:

1. Will the local government have to raise wages to compensate for wages paid in the gas field?
2. Will local government operating budgets increase under all the alternatives, or under certain alternatives?
3. Will the costs of materials for capital expenditures, road construction, machinery, and supplies increase?
4. What new facilities or staffing considerations will be needed to absorb the growing need for government and other social services?
5. How will these costs compare to the revenue increases expected from natural gas development under Alternatives 1, 2, 3, and 4?
6. Will the local governments be required to spend more money repairing streets and roadways under Alternatives 1,2,3, and 4?
7. What about local infrastructure costs required to expand municipal services to a growing population? How will costs for sewer and water services by local towns change under Alternatives 1, 2, 3, and 4?
8. How will street, park and other town maintainence costs change for the towns with growing populations due to increased employment from the federal actions under Alternatives 1, 2, 3, and 4?
9. Are current town sewer and water facilities adequate to absorb the predicted growth under Alternatives 1, 2, 3, and 4? Or should they be planning to upgrade and expand these facilities under certain Alternatives or all Alternatives?

Response: The final EIS has been revised to discuss the anticipated impacts to housing demand, housing supply, and housing prices under each alternative and also under the bust once it sets in. There was a review of the Ecosystem Research Group's Sublette County Socioeconomic Impact Study. This review was used to expand the narrative summarizing the infrastructure needs associated with the oil and gas boom forecast under each alternative.

Comment: When estimating the benefits of an oil and gas development project the agency must show these benefits as net rather than gross. The increased public service and infrastructure costs associated with expedited oil and gas development must be fully accounted for as part of the NEPA process for the current push to develop oil and gas in the West.

Response: A benefit-cost analysis would be required to fully analyze all the benefits and costs associated with a major oil and gas driven boom. Because the quantification of the non-market impacts are considered outside the scope of the analysis used for the RMP, all the benefits and costs cannot be quantified. Therefore, a benefit-cost analysis under these circumstances would be incomplete and will not

be done for this RMP. However, a narrative has been added to the analysis that points out the fact that even though there is a substantial tax and royalty revenue stream associated with a major oil and gas driven boom, there are also increased demands for services driven by that same boom.

Comment: The impacts on local economic diversity, the socio-economic risks to communities from cycles of boom and bust, as well as the economic instability associated with oil and gas development, must be analyzed and addressed as part of the NEPA process.)

Response: To accurately portray the issues associated with a boom and bust cycle, an enhanced narrative has been added to the socioeconomics section, which provides a robust discussion of what can be expected under each alternative with regard to depth and breadth of both the boom and the bust.

Comment: In order to fully comply with NEPA, the agency must include an analysis of the costs of implementing each alternative, which includes the costs of the mitigation plans contained within each alternative. These costs, must then be compared to the expected budget level to assess the probability of mitigation measures being fully implemented. The agency should therefore, as part of the NEPA process, include a reasonable budget limitation and evaluate a set of management alternatives that are constrained by that budget level. The agency must require adequate funding from oil and gas operators (in the form of reclamation bond) to insure that the reclamation is complete and adequate.

Response: A benefit-cost analysis would be required to fully analyze all of the benefits and costs associated with a major oil and gas driven boom. Because the quantification of the non-market impacts are considered outside the scope of the analysis used for the RMP, all the benefits and costs cannot be quantified. Therefore, a benefit-cost analysis under these circumstances would be incomplete and will not be done for this RMP.

It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted and where BLM has the authority to require mitigation.

Comment: E. The agency must analyze and discuss the socio-economic costs to communities associated the boom and bust cycles of oil and gas development. We formally request that the agency estimate the costs associated with oil and gas development to private landowners as part of the NEPA process. When estimating the benefits of an oil and gas development project the agency must show these benefits as net benefits rather than gross benefits. The increased public service and infrastructure costs associated with expedited oil and gas development must be fully accounted for as part of the NEPA process for the current push to develop oil and gas in the West. The impacts on local economic diversity, the socio-economic risks to communities from cycles of boom and bust, as well as the economic instability associated with oil and gas development, must be analyzed and addressed as part of the NEPA process. A thorough plan for monitoring the socio-economic impacts of oil and gas development must be developed and implemented as part of the NEPA process and the implementation of all development and non-development alternatives.

Response: A draft study has been prepared by ERG that addresses issues related to the oil and gas boom. This study has been referenced in the final RMP. A benefit-cost analysis would be required to fully analyze all of the benefits and costs associated with a major oil and gas driven boom. Because the quantification of the non-market impacts are considered outside the scope of the analysis used for the RMP, all the benefits and costs cannot be quantified. Therefore, a benefit-cost analysis under these circumstances would be incomplete and will not be done for this RMP.

Comment: The socioeconomic impact analysis minimizes the potential challenges facing Sublette and Sweetwater Counties to address population growth and impacts on housing and demands for public services associated with the level of oil and gas development outlined in the RMP. Section 4.10.6 Impacts Under Alternative 1 contains the following statements. "Continued oil and gas development would be expected to keep the existing oil and gas industry healthy, as well as to increase regional economic activity. However, since housing availability in the study area is limited and many of the oil and gas development jobs are seasonal or temporary, the population impacts would be lessened." Then later "…the county's population will increase steadily….a 73% increase over the 10-year period" (2005 to 2015). Yet later "Activities within the planning area would impact local government services…and cause undue strain infrastructure (e.g., roads, utilities, and schools)." Finally, "Without additional housing availability, it would be difficult to increase the provision of these services…" While those statements acknowledge that impacts will occur, they fall short of capturing the magnitude, intensity and severity of impacts as required by NEPA. It overlooks issues such as the potential jurisdictional and timing mismatch between impacts on demands for services and revenue accrual, and challenges faced by service providers, such as recruiting and retaining employees to expand services. Furthermore, the discussion treats the seasonality of energy related development as a "mitigating" factor rather than a dimension of the development that imposes particular challenges for local businesses, governments and service providers

The seasonality and rapid rise in local employment is clearly evident in the following graph (from The Sublette County Socioeconomic Analysis Advisory Committee www.sublette-se.org). The discussion also ignores the longer-term post-development implications for communities and economies. The prospective peaking and loss of population was recognized by the efforts of the PAWG-SETG referenced in the Draft RMP. Population projections developed by that group portray a peaking in resident population in about 2015; that is, during the life of this plan. Additional insight regarding the long-term implications are evident in a series of economic and demographic projections developed by the Coalition of Local Governments using a version of the REMI Policy Insight model calibrated for a 6-county region of southwest Wyoming (Carbon, Fremont, Lincoln, Sublette, Sweetwater and Uinta) – Table A on the next page and the three figures on the subsequent page. 1

Two sets of projections were developed using the REMI model; a baseline scenario assuming limited additional energy resource development but local participation in underlying national economic trends, and a with Pinedale RMP scenario. For this analysis, the "with RMP" scenario is generally based on Alternative 1 – No Action, using available data contained in the draft EIS, supplemented by generalized assumptions regarding the distribution of industry spending and non-resident labor. The projections do not represent the official or accepted projections of any of the member organizations of the Coalition of Local Governments. Rather, they are intended to be illustrative of reasonably foreseeable eventualities, the socioeconomic consequences of which should be addressed in the RMP/EIS.

Response: The final EIS has been revised for consistency. A draft study has been prepared by ERG that addresses the issues related to the oil and gas boom. This study has been referenced in the final EIS. Also, an expanded narrative has been added to the document that summarizes the discussions BLM has had with the impacted towns and counties regarding their assessment of the infrastructure costs associated with oil and gas development. A discussion regarding the anticipated boom and bust cycle associated with each alternative has been added to the socioeconomic section in Chapter 4 of the final EIS.

Comment: The peak projected impacts are:

9,150 jobs in Sublette County and 17,360 jobs across the 6-county region

7,514 residents in Sublette County and 15,210 residents across the region

The resulting projections illustrate the rapid growth associated with the proposed drilling program (results for the other alternatives would generally be similar), with growth in Sublette County even more rapid than anticipated by the PAWG-SETG. That growth and the demands on services would be in advance of the bulk of the ad valorem and other tax revenues associated with production. The results show that Sweetwater County will experience considerable employment and population effects as well. For the most part, the potential for such impacts is not addressed in the Pinedale RMP/EIS. Neither are the effects in Lincoln and Uinta counties (see Table A.) Although the scale of the impacts in the latter two counties are considerably lower than in Sublette and Sweetwater county, local governments and service providers, like those in Sweetwater county, will face additional demands without the benefits of the direct increases in ad valorem and sales and use tax revenues realized in Sublette County.

Response: A draft study has been prepared by ERG that addresses the issues related to the oil and gas boom. This study is referenced in the final EIS. Also, an expanded narrative has been added to the document that summarizes the discussions BLM has with the impacted towns and counties regarding their assessment of the infrastructure costs associated with the gas development. The three county study area comprised of Sublette, Lincoln, and Sweetwater counties will remain the same.

Recreation, Wildlife, Habitat

Comment: Not only would this destroy natural habitat, but it would reduce INCOME to the area because of a loss of recreation dollars. If you do any research, you will see that recreation revenue is greatly increasing in states such as Wyoming and Montana. Let's not take livelihoods away from our fellow citizens!

Response: Sections 4.10 and 4.19.1 of the draft RMP identify recreation as a contributor to the local economy.

Comment: I own 2 hunting camps in the Greys River drainage in Lincoln County. The impact that is currently going on in Lincoln and Sublette County has been excessive. The mule deer are seriously being affected. The Wyoming Game & Fish has been reducing non-resident hunting licenses, which is affecting my ability to make a living.

Response: Impacts to wildlife from oil and gas development are described in Chapter 4. BLM does not have the authority to prohibit development of existing valid oil and gas leases.

Comment: If the BLM intends to prohibit all new ROWs in sage-grouse habitat and crucial winter range, it must clearly indicate its intent, and disclose the significant negative impacts closing the Pinedale Resource Area to new oil and gas development will have upon the local economy.

Response: No alternative analyzes prohibiting ROWs in sage-grouse winter concentration areas. Exclusion areas near leks are 200 feet in the Preferred Alternative of the draft RMP. Exception criteria are also provided in case that moving the ROW 200 feet is not possible.

Non-market Values

Comment: We cannot drive into Pinedale without seeing haze in the sky. The town is no longer the town it was even five years ago. The pollution and social effects of the gas boom have changed the landscape, the skyline, and the quality of life.

Response: Air pollution is a non-market value that will decline with increased development. Increased crime, congestion, and other social ills are also likely and have been addressed in the draft RMP impacts analysis.

Comment: FROM A STANDPOINT OF ECONOMIC GROWTH AND NATIONAL SECURITY, when will you recognize the VALUE of ecosystem services? I'm not asking for a miracle- for you to change your stance on the environment out of compassion, I'm asking you to consider the fiscal value of environmental services. Google Amory Lovins and Google Ecosystem services and work it out with insurance companies. There's money, measurable value at stake here. Just do a cost/benefit analysis and consider the results.

Response: This comment is addressed in part in Chapter 4, which states: "Non-market values associated with BLM lands, such as recreation (for example, hunting, biking, hiking, and OHV use), viewsheds, wildlife habitat, water regulation, climate regulation, waste assimilation, hydrological function, and flood control (among many others), are expected to decrease under this alternative. Because the decreases in these values are often difficult to quantify, it is not easy to fully understand the tradeoffs inherent with significant oil and gas development. It could be that under Alternative 1, the societal non-market values could decrease more than the value of the oil and gas resource extracted." A benefit-cost analysis has not been done, but if such an analysis were conducted, the non-market impacts would need to be quantified and included.

Comment: While I appreciate the fact that Americans are given the chance to speak up about their opinions concerning this atrocity, nature being further destroyed by man for the almighty dollar, I am concerned still that we will lose all that is natural in this world if we continue to tamper with this planet for our own gain. It is actually more of a gain for politicians and people that are involved in sucking the dollars of the American people away from them. This world has intrinsic value that does not have monetary value. The lives of all of the animals and plants do not have monetary value. We should value life above all things, especially since we have very little control over nature despite the fact that we continue to attempt to control and use it for our own gain. It truly is disgusting - how many people are actually in control of our natural resources? We all have to live on this earth, so why do only a few select people elected to determine the fate of us all? One can determine that this is the best way to run a country, but no one runs the world. We are all supposed to be keepers of this beautiful world and not only consumers. Thank you.

Response: Non-market values are important. The impacts analysis in Chapter 4 recognizes the effects on non-market values. Other issues raised are outside of the scope of this study.

Comment: It is also not in the best interest of the long-term economy of a place like Pinedale that depends on a healthy natural ecosystem as the base of its economy.

Response: Non-market values are important. The impacts analysis in Chapter 4 recognizes the effects on non-market values.

Comment: I am a native of Dubois, Wyoming and would like to express my concern for all of the gas drilling that is happening in this part of the country. The consensus in the community is that it is TOO MUCH. Our livelihood here is based on the outdoors and wildlife. Please listen to the input from people who live here, not just private interests looking to profit.

Response: This comment is addressed under non-market values in Chapter 4. For example, the no action alternative includes the following narrative stating that "Non-market values associated with BLM lands, such as recreation (for example, hunting, biking, hiking, and OHV use), viewsheds, wildlife habitat, water regulation, climate regulation, waste assimilation, hydrological function, and flood control (among many others), are expected to decrease under this alternative. Because the decreases in these values are often difficult to quantify, it is not easy to fully understand the tradeoffs inherent with significant oil and gas

development. It could be that under Alternative 1, the societal non-market values could decrease more than the value of the oil and gas resource extracted."

Comment: I live here because of the amount of public land surrounding the Pinedale area. I will never be able to afford a large piece of property so I depend on our public lands for recreation, visual inspiration and mental health.

Response: Non-market values such as visual inspiration and mental health are covered, in part, in Chapter 4, which recognizes the effects on non-market values in the EIS.

Comment: 4. There should be a complete accounting of the cost of this change in the RMP, and subsequent permitting procedures and monitoring costs (state, federal, and county) of the various resulting projects. Will there be a net gain to taxpayers? We feel that our tax dollars should be spent on better things, and not things that disturb us.

Response: To fully assess all the benefits and costs, the non-market impacts would need to be quantified, which is beyond the scope of this analysis.

Comment: 2. Non-market values The DEIS states: "Because the decreases in these non-market values are often difficult to quantify, it is not easy to fully understand he tradeoffs inherent with significant oil and gas development" (p. 4-113). This statement is patently false. Non-market values have been measured and quantified for decades. There is a well established body of economic research on the measurement of non-market values, and the physical changes (decreases in the source of these values) brought about by "significant oil and gas development" are very easy to measure quantitatively.

One of the most important purposes of public lands, including those of the BLM in the Pinedale area, is the provision of public goods. Non-market goods often fall into the category of public goods. These are things like outdoor recreation opportunities, clean air, clean water, the preservation of wilderness and other undeveloped areas that would be underprovided if left entirely to market forces. The BLM has an inherent responsibility to see that these public goods are provided and in quantities that meet the demand, not just of local residents, but of every U.S. citizen.

Non-market values are important to the residents of the Pinedale area. In a recent study (McLeod et al. 1998), Sublette County residents were asked why they chose to live in the area. The top three responses (in order) were "scenery," "recreation" and "lifestyle." All of these are non-market values and the BLM lands in the Pinedale area are without a doubt an important (if not the most important) source of these values.

Response: To quantify the non-market impacts, a non-market study using, for example, CVM would be required, which is beyond the scope of this effort. The final EIS has been revised to include an enhanced narrative that subjectively describes the importance of non-market impacts in the context of an intense oil and gas boom and a discussion of the anticipated impact to non-earned income and the second home market associated with each alternative.

Comment: The BLM has generally failed to adequately recognize, consider and analyze non-market values in its socio-economic analysis.

Response: To quantify the non-market impacts, a non-market study using, for example, CVM would be required, which is beyond the scope of this effort.

Comment: We request that the agency include both market and non-market costs and benefits in order to fully account for all the impacts of potential development.

Response: To quantify the non-market impacts, a non-market study using, for example, CVM would be required, which is beyond the scope of this RMP. In the absence of a CVM study, a comprehensive narrative has been added to the final EIS that subjectively describes the importance of non-market impacts in the context of an intense oil and gas boom.

IMPLAN

Comment: The assumptions and methods presented in Appendix 26 leave many unanswered questions. First, how exactly were the oil and gas multipliers adjusted? The wording implies that these national multiplies may have actually been adjusted upward for the Pinedale area: "These estimates were than adjusted to account for self-employment…" (p. A26-1). No evidence is presented that would support a large amount of self-employment in the oil and gas industry, and it is widely understood that the national level multipliers are actually already too large to accurately portray the impact of any industry in a small remote area such as the study area. The actual multipliers used to project the impacts of all the industries should be presented and any adjustments that have been made to these should be explicitly detailed, including the numbers upon which such adjustments were based.

Appendix 26 also states: "The IMPLAN sectors associated with recreation were not adjusted because it was believed [emphasis added] that they were a reasonably accurate representation of the sectors found in the study area." (p. A26-1). Believed by whom? Based on what? This assertion is completely unsubstantiated, and we feel represents the chronic under-analysis applied to any sector that isn't oil and gas! If any sector in the study area might require some additional effort in order to effectively predict impacts it would be the recreation sector which is at best poorly modeled in IMPLAN. Please provide details upon which this assumption is based, or preferably, conduct better analysis of this important sector.

The discussion of the reasons for only including non-resident recreation activity as contributing to the local economy further highlights the need to collect and analyze the overall impact associated with the existence of recreation opportunities on BLM lands in the study area. While resident recreation participation may not represent "new" money flowing into the economy the way non-resident spending does, this is a very narrow view of the role that these lands play in the local economy. Residents may, and studies have shown do, move to areas such as the Pinedale area because of the presence of the surrounding public lands. This is due to many factors – including both the scenery or backdrop they provide and the recreation opportunities. These new residents bring to the area needed economic diversity as many are entrepreneurs who start new businesses in their communities. These businesses are a source of jobs and income and may be harmed by the proposed accelerated oil and gas drilling. And in fact in Pinedale it has been well documented that non- oil and gas businesses are being harmed by the current level of drilling. It is unlikely that increased drilling will improve things. New residents who earn non-labor income (retirees and investors) are also attracted to areas with protected public lands for similar reasons as entrepreneurs. These people also bring new money to the local communities, income which can often serve as a source of capital for new entrepreneurial endeavors spurring a cycle that can potentially improve the diversity of the economy. The over-dependence on oil and gas drilling will stifle this diversity, and it is well documented that areas with diverse economies outperform those with a single-industry focus.

Response: The Impact Analysis for Planning (IMPLAN) model used in this analysis was calibrated by the University of Wyoming to represent the study area. But as pointed out in this comment, there are other important considerations that are not fully reflected by IMPLAN runs. Most notably, the non-market

impacts are not captured in the IMPLAN analysis. To quantify the non-market impacts, a non-market study using, for example, CVM would be required, which is beyond the scope of this effort.

The final EIS has been revised to include an enhanced narrative that subjectively describes the importance of non-market impacts in the context of an intense oil and gas boom and a discussion of the anticipated impact to non-earned income and the second home market associated with each alternative. The Sonoran Institutes publication titled "Public Lands Conservation and Economic Well-Being" is referenced and summarized to point out the importance of public lands, especially protected public lands, to the overall economic well-being of communities in the West.

Comment: 1. IMPLAN We are concerned that the use of the IMPLAN (or any economic base) model to predict the impacts to the Pinedale socioeconomic region of influence will lead to inaccurate and incomplete at best and at worst, biased estimates of the potential impacts. While the IMPLAN model can be useful as a tool to develop static analyses of the regional economy, the agency and local communities must be aware of the shortcomings and poor track record of the model as a predictive tool. As Haynes and Horne (1997) note: "Where the economic base approach gets into trouble is when it is used inappropriately as a tool for planning or predicting impacts (emphasis added) of greater than one year in duration; a snapshot of current conditions tells little about the form a region's future economy may take."

There are several issues with the assumptions on which economic base models such as IMPLAN are based. First is the incorrect assumption that an economy is static (i.e. it does not change). IMPLAN also assumes that there will be no changes in relative prices, no input substitution or technological change in the production processes (for example increasing technology has resulted in fewer and fewer workers per unit of output in the oil and gas industry), no labor mobility, no change in products or tastes, no regional migration, and no changes in state and local tax laws. The assumption of no labor mobility is particularly important for oil and gas drilling proposals, since it draws into question the issue of local versus non-local job creation. Workers are mobile, especially in the oil and gas industry as crews move from drill site to drill site. There is no guarantee that the oil and gas jobs projected by IMPLAN will be filled by local workers. And in fact, there is considerable evidence that workers in non-local crews fill most, if not all the direct jobs in oil and gas drilling.

Also IMPLAN models do not consider the impacts of many important variables that affect regional growth in many rural communities. Many Westerns communities like the ones in the Pinedale area have economies that are dependent on local amenities like high quality hunting, fishing and recreational opportunities, open space, scenic beauty, clean air and clean water, a sense of community, and overall high quality of life. These are not measured or accounted for in IMPLAN models. However these amenities are associated with attracting new migrants as well as retaining long-time residents and are also clearly likely to be negatively impacted by an increase in oil and gas drilling in the Pinedale.

IMPLAN completely fails to account for retirement and investment income. Many residents of Western communities (both long-time and new) earn retirement and investment income. An analysis of economic trends will show that retirement and investment income is becoming increasingly important to rural economies of the West.

Economists with both the Forest Service (Hoekstra, et. al 1990) and the Office of Technology Assessment (1992) concluded that while IMPLAN is useful for appraising the economic impacts of a management plan, the model is insufficient for evaluating the overall economic impacts for communities. These impacts (as has already been seen in the Pinedale area) can be large and must be measured accurately. And according to the OTA (1992), IMPLAN has an additional shortcoming for assessing community impacts: the economic data used to construct IMPLAN do not provide comparable details for all sectors of the economy. While economic data for oil and gas is classified as a separate manufacturing industry,

recreation is scattered among a variety of industries generally classified in services and retail, with some in transportation. The ease of data acquisition for estimating oil and gas impacts combined with the difficulty of estimating the impacts of recreation and tourism underscores the potential bias favoring oil and gas development in IMPLAN modeling.

The concern over the accuracy of models like IMPLAN combined with concern over the use of these models for planning, suggests that it is not only inappropriate but a disservice to rural communities to rely on IMPLAN to estimate the economic impacts of public land management alternatives on rural communities.

Response: While there are shortcomings with IMPLAN, it is commonly used for impact analysis work. Other federal agencies, such as the United States Forest Service, use it for their impact assessment work. Also, the University of Wyoming has addressed the issue of a transient oil and gas workforce and adjusted the output of the model to account for non-local labor. Nonetheless, using IMPLAN as the sole indicator of impacts can be misleading because it does not include the non-market impacts. And although the quantification of non-market impacts are considered beyond the scope of this effort, a new narrative has been added to the final EIS that subjectively addresses this issue.

Comment: We recommend that the BLM conduct a more thorough analysis of the socioeconomic impacts associated with the RMP Alternatives. The attached document – "Socio-Economic Framework for Public Land Management Planning: Indicators for the West's Economy" provides details of the methods and analyses that we feel are necessary for a complete assessment of the impacts to the Pinedale area.

We recommend that the BLM stop relying on IMPLAN and other models derived from economic base theory. However, if planners in the Pinedale Field Office continue to use IMPLAN, the model must account for non-labor income, as well as income from hunting, fishing, and recreation. It must also account for the fact that most drilling is completed by non-local crews. The analysis must account for increasing labor productivity and hence declining jobs per well drilled. We also insist that if the BLM uses IMPLAN that the agency fully discuss the assumptions, the shortcomings, and the risk and uncertainty due to the poor track record of the IMPLAN model in planning efforts. We also request that all data and multipliers used to project local impacts be made public.

More thorough and accurate data on the impact of non-oil and gas sectors must be used in order to make an equitable comparison of the alternatives. Some sources of data on the impacts of the recreation sector include Kaval and Loomis 2005 and Rosenberger and Loomis 2001. The BLM must measure and account for changes in non-market values associated with the dramatic increases in oil and gas drilling proposed in this RMP. To do otherwise omits a very important socioeconomic impact that is the direct result of management actions. Peer reviewed methods for quantifying both the non-market and market costs of changing environmental quality have been developed by economists and are readily applicable to the present case. For a catalog of these methods see Freeman (2003). For a complete socioeconomic analysis, BLM should adapt these methods to conditions in the Pinedale area to obtain a complete catalog of estimates of the economic consequences of the proposed Alternatives.

Response: The final EIS has been revised to include additional socioeconomic impact analysis.

Comment: We recommend that the agency stop relying on IMPLAN and other models derived from economic base theory. If planners use IMPLAN, the model must account for non-labor income, as well as income from hunting, fishing, and recreation. If the agency uses IMPLAN, it must also account for the fact that most drilling is completed by non-local crews. If the agency uses IMPLAN, the analysis must account for increasing labor productivity and hence declining lobs per well drilled. We insist that the

agency fully discuss the assumptions, the shortcomings, and the risk and uncertainty due to the poor track record of the IMPLAN model in planning efforts. We also request that all data and multipliers used to project local impacts be made public. We also request that the agency complete a trend analysis of regional jobs and income - to provide a better and more complete understanding of their economic past and their economic future. We formally request and recommend that the agency analyze economic trends using the Economic Profile System model developed by the Sonoran Institute in cooperation with the Bureau of Land Management (available at http://www.sonoran.org).

Response: While there are shortcomings with IMPLAN, it is commonly used for impact analysis work. Other federal agencies, such as the United States Forest Service, use it for their impact assessment work. Also, the University of Wyoming has addressed the issue of a transient oil and gas workforce and adjusted the output of the model to account for non-local labor. The Economic Profile System (EPS) and Economic Profile System for Communities (EPSC) were used for this analysis and files of these profiles are available for review. It should be noted that both EPS and EPSC are not designed to do impact analyses. Moreover, in an area like Sublette County that is undergoing rapid change driven by intense energy development, the data in both EPS and especially EPSC is dated.

Comment: B. The plan must reflect an accurate and realistic projection of jobs and income associated with the oil and gas development proposal. We formally request that the agency stop relying on IMPLAN and other models derived from economic base theory. If the agency planners use IMPLAN: The agency must fully discuss the assumptions, the shortcomings, and the risk and uncertainty due to the poor track record of the IMPLAN model in planning efforts. We request that all data and multipliers used in the socio-economic impact analysis, including those used in 1MPLAN be made public. The model must account for non-labor income, as well as income from hunting, fishing, and recreation. The model must also account for the fact that most drilling is completed by non-local crews. The analysis must account for increased labor productivity and hence declining jobs per well drilled. The agency must also complete a trend analysis of regional jobs and income - to provide a better and more complete understanding of their economic past and their economic future. We formally request and recommend that the agency rely on trend analysis of income and employment for the counties impacted using the Economic Profile System (EPS) developed by the Sonoran Institute in cooperation with the BLM (available at http://www.sonoran.org).

Response: While there are shortcomings with IMPLAN, it is commonly used for impact analysis work. Other federal agencies, such as the United States Forest Service, use it for their impact assessment work. Also, the University of Wyoming has addressed the issue of a transient oil and gas workforce and adjusted the output of the model to account for non-local labor. EPS and EPSC were used for this analysis and files of these profiles are available for review. But it should be noted that both EPS and EPSC are not designed to do impact analyses. Moreover, in an area like Sublette County that is undergoing rapid change driven by intense energy development, the data in both EPS and especially EPSC is dated.

Clustering Drilling, Phased Development

Comment: Clustering also benefits communities by spreading the extraction process over time so that the workforce becomes more invested in the area. There is a lower population need for the work force and it would remain a “level” number. This would give the county the ability to catch up with infrastructure to serve the boom as well as our longer-term recreation-based economy.

Response: Clustering wells would not reduce the number of wells drilled or the workforce required, but would reduce surface impacts of gas development. Clustered developments are being implemented where appropriate in the planning area, but it is not possible to have cluster drilling until enough straight holes have been drilled to define the field.

Comment: The benefits of clustering the impacts of energy development and phasing their progression northward are many. The primary benefit to the area is a local economic stabilization of spreading the extraction process out over time so that the workforce becomes more invested in the community. There is a lower population need for the work force and it would be a 'level' number. This would give the county the ability to catch up with the infrastructure needed for this development as well as our longer term recreational economic future.

Response: Social effects are addressed in Sections 4.10.4 and 4.10.5 of the draft RMP. Clustering wells would not reduce the number of wells drilled or the workforce required, but would reduce surface impacts of gas development. Clustered developments are being implemented where appropriate in the planning area.

Tourism

Comment: Moreover, your draft RMP/EIS does not appear to have given sufficient consideration to the economic impacts that cultural tourism brings to the area. White energy development has certainly brought economic advancement to the area, the complete dominance of this industry has also brought significant social disruption. In addition to the degradation, in air quality suffered as a result of energy development, Pinedale has also suffered degradation in its quality of life and availability of community services. These negative effects could potentially be offset by a greater emphasis on cultural tourism. In the late 1990s, Pinedale hosted a national fur trade symposium which brought over one hundred people into the community to share their fascination with this history and to learn more about the nearby resources. Today, it is difficult, if not impossible, to imagine the town hosting such an event since temporary lodging facilities are nearly always fully occupied by energy field workers.

Response: Intensive energy development has the potential to impact tourism. The extent of that impact could be estimated but would require a study designed to quantify the non-market affects of a major energy driven boom. Such a study has not been conducted.

Comment: The resulting impact of lack of lodging due to energy field workers on one of Pinedale's premier cultural attractions, the Museum of the Mountain Man, has certainly been significant. A designated Rural Historic Landscape to tell the fascinating story of the cross-cultural fur trade society could help to 1) diversify the Sublette County economy; 2) promote increased recreational opportunities; 3)fulfill the BLM's multiple use mandate; and, 4) support existing resources in the communities of Pinedale, Big Piney, Boulder, and Daniel.

Response: Intensive energy development is impacting tourism. Visitor data from the Museum of the Mountain Man would provide some quantification of at least some of the impacts to tourism. Such data were included in the final EIS.

Comment: For many years my family & friends have visited this country on white-water raft trips. As many as 16 of drive & fly into Wyoming & Utah, doing business with local outfitters, motels, airport and sporting goods stores. I estimate collectively we spend around $10,000 each time we come, and a group of us come almost every other year, to the upper Green, and into Utah through Desolation Canyon. There are many other groups like ours.

Response: The impact on tourism has been considered, but it is unclear what the long-term impact will be, given the fact that there is a negative effect on non-market values under intense gas development.

Comment: 8. What about tourism and real estate values? Those assets should not be sacrificed at the altar of energy development. There are other economic interests in this area, and unfortunately they are not compatible with energy development.

Response: To the extent possible, quantitative data was included to show the impacts associated with rapid oil and gas development. With regard to real estate values, all indications point toward increased values produced by increased demand as new people move into the area. However, the demand for second homes is less clear in the midst of an energy driven boom. A narrative has been added to the Socioeconomics section of Chapter 4 describing the anticipated impact to real estate values and second home sales.

Taxes

Comment: 4. There should be a complete accounting of the cost of this change in the RMP, and subsequent permitting procedures and monitoring costs (state, federal, and county) of the various resulting projects. Will there be a net gain to taxpayers? We feel that our tax dollars should be spent on better things, and not things that disturb us.

Response: Total estimated tax royalties are in Table 4-14 of the draft RMP.

Comment: The State of Wyoming and the Federal government receive vast royalties and tax revenue from energy development. With an estimated 20 to 25 trillion cubic feet of natural gas recovery possible within the Pinedale Anticline, local governments and the U.S. Treasury stand to receive substantial revenue gains. The money is used for schools, libraries, and medical services. This increases the quality of life in Wyoming and this must be recognized within the RMP.

Response: Table 4-14 shows the taxes and royalties anticipated for each alternative. How these revenues are spent is subject to local, state, and national budgeting decisions, and those allocations sometimes change. Moreover, additional tax revenues and royalties do not automatically translate into increases in the quality of life. What is considered a benefit to one person may very well be considered a negative impact to another.

Comment: We request that the agency determine all applicable Federal, state and local tax laws (including exceptions and reductions) and that these laws and regulations be used to make realistic and accurate estimates of net tax revenues from oil and gas production. As discussed above, revenue estimates must be made based on economically recoverable resources rather than technically recoverable - and must include the environmental and community costs from drilling and production.

Response: The tax revenues have been estimated and reported in the draft EIS. The impact analysis for socioeconomics has been revised in the final EIS.

Mitigation

Comment: It basically ignores the effects of the massive development already underway and only speaks about potential new development without taking the whole scenario into consideration Mitigation proposals do not occur in the areas which are really being affected by drilling, road building, and increased traffic.

Response: The RMP is a management plan that looks at Reasonable Foreseeable Development scenarios. Therefore, it does include the development underway and also looks at new development. Mitigation is considered as impacts occur and when BLM has authority to require mitigation.

Comment: the draft document makes no reference to what should be done to mitigate the significant impacts associated with existing and expected levels of development. My office has been working with the Sublette County commissioners and local Pinedale officials to address the specific challenges facing this area of the state and sought technical guidance in order to quantify the socioeconomic impacts that

attend the development taking place in Sublette County. As these impacts become better defined, I ask that state and local cooperators be able to further inform the socioeconomic impacts of the activities contemplated in the RMP and that the BLM work with us to contour appropriate mitigation strategies going forward.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

Comment: Activity plans are non-existent in this RMP. There are no plans to effectively mitigate the impacts to wildlife or socio-economics described from oil and gas activities.

Response: Big Piney/La Barge has an activity plan. Other development is being conducted under site-specific EISs. It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

Comment: In regards to mitigations and restrictions, I believe the BLM must weigh the net loss of revenue. We should balance other resource needs but understand all economic impacts. For these reasons, I strongly believe Alternative 3 is too restrictive.

Response: Loss of revenue is included in the draft RMP socioeconomic impact analysis for Alternative 3.

Comment: It's interesting and somewhat discouraging to read on p. 4-129 that while the BLM's RMP acknowledges a probable 181% increase in crime to be expected from 2006 - 2020, there is absolutely no mitigation required nor planned to address this direct impact to our community.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted and where BLM has the authority to require mitigation.

Comment: Based on NEPA requirements, and standard cost benefit analysis practice (see Boardman et al. 1996), it is evident that the DEIS is inadequate in its economic analysis. Standard cost benefit analysis seeks to estimate positive and negative effects resulting from a proposed action, and in particular, the magnitude of effects. To accomplish this, effects must be identified and the relationship between effects must be disclosed (cumulative effects). This information can then be used to estimate the value of outcomes and mitigation techniques (Hahn et al. 1996). Furthermore, NEPA requires disclosure of the effects to the human environment including health and welfare, community concerns and safety.

Response: Under NEPA, BLM is required to do impact analysis, which differs from cost-benefit analysis. It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted and where BLM has the authority to require mitigation.

Comment: The preferred alterative proposes to make one million acres available for oil and gas leasing and development (p 2-20) resulting in significant effects to the economy of the affected region. The DEIS includes only a brief outline of the assumptions used for the IMPLAN analysis in Appendix 26. In chapter 4, the BLM recognizes that economic impacts will "likely occur" to employment and income, tax revenues, demand for housing and government services as well as the social fabric of communities, yet

fails to provide detailed information. To fully disclose the economic effects and gain an appreciation for mitigation needs, a more comprehensive treatment is necessary. Full disclosure should include:

- Changes in population over the planning horizon,
- Changes in demographics including age and ethnicity,
- Employment by sector,
- Income by sector,
- Average earnings by sector,
- Tax revenue by municipal, state and federal jurisdictions,
- Direct, indirect and induced effects by sector, including multipliers,
- Increased housing needs for owned and rental units,
- Demand for recreation,
- Demand for forest resources,
- Anticipated trends in crime
- Infrastructure requirements according to population,
- Current utilities (sewage, power, gas, communications, etc.)
- Increased demand for utilities,
- Transportation corridors (current and future demand),
- Social services: current and future demand (schools, police, fire, medical).

The DEIS only briefly describes qualitative effects and does not discuss the mitigation of negative effects.

Response: A draft study has been prepared by Ecosystem Research Group that addresses the issues related to the oil and gas boom. This study is referenced in the final EIS. It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted and where BLM has the authority to require mitigation.

Comment: G. The agency must correctly account for budget constraints and fiscal realities. In order to fully comply with NEPA, the agency must include an analysis of the costs of implementing each alternative, which includes the costs of the mitigation plans contained within each alternative. These costs must then be compared to the expected budget level to assess the probability of mitigation measures being fully implemented. The agency should therefore, as part of the NEPA process, include a reasonable budget limitation and evaluate a set of management alternatives that are constrained by that budget level. As part of the fiscal analysis of the plan alternatives, the agency must realistically assess the bonding needs for the oil and gas development proposed. Operators must be required to post adequate bonds to ensure that acceptable reclamation and remediation are conducted.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted and where BLM has the authority to require mitigation.

Comment: 7. Page 2-14, third bullet, and elsewhere, states that “Compensation mitigation practices must last as long as the impacts are expected to occur.” Should not such mitigation, be it improvements, activities or other practices, be permanent or last at least as long as impacts are expected to occur, and subject to monitoring to insure effectiveness of the proposed mitigation?

Response: Mitigation would be monitored for effectiveness. Many mitigation projects, such as vegetation treatments, would not have "permanent" benefits because vegetation communities would not be static but would change over time.

Air Quality

Comment: 3. Air quality and agricultural losses. The socioeconomic analysis is inadequate because it fails to consider the potential of economic losses in the agricultural sector resulting from increases in ozone levels during the growing season. BLM analysis (Supplement Ozone Modeling Analysis, pp. 1-4) focuses entirely on whether predicted 1st -4th ranked ozone concentrations are in compliance with the NAAQS and WAAQS standards (Supplement Ozone Modeling Analysis, p.1). Important as these standards are, the highest concentration levels do not provide sufficient information to assess the economic effects of possible increases in ozone concentrations during other times of the year. These effects can only be estimated in when ozone modeling analysis also investigates in detail changes in average and maximum ozone concentrations during other times of the year under a variety of alternatives. This will especially be the case for agriculture, an economic and culturally important economic sector in Wyoming.

It has been well established in the scientific literature that elevated levels of ozone have adverse effects on crop yields for a large variety of crops, including alfalfa and other forage crops (Lessor et al. 1990); Benton et al. 2000). The economic consequences of these adverse effects have been estimated and shown to be in the billions of dollars at the national level (Adams et al. 1986; Murphy et al. 1999). Moreover, Murphy et al.'s (1999) findings show that even small (10 percent) reductions in ozone will have large economic benefits. By symmetry, it is possible that small increases in ozone will have large economic costs.

Alfalfa and forage (hay) crops are the single most important agricultural crops in the Wyoming counties of Sublette, Sweetwater, and Lincoln and are among the crops whose yields are most strong affected by increases in ozone (Lessor et al. 1990). In fact, in 2005, these counties cultivated 201,000 acres of hay and produced 324,000 tone of hay with, with a total value of production of $29 million (National Agricultural Statistics Service 2006).

Response: The final EIS has been updated to include analysis of impacts to vegetation from increased concentrations of ozone. However, because the level of increase of ozone concentration cannot be determined, the degree of impact to vegetation and thereby to the local economy cannot be determined.

Comment: From these findings it is clear that potential percentage losses from increases in ozone are large. For the agricultural sectors of Sublette, Sweetwater and Lincoln counties, the potential economic impacts are also relatively large. If Lessor, et al.'s (1990) results can be applied to these three counties, a 60 percent increase in ozone would lead to agricultural value of production losses between $.24 million and $.74 million for alfalfa and between $.03 million and $1.2 million for other forage. Moreover, Lessor et al.'s (1990) empirical results suggest that some losses would also occur for percentage increases in ozone of less than 60 percent. Moreover, the example above of economic losses would represent a lower bound for three reasons. First, the example is based on the assumption that alfalfa and forage production is affected, but not the quality of what is produced. Yet, there is emerging evidence that nutritional value alfalfa also deteriorates as ozone levels increase. Muntifering et al. (2006) conclude: "The RFV (relative feed value) of the lower foliage of most alfalfa plants was reduced by exposure to ozone, depending on the number of hours exposed to ozone per day, and the number of days of consecutive exposure (p. 2)". If increased ozone results in decreased crop quality there will be additional economic losses associated with increased ozone because decreases in quality will result in decreases in price. Second, the example applies only to alfalfa and forage crops, but there is emerging evidence that ozone also adversely affects wild plants. Davison and Barnes (1998) note that "many wild species have been shown to be at least as

sensitive to ozone as crops that show significant yield losses…(p. 135)". If this result holds for the plant species occupying the range and forest lands in Sublette, Sweetwater, and Lincoln counties, increased ozone levels would lead to a deterioration of opportunities for rangeland grazing of livestock and wildlife. This could lead to economic losses in the livestock and recreation sectors. Third, the example did not consider other crops grown in the area, including the 8,200 acres of barley in Lincoln County

Response: The final EIS has been updated to include analysis of impacts to vegetation from increased concentrations of ozone. However, because the level of increase of ozone concentration cannot be determined, the degree of impact to vegetation and thereby to the local economy cannot be determined.

Comment: In order to fully assess the potential for economic losses to the agricultural sector, BLM should conduct a thorough ozone modeling analysis which investigates in detail potential changes in average and maximum ozone concentrations during all times of the year under a variety of alternatives. BLM should consider potential losses due to increased air pollution in the value of agricultural production and deterioration in the productivity and health of rangeland and forest resources.

Response: The final EIS has been updated to include analysis of impacts to vegetation from increased concentrations of ozone. However, because the level of increase of ozone concentration cannot be determined, the degree of impact to vegetation and thereby to the local economy cannot be determined.

Other Economic Concerns/Issues

Comment: I therefore strongly oppose this Alternative and support instead Alternative 3 with the following revision included in its final form: • Consider other means of economic gains for multiple use regulations such as small-scale commercial logging to thin out beetle-kill trees and reduce need for massive wildfire suppression and management, allowing other forms of employment for residents and other means of revenue gathering.

Response: Operations such as small scale logging are provided for in the draft RMP in the Forestry alternatives.

Comment: Section 3.10 should include a discussion of the fiscal conditions of local governments in study area. At a minimum, the discussion should address revenues by major source and expenditures by major function for the three counties and major communities. Key trends in those parameters should also be described, particularly those related to recent and ongoing energy resource development. The discussions of the distribution formulae for the various severance and federal mineral royalties should note that distributions to local governments are presently capped statutorily, and hence local governments are unlikely to participate from the increases in production related severance and royalty revenues. The fiscal discussion should recognize that a substantial portion of the projected ad valorem tax revenues would be generated by the mandatory taxes for public education. Tax revenues generated by these levies are subject to "recapture", that is, remittance to the state to support public education statewide and consequently, do not accrue to the local school districts. In Sublette County the public education levies account for about 75 percent of the total countywide tax levy (and revenues). As a result, the level of ad valorem tax revenues accruing to the local school districts, and to the county to fund the additional demands for services is substantially less than is implied by Table 4-14. Finally the fiscal discussion must acknowledge that local government and education expenditures will increase dramatically in response to anticipated economic and population growth and that there are likely to be jurisdictional mismatches and time-lag issues between demands for expenditures and revenue accrual. The current discussion includes the heading Impacts on Tax Revenues, but ignores the corollary effects on expenditures do not accrue to the local school districts.

Response: BLM will leave the release of the fiscal condition of local governments to local governments. It is the purpose of the RMP to disclose impacts related to different management alternatives.

Seasonal Restrictions

Comment: Most importantly wrong with this RMP is the seasonal restriction portion. By creating a short window for activity in an area, BLM will essentially be creating a transient workforce through the implementation of this guideline. This type of employment pattern will be detrimental to what would have otherwise been a economic stimuli for Wyoming with the employment opportunities energy development will create. Secondly, these restrictions will severely reduce the production output needed to be profitable for the companies in the area.

Response: Since a large percentage of the drilling crews are from out of state there is already a transient workforce. Seasonal restrictions do increase the cost of drilling, but experience shows us that companies have historically been able to operate at a profit even with seasonal restrictions.

Comment: I am also deeply concerned about the restrictions especially in Alternative 3. Especially the seasonal restrictions will have a negative impact on the development of the area. They will mean a seasonal workforce, which is known to bring a lot of problems with it.

Response: The alternatives and analysis provided in the draft RMP are appropriate for a land use plan-level document.

Comment: Revised history. Table A26-2 presents total well projections by alternative. It is interesting to note that the data for past years (2001-2005) actually varies with alternatives. Why would the number of plugged and abandoned wells in these prior years change with management alternatives that have not been carried out?

Shrinking tax revenues Please explain how the projected tax revenue for Alternative 3 can be 81% of that for Alternative 4, when Alternative 3's projected value of production is 95% of Alternative 4's. It would appear that the BLM has either deliberately inflated the projected revenue to the local government for Alternative 4 or deliberately deflated the estimates for Alternative 3 (Table 4-14). In either case this represents a bias in the analysis that favors oil and gas drilling to the exclusion of other multiple uses of these public lands. Combined with the failure to address the considerable costs of the proposed oil and gas drilling this indicates and incomplete and inadequate analysis of the impacts of the proposed management.

Response: A formula developed to predict the probable percentage of plugged and abandoned wells for each alternative was mistakenly applied to the past years 2001-2005. The table has been updated in the final EIS to show the actual number of wells plugged an abandoned during the period 2001-2005.

The tax analysis has been updated. The tax revenue in Alternative 3 is now 90% of that of Alternative 4, which is consistent with the value of production.

Comment: From the aspect of gauging socioeconomic impacts from the various RMP alternatives, Table A26-2, in Appendix 26, is one of the most important pieces of information given in the entire document. As we all know, the labor-intensive nature of the mining industry ensures that mining activities within the size and scope of the Pinedale RMP will have a huge affect on socioeconomic impacts in the region.

Perhaps the two biggest factors within natural gas mining development that influences socioeconomic impact are the number of wells and the pace of development. The only place in the RMP that I found that

addresses' this is Table A26-2. Table 4-13 gives a yearly average, but Table A26-2 provides a very useful trend analysis.

How, exactly, were these well counts formulated? What scenarios were used to make these predictions? Same goes with Table 4-13. This must be explicitly identified if these tables are to be at all useful. What is included in this well count and what is not?

Response: The methods and assumptions used to formulate the RFD can be found in *Reasonable Foreseeable Development Scenarios for Oil and Gas Development in the Pinedale Field Office* prepared by BLM's Wyoming State Office Reservoir Management Group (RMG). The 2,969 wells in 2006 as shown on page 4-113 of the draft EIS is inclusive of the producing wells that existed at the end of 2001 and those wells developed from 2001 to 2006. Table A26-2 does not include the wells the existed in 2001 and only projects the number of wells anticipated between 2001 and 2020. Based on WOGCC databases, about 1,750 producing wells existed at the end of 2001 and 925 producing wells were developed between 2001 and 2006. Table A26-2 has been revised to show that 925 well were developed from 2001 through 2005. Protections for years 2006-2020 have also been revised. Tables 4-13 and A10-1 have the correct projections. The text has been corrected in the final EIS.

It needs to be reiterated that the projected well numbers are projections based on a number of assumptions. The actual number of wells may vary from the projection. It is the actual number of wells developed that will ultimately become part of the tax bases. As stated above, the projected wells numbers are BLM's best estimate of what may occur. They are not an implicit determination of what will actually occur.

Comment: Other comments and apparent discrepancies: The monetary value listed in Table 4-14 for severance taxes under Alt. 3 seems inconsistent with the total value of production in Table 4-13 and the ad valorem values in Table 4-14. The average numbers of wells drilled per year in Table 4-13 appear to represent drilled and completed, and hence producing wells. The P&A wells are excluded. That distinction should be noted. The number of federal and the numbers of state and private wells in Alternative 2, Table 4-13, i.e., 377 and 15 wells, respectively, appear inconsistent with the values shown for earnings and numbers of jobs. Given the historical commuting workforce linkages between Sublette and Teton counties, a discussion of the rationale for excluding Teton County from the analysis should be included in 3.10. Recent, ongoing and future energy resource development in Sublette County clearly results in indirect effects on Teton County. Section 3.10.2 includes the statement "Prior to the last 2 years, ranching was the main industry for the area." Is this characterization reasonable given the subsequent discussion of tourism and energy development? It appears that this statement may have come from a dated source. The description of the history of communities in Section 3.10.2 warrants additional revision. Examples of poorly written narrative include: "Industries supporting the town today include ranching, oil and gas extraction, and tourism, and a small general aviation airport serves both Marbleton and Big Piney." "Formed by the railroad and coal mines, Rock Springs offers" and "There are also many recreational amenities located in Green River, including…and Flaming Gorge Reservoir" Page 3-61 includes the following: "It is likely that employees are commuting to the economic study area to support the oil and gas boom, but report their employment and earnings where they live." If that is true, many of the costs created by the temporary influx of workers are being borne by the residents without the usual offsetting revenues created by workers permanently relocating to the region. This statement is overly broad and does not accurately characterize the relationship between energy resource employment, demands for services, and the costs and revenues associated there. Employment data presented in Tables 3-11 and 3-12, as do the earnings data in Tables 3- 13 and 3-14, refer to non-comparable data series. That fact should be noted in the footnotes on page 3-60 lest the reader get the impression that total regional employment declined by nearly 10,000 jobs and earnings declined by nearly $200 million between 2004 and 2005. Table 3-11 appears to combine from different sources and possibly includes estimated data.

The results are a set of inconsistent data that do not accurately reflect the composition of employment in the region. For example, the entries for the mining industry show only 2,669 jobs with employment declining over the period 2001 through 2004. Table 3-13 is expressed in 1,000s of dollars. Table 3-16 shows the ad valorem mineral valuation, not tax revenues. The discussions of the distribution formulae for the various severance and federal mineral royalties should note that distributions to local governments are presently capped statutorily, and hence local governments are unlikely to participate from the increases in production related severance and royalty revenues. The fiscal discussion should recognize that a substantial portion of the projected ad valorem tax revenues would be generated by the mandatory taxes for public education. Tax revenues generated by these levies are subject to recapture, that is, remittance to the state to support public education statewide and consequently, do not accrue to the local school districts. In Sublette County the public education levies account for about 75 percent of the total countywide tax levy (and revenues). As a result, the level of ad valorem tax revenues accruing to the local school districts, and to the county to fund the additional demands for services is substantially less than is implied by Table 4-14. Table 3-19 contains data entry and/or mathematical errors, see for example, the row entries for 2001 doesn't sum, and the 2003 entry for Sweetwater County appears to be the total PILT entitlement acres not PILT payments. The discussion of nonlabor income on pages 3-72 and 3-73 should be revised. The narrative suggests that nonlabor income has been declining in Sublette and Lincoln counties. Nonlabor income has declined as a share of the total, but increased in absolute amounts. The discussion fails to recognize the underlying role of the dramatic increases in labor earnings, tied to energy development, as a key contributor to the observed declines in relative income shares from different sources. Table 3-22 and associated discussions should note that the rental housing vacancy rates are survey-based. Consequently, the universe of reporting units varies over time such that year-to-year comparisons don't necessarily reflect true changes in either the number or availability of units. We agree that worker safety is an important issue and that the oil and gas industry exposes workers to potential safety hazards and risks. Nonetheless, we question the validity of the contention that seasonal limitations on drilling impose greater risks during rig mobilization than a normal rigging up or down, or that safety is compromised (see page 3-83). The discussion of Hunting and Wildlife Viewing under 3.9.2 cites the Wyoming Game and Fish Department as a source of hunting data. Can some type of estimate of the level of big-game hunting occurring in the region be provided? The potential effects of the various alternatives on the availability of hydrocarbons and the costs to producers and consumers are likely to be non-existent or very small -- 2nd bullet on page 4-47. The last sentence in that bullet should be revised to read, "This could result in some very limited, not readily measurable or quantifiable, increases in costs to producers and consumers, the incidence of which would primarily occur outside of the study area." The tone of the assessment suggests that any oil and gas resources not developed during the life of this plan somehow become lost or irrecoverable. In fact, future revisions of the RMP could facilitate such recovery. One result of this perspective is to value near-term recovery over long-tem recovery, thereby diminishing the potential contributions of energy resource development to long-term economic sustainability of our communities. This trade-off in our economic futures should be described in the assessment. The heading for Table 4-6 should probably include the term "Subsurface" and the percent change values shown in Table 4-6 should probably be preceded by a negative sign since the point of comparison is Alternative 2 compared to Alternative 1. Similar changes should be made in the corresponding tables for Alternatives 3 and 4.

Response: The tax analysis has been updated in the final EIS and is now consistent with the value of production differences among the alternatives. A new table in Section 4.1.5 has been included in the final EIS which include both completed wells and plugged and abandoned wells. The discussion in 3.10.2 has been changed in the final EIS to reflect the considerable energy development. The community descriptions have been revised in the final EIS.

Soils

General Comment Responses: *No GCRs are associated with this category.*

Comments on Document/Suggested Changes

Comment: PAGE: 4-131, SECTION: 4.11.1, RECOMMENDED CHANGE: [Compacted soils are less accommodating to plant roots, and seed germination is difficult in such soils.] (STRIKEOUT) EXPLANATION: Not so true as to be an assumption for EIS.

Response: This assumption is intended to supplement the previous assumption regarding soil compaction. No change is recommended.

Comment: PAGE: 4-131, SECTION: 4.11.1, RECOMMENDED CHANGE: [Soil productivity could be reduced by downwind and downslope contamination from eroded soils.] (STRIKEOUT) EXPLANATION: Eroded soils are not contaminated.

Response: BLM agrees. “Contamination” has been changed to “deposition” in the final EIS.

Comment: PAGE: 4-138, SECTION: 4.11.7, RECOMMENDED CHANGE: RECONCILE WITH 4-131 (natural erosion is .1 T / year) This alternative would provide for approximately 10,500 acres of forest and woodlands to undergo various treatments such as thinning, hazardous fuels reduction, and commercial harvest activities. Erosion rates following treatments or harvest activities would be 0.02 ton per acre per year, resulting in approximately 210 tons of soil erosion. Erosion rates could be higher along skid trails and landings (0.22 ton per acre per year), and there could be some soil compaction associated with these facilities. EXPLANTION: Erosion estimates inconsistent

Response: BLM agrees. The assumptions were confusing. See the updated text in this section of the final EIS.

Comment: Because the BLM has recently proposed to allow year-round drilling in the PRA, it is particularly crucial for the new RMP to contain clear, binding standards to prevent damage to saturated, hydric and erosive soils. The 1988 RMP required “seasonal closures due to saturated soil conditions.... (At certain times of the year, use will be precluded until soil moisture is such that the use or activity will not result in degradation of the soil resource and watershed condition. These closures occur predominately in the spring and autumn.)” 1988 RMP at 19. This direction should be retained and strengthened in the new RMP.

Response: BLM agrees. Soil moisture/rutting depth stipulations should be a part of the RMP. The RMP must include a stipulation or reference stating that activities occurring in wetlands, including casual use, must be in compliance with Section 404 of the Clean Water Act.

Comment: To reduce surface water degradation from soil erosion, the new RMP should follow the direction in the 1988 RMP requiring soil management practices to be based on “soil survey data, and ... be related to the soil characteristics such as the steepness of slopes, the length of slopes, and soil chemistry and composition.” 1988 RMP at 19. Problematic types of soils should be identified, and specific criteria should be developed for these soil types, based on slope steepness, proximity to water, slope length, soil chemistry, vegetation, etc.

Response: BLM agrees that it needs to have a slope restriction stipulation. Other stipulations, such as slope length, soil chemistry, composition, erosiveness, proximity to water, vegetation composition, etc.,

should be part of the permitting process since they are site- and project-specific. Soil survey data is needed. To this end soil survey efforts are currently underway in Sublette County.

Comment: PAGE: 4-2, SECTION: 4.1.2, RECOMMENDED CHANGE: Update data for soil surveys and forest stands EXPLANATION: BLM needs to update data or provide that planning decisions will be revised upon more complete data.

Response: Soil survey activities are currently being conducted in Sublette County by NRCS.

Comment: PAGE: 4-131, SECTION: 4.11.1, RECOMMENDED CHANGE: Vegetation removal and surface disturbance particularly unmaintained dirt roads are the primary cause of accelerated soil erosion on the uplands. EXPLANATION: Failure to maintain dirt roads is a major source of nonpoint source water pollution. While the sentence is technically true it is not accurate.

Response: While it is true that unmaintained dirt roads do contribute significantly to accelerated erosion, the assumption is more directed to ongoing and future surface disturbing activities rather than two-track roads. As for two-track roads, these were not considered in this analysis.

Comment: PAGE: 4-132, SECTION: 4.11.1, RECOMMENDED CHANGE: Wind erosion can impact soil productivity in a similar manner as water erosion. [Since no technologies exist to model wind erosion on rangelands, this analysis will be limited to impacts resulting from water erosion.] (STRIKEOUT) EXPLANATION: NRCS does modeling so not accurate to say no model.

Response: It is true that wind erosion models are available; however, the current model used on croplands, Wind Erosion Prediction System (WEPS), is not designed for use on rangelands. The assumption has been changed in the final EIS to reflect that no similar technologies exist to model wind erosion on rangelands.

Comment: PAGE: 4-132, SECTION: 4.11.1, RECOMMENDED CHANGE: [Short-term erosion impacts depend on the length of time it takes for the disturbed area to become revegetated, generally a 0- to 5-year time frame.] (STRIKEOUT) EXPLANATION: Not accurate nor true.

Response: BLM disagrees. However, this assumption has been further clarified. The choice of this time frame is an assumption used in the analysis to reflect the time a disturbed site takes to become stabilized with a self-sustaining, perennial vegetative community. Most sites should revegetate in less time than 5 years, and annual weeds will certainly establish well before 5 years. Actual time frames for the reestablishment of a perennial vegetation cover vary considerably depending on variables such as seedbed preparation, total precipitation, effective precipitation, slope, aspect, elevation, soil texture, soil organic matter, water holding capacity, etc.

Fragile, Unique, or Saline Soils

Comment: The 1988 RMP made clear Soap Holes Basin was not the only area with highly saline soils - that area was only cited as one example of lands requiring special management attention. The revised RMP DEIS does not map saline soils in the PRA even though such soils are widespread. The only reference to saline soils I could find in the RMP DEIS referred to Soap Holes Basin. RMP DEIS at 4-46.

Response: Saline soils are included with other soil types that are fragile, highly erosive, or otherwise difficult to reclaim. Language has been added to the Management Actions in the final EIS under Soils, Objective 2 to clarify this. Maps are not presented because the specific soil information is not available.

Comment: The BLM indicates on page 2-132 that additional mitigation measures will be imposed on lands within the Blue Rim, Milleson Draw, and the Long Island Watershed. Unfortunately, the BLM has not mapped or identified said watersheds in the RMP DEIS. Although Map 3-13 identifies watersheds in the resource area, Blue Rim, Milleson Draw, and the Long Island Watershed are not identified on the map. The BLM should provide a map detailing these areas in order for APC to understand how its operations may be impacted.

Response: The Blue Rim and Milleson Draw areas are not watersheds, but geographic areas with unique soil characteristics. The Blue Rim is a long ridge located south of Wyoming Highway 351 and north of Alkali Draw. Milleson Draw is a tributary of the Green River, entering from the east about 5 miles south of Big Piney. The Long Island Watershed has been identified in the final EIS.

Off-highway Vehicles

Comment: Disclosing how many acres of land in the PRA would be open to ORV use is not the same the same thing as analyzing how much soil erosion and surface water degradation would result from that use. The DEIS doesn't even provide any information on how many ORVs would be using those acres, much less describe the soil conditions in those areas or how much sediment would be loosened and eroded by storm and snow-melt run-off.

Response: It is beyond the scope of this document to analyze the impacts to the proposed off-highway vehicle (OHV) areas in the detail suggested by the reviewer. The erosion figures generated by the Water Erosion Prediction Project (WEPP) are admittedly broad-brush. By using the same assumptions for each alternative, and varying acres of disturbance for each alternative, the erosion numbers generated disclose to the public the relative impacts to the soil resource. In no way should the erosion estimates generated by WEPP be considered hard, firm numbers. In addition, these are average annual erosion rates, spread over a 50 year simulation period.

Comment: PAGE: 4-139, SECTION: 4.11.7, RECOMMENDED CHANGE: REVISE The designation of 3,110 acres for three [two] (STRIKEOUT) OHV Open areas would have direct impacts on the soil resource. Soil erosion rates are predicted to increase by a magnitude of 10 times above the natural rate of erosion, resulting in the loss of 1,275 tons of soil per year. These calculations may actually underestimate the potential for erosion since they do not include gully formation along trails and roads. The objective to mitigate erosion impacts along transportation corridors would be of immediate benefit the soil resource. EXPLANATION: Model summary does not appear to be correct.

Response: Erosion rates for OHV areas have been recalculated to better reflect impacts. Average erosion rates increased from 0.41 tons/acre/year to 2.47 tons/acre/year. The areas open to unregulated OHV use have been revised in the final EIS.

WEPP Model

Comment: The DEIS states that the WEPP model was used to estimate soil erosion rates. However, the DEIS does not explain the assumptions and methodology used in this model. Courts have held that where an agency relies on a complex predictive model the assumptions and methodologies must be disclosed for public review. Moreover, any substantive criticisms must be acknowledged and addressed. The DEIS's failure to present this key information is not only contrary to 40 C.F.R. § 1502.24, it also prevents the public from evaluating the veracity of the DEIS soil erosion predictions. And the estimates appear to lack scientific credibility in several respects. For instance, while the DEIS states that "[e]rosion rates are inherently difficult to predict" and that the WEPP model accuracy is +/-50%, the tons/year erosion rates are nevertheless quoted to 6 significant figures. In addition, the predicted combined erosion rate from roads amount to only 2% of that from pipelines. This is clearly in error. There would be 2,168 miles of

new roads in Alternative 4, which means BLM is assuming the average erosion rate per mile of road would be only be about one half ton (under 1200 pounds) per year. Expressed differently, BLM is assuming 31/2 ounces of sediment would erode from each linear foot of new road over an entire year. And this completely ignores existing roads. Accounting for the existing roads, BLM's modeling would appear to be based on the assumption that only about 2 ounces per year of sediment would erode from each linear foot of road. A single rainstorm could erode more than this from the prismed edges of dirt roads, and additional sediments would erode from the channelized run-off along the borrow strips. Frequent vehicle traffic would also erode dirt roads by converting the roadbed into airborne particulate (dust).

Response: Methodologies and assumptions are explained on pages 4-131- 4-132; Sections 4.11.1 and 4.11.2 of the draft EIS. Erosion figures generated by WEPP could have been rounded, as seems to be suggested by the reviewer; however, the decision was made to use the actual figures generated by WEPP. Road erosion rates were recalculated in the final EIS using native surface, 300-foot length, and 15-foot road width. Erosion rates for reclaimed pipelines were recalculated by adjusting cover values to better reflect successful reclamation. This analysis is for new roads only.

Comment: Soil erosion is one of the most significant threats to surface water quality in the PRA. There are numerous sources of erosion including (but not limited to) roads, well pads, pipelines, facility construction, ORV use, logging, livestock grazing, storm water discharge, bank scour from water discharges, and natural erosion from undisturbed areas. Previously, I discussed some concerns related to the WEPP modeling and the RMP DEIS's failure to adequately assess the cumulative impacts of past, present and future sediment loading. Those comments focused on quantities of sediment. However, I did not discuss potential impacts from the sediment loading. Among other impacts, sediment discharge into surface waters can result in increased turbidity, increased filtration costs for downstream users, siltation of spawning gravels and pool bottoms, creation of unnatural sand bars and obstructions in streams, changes in stream channel morphology including channelization in sediment accumulations, and changes in benthic and aquatic plant communities. Some eroded soils accumulating in drainages and intermittent stream courses may not reach perennial surface waters for years. Thus, to properly assess impacts from soil erosion it is necessary to treat this as a long-term problem spanning decades.

Response: The erosion figures generated by WEPP, and the assumptions used in the analysis, are admittedly a broad-brush approach to analyzing impacts to the soil resource. The intent was to analyze and compare surface disturbing activities for each alternative. By using the same assumptions for each alternative, and varying acres of disturbance generated through the Reasonable Foreseeable Scenario, the erosion numbers thus generated, disclose to the public the relative impacts to the soil resource by alternative for a range of surface disturbing activities. In no way should the erosion estimates generated by WEPP be considered hard, firm numbers. In addition, these are average annual erosion rates, spread over a 50-year simulation period.

Comment: PAGE: 4-132, SECTION: 4.11.2, EXPLANATION: BLM needs to contact NRCS because discussion not accurate.

Response: The erosion figures generated by WEPP, and the assumptions used in the analysis are admittedly a broad-brush approach to analyzing impacts to the soil resource. The intent was to analyze and compare surface disturbing activities for each alternative. By using the same assumptions for each alternative, and varying acres of disturbance generated through the Reasonable Foreseeable Scenario, the erosion numbers thus generated, disclose to the public the relative impacts to the soil resource by alternative for a range of surface disturbing activities. In no way should the erosion estimates generated by WEPP be considered hard, firm numbers. In addition, these are average annual erosion rates, spread over a 50-year simulation period.

Reclamation, Mitigation, and Monitoring

Comment: PAGE: 2-141 SECTION: Revise or delete. [e. Interim reclamation standards would be developed to reduce soil erosion on a project or site specific basis. Emphasis would be placed on areas adjacent to waters and wetlands.](strikeout) RECOMMENDED CHANGE: EXPLANATION: Question the merit of interim reclamation. In many cases interim reclamation causes greater soil disturbance, expenditure of funds for relatively little return on investment. Emphasis makes no sense. If prohibit structures in areas adjacent to water or wetlands then there should be nothing to reclaim.

Response: It is not possible to completely prohibit development of facilities, particularly linear facilities, in wetland and riparian areas. Emphasis on reclamation in these areas is reasonable. Designing interim reclamation on a site- or project-specific basis would ensure that it is applied in situations where appropriate.

Comment: Soil Erosion. The soil erosion monitoring items - for uplands and on stream banks and floodplains - appear to be well designed. However, as noted above, the action trigger specified for the soil erosion on stream banks appears to have been transposed with that for depth to water. The method of monitoring is also ambiguous. The table indicates the sampling method could be either by visual observation or by erosion pins. The former is highly subjective, and even a trained observer could overlook significant erosion. Certainly, visual observation would not be sufficient to accurately gauge "soil loss in tons per year" as required by the applicable unit of measure. The sampling frequency is also once per year, which may be inadequate to correct soil problems before they become severe and irreversible. I recommend surveying disturbed sites twice per year (spring and fall) and also surveying immediately after a 10-year storm even has occurred in the area.

Response: Soil erosion monitoring would be conducted to the level that BLM is able. Soil erosion data would also be obtained from other sources.

Comment: The action trigger for soil erosion on stream banks and floodplains suffers from the same problems. I believe trigger proposed for this item is when there is "Accelerated stream bank soil loss" (which is actually listed for the item associated with depth to water). Again, what erosion rate would need to be observed before action would be taken? Would there be different thresholds for different stream channel morphologies and flow regimes? Would there be different thresholds for stream banks versus floodplains? And what corrective action would be taken when a threshold is exceeded?

Response: The soil erosion monitoring items have been amended in Table A11-1 in the final EIS.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following:

- Monitoring of soil fungi and microorganism communities in areas where produced waters may be discharged onto soils (including along road margins where produced water is used as a dust suppressant).
- Estimated total annual soil erosion (in tons per year) occurring in the PRA from natural causes and from BLM-authorized activities (including ORV use and livestock).
- Potential soil contamination beneath reclaimed well pads and pits (some contaminants may not enter ground waters immediately due to reduced infiltration through compacted soils under well pads).

Response: An analysis of "potential" soil contamination beneath reclaimed well pads is beyond the scope of the RMP/EIS document. This type of analysis is more appropriate at the project level.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following:

- The amount of contaminated soil and/or water that is removed from the PRA each year and taken to permitted hazardous waste disposal facilities.

Response: Most permitted landfills accept petroleum contaminated soils (PCS). It is not possible to predict the amount of contaminated soils that might be generated from year to year.

Comment: The RMP should require monitoring, testing and certification of hazmat release remediation efforts. It is not enough to simply bring a backhoe to the site of a spill, scoop out some soil near the surface that looks contaminated and call the job done (as is typically being done under the existing RMP). The soils in the PRA are sandy and have high infiltration rates. In most places there is little or no clay content to adsorb or slow contaminant in-filtration. Given the wide variety of harmful chemicals being used in the PRA (including benzene), the RMP must provide assurances spills will, in fact, be completely cleaned up. After soil is excavated and before the site is covered over, several soil and/or water samples should be collected and tested at an approved independent lab. Only after the lab certifies the samples are free of contamination should the spill be declared fully remediated.

Response: BLM agrees. The reviewer is correct in pointing out BLM's responsibilities in the event of a hazardous substance release. BLM has procedures in place to address spills of hazardous wastes and substances. Furthermore, BLM is aware of the responsibilities and liabilities under RCRA and CERCLA.

Comment: To the greatest extent practicable, require drilling, completion, stimulation, dust suppression, and reclamation to use treated produced water rather than surface waters or Class I, II or III ground waters.

Response: This suggestion has been added to the list of BMPs used in gas field and other developments.

Comment: Map 7 in the 1988 RMP also depicted the Tip Top Watershed as a "crucial watershed" requiring special management direction for "reducing erosion and channel degradation", in this watershed. 1988 RMP at 21. The revised RMP DEIS also fails to map erosive soils. Without this information there is no basis for determining whether activities contemplated under the new RMP would adversely impact surface waters through soil erosion.

Response: Site-specific analyses, mitigation measures, and monitoring plans will be developed at the project level. Several reclamation projects have been completed in the Tip Top area since finalization of the 1988 RMP. Specific soil information is not available.

Grazing

Comment: PAGE: 4-133, SECTION: 4.11.3, RECOMMENDED CHANGE: Grazing animals, especially wild horses, [Livestock grazing] (STRIKEOUT) would impact the soil resource. Wild horses, wildlife, and livestock [Livestock] (STRIKEOUT) remove herbaceous vegetation to such an extent that existing vegetation is not [that would otherwise] (STRIKEOUT) be available to protect the soil surface from raindrop impact and overland flow. EXPLANATION: Impact statement inaccurate and shows bias against grazing. Cattle and sheep to not remove all vegetation while horses do.

Response: BLM disagrees. This statement was not intended to single out livestock grazing. Livestock do remove some, though not all, herbaceous vegetation. The statement was further qualified by stating that natural or background erosion rates generated by WEPP are minimal, and this background erosion rate is taken into account by stating that these are grazed ecosystems. There are no wild horses in the resource area.

Comment: PAGE: 4-138, SECTION: 4.11.7, RECOMMENDED CHANGE: In those areas where grazing animals (livestock wild horses, wildlife) congregate, particularly during wet soil conditions, there could be some soil compaction. [Livestock] (STRIKEOUT) Trails often develop along fence lines and in the vicinity of water developments and have the potential to concentrate water flow and create gullies. Implementation of the Wyoming Standards for Rangeland Health (USDI, BLM 1997) would help ensure proper management of grazing animals [livestock] (STRIKEOUT) and serve to minimize impacts on the soil resource. EXPLANATION: One-sided and biased.

Response: BLM disagrees. This statement is not intended to single out livestock grazing. BLM manages land uses that do have impacts to the soil resource. Livestock trails do have the potential to concentrate water flow and create gullies.

Comment: PAGE: 4-138, SECTION: 4.11.7, RECOMMENDED CHANGE: The impacts from [livestock] (STRIKEOUT) grazing animals would be the same as under Alternative 1.

Response: The intent of this statement was specifically to compare impacts of livestock grazing between the two alternatives. No change is recommended.

Comment: PAGE: 4-131, SECTION: 4.11.1, RECOMMENDED CHANGE: Soil compaction is considered to be a localized impact common to activities such as livestock wildlife or wild horse concentration areas, particularly during times when soils are wet; and high-traffic areas such as dirt roads, walking paths, hiking trails, [or OHV] (STRIKEOUT) areas. EXPLANATION: Less true for OHV, bias against grazing comes through here as well.

Response: This assumption is not intended to single out livestock grazing, and although it is true that OHV use is less likely to compact soil, no change is recommended.

Transportation, Access, and Travel Management

General Comment Responses:

Comments:

- OHV use is increasing rapidly with significant unacceptable impacts on wildlife, livestock forage and soils. The Draft RMP proposes to categorize areas by designation of the acceptable levels of OHV use. However, the plan lacks a commitment to the necessary level of enforcement. It simply anticipates and implicitly accepts the impacts on livestock grazing management.
- Ensure that closed routes will not be used through restoration of the route, gates and/or enforcement with personnel on the ground.
- Identify roads that harm wildlife, or increase likelihood of noncompliance with conservation mandates, then close, reroute, or limit use to reduce their impacts.

Response: Transportation planning efforts subsequent to the RMP/ROD would address the concerns you identified.

Comments:

- While town officials have sought solutions, including vehicle weight limits for the road, a workable solution has not been found and BLM-approved field traffic, continually drives through residential areas of Pinedale. In fact, the Wyoming Department of Transportation has increased its highway patrol presence in the Pinedale area, to identify the increasing number of illegally-weighted trucks that are degrading area roads faster than the usual rate of wear and tear. Traffic impacts to surrounding communities in the RMP region need to be specifically addressed in the RMP.
- The Town of Pinedale requests that BLM policy managers consider very carefully all traffic impacts to the Town of Pinedale with enormous growth of the energy industry in our immediate area. As we are working to address these traffic impacts, it is requiring years to adequately address these changes, since our main street is also a state highway. Slowed down gas field development will give Town officials more time to implement greater safety standards for our town's main roads. Without slowing down the pace of development, the Town of Pinedale is left to deal with the boom town impacts before we can implement the proper changes.
- Prohibition of weight limit (trucks) on Tyler Avenue. The width on Tyler Avenue, the street cross-section (pavement and sub base depth) and bridges (structure) are limited to a smaller axle weight than what is currently being imparted on the road. Developing additional cross-section on the road with strengthening the bridges and changing them (width) would not be feasible due to the limited ROW from close proximity of private properties for such expansion. There or alternate routes for these trucks must be implemented. A comprehensive plan of existing network of roads and proposed road should be incorporated within the EIS. In addition an emergency action plan should also be put into the EIS for emergency situations when trucks overturn and spill their cargo (waste products), fuel oil etc to properly manage and contain such environmental contamination. The plan should detail contaminated soil removal new soil introduction and restoration of vegetative matter.

Response: BLM is unable to incorporate comprehensive transportation planning into the RMP at this point. Transportation planning will be completed within 5 years of completion of the RMP revision. An alternate route for truck traffic around the town of Pinedale is currently being processed.

Unique Comments:

Comments on Document/Suggested Changes

Comment: We also remain concerned that the BLM has failed to adequately address the direct, indirect, and cumulative impacts associated with roads and the development of more of them associated with the rampant oil and gas development the preferred alternative proposes, and we believe the analysis of impacts regarding OHV/ATV and other motorized use have not been fully disclosed.

Response: BLM has determined that the impact analysis is adequate. The draft EIS Preferred Alternative analyzes oil and gas development that might occur, given the provisions of that alternative. It does not propose a certain level of development.

Comment: Page Number and Issue: 2-65, 2-92, 2-135 and other pages within the draft: Transportation planning would be completed within 5 years of implementation of the RMP. Recommendations: USQ requests that language be added that allows for amendments to the plan to accommodate advances in technology.

Response: Transportation plans would determine which roads would be available for use and which would be closed and reclaimed. It is unlikely that new technology would require changes in designated roads; but the transportation plans would be updated when necessary.

Comment: Item: Page 2-122, Section 2.5.5, Management Objectives and Actions BLM's objective is to "Provide opportunities for geophysical and geologic data acquisition while mitigating impacts on important resource values. Actions:

a. Geophysical data gathering methods that involve only casual use of the surface (as defined in 43 CFR §3150) would be permitted throughout the planning area.
b. Vehicle-based geophysical activities would be assessed on a case-by-case basis.
c. The use of surface and/or above-ground (Poulter shot) explosive charges for geophysical exploration would be assessed case by case.
d. Geophysical projects, including projects proposed in areas with an NSO restriction, would be analyzed and mitigation developed on a case-by-case basis." Comment: Since it is stated in (a.) that "geophysical data gathering methods that involve only casual use" shall be permitted, (b.), (c.) and (d.) are redundant and should be deleted. As currently stated, the methods to be used are adequately defined within the definition of "casual use".

Response: Not all geophysical data gathering methods involve only casual use.

Comment: PAGE: 2-135, RECOMMENDED CHANGE: Add management goal: Coordinate with state and local governments in meeting transportation needs EXPLANATION: Recent development has seen little to no coordination with local governments on transportation issues. As a result, there are a number of adverse impacts that could and should be avoided but are not due to this complete lack of coordination. As one example, the additional traffic to carry produced water into other counties for disposal is tearing up county roads, leaving incredible trash and dust, and there is no mitigation or funds that the county can access to rebuild the roads. BLM criteria ignore county interests, such as keeping county off of the JIO even though this development has significant impacts on county land use, law enforcement and other

jurisdiction issues. This attitude needs to change and transportation is one of the major issues where this needs to occur.

Response: Cooperation with local governments is outlined in Section 2.3.17; it is not necessary to repeat it in each resource section of the plan.

Comment: PAGE: 2-135,RECOMMENDED CHANGE: DELETE b. Access to county and state roads will be built to conform to [would be minimized and consolidated where practicable to enhance] (strikeout) safety and reduce [minimize] (strikeout) conflict points. Ingress and egress to state highways and county roads would be coordinated with the state highway department and counties, respectively. EXPLANATION: BLM has no authority to limit access to state and county roads. The counties object to the current practice of building frontage roads for gas field development that increases dust, particulate, and surface disturbance.

Response: At the request of the Wyoming Department of Transportation, this action was included to ensure that BLM roads that access state and county highways are constructed in a safe manner. BLM has authority to require this.

Comment: PAGE: 2-136, RECOMMENDED CHANGE: [f. New developments would be designed to minimize the number and miles of new roads, habitat fragmentation, and main access points to new fields.] (strikeout) EXPLANATION: This does not belong here as it involves temporary roads for gas development, not long-term transportation needs.

Response: The action is appropriate as presented in the draft EIS. It is reasonable to expect gas field roads to be in place for 50 years or more.

Comment: PAGE: 2-147, RECOMMENDED CHANGE: k. Transportation planning in close coordination with local governments would be implemented to avoid creating unusable islands of wildlife habitat and proliferation of access points (patch size varies by species). EXPLANATION: Any transportation planning needs to be done in close coordination with local governments. Failure to do so in the past has created unnecessary hardship and adverse impacts on communities and government services.

Response: BLM planning guidance and CFR 8342.2(a) directs BLM to incorporate public participation in the transportation planning process. The cooperating agencies and public would be included in the travel management planning process as described in Appendix 17.

Comment: PAGE: 4-140, SECTION: 4.12.1, RECOMMENDED CHANGE: REVISE The program responds to requests for authorization from other programs or outside entities and facilitates close coordination with state and local governments with respect to anticipated traffic conditions and design. EXPLANATION: While BLM has generally failed to coordinate with local governments, e.g. failure to consult and coordinate with county on transportation issues or to include local agencies in JIO, this objective needs to be in the RMP.

Response: To change this sentence as stated does not make sense in this context. Coordinating with state and local governments, with respect to anticipated transportation needs, is a good idea.

Comment: PAGE: 4-140, SECTION: 4.12.1, RECOMMENDED CHANGE: Add Garbage and litter along road sides will increase with additional inhabitants and/ or workers. Traffic on local government roads will continue to increase beyond existing capacity of the roads and current road damage will be a worsening problem due in large part to BLM restrictions on disposing of produced water on public lands and limited housing in the area. EXPLANATION: There has been an exponential increase in trash and

BLM programs do nothing to address this problem. It points out yet another need for better coordination in transportation and other development issues. BLM policies continue to put tremendous burdens on county roads and transportation planning gives no thought let alone effort to mitigate the adverse impacts. This situation needs to change.

Response: The first part of this statement is correct in that additional garbage and litter will increase with additional traffic and traffic will continue to increase. See the updated text in the impacts common to all sections for transportation.

Comment: PAGE: 4-14-, SECTION: 4.12.1, RECOMMENDED CHANGE: ADD Temporary or transient workers have no stake in community and have shown greater tendency to litter. EXPLANATION: Recent years have seen exponential increase in garbage and waste along with roadside litter. A major factor is the number of transient workers rather than resident workers. This situation is largely the product of BLM restrictions on construction that preclude development of a community. Instead, most of the workers are transients with no tie or pride in the community. The long term environmental, social and economic impacts to the community are significant and unaddressed.

Response: Temporary workers are not responsible for the dumping that has been occurring on the public lands for the last 100 years. It is not responsible to assign blame in this direction. Increased population causes increases in a number of social ills, but it is not reasonable to assume that all negative impacts are due to one group of individuals.

Comment: PAGE: 4-141, SECTION: 4.12.1, RECOMMENDED CHANGE: ADD In order to reduce surface disturbance and establishment of dual roads, BLM will consult with county and cities when designing roads including implementing previous policy of limiting access to arterial roads. EXPLANATION: Another poor BLM policy calls for limiting access to arterial roads. This creates parallel road systems with more surface disturbance. Other limits on roads create increased risk of accidents. The county maintenance load has also increased and the reduced road conditions in turn increase the risk of accidents.

Response: With the assumption that an arterial road is a “paved” state or county road, it is at the direction of the Wyoming Department of Transportation (WYDOT) that we limit access.

Comment: PAGE: 4-144, SECTION: 4.12.1, EXPLANATION: BLM needs to completely revise how it handles transportation issues and how it relates to local governments. As noted above, seasonal closures affect transportation access, putting greater burden on county roads during the construction season. There is a need for a bridge for the Jonah Field road. There is one paved road between Jonah and Mesa. County lacks consistent and direct funding for roads that are adversely affected by development. As one example, the Jonah field development has caused significant damage to existing roads. There are few sources of funding for reconstruction and maintenance due to Wyoming system of revenue distribution and they are not in proportion nor timed to address the harm done to existing roads and other services. BLM decisions only exacerbate the problem. EIS fails to analyze transportation needs in terms of future demand, efficiency and safety. EIS minimizes the costs of mitigation measures and the impacts on other discretionary uses, such as OHV recreation.

Response: Assuming the bridge in question is across the New Fork River, this is a private land issue. The county does not have a road directly affected by the Jonah Field. The highway is WYDOT and all the interior roads are maintained by the operators.

Comment: PAGE: 4-145, SECTION: 4.12.2, RECOMMENDED CHANGE: ADD County and state roads and other R.S. 2477 rights are not affected by this RMP but BLM decisions can result in

degradation of county road systems. EXPLANATION: EIS omits county road system, although as explained above, the RMP imposes significant costs on the county and the impacts include destruction of county road system and increased traffic during the artificially short construction season.

Response: BLM's transportation planning process does consider how county and/or other transportation systems affect public access and use; however BLM, as correctly stated, has no administrative jurisdiction regarding county roads.

Comment: PAGE: A17-2 SECTION: RECOMMENDED CHANGE: Add maps that are omitted. EXPLANATION: Transportation map not on web site nor shown anywhere. Maps should display county road system anyway.

Response: Map A17-2 depicts the general transportation routes within the planning area. Other than federal and state highways, specifically noting all county and BLM roads within the planning area is not possible at the scale required for this document.

Comment: PAGE: G-3 CHANGE: CHERRY-STEMMING – The proliferation of roads and multiple branching of roads within an area. This [has significant impact on](STRIKEOUT) may adversely affect wildlife habitat through fragmentation and loss of habitat. EXPLANATION: Level of impacts, if any, to wildlife depend on facts and circumstances of particular road and habitat. Definition should be revised to account for relative impacts.

Response: The definition has been updated in the final EIS.

Comment: PAGE: G-6 CHANGE: DESIGNATED ROADS AND TRAILS – Those roads and trails owned and administered by BLM that are specifically identified by the BLM as the only allowable routes for motor vehicle travel in the specific area involved. All designations must be based on the protection of the resources of the public lands, the promotion of the safety of all the users of the public lands, and the minimization of conflicts among various uses of the public lands; and in accordance with the specific criteria. EXPLANATION: BLM may not determine allowable uses on roads and trails it does not own or administer, and the definition needs to be modified to reflect this limitation. There are also specific designation criteria and procedures with which BLM must comply, including minimizing conflicts with public land users. 43 C.F.R. Subpart 8342.

Response: The definition of designated roads and trails provided does not indicate BLM would dictate allowable uses. Specific routes and/or any special management prescriptions would be determined through the area-specific transportation planning activity plans, utilizing public input.

Comment: PAGE: G-20 CHANGE: ROAD - A public way for purposes of vehicular travel. [A vehicle route that has either been improved or maintained by mechanical means to ensure relatively regular and continuous use, or has been established where vehicle travel has created two parallel tracks lacking vegetation.](STRIKEOUT) EXPLANATION: Proposed definition is based on wilderness roadless review program under FLPMA which has expired, 43 U.S.C. § 1782 (House Committee Report 94-1163, p. 17 (May 15, 1976). The definition needs to reflect broad use of the term under both federal and state law. SUWA v. BLM, 425 F.3d 735, 779-83 (10 Cir. th . 2005).

Response: The definition of road is appropriate as given in the draft EIS.

Off-highway Vehicles

Comment: In addition, we would like to see the plan provide specific guidance on the expanding development of OHV trail within VRM Class II areas.

Response: BLM would address specific OHV projects on a case-by-case basis, utilizing the appropriate project planning and development guidance. Project issues related to resource concerns such as VRM would be considered during the NEPA process.

Comment: PAGE: 2-15 SECTION: 2.3.17 RECOMMENDED CHANGE: ADD • Identify demand for OHV use and the best locations to meet that demand while avoiding undue and unnecessary degradation. [use escalating to a significant issue](strikeout) EXPLANATION: Both the MSA and Chapter 3 identify increased demand for OHV use. The RMP proposes to reduce OHV use to about 10% of current levels, a decision that is not supported by the record. The CLG believes that BLM needs to match demand to specific areas, in order to address current levels for OHV use and anticipated demand. The language adds emotion where none is appropriate.

Response: The text referred to is an example of where an activity plan working group might be useful and is appropriate as given in the draft EIS.

Comment: The next subject would be off road recreational areas. We have one place in the desert out there, I can delineate it if you want. I don't -- I don't have a physical description, but it's between the Alkali Draw and the Burma Road and it's on Granite Wash. There's been historical use there. There's clay knobs that are devoid of vegetation basically and there's rolling clay knobs and that's been a major place for motorcyclists and recreationlists of that sort since the '70s. And this would all be taken away in the RMP Alternative 4 and all the other alternatives. The Alternative 4 has an area for OHV use in the Pinedale area south of the -- Pinedale, southwest just a little bit, and it's been shrunk to the size – it's really going to be basically not hardly usable. And it's going to encourage use around the OHV area. I think it's time to understand that there are people that are going to use this land for that purpose and make it big enough that it can be contained; otherwise, you're just making to make the -- make the population that uses that criminals for using federal property that it shouldn't -- that they shouldn't be. So I think that area should be increased to the size that is in, I think, Alternative 1.

Response: The final EIS considers an OHV "open" area located in the vicinity of Granite Wash. Areas open to unregulated OHV use have been revised in the final EIS.

Comment: PAGE: 2-136, RECOMMENDED CHANGE: [g. OHV designations for restrictions to existing roads and trails would remain in effect until travel management planning is completed and designated roads and trails are identified.] (strikeout) EXPLANATION: BLM cannot close public lands to OHV use without more basis. OHV use is defined as crosscountry travel and limiting it to existing trails is in fact a closure. RMP fails to show that there is a need to close this much of planning area and fails to show that the remaining open areas are sufficient to meet recreation demand. The local governments own experience suggests that it falls far short of meeting demand.

Response: BLM Land Use Planning Guidance for Comprehensive Trails and Travel Management (H-1601-1) requires BLM to provide short-term management guidance for OHV use in areas when BLM is unable to complete transportation planning for any given area during the RMP process. Therefore, BLM has adhered to this directive by allowing for continued OHV uses and activities within the planning area. CFR 8340.0(a) 5 defines OHV (h) as follows: "Closed Area means an area where off-road vehicle use is prohibited. Use of off-road vehicles in closed areas may be allowed for certain reasons; however, such use shall be made only with the approval of the authorized officer".

Comment: PAGE:2-136 SECTION: RECOMMENDED CHANGE: DELETE [a. OHV designations would be established for all lands within the PFO. Periodic adjustments and use constraints could be necessary to ensure that sensitive resources are appropriately protected from excessive disturbance; road, route, and trail proliferation; and human encroachment. b. Motorized vehicle use, except for over-the-

snow equipment, would be limited to existing roads and trails unless otherwise specified.](strikeout) EXPLANATION: RMP closes all areas to cross country travel without documentation of need.

Response: Under the Preferred Alternative, the "Desert Open Area" OHV designation would change to "Limited Area" where OHV use would be limited to existing roads and trails. BLM must provide a reasonable range of alternatives, and given the resource values associated within this area, this action is deemed reasonable and appropriate for consideration. A basis for considering this action is found in CFR 8342.1, Designation Criteria, which directs BLM as follows: "(a) Areas and trails shall be located to minimize damage to soil, watershed, vegetation, air, or other resources of the public lands. and (b) Areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitat."

Comment: PAGE:2-136 SECTION: RECOMMENDED CHANGE:DEIS states: f. The Red Dugway road would be limited to all-terrain vehicles (ATV), horse, and foot traffic (Map 2-21). EXPLANATION: This road should remain available for recreation use.

Response: In this alternative the Red Dugway road would be available for recreation use.

Comment: PAGE:2-142 SECTION: RECOMMENDED CHANGE:Delete: [a. Vehicles and equipment used for fire suppression would be subject to the OHV restrictions applicable in the area of the fire.](strikeout) EXPLANATION:Contrary to fire plan.

Response: It is reasonable to extend OHV restrictions to all uses, rather than singling out certain types of vehicle use. New roads are pioneered in many ways. Often only a few vehicle passes are required to make what looks like a road to other users.

Comment: PAGE: 3.90, SECTION: 3.12.3, RECOMMENDED CHANGE: Add data regarding OHV use trends in the future. EXPLANATION: The discussion of OHV use trends conforms to CLG data that there is a sharp increase. In comments elsewhere, CLG notes that the RMP decisions to adopt limited and closed OHV use areas contradicts trends of increased use. The RMP needs to explain the basis for determining the remaining areas are sufficient to meet OHV use trends.

Response: BLM has no data to indicate that future trends for OHV use within the planning area would not be accommodated.

Comment: PAGE: 4-145, SECTION: 4.12.2, RECOMMENDED CHANGE: Allow OHV use in emergency. Lands would be open to motor vehicle access for emergency purposes such as search and rescue and fire fighting, regardless of the OHV designation. EXPLANATION: Chapter 2 does not provide for OHV access for emergency or fire fighting.

Response: Emergency purposes fall under "necessary tasks" and would be allowed in all areas. Fire fighting needs are assessed case-by-case and would be subject to the RMP and decisions of the resource advisor or Authorized Officer. Wildland fire, particularly where no structures are threatened, is not always an emergency situation.

Comment: PAGE: 4-148, SECTION: 4.12.2, RECOMMENDED CHANGE: ADD OHV restrictions will cause significant damage to private lands when frustrated OHV users turn to private lands. EXPLANATION: EIS discussion flawed: Fails to disclose change from most public lands being open to OHV use to less than 3,110 acres open, more than 124,980 acres limited OHV, and the rest closed.

Response: BLM has no data indicating OHV use on private lands would be impacted by OHV designations on federal lands. OHV use in the Proposed Plan could continue to occur on 893,480 acres of the planning area.

Comment: PAGE: 4-208 SECTION: 4.17.7 RECOMMENDED CHANGE: DELETE [The impacts from OHV Open areas would be the same as under Alternative 2.] (STRIKEOUT) EXPLANATION: Untrue since alternative 2 has 10460 acres for OHV and alternative 4 has only 3110 acres.

Response: The text has been updated in the final EIS.

Comment: The Bureau of Land Management's consideration to limit or shut down the area to off road vehicles would be a huge loss to the community. The area is amazing for friends and families to have meaningful experiences together and see some amazing sights and beautiful lands. Public lands. That is how the public uses it. If it were closed, those opportunities would be gone. Far less people hike or bike there, and my guess as a resident is that the usage would decrease substantially. At the end of the day, it still is a public area, right? My suggestion is to allow people to use the area how they choose. Currently, I think it's safe to say that the majority of people choose to motor their way around the area without worrying about violating laws that prohibit their use.

I know a lot of kids my age, and younger, that spend their time living and breathing motorcycles and ATVs. They spend their time either riding, or working for the money to allow them to ride. What would they be doing if they weren't? I don't want to think about it. I do believe firmly that ORV areas keep kids, including my friends, off drugs and out of trouble. I have no idea what I activities I would be doing with the time I spend riding. I know it wouldn't be a positive thing. What would be the consequences of closing or restricting the ORV use? Concentrated and overly crowded areas elsewhere. The hills bordering Marbleton would be affected greatly, as they would see much more use, causing detrimental and serious effects to the land. The damage to the vegetation would be terrible, much more so than the damage of the larger South Open Desert could ever be. Families are the greatest benefactors of the current ORV area.

Response: BLM recognizes the legitimate need for OHV activities utilizing motorized off-road, cross-country travel. However, public sentiment and BLM transportation and planning guidance does not support unlimited off-road, cross-country motorized travel. Generally, unlimited motorized cross-country travel may be warranted in areas where it does not impact other valuable resources, where conflicts with other recreational activities are insignificant, and where a substantial demand for this type of motorized recreational activity has been demonstrated. The comment implies that large areas would be closed to OHV use, which is not the case. Under the Preferred Alternative, only 23,730 acres, mostly in wilderness study areas, would be closed to OHV use. Approximately 771,000 acres would be available for OHV use on existing roads and trails.

Comment: PAGE: G-15 CHANGE: OFF-HIGHWAY VEHICLE MANAGEMENT DESIGNATIONS - Designations limited to roads and trails owned and administered by BLM and apply to all off-road vehicles regardless of the purposes for which they are being used. EXPLANATION: Per comment on Designated Roads and Trails, BLM may not determine allowable uses on roads and trails it does not own or administer, and the definition needs to be modified to reflect this limitation.

Response: The definition provided makes no reference to administrative authority for non-federal lands.

Rights-of-Way (ROWs)

Comment: PAGE:2-155, RECOMMENDED CHANGE: g. Roads and ROW would follow existing alignments unless design and implementation would preclude adverse impacts on trout and elk calving habitat. EXPLANATION: This action should be applied throughout the plan.

Response: Most of the planning area does not contain trout and elk calving habitats. It is not reasonable to limit new roads and ROWs to existing disturbance throughout the planning area.

Comment: PAGE: 4.35, SECTION: 4.5.7, RECOMMENDED CHANGE: ADD Rerouting rights-of-way will cause additional surface disturbance. EXPLANATION: Re-routing access roads may see as much as 13 miles of new road. The increased surface disturbance reduces mitigation benefits being imposed. Roads tend to be of lower standard, thus adding to dust and erosion as well.

Response: It is impossible to calculate how much additional surface disturbance might be caused in the future by rerouting of ROWs that might someday be proposed. However, a general statement of potential additional surface disturbance has been added to the final EIS.

Laws, Policy, Guidelines

Comment: Follow Wyoming Game and Fish Departments guidelines in construction of all new roads (Wyoming Game and Fish Department 2004).

Response: BLM currently uses accepted road construction and maintenance standards.

Comment: PAGE: 2-136, RECOMMENDED CHANGE: c. Reasonable access would be provided across public lands to landlocked private and state lands, consistent with federal law and BLM Manual 2801.49. EXPLANATION: BLM has statutory obligation to provide access. 16 U.S.C. §1332(b).

Response: Federal regulations at 16 USC § 1332 (b) reads as follows: (b) “wild free-roaming horses and burros” means all unbranded and unclaimed horses and burros on public lands of the United States.

Comment: PAGE: 2-136, RECOMMENDED CHANGE: d. Access across private lands to isolated public land parcels would be acquired from willing land owners only to the extent necessary and then only the minimum amount of land. EXPLANATION: FLPMA limits access acquisition for a right-of-way. 43 U.S.C. §1715(a).

Response: The Federal Land Policy and Management Act of 1976 as Amended Title II Sec 205. [43 USC 1715] “(a) Not with standing any other provisions of law, the Secretary, with respect to the public lands and the Secretary of Agriculture, with respect to the acquisition of access over non-Federal lands to units of National Forest System, are authorized to acquire pursuant to this Act by purchase, exchange, donation, or eminent domain, lands or interests therein: Provided, That with respect to public lands, the Secretary may exercise the power of eminent domain only if necessary to secure access to public lands, and then only if the lands so acquired are confined to as narrow a corridor as is necessary to serve such purpose. Nothing in this subsection shall be construed as expanding or limiting the authority of the Secretary of Agriculture to acquire land by eminent domain within the boundaries of units of the National Forest System.”

Comments with Multiple Issues

Comment: Page 2-20 (bottom), “Large Block NSO Areas would be managed for protection of wildlife habitats through offering oil and gas leases with NSO stipulations.” Comment - Though through such methods as horizontal drilling it may be possible for E&P companies to develop resources under Large

Block NSO Areas, to accomplish geophysical exploration over such leases it is necessary for those operations to be conducted on the surface above. Therefore, NSO stipulations should allow geophysical operations in these multi-use Large Block NSO Areas. Geophysical operations have a near-zero impact on the environment (including wildlife – it has not been shown that geophysical has had a negative impact on any wildlife) and should be allowed to be conducted in any multi-use area under BLM jurisdiction.

Page 2-122 (bottom), "Provide opportunities for geophysical and geologic data acquisition while mitigating impacts on important resource values. Actions:

a. Geophysical data gathering methods that involve only casual use of the surface (as defined in 43 CFR §3150) would be permitted throughout the planning area.

b. Vehicle-based geophysical activities would be assessed on a case-by-case basis.

c. The use of surface and/or above-ground (Poulter shot) explosive charges for geophysical exploration would be assessed case by case.

d. Geophysical projects, including projects proposed in areas with an NSO restriction, would be analyzed and mitigation developed on a case-by-case basis." Comment - Since it is stated in (a.) that "geophysical data gathering methods that involve only casual use" shall be permitted, (b.), (c.) and (d.) are redundant and should be deleted. As currently stated, the methods to be used are adequately defined within the definition of "casual use". Then, however, the term "case-by-case basis" is used to eliminate the useful guidelines of the definition of "casual use", offering decision making latitude that need not be included in this process. There is no reason to complicate that which is already uncomplicated.

Incidentally, since the definition of "casual use" allows for "activities that involve practices which do not ordinarily lead to any appreciable disturbance or damage to lands, resources, and improvements", and since ATV's, due to their very design, do not cause any appreciable disturbance or damage, then in this sense ATV's should not ever be considered as vehicles subject to any such limitations. Therefore, the following clause should be included after the existing sentence in (a.), stating, "ATV operation is to be considered a casual use activity in this RMP."

Page 2-155 (bottom), "e. Geophysical operations on BLM-administered surface in the Wind River Front Management Area would be restricted to designated roads and trails or to non-vehicle-based methods." Comment - Since ATV's, due to their very design, do not cause any appreciable disturbance or damage, then in this sense ATV's should not ever be considered as vehicles and be subject to any such limitations. Therefore, the following clause should be included after the existing sentence in (e.), stating, "ATV operation is considered a casual use activity and therefore considered a non-vehicle based method in this RMP."

Page 4-52 (bottom), "Contributing segments of the Lander Trail and Sublette Cutoff Trail would be encumbered by a CSU stipulation that prohibits surface disturbance, including geophysical vehicle or shot-hole operations within one-quarter mile or the visual horizon, whichever is closer (geophysical cable laying by hand-crews on foot is allowed)." Comment - As there are a number of operations besides cable laying on a geophysical operation that do not involve "geophysical vehicle or shot-hole operations", the phrase inside the parenthesis should be worded as follows: "all non-vehicle-based methods are allowed."

Page 4-53, "Approximately 315,690 acres would be closed to OHV use from November 15 to April 30. This corresponds with big game crucial winter range closures and precludes surface disturbing activity, including oil and gas development, during this time. This would seasonally limit the extent of exploration (including geophysical operations) and development that could occur in these areas. Within the big game

winter range OHV seasonal closure, the Bench Corral area and elk feedgrounds would not only be closed to surface disturbing activities, but would also be closed to unauthorized human presence from November 15 through April 30 annually. This would potentially impact production operations, such as pumper access, workover rig, and condensate/produced water hauling, as well as geophysical exploration in the closure area during the closure period." Comment - Geophysical operations have very low to zero impact on the environment. Hundreds of thousands of miles of geophysical data have been acquired in the Rockies with virtually no resulting environmental disturbance or damage. Geophysical operations should not be included in any winter range exclusion period. In all the years that geophysical operations were normally conducted through winter range periods, and in all the years of geophysical operations during other times, it has never been demonstrated that those operations have shown to have a negative effect on any wildlife.

Page 4-54, "Vehicle-based geophysical operations could be prohibited in areas with known paleontological resources and in areas with a high potential to contain paleontological resources. Geophysical data source points would avoid paleontological sites. The data points would be either moved away from the site or skipped entirely." Comment - This statement is too open-ended with no appropriate guidance of avoidance parameters. The following should be substituted: "Vehicle-based geophysical operations are not to occupy the same surface area as known paleontological resources in situ. Also, vehicle-based geophysical operations will avoid occupying the same surface area that have high potential for significant paleontological resources (defined as specific areas consisting of rock units with a high potential for significant paleontological resources known to have yielded vertebrate fossils within the project area or region). A geophysical source point will avoid a paleontological site by either being moved (or skipped) from that same surface area occupied by that paleontological site."

Page 4-73, "Geophysical operations would be restricted during the 5-month window where greater sage-grouse habitats occur." Comment - This statement requires deletion. There has been no reason shown for such a restriction. It has never been demonstrated that geophysical operations harm any wildlife, including sage-grouse. The low impact, transient nature of geophysical operations have a near zero impact on the environment. In fact, because geophysical operations have such little impact on the environment, and yet greatly increase oil and gas drilling success which results in significant reduction of total drilling and associated environmental impact, geophysical operations should be encouraged instead of restricted.

Page 4-210, "Geophysical actions during wildlife-sensitive time periods would likely disturb wildlife, causing reduced fitness, temporary habitat abandonment, or nest abandonment." Comment - This comment is outrageous and requires deletion. As stated previously, there is no evidence that geophysical operations have harmed any wildlife. The low impact, transient nature of seismic operations require that seismic operations not be lumped together with other activities that are permanent and impactful in nature. The following clause should be substituted: "Geophysical operations by their very nature are transient and near zero impact to the environment, and therefore are not to be excluded during wildlife-sensitive time periods. In fact, the data derived from geophysical operations will significantly reduce environmental impact because higher drilling success rates (less dry holes) from those data result in much less overall drilling and associated activities."

Response: Geophysical operations are not considered "surface occupancy" and would be allowed with the restrictions listed on pages 2-122 and 2-123. Not all geophysical data gathering methods involve only casual use. It is not correct to assume that all-terrain vehicle (ATV) use causes no disturbance or damage. BLM intended to specifically allow geophysical vehicle or shot-hole operations. Other proposed activities would be evaluated case-by-case. You are correct that geophysical operations have less impact than drilling. The restrictions on geophysical activities are much more lenient than the restrictions on drilling and other activities. The text concerning vehicle-based geophysical operations is appropriate as presented in the draft EIS. It is reasonable to restrict disruptive activities like thumper trucks and other geophysical

methods during nesting and other sensitive periods for sage-grouse, a sensitive species. It is reasonable to present the potential impact of nest abandonment or temporary habitat abandonment due to the presence of thumper trucks or other geophysical equipment.

Comment: There are a many options available besides laying cable that do not involve "geophysical vehicle or shot-hole operations." The phrase inside the parenthesis should be worded as follows: "all non-vehicle-based methods are allowed." BLM must recognize that these types of non-intrusive methods will not impact the actual trail segment, not to mention the ¼ mile buffer. We recommend BLM revise this section to specify that non-vehicle-based methods are allowed without restriction.

Page 4-53 "Approximately 315,690 acres would be closed to OHV use from November 15 to April 30. This corresponds with big game crucial winter range closures and precludes surface disturbing activity, including oil and gas development, during this time. This would seasonally limit the extent of exploration (including geophysical operations) and development that could occur in these areas. Within the big game winter range OHV seasonal closure, the Bench Corral area and elk feed grounds would not only be closed to surface disturbing activities, but would also be closed to unauthorized human presence from November 15 through April 30 annually. This would potentially impact production operations, such as pumper access, workover rig, and condensate/produced water hauling, as well as geophysical exploration in the closure area during the closure period." Comment - As state previously in these comments, geophysical operations have virtually zero impact on the environment. Hundreds of thousands of miles of geophysical data have been acquired in the Rockies with no resultant environmental disturbance or damage. It is unwarranted to include geophysical operations in any winter range exclusion period. In all the years that geophysical operations were normally conducted through winter range periods, and in all the years of geophysical operations during other times, it has never been demonstrated that those operations have had a negative effect on any wildlife species.

Page 4-54 "Vehicle-based geophysical operations could be prohibited in areas with known paleontological resources and in areas with a high potential to contain paleontological resources. Geophysical data source points would avoid paleontological sites. The data points would be either moved away from the site or skipped entirely." Comment - This statement is open-ended with no appropriate guidance of avoidance parameters. The following sentence should be substituted: Vehicle-based geophysical operations should avoid occupying areas with known paleontological resources (defined as specific areas consisting of rock units with a high potential for significant paleontological resources known to have yielded vertebrate fossils within the project area or region). A geophysical source point will avoid a paleontological site by either being moved (or skipped) from that same surface area occupied by that paleontological site."

Response: BLM intended to specifically allow the activity in the parentheses. Other proposed activities would be evaluated case-by-case.

Seasonal Restrictions

Comment: PAGE:2-136 SECTION: RECOMMENDED CHANGE: DELETE [g. Additional restrictions for seasonal use of over-the-snow recreational motorized equipment would apply as follows:

- Big game crucial winter range (except designated routes on Map 2-35) (November 15 to April 30)
- Elk feedgrounds (November 1 to April 30)
- Bench Corral area (November 1 to April 30)
- CCC Ponds SRMA (closed year round).](strikeout)

EXPLANATION:The local governments do not believe that increased elk numbers support closures that would prohibit snow mobiles.

Response: BLM and WGFD have agreed that these restrictions would reduce stress upon important wildlife using crucial winter ranges. Most crucial winter ranges affected are those for mule deer and pronghorn. Few native elk crucial winter ranges remain in the planning area.

Comment: PAGE:2-136 SECTION: RECOMMENDED CHANGE: DELETE [I. Additional restrictions for all motorized equipment would apply as follows (Map 2-35):

- Approximately 2,500 acres between Silver Creek and Cottonwood Creek would be closed from November 15 through January 31 (Map 2-35).
- Roads could be closed seasonally to avoid damage or to protect resource values.](strikeout)

INSERT The local governments will sponsor an advisory group to identify roads needed for access and the times for which access is needed and provide the information to BLM along with the roads and trails which are part of the county road system. EXPLANATION: Hunters need access to Silver and Cottonwood Creeks. This restriction is unreasonable and not based on any facts. The local governments do not disagree that some roads should be closed at specific times of the year. The RMP however does not clarify the basis for the closure thus allowing entirely arbitrary decisions to be made. Immediate closure cannot be justified based on the planning record. The complete lack of coordination with county government which has statutory jurisdiction over roads and trails and is responsible for transportation system is just one example of why the decision needs to be postponed until there is the much needed coordination.

Response: The counties and conservation districts, as cooperators on the RMP process, would be invited to participate in the transportation planning to be conducted following finalization of the RMP ROD. The road closure for the Silver Creek Ridge was in response to a request from WGFD. WGFD worked and continues to work with adjoining ranchers to reduce depredation of stored agricultural crops through the use of controlled access across public lands and access to private lands under a hunter management area concept. The road closure was published in the *Federal Register* and several articles appeared in the local newspapers. No comments were received. Each year WGFD publishes new maps that contain rancher contact information and rules for all hunters governing access to private lands with the intent to reduce the stored agricultural crop depredation. All vehicular traffic into Cottonwood Creek is controlled by private land owners. It is necessary to provide for emergency closures in situations of damage or risk to public safety.

Comment: PAGE:2-137 SECTION: RECOMMENDED CHANGE: DELETE [j. OHV closures and seasonal restrictions would be effective immediately upon signing of the ROD for the RMP.](strikeout) EXPLANATION:Immediate closure cannot be justified based on the planning record. The complete lack of coordination with county government which has statutory jurisdiction over roads and trails and is responsible for transportation system is just one example of why the decision needs to be postponed until there is the much needed coordination.

Response: The action referenced does not impose any restrictions or limitations upon the transportation systems administered by Sublette or Lincoln counties.

Hazardous Materials

Comment: To minimize the risk of hazmat spills that may contaminate ground waters used by residents living near Highway 191 north of Sand Draw, require trucks carrying hazardous materials to and from the

Pinedale Anticline field to use the Piney Cutoff (County Road 351) and south entrance to the Paradise Road. The north end of the Paradise Road, near the junction with Highway 191, presents greater risk of motor vehicle accidents and also presents greater risk of surface water contamination.

Response: This is outside BLM authority.

Comment: To address surface water issues outlined in these comments, I am asking the BLM to adopt the following direction in the new RMP: • To prevent accidental spill-related contamination of the Class 1 surface waters in the Green River above the New Fork confluence, transport of hazardous materials (including any vehicle carrying more than 100 gallons of diesel fuel or gasoline) shall be prohibited along the East Green River Road, Sublette County Road 110, between U.S. Highway 191 and County Road 351 (Piney Cutoff); exceptions may be made on a case-by-case basis for ranches and home owners along this road segment.

Response: This is outside BLM authority.

Comment: To minimize the risk of hazmat spills in the Green River and New Fork River, require trucks transporting hazardous materials to and from the Jonah field to use the Luman Road, and prohibit travel by such vehicles on the Piney Cutoff (County Road 351) from 1/4 mile east of the New Fork River Bridge to U.S. Highway 189.

To protect the Hoback River and ground water resources west of the Rim, discourage transport of hazardous materials - to or from the Jonah field, PAPA field, and other oil or gas sites in the PRA - on U.S. 189/191 through Hoback Canyon.

Response: This is outside BLM authority.

Comment: "Contributing segments of the Lander Trail and Sublette Cutoff Trail would be encumbered by a CSU stipulation that prohibits surface disturbance, including geophysical vehicle or shot-hole operations within one-quarter mile or the visual horizon, whichever is closer (geophysical cable laying by hand-crews on foot is allowed)." Comment: There are operations besides cable laying on geophysical operations that do not involve "geophysical vehicle or shot-hole operations." The phrase inside the parenthesis should be worded as follows: "all non-vehicle-based methods are allowed." Further, geophysical operation is a very short duration and temporal activity. Any use of the ¼ mile visual horizon would only be temporary and would not involve a long term presence that would compromise the trail.

Response: We appreciate and recognize your point. We also find that any National Historic Trails conflicts proposed by geophysical operations are best evaluated and mitigated on a case-by-case basis, so we choose to retain the original language. Over the past 25 years, we have not found such conflicts to encumber either the geophysical operations or historic trails management strategies.

Comment: And I think that any road that serves more than three wells should be magged, automatically, or dust control of some sort, whether it's the beano (phonetic) or whatever we get but we've got to do some dust suppression. I don't really think that just using water is the answer because then we're going to use up the water that we need here to subsist with and keep our aquifers full.

Response: Mitigation of impacts of gas field developments should be determined at the implementation or permitting stage, not dictated in the RMP. Methods to control dust are included in the BMPs in Appendix 5. It is not appropriate to specify a particular BMP for use throughout the planning area.

Comment: I think any road that serves more than 50 wells should be paved. Whether it's in these fields or any new fields that are coming up, I think that even the oil fields should have that consideration. I don't know if you can force it on old leases, but I think there should be a cooperation with all the different agencies and understand that we can do so much with taking to these big developments like this.

Response: Mitigation of impacts of gas field developments should be determined at the implementation or permitting stage, not dictated in the RMP. Methods to control dust are included in the BMPs in Appendix 5. It is not appropriate to specify a particular BMP for use throughout the planning area.

Vegetation

General Comment Responses: *No GCRs are associated with this category.*

Comments on Document/Suggested Changes

Comment: PAGE:2-137 SECTION: RECOMMENDED CHANGE: REVISE a. BLM will commit to funding and will [would](strikeout) collaborate with stakeholders (federal, state, and local agencies; operators; landowners) to identify funding mechanisms and methods to complete ecological site and vegetation inventory. EXPLANATION: BLM should be funding the effort on public lands. The work done on private lands can be funded through conservation districts and NRCS. Private land owners and local governments like the county do not have such funding.

Response: Local cooperators are interested in assisting in funding this effort. PFO sees no reason to refuse this offer of cooperation.

Comment: PAGE: 3.93, SECTION: 3.13.1, RECOMMENDED CHANGE: Revise to disclose the percent or riparian and "wetland" areas discussed in the RMP are public land and those that are private land. EXPLANATION: The RMP fails to disclose that most (about 80%) of the riparian and wetland areas are located on fee land outside of the RMP.

Response: The acreages and percentages in the text in Section 3.13.1 have been updated to agree with Table 3-27, which provided vegetation acreage values for BLM lands within the planning area.

Comment: PAGE: 3.135, SECTION: 3.18.2, RECOMMENDED CHANGE: [Need more here] EXPLANATION: Most of the plants listed are not located in the area.

Response: No plants are listed in the section mentioned. However, the presence of a number of sensitive plants in the Ross Butte area has been verified.

Comment: PAGE: 4-149, RECOMMENDED CHANGE: ADD Wildlife numbers and upward trends adversely affect plant communities.

Response: BLM finds that this assumption is not necessary.

Comment: PAGE: 4-149, RECOMMENDED CHANGE: Current [Some original] (STRIKEOUT) plant communities likely would not be reestablished to pre-disturbance structure and density for more than 20 years. EXPLANATION: Original is the wrong term. There is no such term "original plant communities"

Response: This assumption has been rephrased in the final EIS.

Comment: PAGE:2-137 SECTION: RECOMMENDED CHANGE: REVISE Objective 1 Establish and maintain an accurate ecological site and vegetation inventory for the planning area. EXPLANATION: An ecological site inventory is more meaningful because it will provide additional information regarding soil type, site potential rather than just a list of the plants currently present.

Response: This change has been included in the final EIS.

Special Status Species

Comment: DEIS A18-1: Regarding Ute ladies'-tresses (Spiranthes diluvialis) conservation measures, the DEIS states "plans that incorporate these measures, and projects that implement them, are generally not

expected to have adverse effects on the orchid...". However, according to the programmatic BA and programmatic BO for the Ute ladies'-tresses orchid, plans that incorporate the measures are still expected to have adverse effects to individual orchids as a result of livestock grazing activities. Please see the programmatic BAs and BOs and adjust the text of Appendix 18 of the DEIS, if necessary.

Response: The Biological Assessment and Biological Opinion were received too late to be incorporated into the draft EIS. The information in them has been included in the final EIS.

Comment: The DEIS does not contain the Bureau's most up-to-date programmatic conservation measures for the Ute ladies'-tresses orchid. Please see the latest drafts of the programmatic BAs and BOs for the most up-to-date conservation measures.

Response: The Biological Assessment and Biological Opinion were received too late to be incorporated into the draft EIS. The information in them has been included in the final EIS.

Comment: PAGE:2-137 SECTION: RECOMMENDED CHANGE: REVISE c. Known and discovered locations of Special Status Plant Species would be protected and closed or avoided to— EXPLANATION:The avoidance option should be available where appropriate.

Response: Avoidance would mean that special status plants could be destroyed, which is not compatible with BLM policy. Avoidance is appropriate only with ROWs where the special status plant population would experience no surface disturbance but where the project could proceed through other methods.

Comment: PAGE: 1-152, SECTION: 4.13.2, RECOMMENDED CHANGE: REVISE OHV use would result in localized impacts on vegetation, such as reduction of vegetation cover and density and community composition changes. [The generation of dust from vehicular travel on roads next to Special Status Species could affect plant photosynthesis and population survival because of the small number of individual plants in some areas.] (STRIKEOUT_ Reclamation would replace abandoned roads with herbaceous and shrubby vegetation and the impacts stated above would no longer occur. EXPLANATION: The dust would have to bury the plant. Not true.

Response: Reduction of photosynthesis can occur when fugitive dust lands on and coats the leaves of a plant adjacent to a road. This may affect a stressed plant and lead to further deterioration. With plants that are already uncommon, this may cause a loss of productivity and be detrimental to the plant or the population.

Reclamation, Mitigation, Revegetation, Treatments

Comment: We find the current federal and state management of our wildlife resources to be reactive, with no clear plans to maintain, improve or restore habitats so vital to the future of our wildlife populations. Accordingly, we insist that the following corrective actions be considered and implemented: 9. A site specific, detailed reclamation plan should be prepared for each well pad, pipeline, and road prior to authorization and include:

- Top soil storage techniques
- Native vegetation disturbed
- Diversity and composition.
- Importance to animal use patterns
- Expected results from reseeding
- Need to collect native seed
- Need for irrigation and fertilization
- Need for fencing

- Methods to be employed to insure success
- Potential for mats
- Drilling, broadcasting or natural reinvasion of plants
- Plans to revisit site with heavy equipment and reclamation
- Definition of success
- Native plant diversity
- Ground cover
- Predicted animal use
- Plans for reseeding if reclamation fails
- Costs, bonding and penalties for failure

Response: The methods suggested here represent current technology on reclamation. Site-specific reclamation requirements would be determined at the project or implementation level rather than in the RMP. These methods have been included in the list of BMPs to be used in oil and gas and other developments.

Comment: Page 3 -- 31 on vegetation treatments the question remains there should be a vegetation reclamation plan that is implemented for a typical well site. How it will be implemented, what species of vegetation, the amount of vegetation density that will be re-established, etc. There must be a detailed plan that allows a site developer to follow and the BLM to enforce, in accordance with approved outlined rules regulations on vegetative reclamation and soil reclamation, to restore the local environmental conditions in and around the site after development.

Recent site visits by this office have indicated that there is a lack of proper erosion control and vegetative reclamation or a cohesive plan that is consistent from site to site. This office, from observation, believes that there is a lack of enforcement or planning or both that can be consistently followed through to minimize impacts. Some sites appear they have not been properly reclaimed or done at all.

The above-mentioned plan should also address specific environmental area such as riparian and river bottom areas which are unique local ecological areas that are different than open range land areas that must have a separate and distinct plan to themselves to address similar impacts of erosion control soil management and vegetative reestablishment.

Response: Site-specific reclamation requirements would be determined at the project or implementation level rather than in the RMP. As stated on page 4-3 of the draft EIS, BLM assumes that sufficient funding and personnel would be available to implement the RMP.

Comment: Page 3 -- 87 limitations on specific activities (last paragraph) indicates many soils within the planning area have limiting features that make reclamation and revegetation difficult. Have those areas been identified and have they been worked into a comprehensive plan as mentioned above. The EIS should develop and expand upon special reclamation and revegetation plans for those difficult areas and what site specific actions reclamations and revegetation items are necessary to successfully reclaim and revegetate those areas. The EIS should identify and delineate, so disturbance and encroachment are eliminated. What kind of Delineation fencing flagging or other, etc. Delineation of these areas would also help in reducing and eliminating contact with OHV usage, trucks, drilling operations etc where their disturbance on critical soil areas can cause severe degradation loss of vegetation and alteration of the visual landscape therefore these areas should be properly delineated also who enforces that these areas remain untrammeled.

Response: Specific soil site data is not available to fully map soils in the planning area to identify where limitations exist that would make successful reclamation difficult. In addition, site-specific reclamation requirements would be determined at the project or implementation level rather than in the RMP.

Comment: We advocate for the use of only native vegetation for reclamation. Non-native species create long-term problems and many can become invasive. BLM must require that land be reclaimed as nearly as possible to original (pre-project) condition. We incorporate herein by reference our scoping comments submitted April 7, 2003, to be included in their entirety (including all attachments and exhibits) as part of these comments to the DEIS. In the interests of conserving resources and file space, we have not attached a copy of this document since they are already part of the record.

Response: BLM uses native species whenever possible for reclamation as outlined in Section 1745 of the Manual. Reclamation is planned and designed to produce a desired plant community in accordance with the resource goals of that particular area.

Comment: Item: Page A3-5, Appendix 3, Mitigation: Exposed upland soils must be effectively revegetated within one growing season Comment - Due to recent drought conditions, it may be difficult to "revegetate within one growing season." The BLM must be flexible on this requirement as new reclamation techniques are applied by operators even as the drought persists to achieve the desired condition. It is important and certainly consistent with adaptive environmental management and best practices that innovation be encouraged. Providing flexibility will promote innovation and best practices by the industry.

Response: Drought conditions can have an impact on reclamation. Revegatation of eroded soils needs to proceed as quickly as possible to prevent further erosion. Reseeding such areas may require several attempts throughout the year to take advantage of available moisture. The flexibility of the BLM permitting process and the performance-based process allows BLM to consider the conditions of an area and whether or not other methods are needed.

The final EIS has been revised as follows: "Soil retention measures, such as silt fencing, contour furrows, hydro-mulching, etc., shall be implemented on erosive upland soils at the time of disturbance. Revegetation shall be initiated on exposed soils on portions of the disturbance not needed for operations (i.e., cut and fill slopes, portions of well pads not needed for production operations after the well(s), etc.) within one growing season of the time the disturbance is not needed for operations." Please note that even during drought years, operators can implement measures, such as watering, to achieve successful reclamation.

Comment: PAGE: 2-14 SECTION: 2.13.17 RECOMMENDED CHANGE: ADD Monitoring and evaluation strategy will be developed in coordination with local governments. For ongoing monitoring of vegetation, the conservation districts and grazing permittees will be involved. EXPLANATION: Rangeland monitoring for instance is not a "new project" for which an APWG would be established.

Response: Normal monitoring is presently open to interested parties. For additional information see Appendix 11.

Comment: PAGE:2-137 SECTION: RECOMMENDED CHANGE: REVISE d. All vegetation treatments would be assessed for the potential to introduce invasive species before a treatment method was selected and when mechanical or chemical treatment is used, BLM will reseed and ensure noxious weed control is part of the treatment. EXPLANATION:Vegetation treatments should not be denied solely due to possibility of additional noxious weeds. The solution is reseeding and treatment.

Response: The vegetation treatment would not be denied due to noxious weeds. The intent of this management action is to determine the best method to use. Subsequent reseeding would be part of the treatment if necessary and weed control is always applied as needed.

Comment: PAGE: 4-160, SECTION: 4.13.7, RECOMMENDED CHANGE: ADD Benefits from vegetation treatments not available in most SMAs.

Response: Treatments to benefit vegetation are generally allowed in SMAs.

Comment: PAGE: 4-161, SECTION: 4.13.7, RECOMMENDED CHANGE: REVISE Area specific objectives, including [Wildlife] (STRIKEOUT) and fisheries objectives would be addressed during reclamation activities, which would influence the plant seed mix selection used in reclaimed areas. [Impacts on vegetation from surface disturbing activities would not occur within certain wildlife buffers, which would help to retain native vegetation composition.] (STRIKEOUT) Managing important waterfowl areas for preferred waterfowl habitat would help to maintain and protect vegetation. Reclamation would be tied to site capability and vegetation selected to restore, enhance and maintain biological diversity. EXPLANATION: Arbitrary wildlife buffers should not limit revegetation or other management initiatives.

Response: This section involves wildlife and specifies the main objective species. The buffer area would help protect native species by reducing the amount of surface disturbing activity. In addition, the buffer would not preclude carrying out revegetation projects or other management initiatives.

Sagebrush

Comment: It is likely BLM has utilized methods that overestimate sagebrush cover, causing it to pursue actions to reduce sagebrush cover that are not warranted. Sagebrush "treatments" are often ineffective and "typically do not increase the cover of grasses or forbs relative to untreated areas; in fact they may reduce grass and forb cover. Sagebrush habitats support a large array of native species of plants and wildlife and this important ecological service is not adequately acknowledged or analyzed in the DEIS. Fire is an infrequent ecological factor in sagebrush ecosystems and claims that increasing fire frequency in these habitats will "improve" them are scientifically unfounded. Sagebrush is important forage plant for many species, including due to the fact that it is abundant, an important consideration for any plant species to be deemed an important forage species. But this is not recognized in the RMP DEIS. Mature sagebrush communities provide many important ecological functions that can be lost with sagebrush "improvement" activities, not the least of which is the provision of crucial winter ranges for several species.

Response: The draft EIS discusses the presence and importance of sagebrush as forage and cover for numerous wildlife species. The areas unavailable for leasing or available with NSO stipulations are intended to protect sagebrush habitats on a landscape scale.

Comment: Item: Pages 4-181 – 189. Impacts Common to All Alternatives Comment: Within this section of the document there is inconsistency in assessing the value or impact of vegetation disturbances. On pages 4-181, 4-182, 4-183, 4-184, and 4-185 the impacts of vegetation disturbance are described as negative (fragmentation, loss of species diversity, and suitable for generalist species only). On pages 4-182, 4-189, and 4-90, however, the effects of vegetation disturbance are described as positive (habitat mosaics, increase of habitat values and species diversity, and suitable for use by early seral species). Why is habitat fragmentation bad while habitat mosaics are good when it is necessary to fragment the habitat in order to create mosaics?

While the reduction of sagebrush habitats is likely to have negative effects on sagebrush obligate species, such disruptions will have positive effects on wildlife species that require more open or mixed

sagebrush/herbaceous habitats. What is overlooked in this presentation is the fact that there will be beneficial effects to non-sagebrush obligates that accrue from the reduction of sagebrush habitats. Prairie dogs, ground squirrels, burrowing owls, grassland birds (including mountain plovers), and most medium to small mammal species will all benefit from the opening up of the sagebrush monoculture. Also, prey base for raptor species is likely to be increased with the opening up of the sagebrush habitat.

Response: The argument set forth in this comment compares native ecosystem function with manipulations created by humans. In addition, sacrificing sagebrush obligate species with the justification that prairie species will take over is irresponsible. The beauty of a true landscape mosaic is that it is self-containing and naturally contains habitats for sagebrush obligates, grassland prairie obligates, and forest obligates, to name a few. Humans cannot create these systems better than Mother Nature, and bringing more anthropogenic features into the landscape only creates a situation of further manipulations.

Comment: Pages 2-40 - 2-41 Tables 2-3 Vegetative Manipulation Opportunities (by Prescribed Burn) and 2-4 Habitat Guidelines for Brush Control and Basic Assumptions for Table 2-4. Comment - The management guidelines for sagebrush "control" and their benefits to wildlife contradict the descriptions of oil and gas removal of sagebrush which are classified as "impacts". It is specious to assume that sagebrush removed by oil and gas activities is an impact while sagebrush removed by BLM is beneficial. Clearly there is an opportunity for BLM to work with industry to achieve sagebrush control goals. In areas where BLM needs to remove sagebrush to benefit wildlife, we recommend that where appropriate these actions be coordinated with oil and gas operators so that sagebrush removal can be accomplished in a manner consistent with BLM's objectives. This would be advantageous to BLM, wildlife and industry in areas where such needs are mutually beneficial.

Page 2-151, Item a At the top of the page under Actions, the DEIS states, "Large contiguous patches of sagebrush habitat would be protected through NSO stipulations and unavailable areas (Map 2-9)." Comment - This statement is inconsistent with information presented in Tables 2-3 and 2-4 on Page 2-40 and with "Basic Assumptions for Table 2-4" on Page 2-41. The statement on Page 2-151 requires that large contiguous patches of sagebrush be protected, while the guidelines in Tables 2-3 and 2-4 recommend opening up stands of sagebrush to improve habitats for big game species and sage grouse. It would appear that the value of opening up stands of sagebrush is dependent upon who does it. As stated previously, coordination of sagebrush control between BLM and industry could be beneficial to all.

Response: Sagebrush removed by oil and gas activities occurs in areas determined by the operator to promote gas production. The removal of sagebrush in these areas involves removing vegetation and topsoil on a site measuring from between 3 to 20 acres. The affected site does not produce vegetation for 3 or more years, depending on drilling schedules and the number of wells drilled and completed on the site. In addition, the placement of numerous structures, the introduction of heavy vehicle traffic, and continuing noise and human presence compound the impact of vegetation removal on wildlife. In contrast, sagebrush removed by BLM in planned vegetation treatments occurs in areas most likely to recover and produce healthy vegetation for wildlife. Most plant root systems remain intact and vegetation production resumes shortly after the treatment. No topsoil is removed, keeping seed sources for native plants in place. Additionally, treated sites are managed to reduce other uses and impacts on the site to facilitate recovery of the vegetation community.

Comment: Undeniably sagebrush taxa are the most important organisms (keystone species) occurring naturally within the area considered by the DEIS. This is illustrated by the fact that these taxa are the climatic dominant over the majority of the landscape. They are ecologically influential on all other organisms, both flora and fauna, within the area. Specifically, this means that other species are found in this area because of sagebrush and not in spite of it. I hope to clarify why sagebrush has been called "a nursing mother to a host of organisms that range from microscopic fungi to large mammals" by Welch

(2005). The DEIS fails by any measure to recognize and address this point and the issues it encompasses. Consequently the proposed management plan (Alternative 4) and all other alternatives in the environmental impact statement (EIS) are inadequate relative to meeting BLM's analysis and disclosure obligations under the National Environmental Policy Act (NEPA) and its planning and management obligations under the Federal Land Policy and Management Act (FLPMA).

Response: The draft EIS discusses the presence and importance of sagebrush as forage and cover for numerous wildlife species. The areas unavailable for leasing or available with NSO stipulations are intended to protect sagebrush habitats on a landscape scale. The draft EIS and proposed RMP final EIS are intended to be use allocation and management documents, not exhaustive scientific review papers. The goal to reestablish the role of fire in the ecosystem is broad enough to allow for future information gathering on sagebrush ecology and management.

Comment: Precisely what percentage of the area is dominated by sagebrush taxa is difficult to ascertain because of several confounding and confusing statistics provided in the DEIS. There are figures provided in the document (abstract) of 1,199,280 acres of federally administered mineral estate along with a total surface acreage of 922,880 acres administered by BLM within the planning area (abstract and table 3-27). The summary (p. v) says the preferred alternative 4 would make available 1,024,880 acres for oil and gas leasing and development. From these numbers evidently the total planning area is subject to this activity. On page v the DEIS states, "Intensively developed fields would be managed for intensive oil and gas activities while protecting wildlife habitats to the extent practicable". This statement clarifies that environmental aspects and long term ecosystem stability rank below the leasing and development of gas and oil in the area regarding BLM' priorities and concerns.

Response: There will be extensive development in certain parts of the planning area. These areas would be managed for oil and gas in accordance with the National Energy Policy Act while protecting wildlife habitats as much as possible. In other areas that are not designated for extensive development there will be greater emphasis on wildlife habitat protection and ecosystem stability.

Comment: Further confusion is found in the fact that the text accompanying table 3-27 apparently does not agree with this table as to the percentages of the planning area occupied by different vegetative types. For example, table 3-27 provides acreages for Wyoming big sagebrush, mountain big sagebrush, and desert shrub vegetation communities. These important vegetative types are stated to be found in the following percentages of total vegetation: 70% Wyoming big sagebrush, 10.7% mountain big sagebrush, and 6.2% desert shrub communities, for a total of 86.9% of the Pinedale resource area dominated by sagebrush taxa. This total of 80.7% in the big sagebrush communities collectively has to be considered with a conflicting value of 68.5% that is found upon reading the text that follows table 3-27. This text has the following percentages: 52% Wyoming big sagebrush, 16.5% mountain big sagebrush. Because terminology is changed to "low-density sagebrush communities", for areas that evidently make up the tabled category of "desert shrub", this category becomes even more confused. Evidently this vegetative type has some lower percentage as do the big sagebrush taxa. The percentages given in the text following table 3-27 cannot be calculated from either the tabled value for the total acreage of 922,880 acres nor can they be derived from the 1,199,280 acres of federally administered mineral estate lands.

Response: The acreages and percentages in the text in Section 3.13.1 have been updated to agree with Table 3-27, which provided vegetation acreage values for BLM lands within the planning area. Desert shrub consists of greasewood and saltbush species, not low-density sagebrush.

Comment: Most importantly, considering the over whelming importance of sagebrush, it is appalling to note that within the entire DEIS, BLM referenced only 4 papers pertaining to sagebrush (see literature cited and do not confuse sage-grouse with the much larger issue of sagebrush). None of these 4 papers

were peer-refereed, the normal process used by scientists to insure the information contained in a paper is worthy of publication in a scientific journal. This is particularly ironic because there are hundreds of scientific references that deal with different aspects of sagebrush ecology that should have been consulted. Welch (2005) reviewed over 1600 papers concerning big sagebrush alone. There is obviously no shortage of information about sagebrush for this DEIS. Further, to make this omission of background information for the keystone species in the Pinedale Resource Area where the ecosystem is potentially going to be subjected to many threatening activities is an enormous omission from this DEIS. This lack of consideration regarding the ecological implications of altering the sagebrush ecosystem that dominates 87% of the concerned area (table 3-27) is very evident throughout the DEIS. This DEIS fails to consider the ecology of sagebrush ecosystems in general and specifically the keystone species, the sagebrush taxa This is a severe shortcoming in this DEIS and makes it scientifically deficient and of far less value for rational management decision-making.. When the keystone species are negatively impacted then other important and often critical ecosystem processes and functions also suffer as I discuss throughout this memorandum.

Response: Sagebrush is considered in all of the natural resource issues. For example, in sage-grouse habitats, BLM follows the Sage-Grouse Habitat Management Guidelines for Wyoming. These guidelines have taken into account and used recommendations from many referenced papers. This is true for many species, and these guidelines need to be consulted for the background information for this planning effort.

Comment: The DEIS contains no adequate descriptions of community characteristics within sagebrush types. BLM must correct this omission before an EIS can be finalized if the agency intends to comprehensively address the impacts facing this area as intended by NEPA.

Response: BLM is using the best available information without undertaking new inventories. As new data become available, BLM will incorporate them into its plans.

Comment: The discussion near table 3-27 mentions various sagebrush canopies of greater than 35%, surprisingly even in Wyoming big sagebrush areas. The likelihood is that traditional government methodology was followed (Bureau of Land Management 1996) to determine this sagebrush cover (the other alternative is that the coverage was estimated occularly or best guess). Thus, it is unlikely that the cover figures cited relate to most scientific literature that describes sagebrush thresholds required to sustain important wildlife populations.

Response: The 35% figure was stated as being for high-density Wyoming big sagebrush areas and not for all areas throughout the planning area.

Comment: Wambolt et al. (2006) concluded that sagebrush cover is currently determined with considerable variation in procedure. Such lack of standardization in sampling protocol makes monitoring of management objectives based on research methodology unreliable. This happens because the techniques used in research are more precise and carefully applied. Wambolt et al. (2006) found that percent cover in sagebrush habitats as determined by agency methods (Bureau of Land Management 1996) was up to 2.6 times greater than that from research applications.

Response: BLM uses Technical Reference 1730-1 for measuring plant populations. The land cover data for this document is from Geographical Analysis Program (GAP) data, which was derived from satellite imagery and is not as accurate as on-the-ground methods.

Comment: The Pinedale RMP and EIS must ensure that poor or inconsistent methodologies are not leading to inaccurate estimates of sagebrush cover, which precipitate uncalled for management actions.

Response: The land cover data for this document is from GAP data, which was derived from satellite imagery and is not as accurate as on-the-ground methods but is the best available data that covers the whole planning area.

Comment: As Daubenmire (1970) stated, "range management in North America has been dominated by the narrow view that only the few plants of direct use or detriment are worth consideration". Daubenmire went on to point out that simplification of big sagebrush communities by removal of the dominant (sagebrush) has to have significant negative consequences for other organisms. Wambolt et al. (2001) agreed when they noted significant habitat deterioration did occur on their 13 study sites where big sagebrush cover, density, and production were all significantly greater in the unburned portions in 34 of 38 comparisons, even after as long as 32 years since burning.

Response: Big sagebrush cover and density will be less on burned areas for many years. BLM tries to provide mosaics in accordance with sage-grouse guidelines for sagebrush cover and density when planning prescribed burns.

Comment: The DEIS states that only 5609 acres in the planning area are at the potential natural community (p. 3-32), yet BLM proposes to kill more of the climatic climax sagebrush. The reality is BLM presents no data to demonstrate any knowledge of successional status and thereby, obviously does not account for normal ecosystem processes. The only conclusion must be that BLM either does not recognize the potential natural community or has no appreciation for the fact that this state will be reached much sooner without further human mistakes, or both.

Response: Many areas are managed for the desired plant community, which may not be the potential natural community for that area. The desired plant community will be determined by the resource objectives for that area.

Comment: Prescribed burning has been routinely used for a number of years now by agencies in sagebrush habitat types. Unfortunately this action is usually not supported by numerous science-based studies. There is much scientific evidence documented regarding the negative impacts of fire on these; habitats and the organisms that depend upon them (Byrne 2002, Connelly et al. 2000, Fischer et at 1996, Nelle et al. 2000, Peterson 1995, Baker 2006). This DEIS consistently makes claims that are not based on science regarding such matters as the many points touted as positive about burning sagebrush. By deductive logic it is implied that other activities (oil and gas related) will not negatively impact the ecosystem by also destroying sagebrush and obviously sagebrush habitat that is so very important for many other organisms. The fact is that BLM has produced no data or science based examples to the contrary (noted by the void of literature consulted for the DEIS) showing the claimed positive effects of fire in the sagebrush ecosystem and instead is relying on unsubstantiated conventional wisdom originating from long held bias or conjecture.

Response: The "Wyoming Guidelines for Managing Sagebrush Communities with Emphasis on Fire Management" was issued on November 15, 2002. This was an interagency document sponsored by the Wyoming Game and Fish Department and BLM. Interagency cooperators were the Wyoming Game and Fish Department, Wyoming BLM, the U.S. Forest Service, and the Natural Resource Conservation Service.

This document has an extensive bibliography listing the scientific publications used for this document. It discusses the sagebrush ecosystem in Wyoming, management concerns and goals, sagebrush degradation issues, as well as providing management guidelines project implementation in the various primary sagebrush species in Wyoming. This document provides the overall strategies for implementing not only

prescribed fire, but other treatments within the sagebrush ecosystem. Any sagebrush manipulation should fall within the guidelines in this document.

Comment: On fire, a dozen sagebrush and sage-grouse scientists (PACWPL policy paper SG-02-02 p. 11) stated that "there is no empirical evidence supporting the notion that fire has positive effects on sage-grouse over the short or long term." Additionally, they pointed out that fire removes large sagebrush plants that provide theiral and security cover as well as food, and reduces important insect populations vital to sage-grouse diet. Unfortunately, fires tend to burn the most productive and best habitats within an area, usually where grass and shrub cover are greatest, leaving the unburned portions to be the less productive sites of inferior habitat quality (Connelly et al. 2000).

Response: Prescribed burns are planned using the sage-grouse guidelines for sagebrush, which were developed to protect sage grouse and their habitat.

Comment: Usually, sagebrush dependant species, for example sage-grouse, use only remaining sagebrush stands in burned habitats, thereby, reducing the area of occupation and their populations, if they can persist at all following fire. Byrne (2002) documented that the avoidance of these burned areas by sagebrush dependant species goes on for decades. Despite the fact that many agency personnel have supported the use of prescribed burning of sagebrush communities to supposedly enhance habitat for sagebrush dependant species, there is no adequate scientific basis that demonstrates this occurs (Nelle et al. 2000, Fischer et al. 1996)

Response: Prescribed burns are planned so as to provide habitat for numerous species. These species include sagebrush-dependent wildlife species, other wildlife species, and livestock.

Comment: It is imperative that the facts in Baker (2006) not be ignored when discussing the concepts put forth by the DEIS. Quoting, Baker (2006) "combining the fire-scar and recovery evidence, the best available estimates of fire rotation are 325-450 years in low sagebrush, 100-240 in Wyoming big sagebrush, 70-200 years or more in mountain big sagebrush." Baker further states that "these estimates are likely low estimates because they could not be corrected for targeted sampling and they use a conservative estimate of adjacency correction, but fire rotation in sagebrush cannot be estimated more precisely at this time using available data." He further expands that "given the long rotations that characterized pre-Euro American fires in sagebrush, fire exclusion likely has had little effect in most sagebrush communities." Further, "particularly in Wyoming big sagebrush, a program of prescribed burning is unwarranted or inadvisable if maintaining and restoring sagebrush landscapes and sagebrush-dependant species is the goal. Correcting for fire exclusion by reintroducing fire is likely not a common sagebrush restoration need". Wyoming big sagebrush is the single most important taxon in the Pinedale Resource area.

Response: Prescribed burning is planned for resource and multiple use objectives and to obtain a desired plant community. When prescribed burns are planned in sagebrush areas, guidelines for sage-grouse and other wildlife are included in the planning.

Comment: The DEIS states (p. 4-160) that "vegetation treatments would be designed to reestablish the natural role of fire in the ecosystem." Until BLM recognizes what that role really is for sagebrush communities (i.e., a very limited, infrequent role) it appears that just the opposite will occur. Fire will be introduced at unnatural and scientifically unjustified scales and frequencies. Unfortunately, the tendency is for the uninformed public to think that if sagebrush needs to be reduced by fire and other means, as so often stated in this DEIS, then obviously, there is no reason for them to be concerned about sagebrush habitat loss to oil and gas related issues or other management actions. However, because the underlying

bases for these claims has no scientific grounding, the further implied conclusion that other sources of sagebrush loss are not harmful also has no basis.

Response: The LANDFIRE project has produced information on the fire return intervals and fire severity. It provides a basis, using the biophysical setting, to provide historical and "best science" data on the location of the various vegetation types pre European settlement and comparisons between their "historical" range and structure/composition with what is found on the landscape today. BLM uses the fire regime and condition class, the biophysical setting, and the existing vegetation type gathered from this research to analyze the potential and need for implementing a project in any biophysical setting that is funded by the fuels or forestry program.

Comment: Large mammals known to consume big sagebrush include domestic sheep, mule deer, pronghorn, elk, Rocky Mountain bighorn sheep, and desert bighorns (Welch 2005). Numerous small mammals and a number of birds including sage-grouse, dark-eyed juncos, homed larks, and white-crowned sparrows rely heavily on sagebrush foliage. Although, it is easy to overlook the importance to lesser organisms in ecosystem function, it is apparent that sagebrush plays a major role in supporting many of these organisms including fungi and insects. Welch and Criddle (2003) cited 31 fungus species and 52 species of aphids that receive nourishment from big sagebrush alone. While my list is not implied to be complete, it does illustrate that overlooking the importance of sagebrush as a forage source for fauna of sagebrush habitats is to leave unacknowledged one of its more important contributions to the ecosystem. Failure to acknowledge this widespread importance as a forage species will lead to an inappropriate management plan and actions, or at a minimum uninformed guidance and actions.

Response: BLM considers sagebrush an important species in the ecosystem. Management actions in the alternatives that limit availability of areas for oil and gas leasing, limit surface disturbance and fragmentation, and require reclamation are intended to conserve sagebrush habitats on a landscape scale.

Comment: Forage value for sagebrush consumers will not be enhanced by favoring younger plants through artificial control methods. This has been proven by Wambolt (2004) when he determined the crude protein level and digestibility of 3 big sagebrush taxa were not enhanced in young sagebrush plants compared to mature individuals. Mountain, Wyoming and basin big sagebrush subspecies were studied. This research noted the lack of forage quality improvement in young sagebrush plants over older ones described as decadent by some. Again, this illustrates that land managers should not have faith in conventional wisdom that has been untested, particularly where there is research that has reached contrary conclusions. However, the apparent problem in this DEIS is the lack of understanding of what knowledge is available regarding sagebrush and its ecosystem. Research like this clearly indicates that sagebrush nutritional levels (or those of other species) will not increase by manipulating vegetative cover to favor early successional stages rich with young plants. The likelihood of sustaining populations of any animal is dependant upon providing an adequate source of forage. That means not only high quality forage hopefully, as available in sagebrush taxa, but also a good quantity of forage, which obviously is provided through the climax dominant species on any landscape if palatable like sagebrush .

Response: BLM has made appropriate changes to the management actions for vegetation management in the final EIS.

Comment: Collectively, the points discussed above relating to forage values taken with the high attributes of sagebrush to furnish thermal and security cover for animals (details under Sagebrush-Mature Community) are largely why sagebrush habitats are more often than not the location of "critical winter ranges." Many wildlife species including the following game animals: sage-grouse, mule deer, pronghorn, elk, and bighorn sheep, commonly depend on sagebrush winter ranges that meet requirements of both forage quantity and quality. In summary, sagebrush is not only the most abundant forage available, but

also the most nutritious and highly digestible forage during the majority of the year including winter. Many animals have evolved with sagebrush, and in fact, rely on it as a staple in their diets. The DEIS fails to explore the full ramifications of the various alternatives to critical winter ranges for wildlife in general and especially for non-game species, particularly in the context of forage relationships and the nutritional contribution of sagebrush to wildlife. This failure renders the DEIS inadequate to meet the requirements of full analysis and disclosure of all significant environmental impacts established by NEPA and the management alternatives presented are inadequate to meet BLM's obligations under FLPMA.

Response: The draft EIS considers the impacts of oil and gas development and other potential uses on crucial wildlife winter ranges. However, it is not possible to provide exact figures for these impacts. The draft EIS predicts that mule deer use of the winter range on the Mesa, for example, will decline; but it is not possible to completely predict the impact of drilling and production activity on the deer population. There are no alternatives to crucial winter ranges or the characteristics of crucial winter ranges. Crucial winter ranges are a combination of characteristics including vegetation, elevation, aspect, and exposure that make vegetation available to animals during the winter months. For mule deer, pronghorn, and sage-grouse, the characteristic vegetation is sagebrush. Crucial winter ranges cannot be created or replicated in areas that do not possess these characteristics.

Comment: Item: Page 2-151. Item a. at top of page under Actions states that: "Large contiguous patches of sagebrush habitat would be protected through NSO stipulations and unavailable areas (Map 2-9)." Comment - This statement is inconsistent with information presented in Tables 2-3 and 2-4 on Page 2-40 and with "Basic Assumptions for Table 2-4" on Page 2-41. The statement on Page 2-151 requires that large contiguous patches of sagebrush be protected, while the guidelines in Tables 2-3 and 2-4 recommend opening up stands of sagebrush to improve habitats for big game species and sage grouse.

Response: Sagebrush removed by oil and gas activities occurs in areas determined by the operator to promote gas production. The removal of sagebrush in these areas involves taking out vegetation and topsoil on a site measuring from between 3 to 20 acres. The affected site does not produce vegetation for 3 or more years, depending on drilling schedules and the number of wells drilled and completed on the site. In addition, the placement of numerous structures, the introduction of heavy vehicle traffic, and continuing noise and human presence compound the impact of vegetation removal on wildlife. In contrast, sagebrush removed by BLM in planned vegetation treatments occurs in areas most likely to recover and produce healthy vegetation for wildlife. Most plant root systems remain intact and vegetation production resumes shortly after the treatment. No topsoil is removed, keeping seed sources for native plants in place. Additionally, treated sites are managed to reduce other uses and impacts on the site to facilitate recovery of the vegetation community.

Comment: The science supporting the PACWPL statement is lost in the Pinedale DEIS. There appears to be no concern for the sagebrush ecosystem at the landscape scale within the planning area. The BLM has generally regarded the sage-grouse as a "sensitive species" and regarding that status, it would seem that the lack of concern for the grouse's habitat in the Pinedale planning area is difficult to understate. The PACWPL authors were 12 scientists that have researched sagebrush ecosystem management and sage-grouse management throughout lengthy careers. These scientists sought the criticism of additional peers that were also knowledgeable of this system before authoring this policy paper for PACWPL. The PACWPL paper should be acknowledged by BLM and its implications and application explored in the EIS and implemented in the RMP.

Response: Management actions in the alternatives that limit availability of areas for oil and gas leasing, limit surface disturbance and fragmentation, and require reclamation are all intended to conserve sagebrush habitats on a landscape scale. BLM has incorporated the habitat management guidelines for

sage-grouse to the extent practicable, given BLM's requirement to manage multiple resources and resource uses. All available literature was reviewed and considered in development of the draft EIS.

Comment: The theme is conveyed throughout the DEIS that a newly developing stand of sagebrush following control methods (especially fire) will be more valuable for wildlife than the existing maturing community. There is no logic or other scientific basis for such conjecture. However, there is an enormous amount of evidence to the contrary showing that the mature sagebrush stands are more beneficial habitat for wildlife. The basis for this is found in the facts that truly mature sagebrush communities will provide a number of positive attributes for wildlife such as vertical stratification of habitat niches for numerous animals requiring that characteristic. The principles of optimizing habitat benefits in mature communities are found in Walhno and Schoen (1980) and synthesized by Welch (2005) in terms of the sagebrush literature.

Response: Sagebrush control is planned to form a mosaic pattern that provides different habitats for various species. BLM guidelines provide for a large area of mature sagebrush stands with openings to provide many edges and to provide different densities and covers of sagebrush and grass.

Comment: Truly mature communities can be recognized by plant turnover due to natural mortality from shrub longevity being exceeded, with subsequent replacement of climax species by younger plants. Interspersion of age classes on a plant to plant scale is many times more advantageous than artificially induced age classes among different stands that would be created by sagebrush control techniques. In fact such a true climax habitat would mimic the attributes of old growth forest that biologists know is so enormously valuable to many wildlife species. Artificially created stands will only perpetuate the even-aged stands across the landscape. Most even-aged sagebrush stands today are due to the ill-advised sagebrush reduction practices of past decades. The DEIS informs that such practices will continue in the Pinedale area. The importance of ceasing such practices is even more important than in the past when considered together with the serious habitat consequences sure to be realized with the level of oil and gas development that is contemplated.

Response: Prescribed burns are planned to provide a mosaic to prevent even aged stands and provide varied habitats for wildlife.

Comment: The DEIS does not acknowledge the high ecological values of mature sagebrush communities. Until BLM acknowledges these values and conducts a proper inventory of existing communities and their successional status it will be impossible to adequately plan for viable sagebrush habitats. Consequently, many desirable environmental conditions dependent on viable sagebrush ecosystems also will go ignored.

Response: BLM does value mature sagebrush communities, and they are part of all planning objectives. Many decisions, such as those making large areas unavailable for oil and gas leasing, are part of an effort to conserve sagebrush ecosystems on a landscape scale. BLM used the best available information in formulating the alternatives in the draft EIS.

Comment: Quoting from page 4-252 of the DEIS, "Development activities under all the alternatives would result in the removal of unique attributes of vegetation communities and would also reduce the ability of vegetation resources to support other resource values." This is a very brief, yet well stated, summation of what should be expected if large scale oil and gas leasing and development activities occur in the Pinedale area. The results would be very devastating in the 87% of the area under BLM management that is sagebrush habitat. Unfortunately this recognition of consequences is not considered throughout the DEIS.

Response: Changes in vegetation is addressed in project planning. As a result, this RMP does not allow for large-scale oil and gas leasing throughout the entire planning area.

Comment: My concerns for the Pinedale area are much broader than for a single species. However, in the sagebrush ecosystem many of my concerns could be addressed by providing attention to the guidelines for sage-grouse (Connelly et al. 2000). If the known requirements for sage-grouse were followed, other sagebrush dependant organisms would benefit and prosper. At present the DEIS does not accommodate these sage-grouse guidelines. In fact, BLM does not appear to have adequate background information on this "sensitive" species to address their needs as detailed in these guidelines. The inadequate "buffer areas" proposed around known areas of importance for sage-grouse are particularly disturbing. The failure to accommodate the guidelines is not only a serious omission for the sage-grouse, but also for the sagebrush ecosystem in its entirety.

Response: BLM is required to adhere to the MOU in place between BLM and the Western Association of Fish and Wildlife Agencies (WAFWA) regarding sage-grouse management. BLM follows the guidelines for sage-grouse developed by the state.

Comment: Results indicated that >60% of 86,590 acres of shrub communities inventoried were in fair to poor condition and appeared incapable of perpetuating themselves. While big sagebrush (Artemisia tridentata) utilization of 30-35% is considered proper for sustained use by browsing animals, sagebrush in these shrub communities averaged 45% utilization and current BLM management and that proposed in the RMP allows up to 50% utilization by livestock alone. Other species such as mountain mahogany (Cercocarpus montanus), Gardner's saltbush (Atriplex gardneri), and winterfat (Ceratoides lanata) were utilized to a much greater degree. Cundy (1989) suggested the following factors contributed to deteriorated shrub conditions in the region:

- Fire suppression
- Over-utilization by wildlife and livestock
- Habitat loss associated with energy development
- Drought conditions

Secondly, the remaining shrub communities may be over-utilized due to the loss of habitat from energy development, potentially degrading the quality of the remaining habitat. This supports the need to provide allotment closures and or buyouts in order to mitigate the impacts of energy development. .

Response: Any changes in grazing management will be determined on a site-specific basis, using monitoring information, to conform to the Wyoming Standards for Rangeland Health.

Comment: Reality is that none of the DEIS alternatives allow for ecosystem maintenance. All alternatives offered will allow significant erosion of the ecosystem's renewable natural resources. BLM should remember its purpose to provide stewardship for public lands that will insure their continuing multiple benefits. To do this BLM will have to develop and adopt a new management alternative that recognizes both the severity of proposed impacts on the sagebrush ecosystem and the considerable science available upon which to base an adequate in-depth consideration of these impacts.

Response: BLM has analyzed alternatives that recognize impacts on the sagebrush ecosystem. Because BLM does not have the authority to prohibit development of valid existing oil and gas leases, there will be impacts on the sagebrush ecosystem. These impacts are discussed in Chapter 4 in the vegetation and wildlife sections.

Comment: Consistent with Cundy (1989), Clause evaluated habitat conditions in the Bear River Watershed in southwest Wyoming and found plant communities exhibited signs of heavy use, low production, and lacked diversity among age-classes. Clause (1999) attributed the overall poor habitat conditions to lack of natural disturbance (i.e., fire) and heavy ungulate utilization. Habitat conditions documented by Cundy (1989) and Clause (1999) likely reflect current habitat conditions across the Pinedale Resource Area.

Most shrub communities in the Pinedale Resource Area are dominated by big sagebrush, although small areas of mixed shrubs, such as bitterbrush (Purshia tridentata) and mountain mahogany (Cercocarpus spp) can be found along the foothills of the Pinedale and Piney Front. Historically, fire was a natural component of most sagebrush ecosystems, with fires typically occurring at 20-30 year intervals (Clause 1999). According to Cundy (1989) fire suppression and the reduction or elimination of fine fuel loads by livestock grazing has precluded natural fire. Cundy (1989) suggests the ability of these sagebrush communities to regenerate themselves and remain productive has greatly diminished.

Thus, sagebrush stands are often monotypic, old-aged, varyingly decadent, and possess little or no seedling regeneration. These habitat conditions and the effects on sensitive species such as sage grouse, pygmy rabbits, and other sage obligates are not adequately addressed in the DEIS. In addition to poor shrub conditions in the area, the WGFD has identified aspen regeneration as a major habitat concern. A substantial amount of aspen stands in the Pinedale Resource Area occur on lands administered by the BLM. Aspen is unique and especially important because it is the only upland deciduous tree species that occurs in Wyoming and it provides key habitat for wildlife. Loss of aspen in western Wyoming has largely been due to conifer encroachment and over-utilization by domestic livestock and elk.

Aspen is generally considered a seral species in the Rocky Mountain region, pioneering disturbed areas, but eventually being replaced by more shade-tolerant conifers. Most aspen stands require periodic disturbance to remove conifers and induce sufficient suckering for stand replacement. While, researchers have suggested fire suppression has led to aspen stand deterioration across the Intermountain West, heavy browsing by livestock may have severe effects on aspen growth and regeneration.

Response: Prescribed burning is planned to reduce even aged stands and open up the area to produce varied habitats for numerous wildlife species. BLM is working with the Wyoming Game and Fish Department to address aspen and conifer encroachment, open these areas, and rejuvenate these aspen woodlands.

Comment: Big sagebrush (Artr) is eaten by domestic sheep and cattle, but has long been considered to be of low palatability to domestic livestock, a competitor with more desirable species, and a physical impediment to grazing. The range management community has been conducting a war against big sagebrush (Artemisia tridentata) for over 50 years, but none of the impacts associated with a loss of habitat for sagebrush obligates has been disclosed in the DEIS. The DEIS ignores the negative impacts and insists that such projects are merely “controversial.” The EIS must consider the best available science and provide the required habitat components for sensitive species.

Response: Specifically, the literature highlights the importance of sagebrush to a variety of wildlife ranging from sage-grouse and the almost forgotten pigmy rabbit to big game. Wildlife researchers have argued that the importance of sagebrush as forage, and effects of foraging on sagebrush, are not fully appreciated. Regarding the sagebrush steppe ecosystem, West makes the following remark: “Some of it has been so degraded by excessive livestock grazing and burning that its relationship to its origins is no longer easily recognizable.”

Comment: Furthermore, the ecology of mountain big sagebrush in the West has been altered by livestock grazing, widespread invasion by exotic annuals, and perhaps climate change. Rasmussen and Griner noted that the highest sage grouse nesting success in Strawberry Valley of central Utah occurred in mountain big sagebrush stands having 50 percent canopy cover. Ellis et. al. reported male sage grouse loafing areas with 31 percent canopy cover. Additionally, Katzner and Parker reported that areas of high pygmy rabbit activity occurred in basin big sagebrush stands having 51.1 percent canopy cover, and areas of medium activity occurred in Wyoming sagebrush stands of 42.7 percent. Other obligates such as sage thrasher, Brewer's sparrow, and sage sparrow prefer big sagebrush canopy cover of 20 to 36 percent.

For sagebrush species other than big sagebrush, Walchek reported that a population of Brewer's Sparrows were living in an area of silver sagebrush having canopy cover of 53 percent. Petersen and Best found sag sparrows nested where big sagebrush cover was 23 percent in the vicinity of nests and 26 percent in the general study area. They further noted that all nests were found in big sagebrush plants and large, living shrubs were strongly preferred.

As previously shown, dense stands of sagebrush are important to many sagebrush obligate species, many of which are listed by the BLM as sensitive species, but the BLM has failed to consider the needs of these species. Moreover, the BLM has violated NEPA by failing to disclose the past impacts that have led to the characteristics of the sagebrush communities in the project area, i.e. open canopy sites, and the indirect impacts such characteristics have had on sensitive species.

Since sagebrush communities on private lands have been converted to agricultural or other uses or are not being managed in a manner compatible with sagebrush dependent wildlife, the importance of the PFO maintaining the integrity of sagebrush habitats on BLM lands within the planning area to provide taller, denser stands for mule deer, pronghorn, and sage grouse is extremely important. The cumulative impacts associated with private land development make the habitat provided by BLM lands significantly important, and this should be pointed out in the FEIS.

Big sagebrush canopy cover values tend to decrease in the presence of livestock grazing , not increase as the DEIS maintains, and that in turn can be detrimental to a variety of wildlife species including sage grouse. In fact, the just cited researchers found the following:

- Big sagebrush canopy cover was higher inside grazing exclosures and was decreased outside exclosures,
- Perennial grasses and sagebrush canopy cover were significantly higher in ungrazed vs. grazed plots,
- After grazing had been removed big sagebrush canopy cover and grass cover increased significantly.

Anderson and Inouye found that contemporary state-and-transition models do not fit the sagebrush ecosystem because viable remnant populations of native grasses and forbs are able to take advantage of improved growing conditions when livestock are removed. They found further that despite depauperate and homogenous conditions of permanent plots in 1950, after 45 years vegetation had been anything but static, clearly refuting claims of long-term stability under shrub dominance. Mean richness per plot of ALL growth forms increased steadily in the absence of domestic livestock grazing. Grasses and forbs increased significantly.

Given these findings, perhaps the BLM should analyze the impacts of long-term active management and its impacts on sagebrush communities and obligates compared to the impacts of removing livestock and allowing these communities to recover naturally. Additionally, since the continued "management" of

sagebrush has led to many of the situations scientists now agree are threatening these ecosystems, the removal of livestock from sagebrush communities in less than satisfactory condition, i.e. with open canopies, should be a seriously considered alternative in the EIS.

Any vegetation treatments proposed in sagebrush habitat should consider the requirements of the species that rely on this habitat type. The science is clear that these types of treatments that the EIS proposes to allow detrimentally impact sensitive species and are counter to science. These types of projects should not be allowed in sagebrush steppe habitats and all alternatives should reflect as much.

Response: BLM plans vegetation treatments that consider wildlife objectives and follow guidelines for species, such as sage-grouse, that address the plant community including the sagebrush component.

Comment: PAGE: 4-191 SECTION: 4.17.1 RECOMMENDED CHANGE: REVISE There has been research documenting the benefits of vegetation manipulation for big game species; [however, there has been no documentation on the effects or the need of such manipulations in the planning area to improve sage-grouse nesting habitat.](STRIKEOUT) EXPLANATION: If this is true then statements about habitat degradation for sagebrush are not true.

Response: Habitat can be degraded in situations where traditional vegetation manipulations are not helpful. The viability of traditional vegetation manipulation methods does not determine whether habitats are degraded.

Wyoming Standards for Rangeland Health, Proper Functioning Condition (PFC)

Comment: PAGE: 2-11 SECTION: 2.3.9 RECOMMENDED CHANGE: ADD Vegetation will be managed to maintain or improve ecological range condition, and to maintain or increase forage for livestock grazing, while providing for the maintenance or improvement of wildlife habitat, soil conservation, watershed values, and riparian areas. Vegetation will be managed to meet or maintain to Wyoming Standards for Healthy Rangelands and in cooperation with efforts by conservation districts and NRCS to conserve and manage vegetation species. Vegetation will be managed consistent with capability of soil, climate, geography and altitude. EXPLANATION: Vegetation management is not limited to endangered, threatened or candidate species. The discussion is too narrow. The first sentence is taken from MSA 2-11.

Response: This particular section in Common to All Alternatives only addresses federally listed, proposed, and candidate species and BLM's obligation under the Endangered Species Act (of 1973) (ESA). For other vegetation management actions, please see the vegetation and livestock grazing sections in the various alternatives.

Comment: PAGE:2-137 SECTION: RECOMMENDED CHANGE: REVISE Maintain and/or enhance native vegetation community health, composition, and diversity in conformance with Wyoming Standards for Healthy Rangelands. Reclaim disturbed areas to desired plant communities consistent with the underlying use and in coordination with the grazing permittee. Monitor reclamation success and enforce standards when they are not met. EXPLANATION: Vegetation management needs to conform to Wyoming Standards for Healthy Rangelands. Reclamation needs to be monitored and enforced. Identification of desired plant communities needs to be co-ordinated with grazing permittee.

Response: This section is a goal for vegetation management. The Wyoming Standards for Rangeland Health are the standard for monitoring rangeland health. Following these standards would be the means for achieving the goal and not the goal itself.

Comment: PAGE:2-138 SECTION: RECOMMENDED CHANGE: REVISE Objective 4 Treat 100,000 acres of vegetation to maintain important vegetation types and to conform to Wyoming Standards for Healthy Rangelands.

Response: BLM has to conform with the Wyoming Standards for Rangeland Health and adding it here in the objective would be unnecessary.

Comment: PAGE: 4-151, RECOMMENDED CHANGE: REVISE Implementation of the Wyoming Standards for Rangeland Health as the minimum acceptable conditions for public rangelands would increase the health and diversity of vegetation communities. Impacts on vegetation resulting from livestock grazing management on BLM-administered lands would include the removal of forage by livestock, which could alter the amount, condition, plant community composition, and vigor of vegetation in grazed areas. [Grazing during the growing season or summer months could result in lower vigor of desired species and a change in species composition.] (STRIKEOUT) Concentration areas, including locations of salt and supplemental water, would result in soil disturbance, vegetation removal, and altered plant community composition. Livestock grazing could be used as a tool to manipulate and improve plant community composition. Livestock management activities include travel via OHVs and horses and the use of livestock trailers. These activities could alter the cover and composition of vegetation if repeated use occurs in the same area over time, especially during wet conditions. EXPLANATION: Statement is out of context and appears calculated to mislead. Game and wild horses graze during growing season or summer months. Not true as a rule. Planing area evolved under grazing regime. Growing season grazing unlikely to adversely affect plants. There may be situations when it is more effective to graze spring and fall (such as desert rangelands) and not graze during the hot summer months. But this is not true for all rangelands in the planning area and summer grazing per se does not cause lower vigor or change in species composition.

Response: Depending on the grazing regime, grazing during the growing season or summer months could result in lower vigor of desired species and a change in species composition.

Comment: PAGE: 3-33, SECTION: 3.6.4, RECOMMENDED CHANGE: Identify causes for riparian areas being at risk or non-functioning. EXPLANATION: PFC methodology requires assignment of causal factors. /For example, Cottonwood Common allotment which has 1¼ miles of non-functioning riparian area is in a year-long elk range.

Response: Identifying the cause of degradation is part of the PFC process as well as the Wyoming Standards for Rangeland Health and does not need to be added in this section.

Comment: PAGE: 4-161, SECTION: 4.13.7, RECOMMENDED CHANGE: REVISE In addition, under Alternative 4 all riparian areas would be managed to meet, make progress towards meeting or maintain Wyoming Standards for healthy Rangelands as measured by [or exceed] (STRIKEOUT) PFC. EXPLANATION: Rule directs management to meet or make progress towards meeting. Given high numbers of elk and moose in area, it will be difficult to exceed standards when RMP precludes most management tools as well, e.g. prolific use of VRM Class II.

Response: This is the riparian section and its impacts to vegetation are being discussed. PFC is the minimum level, and the riparian areas are to be managed to meet this standard. PFC is part of the Wyoming Standards for Rangeland Health, but this section is only looking at the impacts in riparian area and PFC is the proper mechanism.

Grazing

Comment: PAGE: 4-149, SECTION: 4.13.1, RECOMMENDED CHANGE: Environmental impacts associated with the management alternatives are caused by land use activities within the planning area. Impacts on vegetation resources are generally the result of activities that consume vegetation or remove and disturb soil and vegetation.

Response: The consumption of vegetation is considered a vegetation removal activity.

Comment: PAGE: 4-151, SECTION: 4.13.2, RECOMMENDED CHANGE: REVISE Riparian areas in parts of the planning area are more susceptible to grazing impacts during the hot season (July and early August). Grazing animals (livestock, game, and wild horses) [Livestock] (STRIKEOUT) are naturally attracted to areas with water and thermal cover. Many grazing management strategies, such as rotation, deferment, rest from use, and the manipulation of season of use and grazing intensity, would be implemented to manage vegetation composition, cover, and vigor to maintain or achieve Wyoming Standards for Healthy Rangelands as measured by PFC in riparian areas or achieve Standards DPC on upland plant communities. The implementation of riparian pastures and exclosures would increase the density, age class, and cover of desirable riparian plants, including willow, cottonwood, and herbaceous wetland/riparian plants within the exclosures. EXPLANATION: Bias again comes through. PFC and DPC are not standards, they are measured by which it is determined whether standards are met.

Response: This section of the impacts is the livestock grazing section and game and wild horses are not included here. **S**eparate sections address game and wild horses.

Comment: PAGE: 4-151, SECTION: 4.13.2, RECOMMENDED CHANGE: REVISE Range improvements such as water developments, fences, exclosures, and vegetation treatments would result in minor and short-term disturbances to vegetation, including loss of vegetation cover and short-term changes in plant composition and vigor adjacent to each project. Improved grazing management and distribution of grazing animals achieved through range improvements could provide periods of rest for plant growth and seed production to maintain plant vigor. EXPLANATION: It is a matter of distribution as well as management.

Response: Grazing management includes the distribution of grazing animals.

Comment: PAGE: 4-151, SECTION: 4.13.2, RECOMMENDED CHANGE: Grazing by livestock, wildlife, and wild horses [Livestock grazing] (STRIKEOUT) could maintain or create habitat for sensitive plants by reducing vegetation competition. However, [livestock] (STRIKEOUT) grazing could potentially reduce the occurrence of some species because of trampling, consumption, and general site degradation. EXPLANATION: Again remove the bias!

Response: This is the section on livestock grazing impacts and so it is appropriate to only mention livestock. Separate sections address grazing by wildlife and wild horses.

Comment: PAGE: 4-151, SECTION: 4.13.2, RECOMMENDED CHANGE: [Livestock would contribute to the spread of weeds. Weed seeds could either become attached to livestock or be ingested and transported to other areas. Areas where animals concentrate and disturb the soil would be particularly vulnerable to infestations of weeds. Range improvements that disturb the soil surface would provide locations for weeds to become established. Overgrazing of native vegetation in areas where BMPs have not yet been implemented could increase the susceptibility of an area to weed infestation.] (STRIKEOUT) Wind, birds, grazing by livestock, wildlife, and wild horses, facilitate the transportation of noxious weed seeds. Where soil is disturbed there is the risk of infestation of weeds. Similarly overgrazing can facilitate infestations. However, grazing plans that promote healthy rangelands and vegetation and coordination

with local weed and pest control districts would create conditions resistant to the spread of weeds. EXPLANATION: This paragraph is singularly ignorant. Research has long established that noxious weeds are carried by birds, wind, and wildlife to a much greater extent than livestock. Indeed one only has to look at noxious weed infestations in wilderness areas where there is no grazing to understand that livestock play a minor role.

Response: This is the section on livestock grazing impacts and so it is appropriate to only mention livestock.

Comment: PAGE: 4-160, SECTION: 4.13.7, RECOMMENDED CHANGE: REVISE Implementation of this alternative would attempt to minimize [ensure that] (STRIKEOUT) impacts on vegetation from livestock grazing were minimized but would do little to reduce impacts from other grazing animals so the total environmental benefit would be minimal. Total AUMs would be maintained at 107,907. [Livestock] (STRIKEOUT) Range improvements such as water developments, fences, and exclosures would be designed to support vegetation objectives and minimize impacts on vegetation. Restrictions in the form of VRM Class I and II objectives and wildlife habitat restrictions would reduce expected benefits significantly. EXPLANATION: This is unlikely to occur with restrictions on range management and projects. EIS must disclose real effects or change arbitrary restrictions adopted in the RMP

Response: This section is the impact section for livestock grazing and as such only this resource is being discussed. Livestock improvements can be changed in the final to range improvements.

Comment: PAGE: 4-152, RECOMMENDED CHANGE: REVISE The use of livestock exclosures to protect seeps and springs would preclude grazing by livestock but not necessarily other grazing animals in these areas. Developed water sources on uplands would be used to improve distribution of grazing animals [reduce livestock concentrations] (STRIKEOUT) in wetland/riparian areas. This would help to improve species composition, vigor, and cover in wetland/riparian habitat. EXPLANATION: BLM needs to remember that livestock are not the only grazing animals in the planning area.

Response: The type of exclosure would determine the types of animals excluded. Normal livestock exclosures would exclude only livestock and other grazing could occur. This has been rewritten for the final EIS.

Comment: PAGE: G-9 CHANGE: FORAGE – All browse and herbaceous [foods](STRIKEOUT) biomass available and acceptable to grazing animals, which may be grazed or harvested for feeding purposes. EXPLANATION: Technical correction needed to reflect standard definition and clarify that forage consists of living growth.

Response: The definition is appropriate as given in the draft EIS.

Comment: BLM has never even looked into the issue of the relationship between its typical riparian greenline stubble height standard of 3 – 4", usually applied to Nebraska sedge, and the effects of applying this standard on adjacent riparian plant community productivity. Carter (1998) showed that before greenline N. sedge had been reduced in height to the standard of 6", riparian grasses had been reduced to 2" stubble height and 89% of stream banks had been trampled, compacted or were actively eroding into the stream. Monitoring data from the Wasatch-Cache National Forest (USDA 1993) included the observation that a Nebraska sedge stubble height of 7.6" corresponded to an estimated 70% use of riparian grasses. Lile et al (2003), compared clipping of N. sedge to stubble heights of 2" and 4" during early season, late season and multiple clippings to both heights. Late season use or 2" stubble height did not allow recovery. Only the 4" early season use achieved the 4" criteria, but did not regrow to meet the 6" criteria by the end of the growing season. This shows that season-long or late season use does not

allow sufficient time for re-growth and that 3-4" stubble heights measured on greenline sedges are not effective in protecting riparian vegetation.

Response: The RMP does not propose any general utilization limits or stubble heights for the planning areas. These management guidelines are determined on a site-specific basis. Monitoring of greenlines and the use of the Standards for Rangeland Health are used to determine the health of the range and riparian areas. When the cause of any degradation is found, adjustments to wildlife or livestock can be made to increase the health of these areas.

Fire, Prescribed Fire

Comment: PAGE:2-142 SECTION:Obj. #2 RECOMMENDED CHANGE: Revise: Objective 2 Use prescribed fire and WFU to meet vegetation goals and to return the ecosystem to [pre-suppression](strikeout) composition, structure, and function where possible. EXPLANATION: Pre-suppression plant composition is neither possible nor necessarily desirable.

Response: To return the landscape to historical fire regimes would benefit the vegetation. Where returning the landscape to historical fire regimes is possible and is the desired plant community, prescribed fire is one tool to accomplish this. If the pre-suppression community was low density sagebrush and grass, historical fire regimes could be possible and could be accomplished through a prescribed burn.

Weeds and Pest Control

Comment: Prohibit the use of insecticides, herbicides, pesticides and other chemical treatments in the PRA when such chemicals may leach into and gradually accumulate in near-surface ground waters and pose long-term contamination and health risks to water users.

Response: Pesticides are used according to the EPA instructions on the label. Precautions and restrictions are used near water.

Comment: PAGE: 4-154, RECOMMENDED CHANGE: However, the designation of SMAs would increase popularity and actual use in these areas, resulting in increased potential for vegetation disturbance [and removal and weed proliferation.] (STRIKEOUT) EXPLANATION: Incorrect as written, noxious weeds carried by wildlife and birds and wind so role of recreation is minor.

Response: This sentence refers to increased use by people, which carries a greater potential for vegetation removal and weed proliferation. There are other vectors for weed dispersal, but this sentence only deals with impacts from people.

Comment: PAGE: 4-185 SECTION: 4.17.1 RECOMMENDED CHANGE: [Forage loss and increased human activity from surface disturbance and other disruptive activities would result in reduced wildlife species diversity, modifications in population distribution or numbers, or possible habitat abandonment.](STRIKEOUT) Reclaimed areas would [be more vulnerable to invasion of noxious weeds and would](STRIKEOUT)not initially provide the same level of habitat function, forage, or cover that the original area provided. EXPLANATION: Data do not support either statement. Reclaimed areas as part of RMP are treated for noxious weeds so are less rather than more vulnerable.

Response: This section is about surface disturbing and disruptive activities. Loss of habitat would result in the impacts listed. Also, in the short term, the area would be more vulnerable to invasion by noxious weeds necessitating the increased use of weed treatments. This would decrease as reclamation is achieved.

Comment: PAGE: 4-188 SECTION: 4.17.1 RECOMMENDED CHANGE: REVISE Continued coordination with local weed and pest control agencies in implementing management actions to control and prevent the reoccurrence and spread of invasive and noxious weeds would maintain the native vegetative species that provide wildlife forage and habitat. Certain species of noxious weeds are poisonous and potentially fatal to some wildlife species. EXPLANATION: RMP needs to continue current MOUs with local weed and pest control districts.

Response: Coordination with the weed and pest districts takes place throughout the state, not just at the field office level. Because coordination is statewide, it will be maintained.

Comment: PAGE: 4-221 SECTION: WTPD RECOMMENDED CHANGE: EXPLANATION: Omits impacts on vegetation; not discussed in Chapter 2; discussion of noxious weeds inaccurate;

Response: The impacts in this section are those to the white-tailed prairie dogs (WTPD) ACEC. Impacts to vegetation are included in the vegetation impacts section. The WTPD ACEC is found in Chapter 2 on pages 2-106, 2-108, and 2-109.

Oil and Gas

Comment: PAGE: 4-151, SECTION: 4.13.2, RECOMMENDED CHANGE: Mineral resource development impacts on vegetation resources would include long- and short-term impacts, small and localized removal of vegetative surface cover, and major disturbances covering several hundred acres. Mineral development would reduce fracture vegetation communities, change plant community structure and diversity, and alter vegetation landscapes. Long-term impacts would mostly be associated with permanent structures and construction of roads. Increased erosion and decreased vegetation cover would potentially occur from soil compaction and the channelization of surface runoff in ruts and road ditches. [Areas below mid-slope roads would become drier, which would reduce plant productivity and potentially change species composition.] (STRIKEOUT) Effects from minerals management could be reduced by voluntary COAs on APDs within these areas, which would be based on site-specific analysis and would establish specific, EXPLANATION: Roads increase not reduce water. BMPs must be voluntary; improperly assumes BLM can impose BMPs.

Response: Roads on slopes would intercept water and carry it away thus not allowing it to continue down slope and thereby drying out the lower slopes. BMPs are voluntary while Conditions of Approval (COAs) attached to an application for permit to drill (APD) are requirements that must be met for approval of the APD.

Comment: Elsewhere, (p. 4-255) the DEIS recognizes (Berger et al 2006) that 6 of 8 migration corridors between the Greater Yellowstone Ecosystem and the Green River are already lost. The further disruption of migratory habitats is a certainty with the level of oil and gas leasing and development allowed under alternative 4. Language in the DEIS generally has the tone taken on page 153 that begs the question of why is BLM using this as an opportunity to promote the killing of the ecosystem's keystone taxon?

Response: Oil and gas leasing, in accordance with the Energy Policy Act and the nation's needs, will proceed while BLM protects, as much as possible, wildlife and their migration routes.

Conifer and Aspen

Comment: We are concerned with aspen and conifer and the emphasis on mechanical treatments or in the case of aspen, prescribed fire. We addressed criteria for structural stages and grazing utilization levels in conifer under our discussion of goshawk above. The failure of the RMP to address the causes of conifer invasion of aspen and the role of livestock in eliminating aspen and accelerating conifer invasion have not

been addressed. Research shows that livestock are a major causative factor in creating these degraded conditions.

Response: Conifers invade aspen stands because of fire suppression, natural vegetation succession, and, in some cases, overbrowsing of aspen sprouts by both livestock and wildlife. It should be noted that adult aspen trees exert a suppressing effect on sprouts. In many cases, killing the parent trees through fire or other treatments is required to release sprouts to grow to maturity.

Soil

Comment: PAGE: 4-151, RECOMMENDED CHANGE: ADD Reclamation will include stockpiling soil but if held for several years, the soil will be spread out to keep seeds and microbes viable. EXPLANATION: Organic components of soil die if held in anaerobic stockpile for too long.

Response: BLM has considered spreading out these topsoil stockpiles before. However, the area they require is so large that it is generally impractical and ends up disturbing much more area.

Visual Resources

General Comment Responses: *No GCRs are associated with this category.*

Comments on Document/Suggested Changes, Alternatives

Comment: Page 3-20 notes that the quarter-mile buffer led to concentration of high-contrast and highly visible development disturbances along the edges of the trail corridor, to the extent that management "failed to maintain the integrity of setting and .7: integrity of place of the historic trail." The statement is an accurate description of past impacts, but its implications for continuing management of the historic trail are unclear. Please link the statement more directly to its proposed remedy in the C.? preferred alternative. For example, is the VRM II designation intended and sufficient to prevent this kind of development pattern from continuing?

Response: BLM will continue to manage contributing portions of the Lander Trail and Sublette Cutoff as VRM Class II where the classification process identified the rails as VRM II (Buckskin Crossing to the Anticline, New Fork to Green Rivers; South to Piney Creek valley to the USFS boundary). Even where the trails are in VRM Class III areas (the Anticline, Deer Hills gas field), BLM will continue to assess impacts to settings and mitigate visual intrusions to the extent possible.

Comment: VISUAL RESOURCES MANAGEMENT Because much of the Visual Resources Management directly affects the community of Pinedale, we support the most stringent VRM restrictions on energy and other industrial development, particularly with lands within visual sight of Pinedale and residential areas. It appears that with all of the alternatives, oil and gas drilling would be permitted within one to two miles of Pinedale's town borders. We are concerned that the Preferred Alternative (Alternative 4, map 2-30) has only a VRM Class III the second least restrictive for this category for lands immediately surrounding the town.

Response: As stated in Alternative 4, the majority of lands south of Pinedale and visible below the ridgeline tops are assigned VRM Class III objectives. BLM recognizes the importance of scenic quality to the public and area residents. BLM planning guidance directs BLM to consider all resources and values in addition to scenic values. Given the likelihood of fluid mineral development within the viewshed of Pinedale, it would not be practical to prescribe VRM II objectives where existing and expected development may preclude the ability to manage to VRM II objectives. Regardless of the assigned VRM objectives, BLM must require mitigation of visual intrusions to the maximum extent practical.

Comment: The BLM's visual resources management under Alternative 3 may unduly restrict oil and gas development. VRM I or II restrictions on over 410,000 acres of the Pinedale Resource Area could restrict or eliminate oil and gas development. See RMP DEIS, pg. 4-72 (noting that areas with VRM I or II restrictions would be largely unavailable for mineral development). Even existing leases could be impacted if operators are not able to secure ROWs across lands with new VRM objectives. The BLM must significantly increase the number of acres with VRM TTT and IV designations.

Response: For comparison purposes and to comply with NEPA, a reasonable range of alternatives must be considered. Alternative 3 visual resource management objectives generally provide for higher standards (VRM Class II) with the intent to maintain the existing landscape characteristics.

Comment: The BLM's proposed visual resources management under the preferred Alternative is overly restrictive. Imposing VRM I or II restrictions on over 258,610 acres of the planning area would significantly restrict or eliminate oil and gas development, even on existing leases. See RMP DEIS, pg 4-72 (noting that areas with VRM I or II restrictions would be largely unavailable for mineral

development). In particular, APC is concerned about the significant increase in VRM I and II areas in the PAPA and the impact such restrictions may have upon existing leases, either directly or indirectly. While the BLM cannot alter development rights on existing leases, BLM may indirectly limit operations by refusing to authorize ROWs in new VRM I and II areas. Finally, the VRM restrictions, like other stipulations, should be waived or eliminated in Intensively Developed Fields.

Response: For comparison purposes and to comply with NEPA, a reasonable range of alternatives must be considered. Very few federal acres within the PAPA are recommended for classification as VRM Class II. Additionally, nearly all the proposed VRM Class II acres are located outside the area of high potential fluid mineral development. BLM is currently allowing development of fluid mineral resources with appropriate mitigation within areas classified with VRM Class II objectives.

Comment: PAGE: 4.14.7, SECTION: 4-165, RECOMMENDED CHANGE: REVISE VRM Class II objectives EXPLANATION: Statements about VRM Class II objectives will not be accurate once planners follow manual. Also overstates benefits from limiting OHV use Fire, existing roads have greater impacts on visual resources. No data to show how visible OHV areas are.

Response: See the updated text in this section of the final EIS.

Comment: PAGE: 4.14, SECTION: 4-162, RECOMMENDED CHANGE: [VRM objectives would be achieved.] (STRIKEOUT) EXPLANATION: Objectives cannot be enforced unless and until planners follow manual. Terms and direction in manuals and instruction memoranda are binding on BLM employees. Robert Glenn, 124 IBLA 104, 108 (1992); Ellis Ferguson, 69 IBLA 352 n.2 (1983). In addition, to the extent the Interior Board of Land Appeal ("IBLA") interprets statutes and regulations as requiring or prohibiting certain actions, such interpretation establishes Interior Department policy which is fully binding upon the BLM until it is altered by competent authority. Milton D. Feinberg, 40 IBLA 222, 228 (1979).

Response: It is not possible to analyze the impacts of establishment of VRM classes without this assumption that the objectives would be adhered to. This is an appropriate assumption to make to support the impact analysis.

Comment: PAGE:2-138 SECTION: RECOMMENDED CHANGE: REVISE Manage public lands in accordance with VRM objectives established in accordance with BLM guidelines. Minimize the impacts on visual resources where appropriate. EXPLANATION: BLM policy does not support minimizing impacts on visual resources in all cases.

Response: The management goals are appropriate as stated in the draft EIS.

Comment: PAGE:2-138 SECTION: RECOMMENDED CHANGE: REVISE Objective 1 Manage the public lands in a manner that protects the quality of the scenic values of those lands based on the visual resource inventory and as modified by the applicable land uses. EXPLANATION: VRM classes are not based on the inventory, which is only the first step. Classes must reflect underlying land use.

Response: All resources and resource uses are managed to reflect a variety of values and uses, including visual resources. Visual resource categories are chosen to reflect other land uses. This does not need to be stated implicitly here, because it is contained in BLM rules, regulations, and guidance.

Comment: Page: 2-156, RECOMMENDED CHANGE:f. The Management Area would be classified VRM Class[es II and] (strikeout) III (Map 2-30). EXPLANATION: RMP fails to document whether

VRM Class II is consistent with underlying land use. Class II precludes most range improvements and other changes. VRM Class II should be very limited or not at all.

Response: VRM Class II would not prohibit developments, but would require siting and design to conform to VRM objectives. VRM Class II objectives are appropriate for those portions of the Ross Butte area visible from the Green and New Fork Rivers, where they would be applied (see Maps 2-30 and 2-33).

Comment: PAGE: 4.36, SECTION: 4.5.7, RECOMMENDED CHANGE: REVISE EXPLANATION: See Comments Ch. 2-##28 & 29. VRM Class II is not accurate because assign the class to areas under current leases and livestock grazing which are not consistent with Class II. VRM is being used as a surrogate and RMP did not follow handbook process.

Response: BLM planning guidance and policy does not exclude multiple resource allocations within areas with VRM Class II objectives. The visual evidence of livestock grazing management generally does not attract the attention of the casual viewer. VRM classifications do not impact livestock grazing permits.

Comment: PAGE: 4-49, SECTION: 4.7.1, RECOMMENDED CHANGE: ADD dust abatement to air quality mitigation. Dust abatement methods will reduce particulates and adverse impacts on visibility.

Response: Dust abatement methods are included in the BMPs in Appendix 5.

Light Pollution

Comment: The numerous floodlights that accompany oil and gas development have had the effect of significantly reducing the nighttime viewing experiences of our students and instructors. Many have commented on the inescapable glare from lights on the valley floor. NOLS feels that light pollution is a significant issue that contributes to the deterioration of a once-unencumbered view, and should be addressed in the RMP.

Response: The ability to substantially shield the nighttime sky from the ambient light created by fluid mineral drilling operations is somewhat limited by operational safety requirements. The final EIS discusses the impacts of night lighting more fully.

Mitigation, Vegetation Treatments

Comment: In section 3 .1 for visual resources. The EIS should expand upon view sheds and their identification, whereby upon removal drilling rigs the permanent infrastructure is painted and camouflaged with neutral natural colors indigenous to the area so their presence can be visually camouflaged from distances to reduce the view shed impacts. Such as digital camouflage patterns that can be developed from digital photographs from surrounding areas near the well sites and incorporated into the paint pattern that would be specific for that site

Response: The visual mitigation you suggested may reduce the visual effect created by gas well drilling operations and facilities equipment. The application of camouflage techniques would be especially appropriate for use in sensitive viewsheds such as urban areas and areas of high scenic quality. However, the specific mitigation you described is more appropriately addressed at the project planning level versus the land use planning level.

Comment: PAGE: 4.14.3, SECTION: 4-162, EXPLANATION: Discussion proves that VRM Class II will preclude vegetation projects and management that would otherwise have environmental benefits.

Response: VRM Class II would not prohibit vegetation treatments. Treatments are conducted in VRM Class I areas when compatible with long-term vegetation goals of the area.

Comment: PAGE: 1-152, SECTION: 4.13.2, RECOMMENDED CHANGE: REVISE VRM Class I and II designations would [minimally] (STRIKEOUT) impact the timing and extent of vegetation treatments such as prescribed burns. VRM classifications would also prohibit or limit some surface disturbing activities which may [and thereby] (STRIKEOUT) protect vegetation but harm vegetation enhancement and restoration measures elsewhere. EXPLANATION: No "minimally" about it, no vegetation treatment if not consistent with low visibility. VRM Class II will greatly limit tools to improve vegetation conditions and EIs needs to disclose that fact.

Response: The application of vegetation treatments such as prescribed burns could be consistent with VRM I or II objectives when the action is deemed complementary with the area VRM objectives that sustain long-term visual quality. Vegetation treatment plans for areas with high scenic values must address the visual concerns; however, restrictions are generally few when potential long- term impacts are mitigated.

Water, Watersheds, Wetlands

Comment: Wetland Areas Map with Buffer Zones: The purpose of this map is to show how little area is available for natural gas development by using the BLM mandated five hundred (500) foot setbacks from surface water and riparian areas. By using the 500 foot surface and riparian setbacks one sees the obvious visual problem of there being only hill tops and steep slopes available to drill from. I have heard it said that the wooded areas would provide visual screening of potential gas development. Gas development in the wooded areas of such sensitive wildlife areas is not a viable compromise. The RMP considers this a Class II visual resource area. As such, how can it even be considered for gas development?

Response: It is reasonable to limit development of oil and gas wells in riparian areas, particularly when the chemicals used in well drilling are considered. Many of the existing gas fields contain few riparian areas.

Trails and Historic Trails

Comment: The DRMP indicates the integrity of visual setting along national historic trails would be protected up to 2 miles on either side of a trail to conform to a VRM Class II designation; however, there is no justification about why protection of national historic trails was increased from the current ¼ mile or visual horizon, to 2 miles. EM urges BLM to clarify how current leases and operations that have the ¼ mile or visual horizon stipulation would be affected. At a minimum, BLM should present justification for the change because the 2 miles on either side of a trail would result in the loss of significant volumes of natural gas from production while providing no tangible benefit for historic trails.

Response: For comparison purposes and to comply with NEPA, a reasonable range of alternatives must be considered. Chapter 4 addresses the potential loss of fluid mineral resources from this management action.

Comment: The BLM should revise the 4-mile VRM II designation along the Lander Trail. The BLM has not demonstrated this stipulation is necessary or justified. Further, the BLM must clearly acknowledge that the new VRM II restriction will not apply to development activities of any kind on existing leases. The BLM cannot retroactively impose a stipulation on existing leases through site-specific conditions of approval. Doing so may violate operators' existing rights and could even lead to an illegal taking of EOG's existing property and contract rights.

Response: The VRM designations were crafted using an interdisciplinary team of specialists, including lands and minerals staff, and were developed empirically. If and when proposals under BLM's permitting authority come forward with VRM Class II areas, BLM will evaluate the proposal and apply the appropriate mitigation treatments to preserve or maintain VRM Class II viewsheds. The 4 miles along the Lander Trail is not a VRM designation, but a viewshed monitoring and impact assessment threshold. To be consistent with Lander, Casper, and Kemmerer BLM offices, this viewshed evaluation zone was increased to 6 miles.

Comment: Page 2-114, (1)(h)Management Objective and Actions "Segments of the Lander Trail where the setting does not contribute to its eligibility for the NRHP would be managed as VRM Class III." Comment - Where trail segments and settings do not contribute to eligibility for the trail to be designated on the NRHP, Class IV management may be more appropriate than Class III, particularly if portions of the trail have already been compromised. BLM must maintain flexibility in management prescriptions.

Response: The VRM Class III designation for these Lander Trail segments was made as part of the VRM classification process across the Pinedale Field Office area. The subject areas rated out as VRM Class III independent of the trail or its condition. This is in part due to operator commitments concerning successful reclamation of "temporary" intrusions. BLM will certainly maintain flexibility in management prescriptions where the Trail's setting has been compromised, but we will also strive to mitigate any impacts.

Comment: PAGE: 2-20 SECTION: 2.4.4 RECOMMENDED CHANGE: REVISE The integrity of the visual setting of national historic trails would be protected from surface disturbing activities by relocating or redesigning projects within 2 miles of either side of the trail to conform to a VRM Class II designation, when it is consistent with the land use allocated in the RMP. EXPLANATION: Map 3-01 shows a 4 mile buffer for the eastern trail segments. The DEIS is generally quite confusing as to the visual buffer. It shifts between ¼ NSO and two mile buffer. Map 3-01 needs to be corrected and the two mile buffer can only be justified if it is consistent with other land use allocations along the trail segments. BLM cannot apply VRM Class II to leases issued with the VRM stipulation, if it would be inconsistent with other rights to drill and develop. SUWA v. BLM, 144 IBLA 70, 83 (1998) (holding the lease issued with VRM Class II stipulation could be developed without following Class II condition, because it was inconsistent with lease decision). CLG also notes that the scale of the VRM Classes suggest that BLM did not in fact follow the manual guidance in assigning the classes. Most of the area along the trail segments is already leased. The balance consists of private minerals and BLM cannot deny access to the private mineral estate.

Response: Map 3-01 does not show VRM classifications or buffers along trails. The Preferred Alternative would apply both a ¼-mile NSO stipulation and a 2-mile (on either side of the trail, for a total of 4 miles) VRM Class II area. VRM Class II would not prohibit development, but would require siting and design of developments to make them less visible or intrusive on the landscape. Nowhere in the RMP would BLM attempt to apply new stipulations to existing leases. The VRM classifications in all the alternatives were developed according to guidance. A number of parcels of BLM-administered mineral estate along the trails are currently unleased.

Comment: PAGE: 2-20 SECTION: 2.4.4 RECOMMENDED CHANGE: Revise Map 2-30 to remove VRM Classes for private land. Revise Map 2-30 to remove VRM Classes for areas already under federal lease. EXPLANATION: Other segments of the trail run through private land, where BLM cannot impose VRM Class II. Several segments purport to impose VRM Class II on trail segments that cross private land. Map 2- 30 needs to be revised.

Response: VRM classes are drawn over the planning area as a whole for ease of visualization. Please see page 1-9 of the draft EIS: "The planning decisions in the RMP will apply only to BLM-administered public land surface and mineral estate in the planning area, including BLM-administered minerals that underlie nonfederal lands (split estate). BLM makes no assertions relative to the allocation of or management of visual resources on private lands.

Comment: The BLM should revise the 4-mile VRM II designation along the Lander Trail. The BLM has not demonstrated this stipulation is necessary or justified. Further, the BLM must clearly acknowledge that the new VRM II restriction will not apply to development activities of any kind on existing leases. The BLM cannot retroactively impose stipulation on existing leases through site-specific conditions of approval. Doing so may violate operators' existing rights.

Response: The acknowledgment of pre-existing lease rights is appropriately stated as such within the document.

Comment: Page Number & Issue:4-22: "Under this alternative, the impacts on the viewshed of the Lander Trail and Sublette Cutoff would be less than under Alternatives 1 and 2, but the impacts would be greater than under Alternative 3." Recommendations:The document provides no basis for the statement. Delete or provide basis for statement.

Response: The impact would be greater than Alternatives 1 and 2, and less than Alternative 3, because the area of restricted development to protect the viewshed of the trail would be larger than in Alternatives 1 and 2 and smaller than in Alternative 3.

Comment: PAGE: 2-114 SECTION: 2.5.5 RECOMMENDED CHANGE: Delete ¶f entirely. f)The Lander Trail and its visual historic setting would be protected through establishment of a VRM\ Class II designation for about [84,380](strikeout) acres of public land within ¼ [2](strikeout) miles of contributing segments of the trail (Map 2-30). EXPLANATION: RMP fails to make appropriate determination as to importance and sensitivity. 2 miles is not warranted by RMP, law or rules. With exception of eastern trail segment to Sand Springs Camp, the area along the trail is under lease. BLM Manual and IBLA case law preclude application of VRM Class II to lands already allocated for surface use for leasing. SUWA v. BLM, 144 IBLA 70 (1998).

Response: The RMP is the place for BLM to make VRM and other determinations. The VRM designations were crafted using an interdisciplinary team of specialists, including lands and minerals staff, and were developed empirically. The 2 miles under discussion has been changed to 3 miles on either side of the trail as a baseline distance for determining potential impacts to trail or other settings. This is consistent with BLM's VRM classification process in which the distance between foreground and middle ground is considered to be 3 miles. BLM will not violate lease rights, but BLM also has the legal obligation to assess impacts of specific proposals made in visually or other sensitive areas due to post-lease considerations. BLM will also design and implement the appropriate mitigation should avoidance prove to be unfeasible.

Comment: PAGE: 4-22, SECTION: 4.3.7,RECOMMENDED CHANGE: Under this alternative, the integrity of the setting of the Lander Trail and Sublette Cutoff may achieve greater preservation [would be preserved] (STRIKEOUT) through intensive viewshed analysis that would determine the necessary width and type of protective buffers required to avoid affecting the intact portions of the trails, as modified by land use allocations. Under this alternative, the impacts on the viewshed of the Lander Trail and Sublette Cutoff may [would be] (STRIKEOUT) less than under Alternatives 1 and 2, but the impacts would be greater than under Alternative 3. REVISE to provide for ¼ mile viewshed along trails. EXPLANATION: RMP fails to follow VRM procedures. See Comments Ch. 2-28-29. Before imposing Class II, BLM must

first assess compatibility with underlying land use. As the FEIS states on 4-14, Class II generally prohibits or constraints surface disturbance. For lands under oil and gas leases, BLM cannot legally impose Class II VRM unless there is an NSO stipulation. Similarly, these public lands are allocated for livestock grazing. As recognized by IBLA and conceded by BLM in litigation, drilling would not be permitted in Class II VRM. SUWA v. BLM, 144 IBLA 70, 85 (1998). The IBLA panel quoted the VRM handbook which states: The visual resource inventory process provides BLM managers with a means for determining visual values. The inventory consists of a scenic quality evaluation, sensitivity level analysis, and a delineation of distance zones. Based on these three factors, BLM-administered lands are placed into one of four visual classes. These inventory classes represent the relative value of the visual resources. Classes I and II being the most valued, Class III representing a moderate value, and Class IV being of least value. The inventory classes provide the basis for considering visual values in the resource management planning (RMP) process. Visual resource management classes are established through the RMP process for all BLM-administered lands (see also Manual 1624.3). During the RMP process, the class boundaries are adjusted as necessary to reflect the resource allocation decisions made in RMP's. Visual management objectives are established for each class. (See Section VB.) (BLM Manual Handbook 8410-1, at 1) (emphasis added) There is no indication in the RMP /DEIS that the VRM Class objectives have been adjusted based on the resource allocation decisions. This is true for areas classified as VRM II but under lease or subject to grazing permits. This omission is especially problematic for the trail segments where the RMP proposes a 2 mile Class II VRM.

Response: VRM analysis and classification guidance was followed in preparation of the draft EIS. The Pinedale Field Office is currently developing gas leases in VRM Class II areas. Presence of oil and gas leases does not negate BLM's responsibility to manage surface resources. VRM classifications would not impact livestock grazing permits.

Comment: PAGE: 4-83, SECTION: 4.7.2, RECOMMENDED CHANGE: REVISE to ¼ mile VRM buffer. EXPLANATION: Again FEIS uses 2-mile buffer along Lander Trail for VRM Class II while there is a 4-mile buffer for oil and gas development. Neither can be justified.

Response: The 2-mile VRM classification would extend on either side of the national historic trails, for a total width of 4 miles.

Comment: PAGE: 4-71, SECTION: 4.7.1, RECOMMENDED CHANGE: CLARIFY VRM Class II for Lander Trail REVISE to ¼ mile. [The proposed 4-mile-wide VRM Class II designation for contributing segments of the Lander Trail would potentially affect well pad, production facility, road, and pipeline placement within this corridor, to meet the VRM Class II objectives. Where the terrain does not provide visual screening of mineral development facilities from the viewpoint of the trail, those facilities could be required to be located either entirely outside the VRM Class II buffer zone or in visually screened areas within the buffer. Fluid mineral resources beyond the reach of offsite development would have the same impact as described above. The impacts related to an unrecoverable loss of federal mineral resources because of drainage from nonfederal leaseholds would be the same as previously described. Again, this would not apply to existing leases, but could apply to postlease actions.] (STRIKEOUT) EXPLANATION: Contradicts EIS 2-115; See also Comment Ch. 2-49 (no authority to impose Class II where contradictory land use allocations, e.g. oil and gas leases). Note even though local governments believe that VRM Class II objectives are unlawfully applied, EIS uses 2- mile and 4-mile Lander Trail buffer, which is contradictory.

Response: The analysis provided is sufficient to address the impacts to minerals attributed to the management of visual resources.

Oil and Gas

Comment: Page Number & Issue:4-72: "The VRM Class I and II areas would be largely unavailable for mineral development. Much of the VRM Class II area overlaps the Large Block NSO Areas and Unavailable Areas, which have little or no development potential. However, the VRM Class II area includes known areas of hydrocarbon production on the Pinedale Anticline along the New Fork River and the Lander Trail, and it also expands into known areas of oil and gas production along the Lander Trail in the Deer Hills and South Piney Creek Canyon area. The VRM Class II management requirements could impact postlease actions (APDs, ROWs, and geophysical NOIs), unless imposition of the restrictions would deprive the leaseholder(s) of their legal right to develop any existing leases in the restriction area. Where meeting the Class II objective necessitates the use of offsite (directional drilling) techniques, both product recovery cost and drilling risk would increase. Leasable mineral resources beyond the technical or economic reach of offsite methods would become unrecoverable. Substantial areas would potentially be beyond the economic or technical reach of directional drilling, and the underlying fluid mineral resources would be unrecoverable. The VRM Class III and Class IV related impacts would be the same as under Alternative 1." Recommendations: Due to the inadequate maps, readers cannot review this section. General Concerns regarding document decisions and validity of existing rights.

Response: The maps provided are adequate for the public to perceive the difference between the alternatives.

Comment: The BLM suggests on page 2-37 that a program would be initiated to "improve the visual quality of oil fields in the planning area by working with the companies to reduce the visual impact of existing facilities." The vast majority of EOG's leases are located in areas with a VRM IV or III classification, which specifically authorize "major modifications" to the existing character of the landscape. See RMP DEIS, pg. 3-105. While EOG takes reasonable steps to reduce visual impacts to the extent practical and safe, the BLM cannot impose restrictions on existing leases or facilities that are inconsistent with its lease rights. Further, it is inappropriate for the BLM to attempt to develop new requirements or mitigation for the No Action alternative, which is intended to reflect current management directions. The BLM must delete, or at least clarify, the language on page 2-37.

Response: The management action noted in Alternative 1 is representative of current management direction.

Comment: Section 4.14 - Visual Resources:The BLM has not adequately analyzed the impacts VRM I and VRM II restrictions will have upon future oil and gas development. Because VRM I and II restrictions would essentially foreclose mineral development, see RMP DEIS, pg. 4-72, the BLM must analyze the socioeconomic effect such designations would have upon the planning area, and account for the loss of mineral production and revenues. Adoption of Alternative 3 or 4 would make development nearly impossible in 30 to 40% of the planning area, including large sections of the PAPA.

Response: No oil and gas leases would be available in areas classified as VRM Class I, which is limited to wilderness study areas. The RFD for oil and gas for each alternative takes into account any reduction in the number of wells that could be drilled due to VRM or other restrictions; therefore, the socioeconomic impact of any reduction in wells is included in the impact analysis.

Comment: The BLM's proposed visual resources management under Alternative 3 is unnecessarily restrictive. Placing VRM I or II restrictions on over 414,000 acres of the planning area would significantly restrict or eliminate oil and gas development, even on existing leases. See RMP DEIS, pg 4-72 (noting that areas with VRM I or II restrictions would be largely unavailable for mineral development). In particular, operators may be unable to develop existing leases if the BLM is precluded from approving ROWs to facilitate development across newly created VRM I and II areas that did not

exist at the time the lease was granted. The imposition of unreasonable restrictions on existing leases may result in illegal takings of EOG's contractual and property rights. The BLM must significantly increase the number of acres with VRM IV restrictions, particularly in existing oil and gas fields.

Response: For comparison purposes and to comply with NEPA, a reasonable range of alternatives must be considered. It is reasonable to analyze expanded VRM Class I and II restrictions.

Comment: While more reasonable than Alternative 3, the BLM's proposed visual resources management under Alternative 4 is still unnecessarily restrictive and may impose impediments to oil and gas development. Placing VRM I or II restrictions on over 258,610 acres of the planning area would significantly restrict or eliminate oil and gas development, even on existing leases. See RMP DEIS, pg 4-72 (noting that areas with VRM I or II restrictions would be largely unavailable for mineral development.). The imposition of unreasonable restrictions on existing leases may result in illegal takings of EOG's contractual and property rights. The BLM must significantly increase the number of acres with VRM IV restrictions, particularly in existing oil and gas fields.

Response: It is reasonable to place restrictions on commercial activities such as oil and gas development in order to mitigate impacts to surface resources.

Comment: The BLM must also revise the acres of lands that will be subject to VRM II restrictions across the planning area. As the BLM admits on page 4-72, VRM I and II areas "would be largely unavailable for mineral development." By imposing VRM I and II restrictions on approximately 30% of the resource area, the BLM is essentially foreclosing oil and gas development in those areas. Such restrictions are unduly burdensome and unnecessary, particularly because the BLM has not demonstrated or explained the need for such a radical shift from the current management practices in the Pinedale Resource Area.

Response: The oil and gas RFD takes into account any reduction in well numbers over the life of the plan that would be caused by VRM class or any other restrictions. The reduction in wells in the Preferred Alternative from the No Action alternative is 56 wells, which, compared to a total projected development under the Preferred Alternative of 7,136 wells, is not a radical shift from current management.

Comment: The BLM has not adequately analyzed the impacts VRM I and VRM II restrictions will have upon future oil and gas development. Because VRM I and II restrictions would essentially foreclose mineral development, see RMP DEIS, pg. 4-72, the BLM must analyze the socioeconomic effect such designations would have upon the planning area, and account for the loss of mineral production and revenues. Adoption of Alternative 3 or 4 would make development nearly impossible in 30 to 40% of the planning area.

Response: The oil and gas RFD takes into account any reduction in well numbers over the life of the plan that would be caused by VRM class or any other restrictions. The reduction in wells in the Preferred Alternative from the No Action alternative is 56 wells, which, compared to a total projected development under the Preferred Alternative of 7,136 wells, is not a radical shift from current management.

Comment: The BLM should also revise the lands that will be subject to VRM II restrictions across the planning area. As the BLM admits on page 4-72, VRM I and II areas "would be largely unavailable for mineral development." By imposing VRM I and II restrictions on approximately 30% of the resource area, the BLM is essentially foreclosing oil and gas development in those areas.

Response: The oil and gas RFD takes into account any reduction in well numbers over the life of the plan that would be caused by VRM class or any other restrictions. The reduction in wells in the Preferred

Alternative from the No Action alternative is 56 wells, which, compared to a total projected development under the Preferred Alternative of 7,136 wells, is not a radical shift from current management.

Comment: PAGE: 4.72, SECTION: 4.7.1, RECOMMENDED CHANGE: REVISE and RECALCULATE to conform to manual: Under this alternative, VRM classifications (Map 2-30) would be more restrictive than under Alternatives 1 and 2 but less restrictive than under Alternative 3. Approximately [30%] (STRIKEOUT) of the planning area would be categorized as VRM Class I (21,290 acres) and Class II [(256,320 acres)] (STRIKEOUT), and the other 70% would be categorized as VRM Class III (395,380 acres) and Class IV (249,940 acres). As discussed under Alternative 1, VRM Class II management requires a high degree of screening to ensure that manmade intrusions do not attract the attention of the casual observer. Where this level of screening cannot be achieved, the intrusion would potentially not be allowed, and, in the case of leasable minerals, the hydrocarbon resource would not be recovered. EXPLANATION: See Comment #56.

Response: The analysis provided is sufficient to address the impacts to minerals attributed to the management of visual resources.

Comment: PAGE: 4-84, SECTION: 4.7.2, RECOMMENDED CHANGE: REVISE ACRES to CONFORM to CASE LAW Compared to Alternative 1, under this alternative VRM management would keep the same acreage in Class I (21,290 acres); [would increase the acreage in Class II by 249% (from 73,430 acres to 256,320 acres) and in Class III by 53% (from 187,070 acres to 395,380 acres);] (STRIKEOUT) and would reduce Class IV acreage by 61% (from 641,140 acres to 249,940 acres). This would be more restrictive to locatable minerals activity than Alternative 1, because of the more stringent requirements to mitigate impacts on the visual setting under Classes II and III. EXPLANATION: See Comments Ch. 2 ## 28-30 (fails to properly apply VRM objectives).

Response: Please refer to responses to those Chapter 2 comments mentioned in this comment.

Comment: PAGE: 2-126, RECOMMENDED CHANGE: VRM Class I objectives would apply to the Scab Creek WSA, and VRM Class II III objectives would apply to the remainder of the SRMA. EXPLANATION: VRM Class II objectives cannot be applied to existing leases and cannot be applied if inconsistent with other uses. See Comment #50. The Front Country portion already has roads, etc. and does not conform to VRM Class II.

Response: BLM adhered to appropriate procedures to inventory and recommend appropriate VRM objectives for broad area landscapes. There are no existing leases in the Scab Creek SRMA area.

Comment: PAGE:2-138 SECTION: RECOMMENDED CHANGE: REVISE a. VRM classifications would be managed according to Map 2-30 (Table 2-29, p. 2-169): 21,290 acres would be managed as VRM Class I; [256,320](strikeout) acres as Class II; [395,380](strikeout) acres as Class III; and [249,940](strikeout) acres as VRM Class IV. EXPLANATION: Maps need to be revised to conform to underlying land uses. RMP does not provide enough information to show the existing land uses versus the inventory. For instance, BLM cannot impose Class II VRM on existing oil and gas leases where surface occupancy is allowed. SUWA v. BLM, 144 IBLA 70 (1998).

Response: It is not prudent or technically feasible to display the level of detail evident in the visual resource inventory and allocation mapping process. The presence of oil and gas leases does not negate BLM's responsibility to develop long-term VRM objectives.

Comment: Page 2-20 The integrity of the visual setting of national historic trails would be protected from surface disturbing activities by relocating or redesigning projects within 2 miles of either side of the trail to conform to a VRM Class II designation.

BLM has not offered any justification for expanding protection of national historic trails from ¼ mile to 2 miles other than to explain (in Chapter 3) that the quarter mile did not preserve the scenic integrity of the trail as it was in the 19th century because structures were placed along the ¼ mile line. Of course the original intent of the trail was not directed as preservation of scenic values. Rather it was the means used to open the West to development and other opportunities. Obviously, scenic integrity has nothing to do with views of folks from the 19th century but rather the views of certain folks today. Expanding the "buffer" along the trail is simply a tool to inhibit any type of development or commercial use and should be recognized as such. We question the implication that certain activities could be relocated. BLM has failed to explain how such a move could be done while honoring valid existing rights. In summary, we oppose the arbitrary extension of the existing buffer because it serves no tangible benefit to the trail or its protection.

Page 2-114, (1)(f) Management Objective and Actions "The Lander Trail and its visual historic setting would be protected through establishment of a VRM Class II designation for about 84,380 acres of public land within 2 miles of contributing segments of the trail…"

To protect all trails with the same status as a congressionally designated trail is excessive and unsupported. In concert with our comments on the Draft Rawlins and Casper RMP Revision, we support Class II protection of congressionally designated trails within the 2 miles only where the segments and settings are pristine and eligible for the NRHP. The Lander Trail is not a congressionally designated trail nor is it being considered for designation. In addition, the integrity of some portions of the trail setting has already been compromised and those areas do not warrant Class II protection. BLM must provide flexibility in management prescriptions as the integrity of some portions of the trail may be more appropriately managed under a VRM Class III or IV stipulation. Furthermore, the standard width of the trail should not exceed the ¼ mile from the centerline of the trail or visual horizon, whichever is closer unless agreed to by all parties. A two-mile buffer is unwarranted as stated above.

Response: Recognition that the one-quarter mile buffer did not provide adequate protection of the visual setting of the National Historic Trails is justification for expanding the visual buffer area. The importance of the National Historic Trails, and their visual setting, was established by Congress in the National Trails System Act of 1968. The argument that a site was not historic at the time European settlers first saw it, is not relevant to the historic importance and relevance of the visual setting of the trails to United States people today.

As plainly stated in the action quoted, the VRM Class II designation applies to only contributing segments of the trails. It is plainly visible on Map 2-30 that the VRM Class II area does not extend fully across the planning area over the length of the trail.

The Lander Trail is part of the Congressionally designated National Historic Trails System. The VRM Class II area for contributing segments of the trail has been expanded to 3 miles either side of the trail for continuity with other BLM planning areas in Wyoming (Casper) that manage National Historic Trails.

Comment: Page Number & Issue:4-62: "The 6-mile-wide VRM Class II designation (169,570 acres) for the Lander Trail would potentially affect well pad, production facility, road, and pipeline placement within this corridor, to meet the VRM Class II objectives...." Recommendations: The RMP should reference or incorporate the Lander Trail PA, which currently governs management of a segment of the Lander Trail.

Response: Programmatic agreements (PA) for management of cultural resources, such as the Lander Trail PA and the Jonah PA, would continue to apply. The PAs are referenced in the management actions common to all alternatives in Chapter 2.

Watershed and Water Quality

General Comment Responses:

Comments:

- Current methods of drilling cause water contamination. Contamination of surface water and contamination of ground water seem to be inevitable side effects. My understanding is that when toxic chemicals are detected in ground water the current 'solution' is to pump water out until a clean sample is tested. Does that mean all the benzene, toluene, and whatever else is removed? Probably not. Put this in perspective. The most valuable resource that comes out of Sublette County is not oil or gas. It is clean water... something our country may need to import from Canada someday. If we contaminate the aquifer below Sublette County, on the crest of the continent, it would be a drastic blow to the economic future of the southwestern states and to the entire nation.

- Drilling has already destroyed the area just south of Pinedale with 1000's of wells, that has had serious effects on water quality (wells are contaminated)

- What about water quality and aquifer contamination? The drillers have made "mistakes" and have had some plumbing "accidents" in the Pinedale Anticline. We do not want the possibility of this in other areas of the Upper Green.

- The coverage of Water Quality (Surface and Groundwater) and Watershed Management appears inadequate. Discussions for the topic are cursory with too few maps, tables, figures or other documentation showing how watershed considerations informed your decisionmaking. For example, -- no quantification of dissolved solids, salts, hydrocarbons present in produced water. -- inadequate quantification of produced water volumes. (Annual average from 1996 – 2006 is not a useful figure.) -- no map of precipitation zones for the watershed -- no table of snowpack averages for the watershed -- no map or acreage table of NWI wetlands in the resource area. -- no data showing acre feet of water the project area contributes to the Upper Colorado riversystem.

- It fails to truly assess the amount of water which would be used and to assess the effects of that amount of water usage on the aquafers and streams/surface water sources that are potentially available.

Response: The contamination of the water wells south of Pinedale was detected through the monitoring program put in place with the PAPA EIS and is being addressed through the auspices of the Wyoming Department of Environmental Quality (WDEQ). Only a few of the wells within the PAPA and Jonah Field had levels of contamination greater than the WDEQ minimum contamination level (MCL), and these are being addressed under the WDEQ remediation program. An expanded study of aquifer connection and function that will help to predict vulnerability to future contamination events is presently underway.

One of the ironies of studying groundwater is that it requires a well and the implied disturbance to the aquifer to even become aware of its existence. This is especially true for complex fluvial deposits such as are encountered in the PAPA and the Jonah field. These portions of the Earth's crust were created by ancient river channels meandering over the land surface and have been frequently compared in complexity and structure to a large bowl of potato chips. In short, it is a very complex system. Beginning with the initial PAPA EIS, all wells within 1 mile of an active hydrocarbon well have been monitored for water quality. Each well is initially monitored for both hydrocarbons and mineral analysis. Each subsequent year, every well is then sampled for mineral content at a minimum and may be sampled for

hydrocarbon content as well. The hydrocarbon test selected for this monitoring was sensitive enough to detect levels sufficient to exceed WDEQ's MCL. In other words, these tests were sufficient to determine if the water being tested met all legal requirements. Livestock and domestic wells in the area tend to use shallow aquifers. All industrial wells completed under the PAPA and Jonah documents are designed to isolate these waters to prevent any problems. The gas wells are at least two orders of magnitude deeper than water supply wells. Costs and operational procedures dictated that an individual well might not be sampled for hydrocarbons with every sampling event. A saline gradient (deeper waters and those aquifers associated with the hydrocarbon production zones are saltier than the more shallow aquifers associated with the water wells in question) allowed for monitoring of undesired well communication, which would trigger a more complete investigation.

Unforeseen events, associated with human error, in early 2007 resulted in produced water being introduced into a limited number of wells. This was detected by the existing monitoring program and triggered a WDEQ investigation and a cleanup of the contaminated wells. As part of this investigation, a more sensitive test for hydrocarbons was used on all the water supply wells within the PAPA and the Jonah fields. This round of tests detected levels of hydrocarbons in sampled wells, some of which were below MCL. It is at this point that a great many questions developed:

1. What is the source of the hydrocarbons: natural, introduced through the drilling procedure, or the result of communication between deep and shallow aquifers along the annulus of the well?

2. Whose jurisdiction does this low level detection fall under? The hydrocarbon levels for the most part do not exceed MCL and are not violating WDEQ regulations. BLM monitors surface compliance, well construction, and product metering. The Wyoming State Engineer's Office (WSEO) monitors well location and water use. The Wyoming Oil and Gas Commission (WOGC) monitors hydrocarbon production and well location.

3. What is to be done about this detection of low levels of hydrocarbons?

Wells that exceed MCL are placed in the WDEQ Voluntary Remediation Program. The majority of wells with hydrocarbon detections, however, were below MCL, meaning that their beneficial use was not degraded and the source is not known. To answer these and other questions, all parties involved (federal, state, and private) have started an investigation to determine the nature of the contamination and the aquifer complex. At this point, all available data are being gathered and analyzed to determine what data gaps exist and which ones need to be filled to answer the questions of both source and potential future actions. This process is presently underway and is not yet fully defined. It is hoped that it will yield results in time. If sound results are produced prior to the publication of the Pinedale RMP/Final EIS, appropriate data and guidelines will be incorporated either into the RMP or the appropriate subordinate documents. The need for an aquifer delineation study was presented early on in the process, but it was determined through the Pinedale Anticline Working Group (PAWG) that proper well drilling procedures and the monitoring of water wells within the production area would be sufficient. This appeared to be the case until the events and monitoring of early 2007.

WDEQ has primacy in terms of waters within the State of Wyoming. BLM works in cooperation with WDEQ to maintain the health of the land and the water that flows off it. It is WDEQ, however, that has the final authority with regard to water. Groundwater monitoring and studies are underway but will not produce significant results for some time. A decision was made to proceed with the planning process and generate an RMP while the ground water studies were continuing. As a result, the RMP will not have all of the data that will eventually become available because it is being written and will need to incorporate data as it becomes available. Establishing and maintaining monitoring programs are associated primarily with individual projects, such as the PAPA and Jonah field developments. It is impractical and in some

cases illegal to halt development until a complete body of data has been gathered, analyzed, and incorporated into proposed actions. As a rule, monitoring plans are standalone documents that reference an EIS or Environmental Assessment (EA) that has been written for a specific project. The RMP is an overarching document that defines the general guidelines for future actions. The new RMP does not change the content of the previous EISs and EAs such as those for the Jonah field and PAPA or their associated monitoring plans. Appendices 3 and 5, as well as portions of Table A11-1, have been revised in the final EIS.

Comments:

- The RMP DEIS does not evaluate the impacts of ground water contamination associated with waste pits and reserve pits. For the PRA, such contamination is of increased concern because the ground water in the near-surface alluvium is used for domestic use and for livestock. More-over, some of the recharge in the region "passes through the alluvium into the Wasatch aquifer." See PAPA Draft Supplemental EIS [8] at 3-72. The Final EIS (and any revised or supplemental draft) should present data on the potentially problematic materials found in pits, including concentrated drilling, completion and stimulation fluids, heavy metals, radioactive materials, and produced waters with high salinity or other contents that may contaminate ground waters.

- The region around the Pinedale Anticline, where the Pinedale Thrust Fault has created an uplifted zone. The sediment layers and aquifers in this zone tend to slope down-ward from the central ridge of the anticline. Contaminated ground waters from the anticline will tend to move to lower potential away from the crest of the anticline. Along the south and west flanks of the anticline, the ground waters in the alluvium, the Wasatch aquifer and Fort Union aquifer likely flow to the south and west towards the New Fork and Green Rivers. On the northeast flanks of the anticline, however, the ground waters will likely migrate towards the nearby communities of Pinedale and Boulder. People drawing well water off the flanks of the anticline may contribute to this migration by, creating "sinks" (areas of lowered hydro-static potential). The recharge map attached as Figure 4 also shows the northwest portion of the Pinedale Anticline experiences greater annual recharge than other parts of the anticline. Higher recharge rates will mean higher ground water flow away from the recharge area. For these reasons, ground water contamination from natural gas wells in the PAPA field is likely to migrate towards these areas where people depend on clean well water for consumption and other domestic uses. The map of ground water wells provided in Figure 1 attached shows there are numerous domestic wells running parallel to the Pinedale Anticline along the north east flanks. Many are within a few miles of active natural gas drilling sites.

- In the Draft Supplemental EIS for the Pinedale Anticline Project Area [8], BLM acknowledges drawdowns in the water table from drilling-related water extraction could be 10-30 feet up to 3 miles from a concentration of activity. PAPA D-SEIS at 4-84. However, BLM assumed there would be "recharge through infiltration" so "[w]ater level recovery in the Wasatch [aquifer] should ... be rapid when pumping ceases in any area." Id. It seems BLM is making the same assumption in the RMP DEIS. The recharge estimates provided in Figure 4 indicate recovery of drawn down aquifers would not be rapid but would take many decades.

Response: The ongoing groundwater study associated with PAPA and the Jonah field will help to answer these questions. At this time the data required for the analysis are not available.

Unique Comments:

Comments on Document/Suggested Changes

Comment: My concern is based on the fact that despite the hundreds of pages of text in this draft, there are little actual number of pages in the text devoted to watershed, water quality and quantity, and implied impacts on all aspects of resource success. Serious impacts are mentioned but the probable long term impacts of each are not evaluated as to overall impact on the functioning of the resource area. For a cursory view of this problem see the following sections:

- Sec 1 cites relevant water statues governing water quality page 1-17,
- Section 2.3.11 on watershed and water quality management is on pg 2-11,
- Sec 4 environmental consequences on watershed and water quality (surface and groundwater) pg 4-166 to 173 all mention the high correlation of surface disturbance due to oil and gas activities and potential watershed health and water quality issues.
- 4.19.16 Watershed and water quality (4-252) degradation of water quality can be a rapid process while recovery in resources is much slower. As stated in a previous section
- 4.19.14 impact on vegetation under alternatives 2, 3 and 4 would reduce ability of vegetation resources to support other resource values. In addition increases in noxious weeds also reduce the land and water quality to support resources. While water quality would be monitored by the state of Wyoming, it still seems the resulting effect is degradation of water quality and quantity on all resources.
- 4.20 irreversible and irretrievable commitments of resources (4-257) Surface disturbances would result in long-term or permanent alterations to soil, removal of vegetation cover, and fragmentation of wildlife habitat. Increased in sediment alkalinity and non-point source pollution that result from activities could result in degradation of water quality, and irretrievable loss of water utility, aquatic habitats, and aquatic-dependent species. Even with reclamation efforts on some disturbed sides may never return to pre-disturbance conditions. The result would likely result in permanent reductions in wildlife populations and impairment of water quality and vegetation communities in some areas.
- 4.21 Unavoidable adverse impacts (4-258) include soil erosion and compaction, habitat degradation and fragmentation, and water quality impairments all of which affect vegetation and wildlife capacity of the landscape.

These suppositions ought to be in large bold type for the public to see and addressed by relevant and smart professionals with evidence and supportable management plans as to how to avoid the impacts and still keep to the Mission Statement of BLM which “is to sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations.”

Response: It would not be appropriate to emphasize watershed impacts over impacts to other resources. The impact analysis presents the predicted impacts that might be expected to occur if RMP decisions were implemented. All RMP decisions would be in accordance with BLM’s Mission Statement.

Comment: Page Number & Issue:4-169: “Year-round drilling could affect watershed health and water quality, primarily through runoff during the times that soils are saturated.” Recommendations: Provide citation and provide support for conclusions.

Response: This conclusion is based on professional judgment and observations made in the field by BLM resource specialists.

Comment: Chapter 2 Page 141 Commentor WGFD Objective 5 Action 3. The water met or exceeded DEQ standards for agricultural grouundwater AND will not change the chemical/physical composition of the water in that stream.

Response: This final EIS has been updated to reflect this.

Comment: • Watershed and water quality goals and objectives for surface and groundwater management need to include an inventory analysis of ground water and surface water relationships. Actions should include conducting comprehensive analysis on relationships, impacts, management of produced waters, treatment options, complications with reinjection, ephemeral drainage discharge issues, etc. Impacts to rangelands, sage grouse habitat and crucial winter ranges need to be addressed.

Response: A groundwater analysis is presently underway. Produced water issues are addressed in the document under the action items for each alternative.

Comment: The reason I have recited the foregoing NEPA requirements (42 U.S.C. § 4332(2)(C), 40 C.F.R. § 1502.16, 40 C.F.R. § 1508.8, 40 C.F.R. § 1508.7, 42 U.S.C. §4332(2)(C)(v), 40 C.F.R. § 1502.16, 40 C.F.R. § 1502.1, at § 1502.24, § 1502.22, at § 1502.22(a), § 1502.22(b)(4), at §§ 1502.2(b), 1508.13, Id. at § 1505.2(c), Id. at § 1502.2(a)) is that the RMP DEIS does not satisfy them. Chapter 4 of the RMP DEIS presents BLM's discussions of potential impacts that could occur through implementation of each of the four DEIS alternatives studied in detail. The four pages 4-167 through 4-170 discuss water quality impacts common to all of the alternatives. The subsequent four pages discuss water-related impacts specific to each alternative. Throughout those 8 pages there is no actual analysis of impacts. Instead, the DEIS merely describes some of the anticipated activities that are expected to occur in the PRA and then presents generalized descriptions of impacts.

Response: The RMP is an overview document. Many factors outside the scope of the RMP document will affect the amount of actual activity that occurs on the ground. The RMP tries to provide direction for these activities but cannot predict the final total amount without setting specific upper and lower amounts of activity. As a result, the exact consequences of each alternative are difficult to predict. The impact analysis is appropriate for the scope of the draft EIS. Because the RMP will not authorize any on the ground activities, it is not possible to predict specific impacts of projects on the ground that have not yet been proposed.

Comment: RMP DEIS at 4-171 and 4-172. This discussion - of impacts from the alternative which poses the greatest overall impacts to water quality - amounts to about one full page in the DEIS ... twenty five unsupported, conclusory sentences. The discussions for the impacts expected from the other alternatives use essentially identical language, and each also consists of about one page of discussion. This is not analysis.

Response: The RMP is an overview document. Many factors outside the scope of the RMP document will affect the amount of actual activity that occurs on the ground. The RMP tries to provide direction for these activities but cannot predict the final total amount without setting specific upper and lower amounts of activity. As a result, the exact consequences of each alternative are difficult to predict. The impact analysis is appropriate for the scope of the draft EIS. Because the RMP will not authorize any on-the-ground activities, it is not possible to predict specific impacts of projects on the ground that have not yet been proposed.

Comment: PAGE: G-24 CHANGE: WATER TABLE - The plane[r](STRIKEOUT) surface between EXPLANATION: Typographical error

Response: This change has been made in the final EIS.

Comment: PAGE: G-18 CHANGE: PRODUCED WATER – Groundwater produced in conjunction with [removed to facilitate the extraction of minerals such as](STRIKEOUT) coal, oil, or gas production. EXPLANATION: Definition should be revised to conform to Onshore Oil and Gas Order No. 7, Disposal of Produced Water, 58 Fed. Reg. 58506 (1993).

Response: This change has been made in the final EIS.

Comment: NEPA requires disclosure of "any irreversible or irretrievable commitments of resources" which would be involved in the proposal should it be implemented. 42 U.S.C. § 4332(2)(C)(v) and 40 C.F.R. § 1502.16. There are numerous irreversible and irretrievable commitments associated with ground and surface water resources in the PRA. These include:

- contamination of ground water from drilling, completion and stimulation fluids, from injection and spills of produced waters, from hazardous material spills and from other mechanisms I discussed previously (ground water contamination is often impossible to remediate)
- ground water depletions and lowering of the ground water table (recharge rates are so low that the ground water may remain drawn down for more than a human lifetime)
- loss of aquifer pore space (and, hence, reduction in aquifer carrying capacity) due to imbalanced hydrostatic pressure from withdrawal of ground waters
- loss of near-surface aquifer pore space volume from construction of compacted roads and well pads, and loss of ground water infiltration (recharge) area from roads, well pads and pits buried on-site
- fracturing or perforating rocks in ways that allow aquifers to communicate, so that low quality ground waters may degrade higher quality ground waters
- oil and gas production contributions to global warming and resulting loss of glaciers in regional mountains (ultimately leading to reduced water supply for local residents)
- soil erosion from roads, well pads, pipelines, ORV use and other activities
- reduction in endangered species population sizes from water depletions and associated irreparable losses in genetic diversity

Although a Resource Management Plan does not, by itself, cause irreversible and irretrievable commitments, it does. allocate lands for various uses that effectively lead to such commitments. For example, which lands the RMP leaves open to mineral leasing, ORV use or water withdrawals often determines the fate of those lands. The RMP Final EIS (and any revised or supplemental draft) should therefore evaluate and disclose any irreversible and irretrievable commitments of resources, including those listed above.

Response: Water quality regulation is the authority of WDEQ. The RMP will not authorize any on-the-ground activities. Direct impacts of permitted actions on groundwater resources will be evaluated at the project-specific level.

Comment: The BLM action for which the Draft EIS was prepared is development of a new Resource Management Plan for the entire Pinedale Resource Area. This new Plan will establish management direction for all natural resources throughout the PRA. According to the Federal Land Policy and Management Act of 1976 (FLPMA), the RMP management direction must "protect the quality" of ecological, environmental and water resources from various possible uses and activities that may occur under the RMP. See, e.g., 43 U.S.C. § 1701(a)(8). In addition, the RMP management direction must also meet the mandate of "multiple use" which is defined to mean "a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations" for resources, including

water, and the "harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment...." 43 U.S.C. §§ 1702(c), 1712(c)(1). The RMP must also "give priority to the designation and protection of areas of critical environmental concern," 43 U.S.C. § 1711(a), and "provide for compliance with applicable pollution control laws, including State and Federal ... water ... pollution standards or implementation plans." 43 U.S.C. § 1712(c)(8). After carefully reviewing the RMP DEIS, it is my conclusion that the proposed direction for the BLM's proposed management direction for the new RMP - embodied in Alternative 4 does not meet these requirements. The same is true of the other alternatives evaluated in. the DEIS.. This is largely because the direction proposed for those alternatives (i) will not protect water resources from contamination or depletions, (ii) will not ensure the ground water resources meet. the needs of future generations, (iii.) will not comply with applicable pollution control laws, and (iv) does not recognize and protect areas of critical environmental concern for important ground and surface waters.

Response: The RMP will not authorize any on-the-ground activities. Direct impacts of permitted actions on groundwater resources will be evaluated at the project-specific level.

Comment: The RMP DEIS presents management direction "common to all alternatives" for protecting watersheds and water quality (ground and surface waters). This "common" management direction reads, in its entirety: "All actions would comply with EO [Executive Order] 11988, Floodplain Management, and EO 11990, Protection of Wetlands, and the State of Wyoming Department of Environmental Quality (WDEQ) water quality standards. Consistent with WDEQ and EPA requirements, Hazardous Spill Response Plans would be required for all projects involving hazardous materials."

RMP DEIS at 3-11. This is not management direction. These two sentences are nothing more than recitations of BLM's intentions to comply with a few applicable legal requirements. In fact, because these requirements exist independently of the RMP, stating them in the RMP is redundant. What is needed is direction that would help BLM officers comply with these and other water-related requirements, along with additional direction to protect water resources from harms that are not currently covered by statutes or executive orders. And there is no such direction. Requiring "hazardous spill response plans" is not the same as providing direction that would actually eliminate or reduce the risk of spills. Nor would such plans protect vulnerable waters from such spills. Instead, the proposed RMP direction merely instructs BLM officials to require further planning. Likewise, telling BLM officers to comply with State Water Quality standards does nothing to guide those officers in meeting the standards. If the RMP is not going to provide direction on how to comply with the various legal requirements, what is the point in even producing such a Plan?

Response: The statement will remain as is. The reference is not redundant.

Comment: Alternative 4, Management Goals: RMP DEIS at 2-139. Although goals are precatory language and are not enforceable, they can guide actions. This set of goals is a good starting point. However, the first goal should not be to "minimize" adverse impacts on water quality, it should be to prevent adverse impacts to water quality. A goal declares intent. If the BLM's goal is only to "minimize" adverse impacts on waters, this suggests BLM is intending to degrade water quality. Moreover, because the word "minimize" is ambiguous, it would allow activities to cause significant water quality degradation without violating the intent of the goal, as written. For the same reasons, the word "minimize" should be deleted from the subsequent goals as well. The references to "federal lands" should be broadened to include operations conducted under federal minerals leases on non-federal surface lands. In addition, I am asking BLM to add the following additional goals to the new RMP and all alternatives evaluated in the EIS:

- To address the needs of downstream water users - and to help recover endangered aquatic species and the ecosystems upon which they depend - increase water flows in the Colorado River Basin and Columbia River Basin where it is practicable to do so without causing other environmental degradation.
- Conserve water (i.e., prevent water waste including evaporative and seepage losses) to the extent practicable through BLM authorized activities, and encourage and help other water users to conserve water.
- Maintain stream channel function and health, and where possible restore previously de-graded stream channels to healthy functioning condition.
- Provide sufficient in-stream flows to maintain healthy aquatic habitats - including adequate peak flows, following historic natural timing of peak flows - to provide (as applicable) favorable water temperatures, spawning gravels free of siltation, formation of sand and gravel bar habitats, and formation of back waters.
- Prevent ground water contamination and losses in ground water carrying capacity (e.g., reductions in porosity from compaction or chemical alteration).
- Maintain the integrity of aquifers, natural aquifer seals, and recharge areas (e.g., from hydraulic fracturing, deep injection, oil and gas wells, etc.).
- Prevent adverse changes to surface waters - in the Resource Area and outside of it - from deposition of air pollutants emitted from operations conducted under federal minerals leases (on federal or non-federal surface lands).

Response: BLM has presented an analysis of impacts that could reasonably occur if certain broad categories of land use activities were carried out. With the soil types present in the planning area, elimination of water quality impacts would necessitate elimination of all soil-disturbing activities. BLM does not have the authority to prohibit development of existing valid oil and gas leases. It is reasonable to have a goal of minimizing the impacts of activities that can reasonably be expected to occur. Minimizing impacts is an accurate and achievable goal where preventing impacts would be unachievable. Water is the purview of the state. The goal of achieving and maintaining proper functioning condition and Wyoming Rangeland Standards as a minimum addresses the other concerns in this row of the table.

Comment: Please develop a full set of management direction that is needed to provide the basic essential protections for watersheds and water resources from all conceivable harms. This direction should be incorporated into every alternative RMP and, before being finalized, should be circulated for public review and comment.

Response: This is out of the scope of BLM's responsibility and of the RMP.

Comment: Compounding the convoluted presentation of alternative management direction, the DEIS fails to explain why there were such drastic changes in the water-related direction between the alternatives. For example, Alternatives 3 and 4 include the following management goal: "Prevent, minimize, and/or remediate elevated levels of salinity contribution from federal lands to the Colorado River system. DEIS at 2-96 and 2-139. In. contrast, Alternative 2 does not have this goal. Why not? Similarly, Alternative 3 contains direction requiring that "100-year flood plains wetlands, and riparian areas would be closed to new permanent facilities (for example, storage tanks, structures, and pits) except those designed and implemented to enhance wetland or riparian area condition or function." DEIS at 2-97. Yet Alternative 2 does not contain this direction. Again, why not? Agencies are required to explain the basis for their actions; they cannot simply outline seemingly arbitrary sets of management direction and leave it to the public to try to guess the underlying reasons. See, e.g., Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co., 463 U.S. 29, 103 S.Ct. 2856, 77 L.Ed.2d 443 (1983) (holding that "an agency must cogently explain why it has exercised its discretion in a given manner" and

offer a "rational connection between the facts found and the choice made"). There is no evidence or explanation offered for the BLM's selection of management direction for the various alternatives.

Response: The alternatives were designed to create a full range of reasonable actions. From this range, the final direction will be chosen.

Comment: Likewise, there is no discussion or explanation for why certain management direction from the 1988 RMP - which BLM believed to be the minimum acceptable protection at the time - is not carried over to the new proposed RMP in the same or strengthened form. For example, in certain sensitive areas the 1988 RMP specifies that "[s]urface disturbance will not be allowed within 1,000 feet of streams and on slopes of 25 percent or greater...." This provision is not included in the new proposed RMP (Alternative 4). Why not? What were the reasons BLM adopted this measure in the first place? And why does the agency now believe this direction is no longer needed? When an agency decides to eliminate previous standards, the agency is required to explain the reasons for the action. See, e.g., Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., op. cit. (Justices Rehnquist, Powell and O'Connor concurring that an agency must explain why it declined to leave previous requirements intact). The DEIS does not comply with this requirement. Without explanations for the changes in management direction between alternatives, it appears the BLM has acted in an arbitrary and capricious way.

To correct these problems, I am requesting that BLM provide explanations for each proposed management goal, objective, standard or guideline. This should include citations to peer-reviewed literature that supports the need for the management direction. If no such literature exists, BLM should explain why it feels the management direction is needed and also explain how the proposed management direction will actually avoid or reduce impacts. And BLM should explain whether the proposed direction represents "all practicable means to avoid or minimize environmental harm ... and if not, why ... not." 40 C.F.R. § 1505.2(c).

Response: The restriction of activities within 1,000 feet of streams and on slopes greater than 25% was specific to the Beaver Creek ACEC (1988 RMP ROD page 53). The restriction is included in Alternative 4 for that area and has been expanded to include a restriction on clearcutting. The Preferred Alternative was developed after evaluating the impacts of continuing the current management and after analysis of Alternatives 2 and 3. The rationale for the management direction presented in the Preferred Alternative is contained in the impact analysis of Alternatives 1, 2, and 3.

Comment: First, the "intents" and "outcomes" are either not specified in the DEIS or are so generalized that they could allow significant environmental harm - including water quality degradation - without violating the performance-based direction. For example, the proposed management direction for Alternative 2 incorporates the following primary management goal for Watershed and Water Quality Management: "Minimize adverse impacts to surface and ground water re-sources and recharge areas from public land uses." DEIS at 2-67. What does "minimize" mean? It does not mean prevent or avoid. It does not mean pollutant concentrations would be limited to X mg/l in ground waters or Y mg/l in surface waters. "Minimize" is an ambiguous term that is neither measurable nor enforceable. Under the "minimize adverse impacts" performance-based direction the BLM could authorize activities that would significantly impact water resources so long as the agency claims it has done what it could to "minimize" those impacts. The RMP must contain measurable standards, not just feel-good goals and intentions.

Response: Water quality is the purview of the state. Because of the varied nature of the environment and the potential actions, it is impractical to provide exact levels of erosion or sedimentation to trigger actions. Much of the potential erosion would occur when no one would be present to observe and measure. Even then the damage would have already occurred. Disturbing the soil surface increases the potential for

erosion above natural background levels. Development of the hydrocarbon resource disturbs the soil. Therefore, taking preventive actions to minimize erosion prior to its occurrence is a practical step.

Comment: Second, to demonstrate a particular RMP goal is achieved, the performance-based approach will require the BLM to "show that the outcome is achieved." DEIS, Appendix A at A3-1. Thus, relying on "intents" and "outcomes" to prove compliance would require the BLM to conduct extensive monitoring - on every resource in the PRA that may be impacted and some resources outside the PRA28 - to prove the intent and outcomes are being achieved. When sufficient monitoring is not done, the BLM would assume intents and objectives are being met, even though they may not be. As noted above, BLM has not been meeting its monitoring obligations under the 1988 RMP [52, 53]. A significantly greater amount of monitoring would be needed to ensure performance-based management is working. Since the BLM has shown it is not going to conduct adequate monitoring under the prescriptive-based approach, there is no reason to expect the agency would meet the greater monitoring responsibilities that come with the performance-based approach.

Response: The final EIS has been revised to include performance-based management at the project planning level, where specific mitigations and guidelines can be developed, rather than at the RMP level. Appendix 3 has been revised in the final EIS.

Comment: Third, under the performance-based approach, even if the BLM were to find that a particular "intent" or "outcome" is not being met, this will not necessarily allow BLM to identify the cause of the undesired impact to the environment or correct the problem. For instance, with thousands of gas wells being authorized in the PAPA and Jonah fields, if BLM were to find that near-surface water quality is being contaminated in these fields, there may be no way for the agency to identify the source(s) of the problem, and it would be too late to pre-vent the problem. The recent discovery of benzene in near-surface ground waters in the Jonah and PAPA fields [25] provides a good example of this shortcoming in the performance-based approach. Because the 1988 RMP did not establish clear prescriptive direction that would protect ground waters from contamination during oil and gas development (e.g., drilling flu-ids may not contain benzene), BLM has followed an implicit performance-based approach to managing ground waters. Basically, BLM assumed that so long as the objective of having uncontaminated ground water was met, there was no problem and the existing management direction was adequate. After benzene was found in the ground waters, it became clear BLM had not done sufficient monitoring to determine the source of the contaminant. In addition, since the benzene has now contaminated the ground water, even if BLM could identify the source(s) of the contamination, it is too , late to prevent the contamination through adjustment of the RMP direction or project stipulations. The RMP direction should be designed to prevent impacts - to actually ensure intents and outcomes will be achieved - rather than simply identifying situations when desired intents or outcomes are not being met, after the fact.

Response: Water is the purview of the state. The recent discovery of the contaminated wells is an example of the monitoring system working.

Comment: Alternative 4, Objective 1: DEIS at 2-139. This Objective is laudable, but it does not actually require BLM to take action to prevent water quality degradation. As with goals, an objective is precatory and unenforceable. In addition, because the DEQ water quality standards are fairly permissive, meeting the "numerical standards" is a rather weak objective when waters already have quality much higher than the minimum standards. The DEIS does not even describe what the "uses and numerical standards" are. The EIS should describe these standards. I also suggest rewording Objective 1 to differentiate between waters that are already above the minimum DEQ the standards and those that are not. For waters that exceed the standards, the objective should be to maintain or improve the existing quality (to the extent consistent with maintaining aquatic ecosystems); for waters that do not currently meet the minimum

standards, the objective should be to improve the existing quality to meet the standards and return the water to historic natural condition.

Response: Water is the purview of the state. State regulations and standards are included by reference rather than being incorporated directly in the text.

Comment: 2-139, Alternative 4, Obj 3 & Actions: Beyond being discretionary and unenforceable, the loose language of this Objective renders it meaningless: the DEIS does not explain what constitutes "control" of water runoff or what constitutes "appropriate rates" of soil erosion. In addition, neither this Objective nor any of the underlying Actions would be binding on the BLM. Action (a) cites BMPs that are not included in the DEIS and are never shown to be effective at would not impact wetlands, riparian areas or floodplains. Action (c) suffers from the same problem by also allowing crossings on a case-by-case basis. Action (d) again allows impacts to wetlands and riparian areas on a case-by-case basis with no direction to disallow such impacts where alternatives exist that would avoid these sensitive areas. Action (e) - which states that "Interim reclamation standards would be developed ... on a project or site-specific basis" - offers no direction for what these reclamation standards would have to achieve. Why are there no reclamation standards included in the proposed RMP and other DEIS alternatives? Action (f) cites BMPs that are not described in the DEIS and are never shown to be effective at controlling threats to Class 1 waters. In addition, Action (f) would only require these BMPs to be used on "contributing federal lands" even though BLM has a responsibility to protect Class 1 waters from threats caused by federal leases on non-federal surfaces. Action (g) also cites BMPs that are not included in the DEIS and are never shown to be effective at controlling salinity. Moreover, this Action is limited to addressing salt contributions only from "highly erodible, saline soils." There are many other sources of salinity contributions to surface waters in the PRA, yet there is no direction presented to protect waters from these sources. And this "Action" will not ensure compliance with the "no salt return" policy of the Colorado River Salinity Control Program / Environmental Quality Incentives Program.

Response: WDEQ regulations cover several aspects in question including stormwater discharge plans and salinity concerns. Appendix 5, Fluid Mineral Best Management Practices, has been updated in the final EIS. Actions c, d, and e include standard language, which BLM believes is appropriate for the RMP. What constitutes reclamation success varies depending on the surrounding vegetation and landform. Specific goals are best set on a site-specific basis.

The development of the energy resource requires pipelines and other facilities to cross water bodies. To eliminate temporary facilities roads and pipelines within the 100-year floodplain would prevent any transport of materials. The case-by-case procedure looks at alternate routes. What constitutes reclamation success varies depending on the surrounding vegetation and landform. Specific goals are best set on a site-specific basis. State regulations would address actions on both federal and nonfederal lands, but BLM cannot regulate nonfederal lands.

Comment: A11-2, Table 3. Furthermore, I do not believe the appropriate "action trigger" for ground and surface water quality changes should be "does not meet DEQ standards." If a noticeable water quality decline is observed, this alone should trigger BLM action to correct the problem - even if the decline has not yet taken water quality below the DEQ minimum standards for that particular ground or surface water. Violation of water quality standards should trigger complete cessation of all activities that may be contributing to the violation as well as trigger prompt remediation efforts. The BLM should take action to correct problems - such as identifying the source(s) of observed degradation and preventing further discharge of pollutants - before such drastic measures. are needed. As an example, if near-surface ground waters with Class I (domestic use) quality are found to be experiencing increased TDS over time, produced waters discharged to the surface may be causing the problem. Instead of allowing the Class I water to continue being degraded to lesser Class II quality that would not be suitable for human use, as

the proposed RMP direction would allow - and then taking action to remediate the ground water back to Class I condition - the BLM could simply halt activities contributing to the decline (e.g., surface discharge of produced waters for dust suppression, vegetation reclamation, etc.).

Response: Table A11-1 has been revised in the final EIS.

Comment: NSO stipulations will not protect all ground water resources in the PRA. To address other threats, I am asking BLM to adopt the following management directives for the new RMP:

- The RMP should. require BLM to work with the local governments, the DEQ, the State Engineer's Office, and applicable Conservation Districts to promptly develop a watershed protection plan - including ground water, wellhead, recharge area, and surface water protections - for the entire PRA. In addition to the issues discussed previously and below, this plan should prohibit or limit transport of hazardous materials near important surface waters, over sensitive ground water aquifers, and in important recharge areas. It should also seek ways to gradually shift to lotox (low-toxicity fuels, oils, etc.) motorized vehicles (e.g., boats and snowmobiles) on Fremont, Boulder and Willow Lakes. The plan should also be subject to expert agency review (e.g., by the EPA and Army Corps of Engineers) and public comment. The RMP should require this plan to be implemented within two years of RMP issuance.

Response: BLM does not have regulatory authority in these areas and cannot mandate action on the part of the agencies that enforce the regulations.

Comment: For perspective, 10,000 additional residents each using an average of 400 gallons per day would collectively consume around 4,500 acre-feet of water a year. Some of this water would be treated and returned to surface waters (e.g., Pine Creek), but a significant amount will be lost to evaporation, such as through watering lawns. and washing vehicles. In fact, lawn watering and car washing are two of the most extensive water uses in the region. Even sewage treatment results in evaporative losses in settling ponds. Although the BLM is not directly using this water, the agency is directly responsible for creating the jobs that ultimately cause these water depletions. The RMP DEIS does not assess the direct, indirect, or cumulative surface water depletion associated with BLM-authorized natural gas and oil development in the PRA.

Response: A brief discussion of this issue has been added to the cumulative impact analysis.

Off-highway Vehicles (OHV)

Comment: PAGE: 4-169, SECTION: 4.15.1, RECOMMENDED CHANGE: REVISE Compaction of soils, channelization of overland flows, and loss of vegetation from OHV activity and from unmaintained or minimal maintained roads would increase erosion, reduce revegetation rates, and decrease stream bank stability, thereby causing increased sedimentation and salt and nutrient loading of streams. OHV or road use during periods of high soil moisture, such as early winter and spring, would accelerate erosion and vegetation damage. EXPLANATION: Presentation of impacts is biased.

Response: The impacts listed as associated with OHV use are appropriate.

Comment: PAGE: 4-174, SECTION: 4.15.7, RECOMMENDED CHANGE: REVISE Designation of 3,110 acres as open to OHV use would create areas of concentrated impacts on vegetative and soil resources. This, in turn, would create local impacts on surface water resources. [If properly managed, the presence of OHV Open areas could help control impacts over the larger planning area if it reduces recreational OHV activity outside of the designated areas.] (STRIKEOUT) Water resources within the OHV Open areas would need to be intensively managed and mitigated. EXPLANATION: Limited benefit

for water quality. OHV areas are not necessarily near water bodies. Statement unsupported by facts: high demand for OHV use and 3110 acres of open will not meet that.

Response: BLM finds the analysis is appropriate.

Comment: PAGE: 4-166, SECTION: 4.15.1, RECOMMENDED CHANGE; DELETE [As populations expand in the area, disturbances created by OHVs will most likely continue to expand.] (STRIKEOUT) EXPLANATION: No basis for this statement. RMP removes 244,000 acres of land from OHV recreation use and limited OHV to 124,980 acres (DEIs 4-160)..

Response: Based on past experience and observation, it is reasonable to assume that OHV use will increase with an increasing local population.

Oil and Gas, Produced Water

Comment: State specifically and with full disclosure how much water will be used for 4000 wells... it's source, clearly defined reclamation or disposal, monitoring and enforcement! Or SLOW DOWN! Water is needed by everyone, everywhere. Wait until you can meet your responsibility to be accountable.

Response: Because of variances in site geology, potential for loss of water or drilling fluids down the hole, and potential for re-use of fluids between wells, it is not possible to accurately estimate the amount of water that would be used for all oil and gas drilling in the planning area. It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

Comment: I'd like to list three major areas in which you are failing. 2. When these companies drill wells on our public land they put all kinds of nasty caustic and corrosive chemicals down the drill holes. Who is making sure these chemicals don't contaminate our aquifers? I'll tell you who.....no one. The BLM doesn't even know what they are putting down there let alone WHERE it is going. By the way the cattle aren't dying from drinking produced water, they are drinking out of drill pits where these chemicals end up. And this is also related to how much water these companies are sucking out of our aquifers at an insane rate. You are not "land managers" you are "gas company appeasers".

Response: The constituents of drilling fluids are known and regulated. The shallow aquifers within the PAPA are cemented off to prevent contamination.

Comment: Some of the information presented is conflicting, confusing or misleading. For example,

Objective 1, Management Action 3 for both Alternative 3 (2.5.4) and 4 (2.5.5) states that the discharge of produced water into stream channels would be "avoided", but "if allowed" would comply with WDEQ standards. But the Impacts section for the same alternatives (4.15.6 and 4.15.7) offers the statement "No produced waters would be discharged into surface drainages". And here is one of the Assumptions (4.15.1) used as a basis for analysis: "As mineral development continues to expand, there will be an increase in produced water volumes that will decrease as the rate of development decreases and the aquifers are drained." It is not at all clear what you mean by this.

The draft EIS indicates that BLM did not perform a rigorous analysis of water issues. This lack of attention probably led to your decision to allow oil and gas leasing on the Upper Green. Exposing theGreen River headwaters to such development would degrade this primary water resource which is so important in the American West. The declining supply of non-polluted fresh water for human populations is a looming crisis which is likely to eclipse even our increasing need for energy resources. Because NSO

offers no real protection, because management practices can be negotiated, because the BLM has shown inability to keep up with compliance monitoring, and mostly because water is a resource more vital than any other, please make unavailable for leasing all lands north of Tier 33 North in the Pinedale Resource Area.

Response: The statement about the disconnect between Chapters 2 and 4 is accurate and has been corrected.

Comment: I consider the EIS to be inadequate in its assessment of the increased drilling which will be permitted in the Pinedale area in the following categories: It fails to truly assess the amount of water which would be used and to assess the effects of that amount of water usage on the aquafers and streams/surface water sources that are potentially available.

Response: The RMP will not permit any on-the-ground activities. It estimates impacts that could occur if allocated land uses in the RMP are carried out in the future. One of the ironies of studying groundwater is that it requires a well and the implied disturbance to the aquifer to even become aware of its existence. This is especially true for complex fluvial deposits such as are encountered in the PAPA and the Jonah field. These portions of the Earth's crust were created by ancient river channels meandering over the land surface and have been frequently compared in complexity and structure to a large bowl of potato chips. In short, it is a very complex system. Beginning with the initial PAPA EIS, all wells within 1 mile of an active hydrocarbon well have been monitored for water quality. Each well is initially monitored for both hydrocarbons and mineral analysis. Each subsequent year, every well is then sampled for mineral content at a minimum and may be sampled for hydrocarbon content as well. The hydrocarbon test selected for this monitoring was sensitive enough to detect levels sufficient to exceed WDEQ MCLs. In other words, these tests were sufficient to determine if the water being tested met all legal requirements. Livestock and domestic wells in the area tend to use shallow aquifers. All industrial wells completed under the PAPA and Jonah documents are designed to isolate these waters to prevent any problems. The gas wells are at least two orders of magnitude deeper than water supply wells. Costs and operational procedures dictated that an individual well might not be sampled for hydrocarbons with every sampling event. A saline gradient (deeper waters and those aquifers associated with the hydrocarbon production zones are saltier than the more shallow aquifers associated with the water wells in question) allowed for monitoring of undesired well communication, which would trigger a more complete investigation.

Unforeseen events, associated with human error, in early 2007 resulted in produced water being introduced into a limited number of wells. This was detected by the existing monitoring program and triggered a WDEQ investigation and a cleanup of the contaminated wells. As part of this investigation a more sensitive test for hydrocarbons was used on all the water supply wells within the PAPA and the Jonah fields. This round of tests detected levels of hydrocarbons in sampled wells, some of which were below MCL. It is at this point that a great many questions developed:

1. What is the source of the hydrocarbons: natural, introduced through the drilling procedure, or the result of communication between deep and shallow aquifers along the annulus of the well?

2. Whose jurisdiction does this low level detection fall under? The hydrocarbon levels for the most part do not exceed MCL and are not violating WDEQ regulations. BLM monitors surface compliance, well construction, and product metering. WSEO monitors well location and water use. WOGC monitors hydrocarbon production and well location.

3. What is to be done about this detection of low levels of hydrocarbons?

Wells that exceed MCL are placed in the WDEQ Voluntary Remediation Program. The majority of wells with hydrocarbon detections, however, were below MCL, meaning that their beneficial use was not

degraded and the source is not known. To answer these and other questions, all parties involved (federal, state, and private) have started an investigation to determine the nature of the contamination and the aquifer complex. At this point, all available data are being gathered and analyzed to determine what data gaps exist and which ones need to be filled to answer the questions of both source and potential future actions. This process is presently underway and is not yet fully defined. It is hoped that it will yield results in time. If sound results are produced prior to the publication of the Pinedale RMP/final EIS, appropriate data and guidelines will be incorporated either into the RMP or the appropriate subordinate documents. The need for an aquifer delineation study was presented early on in the process, but it was determined through the PAWG that proper well drilling procedures and the monitoring of water wells within the production area would be sufficient. This appeared to be the case until the events and monitoring of early 2007.

WDEQ has primacy in terms of waters within the State of Wyoming. BLM works in cooperation with WDEQ to maintain the health of the land and the water that flows off it. It is WDEQ, however, that has the final authority with regard to water. Groundwater monitoring and studies are underway but will not produce significant results for some time. A decision was made to proceed with the planning process and generate an RMP while the ground water studies were continuing.. As a result, the RMP will not have all of the data that will eventually become available because it is being written and will need to incorporate data as it becomes available. Establishing and maintaining monitoring programs are associated primarily with individual projects, such as the PAPA and Jonah field developments. It is impractical and in some cases illegal to halt development until a complete body of data has been gathered, analyzed, and incorporated into proposed actions. As a rule, monitoring plans are standalone documents that reference an EIS or EA that has been written for a specific project. The RMP is an overarching document that defines the general guidelines for future actions. The new RMP does not change the content of the previous EISs and EAs such as those for the Jonah field and PAPA or their associated monitoring plans. Appendices 3 and 5 as well as portions of Table A11-1 havebeen revised in the final RMP/EIS.

Comment: The BLM states in the RMP DEIS that operators would be encouraged to treat produced water in order to "enable its beneficial use." See RMP DEIS, pg. 2-140. The BLM should not utilize the phrase "beneficial use" because it has legal significance in the context of water law in Wyoming. The Wyoming State Engineer has determined that energy production is a beneficial use of water. Further, the BLM should be aware that parties attempting to utilize water produced from oil and gas operations are required to obtain the approval of the oil and gas operator and obtain a permit from the Wyoming State Engineer. See State Engineer Rules Chapter I, Section 19; Chapter II, Section 6. The BLM cannot regulate the use of water in Wyoming.

Response: The term beneficial use has been changed in the final EIS.

Comment: Page Number & Issue:4-64: "Water quality and watershed management actions would prescribe that no new permanent facilities would be allowed in flood plains, perennial or intermittent watercourses, or in wetland/riparian areas, which would lead to the relocation of oil and gas facilities outside these areas (Tables 2-32 and 2-33). The buffer zones protecting wetland/riparian area and flood plains would be expanded to one-quarter mile. This would result in an approximate 260% increase in the acreage affected by the restriction. Oil and gas reserves underlying areas beyond the viable reach of offsite development methods would be unrecoverable." Recommendations: Map is too general to review this section. BLM should provide a more detailed map and allow additional time for analysis by the public. Quantify the amount of oil and gas reserves that would be unrecoverable and provide justification for the 260% increase on acreage affected by the restriction.

Response: It is reasonable to establish limitations on development to protect surface resources. An avoidance area of ¼ mile is generally reachable with directional drilling techniques.

Comment: Oil and gas development and maintenance operations utilize many toxic or hazardous chemicals that must be carefully controlled and regulated to prevent environmental and public health impacts. The RMP DEIS fails to analyze these impacts.

Response: BLM agrees that these substances need to be controlled to prevent impacts. The draft EIS cites The Clean Water Act of 1987, The Safe Drinking Water Act, Wyoming water quality standards and regulations, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, the Resource Conservation and Recovery Act, and Emergency Planning and Community Right-to-Know Act of 1986 as authorities that apply to the selection and implementation of management actions in the RMP. Appendix 25, Hazard Management and Resource Restoration Program, explains the management of hazards on public lands. As stated in Appendix 25: "Detailed management actions specific to hazardous materials usage are included as part of environmental analysis conducted for specific oil and gas field activities." In addition, an analysis of hazardous materials management is prepared as part of the application for permit to drill process.

Comment: The RMP DEIS fails to adequately analyze the impacts of leaking oil and gas waste or reserve pits and the impacts of the massive amounts of produced water that will be generated.

Response: Efforts are made to prevent discharges of oil and gas waste products so the potential quantity is unknown. The potential volumes of produced water are unknown (the quality at the point of discharge is managed by WDEQ). Because of the unknown quantities of both types of material and the unknown timing and contents of accidental discharge of oil and gas waste, if any, the impacts cannot be analyzed at this time or in this document.

Comment: Disposal methods of contaminated produced waters from conventional gas production should be more thoroughly evaluated, particularly in light of the proposed number of wells. In addition, with the likelihood that coalbed methane development will likely increase in this planning area, little if any analysis or discussion occurred on planning for this. In fact, the little discussion that did occur was a one-sentence line that lumped CBM management planning in with traditional oil and gas development. CBM development is significantly different, wells are drilled deeper, requires larger drill rigs, larger well pads per well, larger pieces of equipment for drilling and a different set of water management techniques than those experienced in natural gas drilling. Reserve pits are needed for water discharge, for cuttings, for mud disposal, and the water quality varies. Reinjection of pumped water is equal or usually poorer quality with unknown results of aquifer contamination, and often ephemeral drainages are receiving the discharges with other impacts associated with that action.

Response: The potential for coalbed methane (CBM) development in most of the planning area is quite low. In addition, CBM resources in the Pinedale Planning Area differ from those being produced in northeast Wyoming. The CBM resource, however, is located at greater depths, which is a significant difference. Wells would be deeper, would take longer to drill, and less water would be produced. Water quality is the purview of WDEQ. Additional guidelines have been provided in the final version of the document.

Comment: We formally request that the agency provide an accurate estimate of the numbers of producing wells, dry holes, and injection wells. We request that the cumulative impacts of all wells and associated roads, pipelines and other infrastructure be analyzed fully as part of the NEPA process.

Response: Because the RMP will not authorize any on-the-ground developments, these analyses are conducted in the site-specific oil and gas development EISs—for example, those for the Jonah and Pinedale Anticline fields. It is not possible to predict in the RMP the location of all roads, wells, and other infrastructure that might be proposed by oil and gas operators in the future.

Comment: during this oil and gas production, salt water comes up along with the oil and gas products. Where is this going to go? There -- the water, the transportation group determined that there is one and a half million gallon shortfall between the production of this salty water and the treatment facilities. If you know this, if you're familiar with the production, you know that the New Fork Treatment Facility recently closed down. So what's going to be done with all this salty water? Why are we going to allow additional wells with more salty water that's going to be -- you know, what's going to happen to it? It's going to go down a drainage somewhere, and it's going to end up on somebody's ranch in somebody's water.

Response: Discharge of water is under the jurisdiction of WDEQ. All discharged water must meet WDEQ standards. Given the quality of the water being produced in this area, most if not all produced water will be re-injected or desalinated prior to discharge. BLM is working to assure that the discharge points from desalinization facilities are so located that they do not accelerate erosion.

Comment: What are the "other areas of concentrated development ..." "likely [to occur over the life of this plan"? What are the ground and surface water resources that would be affected? How would those waters be affected? How much water could be extracted or contaminated in, those areas?

Response: Until plans or proposals are submitted, it is not possible to specify where concentrated development might be proposed or what impacts may occur.

Comment: Regarding augmented flows, where is this likely to occur and how much increase in flow is expected? How would this increased flow impact surface waters (e.g., changes in stream. channel morphology, sediment loading, bank scour, etc.)?

Response: Until proposals for discharge are received, their potential impacts cannot be predicted or analyzed.

Comment: On the issue of dewatering, specifically where is this likely to happen and how much water would be produced? What is the chemical make-up of this, water and how could its discharge affect surface water environments?

Response: Until proposals for dewatering are received, their potential impacts cannot be predicted or analyzed.

Comment: The RMP DEIS does not explain what chemicals have been used as drilling fluids or may be used in the future for drilling operations in the PRA. It does not disclose how much of the drilling fluids end up being pushed into ground waters before the casing is installed. Nor does the DEIS explain what health risks these chemicals may pose when introduced to ground waters. Here too, even if a single gas or oil well only contributes a relatively small amount of ground water contamination from drilling fluids, the cumulative effect of thousands of similar wells drilled through the same aquifers may be very significant., Rather than take a hard look at this critically important issue, the DEIS completely ignores it.

Completion and stimulation operations present similar ground water contamination risks. Fracing, for example, involves injecting tons of solvents, gelling agents and sand into the well bore to create and hold open fractures in the productive rock layer(s). A single fracing operation may use upwards of a million gallons of fracing fluids, and a given well may be subject to multiple fracing operations. Among other ingredients, fracing fluids may contain diesel, mineral oil and/or other petroleum distillates, benzene, ethylbenzene, trimethylbenzene, toluene, xylenes, naphthalene and other polycyclic aromatic hydrocarbons (PAHs), naphtha, methyl tertiary-butyl ether (MTBE), 2-butoxyethanol (2-BE), ethoxylated nonylphenol, oxyalkylated phenolic. resin, isobutyl alcohol, methanol, hydrochloric acid, hydrofluoric acid, isopropanol, tetramethyl ammonium chloride, hydroxides, peroxides, boric acid, potassium chloride,

potassium carbonate, sodium bromate, ammonium persulfate, diammonium peroxidisulfate, fumaric acid, dipropylene glycol monomethyl ether, 2-bromo-2-nitropropane-l,3-diol, 2,2-dibromo-3-nitrilopropionamide, and tetrakis-(hydroxy,methyl)-phosphonium sulfate (aka THPS or Mag¬nacide 575 microbicide). All of these materials can contaminate ground water, some can cause organ (e.g., liver or kidney) damage, and several are known or suspected carcinogens. Even cement slurries used to seal or repair casings may contain harmful additives such as N,N-dimethylformamide and 2-acrylamido-2-methylpropane sulfonic acid (e.g., Halad-344). This is just a small subset of potentially harmful chemicals that may be used in the PRA under the new RMP. A recent survey found that 362 different chemical products are used in oil and gas development and delivery, and that at least 92% (333 chemicals) have one or more adverse health effects [22]. These health effects are summarized in the following table (id. at 3). Table 2: Reported Health Effects of Chemicals Used in Oil and Gas Production "See Table on Page 21 of document"

As with drilling fluids, the RMP DEIS does not disclose what chemicals are being used in the PRA for completion or stimulation, much less describe the health risks these chemicals pose when introduced to ground waters. And it fails to disclose how much fracing fluids remain in the ground after fracing operations are completed. While most fracturing fluid injected into a well is returned to the surface through flowback, the EPA estimates 20-40% of fracing fluids may remain in the ground [23]. This is consistent with a gas industry estimate that 70% of fracing fluids are typically retrieved [22], which implies 30% of fluids remain in the ground. This means hundreds of thousands of gallons of fracing fluids may end up in ground waters during each fracing operation. Racing fluids can also leak from faulty casings or wellheads. For instance, in October 2005 a wellhead valve in Colorado failed, resulting in the release of approximately 200 gallons of fracing fluids containing nonylphenol, trimethylbenzene, naphtha, ethylbenzene, and xylenes [24]. The operator estimated 15-20 gallons of this fluid entered an irrigation ditch. Similar fracing fluid leaks (above and below ground) are undoubtedly occurring in the PRA.

Although a gallon of fracing fluid may have relatively small amounts of harmful chemicals (e.g., benzene and MTBE), the overall volume of fracing fluids being used in the PRA is extremely large; this can lead to problematic concentrations of the harmful chemicals in ground waters. Assume conservatively that only 10% of fracing fluids are left in the ground, that each fracing operation uses only 50,000 gallons of fracing fluids, and that each well will only be fraced three times over the life of the well. With on the order of 10,000 wells subject to fracing, the total amount of fracing fluids that may be introduced to ground waters in the PRA cumulatively over the next 10-20 years may exceed 150 million gallons.

More realistically, the total amount of fracing fluids left in the ground throughout the PRA will exceed a billion gallons and may approach 10 billion gallons.9 Most of these contaminants will be concentrated in the Jonah and PAPA fields. A single tablespoon of MTBE can con¬taminate on the order of 100,000 gallons of water. And the EPA has established a maximum permissible concentration of 5 ppb for benzene for drinking water. However, because benzene is carcinogenic any non-zero concentration in domestic-use aquifers is problematic for human health. Water samples taken from more than 80 near-surface industrial water wells in the Jonah and PAPA gas fields during 2006-2007 tested positive for hydrocarbons - including benzene, xylenes and toluene - and at least three of the wells showed concentrations of benzene exceeding 5 ppb [25]. The RMP DEIS does not include any of this information, even though some of the water quality data were available in 2006.10 In fact, the RMP DEIS completely ignores this issue and the risks these introduced compounds pose to ground water quality and human health.

To properly evaluate potential ground water impacts for the new RMP EIS, the BLM should (i) identify and disclose the chemicals that are or may be used in drilling, completion and stim¬ulation fluids, (ii) disclose the health risks of these chemicals, (iii) estimate the volumes and resulting concentrations of

potentially harmful compounds that may be introduced to ground waters, and (iv) estimate the directions and potential migration rates of contaminated waters.

Response: We agree that these substances need to be controlled prevent impacts. The draft EIS cites The Clean Water Act of 1987, The Safe Drinking Water Act, Wyoming water quality standards and regulations, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, the Resource Conservation and Recovery Act, and Emergency Planning and Community Right-to-Know Act of 1986 as authorities that apply to the selection and implementation of management actions in the RMP.

The RMP is BLM's management plan; it is the highest level of decisionmaking specific to land uses. An RMP generally makes land allocations and provides goals and objectives for managing specific areas of land. Mid-level decisions are made in activity plans; they contain more detailed management decisions for specific programs (such as potential hazardous wastes) and areas. The activity plan usually selects and applies best management practices to meet the goals and objectives of the RMP. The next planning level is the project plan, which analyzes site-specific effects associated with individual projects and applies onsite mitigation, as necessary. BLM determined that detailed analysis of the types of concerns you have addressed—with respect to drilling fluids, fracturing fluids, and other stimulation fluids—would be most important to address at the activity plan and project plan levels and not in this RMP. In addition, the Environmental Protection Agency considers exploration and production waste to be exempt under the Resource Conservation and Recovery Act Subtitle C hazardous waste regulations.

Comment: Concerning the identification and disclosure of fluid contents, energy companies have claimed the contents of their drilling, completion and stimulation fluids are confidential. However, I believe the benefits of ensuring public health and safety by disclosing this information override any benefit that might result from operators withholding this information. They are receiving enormous profits from public lands and public resources, and disclosing chemical use is a small price to pay for these profits. If operators really care about the communities around the PRA, they should willingly disclose this information. In addition, while operators may technically be able to claim this information is proprietary, the BLM also has ample discretion (and, I believe, a common law legal obligation) to protect ground waters by restricting the use of potentially problematic drilling, completion and stimulating fluids in the PRA. BLM also has the discretion to make disclosure of fluid contents a requirement of granting an APD. Exercising these authorities still preserves the right of all operators to develop their leases, albeit with greater assurance of protecting ground waters.

Response: Regulatory protection of groundwaters and regulation of chemical use is the authority of WDEQ.

Comment: In the PRA, the BLM has also been allowing well pad waste and reserve pits to be buried on site. In such cases, the liners eventually deteriorate and allow leaching of the residual sludge contents. The very act of burying a pit can compromise the liner, and even a small hole in an otherwise intact liner can allow leachates to begin entering the underlying ground water. In addition to holding concentrated versions of drilling, completion and stimulation fluids, reserve pits also contain cuttings from drilling the well itself. These cuttings pose other contamination problems. Most obviously, the cuttings can contain heavy metals. Less obviously, the sludges can contain radioactive materials. In fact, "[c]ontamination of oil and gas facilities with naturally occurring radioactive materials (NORM) is widespread," and "NORM contamination can be expected at nearly every petroleum facility" [30]. Of particular concern to the PRA, „[p]roduced water may contain dissolved radium which "can lead to contaminated sludges in waste pits and radioactive water." Id. at 12. Examples of other radioactive materials that may be found in sludges and produced waters include uranium, thorium, radon, polonium, thorium, lead-210, and bismuth. Radon contamination of natural gas is a worldwide problem but "particularly high concentrations are reported in the U.S. and Canada." Id. at 13. Evaporation in waste pits can greatly increase concentrations of heavy

metals and radioactive materials. These materials can then enter ground waters if pits are unlined, leak, or overflow. Likewise, when pits containing sludge are buried on-site, these materials can begin entering ground waters when the liners are compromised or deteriorate.

The EIS should also disclose: (i) how many pits have already been constructed in the PRA, (ii) how many new pits are likely to be constructed in the PRA in the future, (iii) how these pits are or will be lined, (iv) how often such pits overflow or leak, (v) how much material typically escapes during such events, (vi) what is done once pits are no longer needed, (vii) rate of deterioration of pit liners for pits buried on-site, and (viii) leaching rates from pits. From these data, BLM should be able to roughly predict ground water contamination risks from pits in the PRA. While some of this information may not be readily available at this time (e.g., liner deterioration and leaching rates), BLM should conduct studies needed to obtain the missing data as soon as possible, in accordance with 40 C.F.R. § 1502.22(a). If BLM can show the cost of obtaining any of the missing data would be exorbitant, the agency should utilize accepted scientifically accepted theoretical approaches that will allow prediction of potential ground water contamination rates from pit leaks, overflow and leaching, as per 40 C.F.R. § 1502.22(b) (4).11 Moreover, BLM should use assumptions that will account for pit-related contamination rates that would have severe consequences even if their probability of occurrence is low. Id.

Response: BLM agrees that these substances need to be controlled to prevent impacts. The draft EIS cites The Clean Water Act of 1987, The Safe Drinking Water Act, Wyoming water quality standards and regulations, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, the Resource Conservation and Recovery Act, and Emergency Planning and Community Right-to-Know Act of 1986 as authorities that apply to the selection and implementation of management actions in the RMP. Appendix 25, Hazard Management and Resource Restoration Program, explains the management of hazards on public lands. As stated in Appendix 25: “Detailed management actions specific to hazardous materials usage are included as part of environmental analysis conducted for specific oil and gas field activities.” The Environmental Protection Agency considers exploration and production waste to be exempt under the Resource Conservation and Recovery Act Subtitle C hazardous waste regulations. BLM has determined that detailed analysis of the types of concerns you have addressed, with respect to well pad waste and reserve pits buried onsite, would be most important to address at activity plan and project plan levels and not in this RMP. At that time, BLM will identify potential impacts of onsite burial for the specific proposed plan, determine the significance of that impact, and prepare a decision to address mitigation of any impacts identified.

Comment: The next subject would be water disposal pits. In all alternatives it’s stated very emphatically that no disposal pits would be allowed on federal property. Now, this is wrong. This -- need for those disposal pits is created on federal property. The reason we need water disposal pits is because of these drilling operations that are happening on federal property. This problem is being created by federal action. It should be rendered by federal action. We need water disposal pits in the areas where they’re drilling. So we’re moving this water from places like the Jonah Field that are very arid, a long ways away from any live water source, and putting them right down on the creek bottom. So I think that’s wrong. I think we need to remedy that, putting an absolute decree with no water disposal pits would be allowed on federal property is wrong.

Response: The final EIS has been revised to consider water disposal pits in certain areas.

Comment: Beyond reserve and waste pits used at drilling sites, there are numerous other containment basins in the PRA that pose risks of water contamination. These include, but are not limited to catch basins used to capture spilled fluids from industrial equipment, and bermed catchments around condensate and produced water tanks. Some of these are located off BLM lands at facilities dedicated to serving energy development in the region, As with drilling pits, these holding facilities often contain

hazardous materials, including chemicals that would render ground or surface waters unusable for consumption by people, livestock or wildlife. For example, seven cows were recently found dead near a compressor station in the Jonah field all apparently died after drinking hydrocarbon-contaminated water from a catchment basin that had been erected to hold spilled fluids released during gas field equipment servicing [31]. When such pits and basins leak or overflow, they will contaminate ground water and possibly surface water. The RMP DEIS does not discuss these constructs much less evaluate their potential impacts to ground waters, surface waters or other components of the environment (e.g., wildlife; soils).

BLM may feel it need not assess the impacts of any pits and basins when they are constructed off BLM lands. However, even those facilities located off BLM lands are being used to support BLM-authorized activities occurring on BLM lands. Thus, water impacts from these off site pits are indirect and cumulative impacts associated with BLM's authorization of gas field development. 40 C.F.R. §§ 1508.8(b) and 1508.7. They must be addressed in the RMP EIS.

In fact, produced water storage ponds have already contaminated ground water in the PRA. Specifically, the 10-acre produced water evaporation pond constructed near Daniel leaked pro¬duced waters that caused ground water. contamination [36]. Although this pit is now closed, no bond was required and the operator has reportedly claimed to lack the funds required to remediate the pollution. Id. The Wyoming Department of Environmental Quality (DEQ) has apparently set up monitoring wells around-the site to track the spread of the contaminants, but to my knowledge no efforts are currently being made to remediate the contamination. The DEIS does not discuss this contamination incident.

I have also been informed (but have not yet been able to confirm) that a large, produced water storage / evaporation pond at the Sand Draw industrial site leaked a significant amount of produced water. At this site there are six produced water storage and evaporation ponds covering 31 acres and holding 600,000 barrels [36]. It is possible at least one of these has leaked, and it is conceivable there are on-going leaks. The operator was required to post a $23,415 bond (id.), but this is clearly insufficient to correct any substantive ground water. contamination that may result from these ponds. The DEIS does not discuss this incident either, or potential for future leaks from this facility or others in the, region.

Overflows and leaks are not the only problems associated with produced water evaporation and storage ponds. As with reserve and waste pits, materials settling out of these ponds create hazardous sludges. These sludges can contain concentrated amounts of harmful organics such as benzene, heavy metals, and radioactive materials. Greases, oils and soaps - brought up with produced waters - also float on the surface of ponds. Although the sludges and "scums" should be hauled to a hazardous material disposal facility, it is my understanding EPA is allowing old storage ponds to be buried on site. For instance, three of the Calpet LCC storage ponds near Big Piney have reportedly been closed and covered over [36]. When the settled sludge residue is left in place and the liners leak - either through punctures or deterioration -the sludge will begin leaching into ground waters. This will cause contamination. The DEIS ignores this issue.

Response: BLM agrees that these containment basins and produced water storage ponds need to be controlled to prevent impacts. The draft EIS cites The Clean Water Act of 1987, The Safe Drinking Water Act, Wyoming water quality standards and regulations, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, the Resource Conservation and Recovery Act, and Emergency Planning and Community Right-to-Know Act of 1986 as authorities that apply to the selection and implementation of management actions in the RMP. Appendix 25, Hazard Management and Resource Restoration Program, explains the management of hazards on public lands. As stated in Appendix 25: "Detailed management actions specific to hazardous materials usage are included as part of environmental analysis conducted for specific oil and gas field activities."

BLM has determined that detailed analysis of the types of concerns you have addressed, with respect to containment basins and produced water storage ponds, would be most important to address at activity plan and project plan levels and not in this RMP. At that time, BLM will identify potential impacts of onsite burial for the specific proposed plan, determine the significance of that impact, and prepare a decision to address mitigation of any impacts identified.

Comment: Volumetrically, produced water is the largest waste generated by the oil and gas industry. This is certainly true in the PRA. Indeed, this year alone, BLM estimates about .7 million barrels of produced water will be generated in the PAPA field and another 2.5 million barrels will be generated in the Jonah field [32]. BLM is projecting that within 10 years produced water generation will exceed 22 million barrels/year from PAPA and 10 million barrels/year from Jonah. Id. By 2025, PAPA is projected to generate nearly 30 million barrels per year, with Jonah continuing to produce in excess of 10 million barrels annually. These projections likely represent significant underestimates of future produced water burden for several reasons.

First, the document reporting the projections states "[p]roposed PAPA infill drilling would significantly increase fluid production after 2007" and the "fluid production projections for this are NOT included on this table." Second, in deriving these projections, BLM assumed water production per well would remain constant over time. For instance, the Jonah projections assume each well will produce 3,000 barrels of water per year. Generally, the amount of produced water increases over the life of the well as hydrocarbon reserves are depleted. See, e.g., [33] at 42 ("As hydrocarbons are removed from the formation, the pressure gradient changes so that the water layer often rises up in the vicinity of the well, creating a coning effect. As production continues, an increasing portion of the produced fluids will be water.") And third, these projections only account for produced water generated in the Jonah and PAPA fields. Significant additional quantities of produced water will be produced from the fields west of Big Piney and La Barge - including coal bed natural gas production - and possibly conventional gas wells in the vicinity of the South Rim. But even if total annual produced water generation would only be 33 million barrels in the PRA by 2018, this is still over 4,200 acre-feet per year - enough to cover some 400 football fields with 10 feet of highly saline and potentially contaminated waste water every year. Between now and 2025, the anticipated rate of produced water generation in the PRA could create a waste-water ocean more than 100 feet deep and a mile in diameter. What is going to be done with this staggering volume of liquid waste? The RMP DEIS does not disclose the projected volume of produced waste water that would be generated under the new RM.P. Nor does the DEIS discuss how this water will be disposed of or what impacts this material poses to ground or surface waters.

Response: Produced water will need to meet WDEQ water quality standards prior to surface discharge. Discharge locations will be located so as to minimize erosional damage. All water discharges need to be approved by WDEQ.

Comment: Stating that augmented flows from surface discharge of produced waters would not cause significant environmental damage - as defined by the Wyoming Standards for Rangeland Health - is not the same thing as disclosing how much water could be discharged and what non "rangeland health" impacts could occur. The DEIS does not even explain what the Rangeland Health Standards are, what they were designed for, or how they would address potential water quality impacts in the PRA.

Response: The Wyoming Standards for Rangeland Health:
http://www.blm.gov/wy/st/en/programs/grazing/standards_and_guidelines/standards.html
provide minimal standards for land health. If these standards were to be exceeded, BLM is legally required to take actions to address the problem.

Comment: The DEIS's discussion of water quality impacts does not even reference past EISs of relevance, such as the Jonah II Natural Gas Project Final EIS [12], the Jonah Infill Final EIS [13], the original PAPA Final EIS [14], the PAPA Draft Supplemental EIS [8], or the Eagle Prospect Exploratory Project Draft EIS [9]. Those NEPA analyses each contain more analysis of water quality impacts than the RMP DEIS, despite the fact that the underlying actions each only affect a small portion of the overall PRA while the RMP will affect the entire PRA. And even those NEPA water quality discussions were grossly inadequate [15].

Response: The EAs and EISs analyze specific activities and thus have the need for greater detail. The RMP is an overview document not a library of all data. Much of the related data is referenced either through the NEPA process or directly.

Comment: PAGE:2-116 SECTION: RECOMMENDED CHANGE: Add the following: Cooperate with local governments in identifying land for produced water waste disposal sites under RPPA. EXPLANATION: The current policy of trucking produced water to disposal sites has significant and unnecessarily adverse environmental impacts. The better solution is to sell land to local government for a waste disposal site pursuant to the RPPA. This would allow for cost-effective disposal, reduce truck traffic, and avoid the problem of dumping water on private land located in either Lincoln or Sweetwater County. In many cases the private land is located nearer or near surface water and the policy of pushing the dump sites onto private land adversely affects water quality as well. The local governments urge BLM to reconsider its policy and to work with local governments in identifying possible waste water sites within Sublette County.

Response: BLM is open to specific proposals, but such an action would require an individual analysis of greater intensity than is available at the RMP level. If such a site were created, the discharge from the facility would need to be located so as to reduce downstream erosion. Most likely, this would involve transportation to one of the larger stream channels in the area. This would involve crossing private lands.

Comment: Given that over 30 million barrels of produced water will be generated every year in the Resource Area under the new RMP, and current treatment (with expansion of the Calpet pits) can only accommodate around six million barrels, it is clear there will need to be significant additional produced water storage in the region. With new storage ponds will come additional spills and associated ground and surface water contamination. The BLM must discuss the storage shortfall and evaluate the inherent risks of ground and surface water contamination.

Response: Page 3-40 of the draft EIS reports only 91 million barrels of water production from March 1996 to March 2006. For this 10-year period, water production averaged only 9.1 million barrels per year. BLM expects that the area will need additional produced water storage, but not a significant increase in storage capability. BLM has determined that detailed analysis of the types of concerns you have addressed, with respect to produced water storage ponds, would be most important to address at activity plan and project plan levels and not in this RMP. At that time, BLM will identify potential impacts of onsite burial for the specific proposed plan, determine the significance of that impact, and prepare a decision to address mitigation of any impacts identified.

Comment: Reuse and Surface Disposal. In the PRA, "[b]etween 40 and 60 percent of water used in well completions (fracturing) is produced water with minimal or no treatment." [8] at 3-82. Some produced water is also being used for dust control. Id. The RMP DEIS does not analyze the impacts associated with these uses of produced waters. As discussed previously, fracing can result in ground water contamination through faulty casings and seals and through communication around the well bore. Although the produced waters used for dust control were reportedly treated with reverse osmosis, this process does not extract all harmful materials from the end product waters. In particular, the end product waters contain salts and may

contain harmful ingredients (e.g., metals), depending on the membranes used [37]. For in-stance, Anticline Disposal waters are currently being used for dust suppression but reportedly have TDS exceeding 500 mg/l [38]. This water quickly evaporations from roads and margins, leading to salt accumulation. Rainfall and snowmelt will subsequent cause those salts to enter ground waters, and run-off may cause the salts to enter surface waters. What water quality standards has BLM required before treated connate waters can be disposed of on the surface, such as through road watering? What monitoring is required to ensure all treated waters meet those standards before being discharged onto roads? How much produced water was used for such purposes? How much produced water does BLM anticipate will be disposed of for such purposes under the life of the RMP? The DEIS does not answer these questions. In fact, it does not even mention that produced waters are being discharged on the surface for dust control.

Response: Much of these concerns are related to WDEQ's area of authority. The level of 500 ppm TDS is the maximum level for potable groundwater based on Chapter 8 of WDEQ water quality regulations. The maximum allowable TDS for irrigation is 2,000 ppm and 5,000 for livestock water.

Comment: The RMP DEIS does not discuss disposal of produced water through injection and, therefore, does not evaluate the associated impacts to ground and surface waters. All the DEIS says about this issue is that "[w]ells would have the potential to affect groundwater quality and quantity through ... injection Proper well drilling and completion methods could reduce these impacts but would not entirely eliminate them." RMP. DEIS at 4-169. There is no information presented on how often injection wells contaminate ground or surface water, or what the impacts would be from widespread injection in the PRA. What does "reduced" mean? For instance, what - level of ground water contamination is expected to occur under the "reduced" impact levels anticipated by BLM? How long would contamination last? How far could it disperse? What aquifers would be affected? What is the communication between the target aquifer(s) and aquifers being used for potable water, agriculture or livestock? If ground waters around an injection well are not being removed from the target aquifer at the same rate (e.g., from oil or gas production wells), the forced injection into already. full pore spaces of the target -aquifer will hydraulically force the waters from that aquifer into other places, which may include faults or fissures leading to adjacent aquifers. How are waters surrounding injection wells being monitored to determine if casing leaks or inter-aquifer communication are occurring?

Response: WDEQ has primacy with regard to the regulation of injection wells. Therefore, BLM cannot estimate related impacts.

Comment: Discharging produced waters into surface waters is of even greater concern to me than discharging onto roads for dust control. The New Fork River is a designated Class 2AB surface water [3] and a Class 2 Trout Fishery (the highest rating in the PRA) [10]. There are various restrictions on degrading these surface waters. Benzene concentrations, for instance, cannot exceed 1.2 micrograms/liter of water for drinking purposes and, for surface waters that are not used for drinking, 71 micrograms/liter. See [3], Water Quality Criteria, Appendix B (Priority Pollutants). Treatment of produced waters from natural gas wells often leaves much more benzene in solution [33, 35]. How is BLM assuring produced waters generated at BLM-approved wells will not violate water quality standards? Some heavy metals are particularly harmful to aquatic organisms. The State Water Quality Rules limit chromium and silver concentrations to 16 µg/i and 3.4 µg/i respectively.. I do not have data on silver concentrations in PRA produced waters, but chromium concentrations are reportedly problematic and may exceed the limit.

Response: WDEQ has primacy with regard to the management of produced waters. Regulation of the quality of discharged produced waters is the authority of WDEQ.

Comment: How much produced water does BLM anticipate will be discharged into surface waters under the life of the RMP and into the reasonably foreseeable future? What water quality standards has BLM

required before treated produced waters can be discharged to surface waters such as the New Fork River? What monitoring is being done to ensure all treated waters will always meet those standards before being discharged into surface waters? What will be done to pre-vent excess discharge that would erode stream banks or change stream channel morphology? How will BLM ensure discharged produced waters will have temperature and dissolved oxygen content similar to that in the native surface water? The RMP DEIS does not answer these questions. As with other aspects of produced water disposal, the RMP DEIS does not even mention that produced waters are being discharged into surface waters. While BLM may feel the State DEQ is responsible for regulating water discharges, the BLM shares some of this responsibility. Indeed, the Federal Land Policy and Management Act (FLPMA) - the BLM's organic act - instructs that the public lands must be managed "in a manner that will protect the ... water resource" and "provide ... habitat for fish and wildlife...." 43 U.S.C. § 1701(a)(8). And NEPA requires the BLM to. assess direct, indirect and cumulative impacts from disposal of produced water in the PRA, regardless of which other agency may regulate that disposal. 40 C.F.R. § 1508.7.

Response: Because of variances in site geology, potential for loss of water or drilling fluids down the hole, and potential for re-use of fluids between wells, it is not possible to accurately estimate the amount of water that would be used for all oil and gas drilling in the planning area. Regulation of quality of discharged produced waters is the authority of WDEQ. Management actions and best management practices (BMPs) for surface discharge have been revised in the final EIS. Regulation of quality of discharged produced waters is the authority of WDEQ. Management actions and BMPs for surface discharge have been revised in the final EIS.

Comment: The coal seams with CBNG potential in the PRA are located several thousand feet below the surface, which is much deeper than the coals in the Powder River Basin. As a result, drilling for CBNG in this region is more intensive and requires drilling equipment and reserve pits similar to those used for conventional gas wells in the PRA. See, e.g., RMP DEIS at 3-41. Thus, all of the foregoing problems I discussed in the context of disposing of produced waters from conventional oil and gas wells apply to CBNG produced water disposal. For instance, CBNG waters from such depths are likely exhibit poor water quality, including high salinity, high concentrations of dissolved heavy metals, and potentially harmful organic compounds. And as with conventional wells, extracting CBNG waters can also lead to mixing of aquifers and can generate gas pockets and seeps away from wells. CBNG, however, also presents a few unique problems. In particular, CBNG operations can generate so much waste water that, when discharged to the surface, drainages and stream courses can blow out and severely erode. This can not only irreparably damage soils and watersheds, it can cause significant scour and sediment loading problems downstream. Resulting impacts can include erosion of stream banks and siltation of spawning gravels.

Response: Regulation of quality of discharged produced waters is the authority of WDEQ. Management actions and BMPs for surface discharge have been revised in the final EIS.

Comment: At the opposite extreme, CBNG waters can actually be "too clean" for discharge into some aquatic ecosystems. Natural surface waters all have some degree of TDS and turbidity. For higher elevation trout waters, the TDS and turbidity is usually quite low, but in basin streams, away from mountains, the natural TDS and turbidity can be high. Some native aquatic species that inhabit these waters require these higher TDS and turbidity conditions to survive. When discharged waters are too clean, they can dilute the TDS and reduce turbidity in ways that can harm the native species.13 This has been happening in the Powder River Basin. See, e.g., [39] ("When the Wyoming Department of Environmental Quality recently planned to issue a discharge permit for 100 cubic feet per second (cfs) from a series of proposed ion-exchange treatment system, the state's Game and Fish Department objected that too much clean water could adversely affect the unique aquatic ecology of the sediment-rich Powder River"). I do not know if there are similar conditions in the Upper Green River Basin, but the BLM

should take a hard look at this before approving any produced water discharges that might alter surface water conditions appreciably from the range of natural variability. Again, State Water Quality Rules not only require the agency to prevent degradation of water quality, they also prevent discharges or non point source activities that would "adversely alter the structure and function of indigenous or intentionally introduced aquatic communities." Making stream waters too clean could violate this requirement.

Response: Regulation of quality of discharged produced waters is the authority of WDEQ. Management actions and BMPs for surface discharge have been revised in the final EIS.

Comment: The RMP DEIS (page 3-41) suggests reinjection is currently being used to dispose of CBNG produced waters. However, there are only nine CBNG wells in place, and it is doubtful re-injection would be feasible for the amount of produced water that would be generated under more intensive CBNG development. And, as noted previously, large-scale re-injection has proven problematic in the very same geologic formations in the Powder River Basin [39]. The RMP DEIS does not address these problems but appears to assume injection of produced waters would be 100% effective.

Response: WDEQ has primacy with regard to the management of produced waters.

Comment: As for evaluation of impacts, the RMP DEIS (page 4-169) states that de-watering of coalbeds in the PRA "could affect both quantity and quality of groundwater, because large areas would be potentially dewatered and the produced water would be either reinjected or otherwise man-aged." But other than this, the RMP says nothing. How much CBNG water is likely to be produced in the foreseeable future? What is the composition of the produced waters? What will be done with those waters? What are the risks of contaminating higher quality ground waters used for domestic purposes, agriculture or livestock? The BLM must answer these and other questions about potential impacts to ground and surface waters from CBNG development.

Response: WDEQ has primacy with regard to the management of produced waters and water quality.

Comment: BLM anticipates this will require over 100,000 truck loads per year by 2010 and 250,000 truck loads per year by 2018. Id. Expressed differently, it is expected that between now and 2018 there will be over 1,700,000 truckloads of produced water hauled out of the Jonah and PAPA fields. Roughly 4 million additional barrels of produced water would be conveyed via pipelines to treatment facilities, injection wells or to drilling and completion sites. Id. This is a massive amount of waste water to transport. And there are going to be spills associated with this conveyance, from produced water storage tank leakage, from transport truck accidents, from transfer accidents (e.g., transferring produced waters from storage tanks to hauling trucks, and when transferring produced waters from trucks to disposal / treatment facilities), and from faulty pipelines. Even if there is only one truck-related spill for every 10,000 hauls, the cumulative number of spills 'could exceed 200 by 2020; collectively these spills could discharge hundreds of thousands of gallons of waste waters into ground or surface waters in the PRA. The DEIS does not address the impacts from such spills of produced waters. Depending on where the spills occur, there is potential' for contamination to ground waters, surface waters or both. The agency needs to take a hard look at these potential impacts and develop ways to avoid or minimize them (more than just asserting in the RMP that spills would be cleaned up).

Response: WDEQ has primacy with regard to the management of produced waters.

Comment: The BLM may feel it need not assess the impacts of produced water treatment and disposal when the involved facilities are located off BLM lands and were constructed without BLM approval. However, nearly all of the produced water in the region is generated on BLM lands under BLM leases, and nearly all of the produced waters being stored or treated in produced water pits derives from BLM

lands or BLM leases. Consequently, BLM has an obligation to assess the impacts associated with produced water treatment and disposal facilities - as indirect effects and as cumulative effects, 40 C.F.R. § 1508.8(b) and 1508.7 - even for facilities located off of BLM lands.

Response: The analysis of cumulative impacts to watershed resources (found in Section 4.19.16 of the draft EIS) has been updated in the final EIS.

Comment: Thus far, I have only discussed potential contamination from materials pumped into well holes or extracted from well holes. There are, however, many other hazardous materials being used in and transported through the PRA, and most are associated with the extraction and processing of natural gas. Here is a partial list of some materials traveling through the PRA each year:

- tens of millions of gallons of condensate
- millions of gallons of diesel fuel to run heavy machinery, generators and other equipment s millions of gallons of gasoline used to fuel worker vehicles, water pump engines, etc.
- hundreds of thousands of gallons of oils used in machinery (including motor oil, gear oil, transmission fluids, brake fluids and other hydraulic fluids)
- considerable amounts of ethylene glycol used in gas dehydrators and for engine coolant
- transported hazmat chemicals used in drilling, completion, and stimulation fluids
- extensive solvents used to clean machinery
- chemicals used to suppress dust on dirt roads
- NORM residues and radioactive materials used in well logging instruments
- herbicides and pesticides used to control invasive or “nuisance” species (including prairie dogs and coyotes)
- vast amounts of sewage and treatment chemicals from portable restroom facilities

Through many separate incidents essentially all of these materials have been spilled in and around the PRA. With the unprecedented increase in activity that would result from the Jonah and PAPA Infill projects, the rates and volumes of hazmat spills will greatly increase during the life of the new RMP. Such spills will contaminate ground and surface waters. This is indisputable.

Response: Specific actions regarding spill containment and bioremediation is beyond the scope of the RMP. The appropriate course of action would be determined on a case-by-case basis in a field-development EIS depending on the location of the spill and the types of chemicals used.

Comment: Just to put things into perspective for the Pinedale Resource Area, BLM anticipates that in the year 2018 alone there will be a need to transport approximately 15 million barrels - over 600 million gallons - of condensate out of the Jonah field using 50,000 odd truck hauls BLM-PW-table. Between now and the end of 2018, the projections indicate a need to transport over 110 million barrels - roughly 5 billion gallons - of condensate out of Jonah using nearly 400,000 truck hauls. Id. There will be accidents and spills during some of these hauls. I expect a comparable or greater amount of condensate will be transported out of the Pinedale Anticline field during the same period, though it seems BLM is assuming much of this will be conveyed through pipelines. Id. Pipelines are susceptible to leaks, both in route and at the charging and discharging points. It is my understanding pipelines in the PRA typically have lifetimes of less than 10 years before corrosion begins causing leaks. The DEIS ignores these issues.

Response: Specific actions regarding spill containment and bioremediation is beyond the scope of the RMP. The appropriate course of action would be determined on a case-by-case basis in a field-development EIS depending on the location of the spill and the types of chemicals used.

Comment: It is my understanding the number of vehicle accidents in Sublette County has more than, doubled in the past five years, in direct proportion to the expansion of drilling activities in the PRA gas fields. Based on projected increases in drilling and work force requirements, I anticipate the number of annual vehicle accidents in Sublette County will double again in the next 10 years. Cumulatively, the associated spills will impact ground and surface waters in the PRA. Although many of these motor vehicle accidents will occur off BLM lands, the accidents will still be attributable to the gas fields and, therefore, to BLM decisions to authorize the field development. Accordingly, BLM has an obligation to evaluate the impacts of these spills. The RMP DEIS does not do this.

Response: Specific actions regarding spill containment and bioremediation is beyond the scope of the RMP. The appropriate course of action would be determined on a case-by-case basis in a field-development EIS depending on the location of the spill and the types of chemicals used.

Comment: Many other hazmat spills - reported and unreported - are occurring on well pads and at maintenance shops and support facilities associated with the gas fields (e.g., gas processing stations, Sand Draw industrial park, M&N). This includes ethylene glycol from dehydrators, condensate from storage tanks, and equipment fuels and oils. Materials from these spills can infiltrate directly into ground waters and be carried into surface waters through storm water run-off. There seems to be a pervasive attitude that a few gallons spilled here or there won't be a problem. Indeed, EnCana's local Environmental Coordinator recently reported "some spills on the [Jonah] field are of small enough quantities that they do not need to be reported" [44]. But when a few gallons of hazardous chemicals are spilled at each of the thousands of sites in the PRA, the cumulative impacts to ground water can be very problematic. In addition to chemical spills, there is also risk of radioactive contamination [30] :

"Although entire natural gas and NGL [natural gas liquid] systems may be contaminated with NORM [naturally occurring radioactive materials], some facilities will be contaminated to the extent that they present significant decontamination and disposal problems. * * * Pipeline sludges can obtain small radium-226 concentrations together with a few hundred to several thousand picocuries of radon decay products per gram.. These sludges require the same handling as low-level radioactive wastes. The pig itself may be contaminated. * * * Machine shops present a special NORM situation. For example, pumps in NGL service may be among the most highly contaminated equipment in a plant. * * * Because rebalancing [pumps] is usually done by grinding until balance is established, the grinding may generate significant quantities of radioactive dust that can contaminate personnel as well as the shop facility. This can pose a very serious problem if contract machine shops are used. * * * [F]ilter assemblies in dry-gas service may be contaminated with very high concentrations of NORM and require special handling to prevent inhalation of the radioactive dust and contamination of the environment during changing of the filters and other required maintenance. * * * Decontamination of facilities by sandblasting can generate large volumes of NORM wastes. * * * Reaming out scale from production pipe can generate large quantities of NORM."

Thus, facilities in and around the PRA may be (and probably are) generating radioactive wastes, including pipe scale and sludge, dusts, and sandblasting residues. These materials - if not properly handled - could contaminate ground and surface waters. I suspect flare pits may also be locations where NORM accumulations occur (along with heavy metals and potentially harmful chemicals). When these pits are covered over, infiltration can cause leaching of contaminants into ground waters, and this may include radioactive materials. To my knowledge, the BLM is not requiring any testing for radioactivity in the PRA.14 Nor is BLM requiring potentially radioactive wastes to be handled and disposed of properly.

Response: Specific actions regarding spill containment and bioremediation is beyond the scope of the RMP. The appropriate course of action would be determined on a case-by-case basis in a field-development EIS depending on the location of the spill and the types of chemicals used.

Comment: Because these facilities exist to process natural gas made available through BLM leases and drilling permits, the BLM has an obligation to address the impacts of chemical and radiological spills from these facilities. The RMP DEIS does not do this. The DEIS's entire discussion of impacts to ground and surface waters from hazmat spills is found in the following sentence: "Chemical spills on the surface would have the potential to penetrate into the soil and ground-water." RMP DEIS at 4-168. This is not an analysis of impacts; it is a statement of the obvious that would be true anywhere in the world for any type of development plan or project. And there is no mention whatsoever of radioactive wastes.

Response: Specific actions regarding spill containment and bioremediation is beyond the scope of the RMP. The appropriate course of action would be determined on a case-by-case basis in a field-development EIS depending on the location of the spill and the types of chemicals used.

Comment: Not all ground water stays in the ground; some eventually discharges into surface waters. As such, when ground water is contaminated in, the region, it can end up contaminating surface waters. The RMP DEIS does not discuss this issue. However, the PAPA Draft Supplemental EIS (page 3-72) contains the following short discussion on discharge of ground waters to surface waters in the PRA [8]: "Probably less than half the recharge in the PAPA is to groundwater alluvium to surface water. A small fraction of the recharge passes through the alluvium into the Wasatch aquifer. The Wasatch in turn appears,. from potentiometric data, to discharge some groundwater to the New Fork River in the reach crossing the anticline." I believe this description is essentially correct (though it likely understates the fraction of recharge in the anticline region passing into the Wasatch aquifer). Therefore, when there are risks of contaminating ground waters, surface waters are also at risk. The New Fork River wraps around the Pinedale Anticline. This surface water therefore has the potential to be contaminated from ground waters flowing to the northeast off the Anticline as well as to the southwest off the Anticline. The Green River may also be at risk of contamination from contaminated ground waters flowing to the west off the Anticline. Ground waters throughout much of the Jonah field likely flow north towards the New Fork River, though the ground waters in the southeastern part of this field may flow towards the Big Sandy River. The Final EIS and any revised or supplemental DEIS must carefully investigate these risks and analyze impacts that could occur to surface waters if these rivers are contaminated by migrating contaminated ground waters.

Response: WDEQ has primary authority with regard to the management of produced waters and surface discharges. NEPA regulations do not require that all the data from tiered documents be in the parent document.

Comment: Also CBM discharged waters an issue which has been totally glossed over in the DEIS. In our scoping comments we requested that the RMP include provisions requiring that all threats to public health, safety, or welfare, or to the environment, be reported immediately and that BLM immediately order that all wells causing problems be shut-in pending further investigation. Such provisions should apply to all aspects of oil and gas extraction. The RMP has no such provisions. We again request that such provisions be included in the FEIS. This is BLM's responsibility to monitor, not industry's.

Response: Alternatives 3 and 4 provide provisions for the management/discharge of produced water, see pages 2-97 and 2-139 of the draft EIS. It also states on these pages that produced water from CBNG wells would be handled employing the same methods used for treatment of produced water from traditional gas or oil wells.

Comment: The BLM seems to be assuming that 100% of any produced ground water would either seep back into the ground or. would be discharged into surface waters, thus increasing flows in the Colorado River Basin. See, e.g., PAPA Draft SEIS at 4-116 (where BLM asserts that because produced ground water would "be returned to the Colorado River Basin" it will "be considered as a contribution [to stream

flows] and ... there would be no net depletion associated with the project”). In actual fact, a significant portion of the produced water will be disposed of in ways that will not contribute to stream flows. For example, evaporation is currently being used to dispose of large volumes of produced waters. And sprinkler systems used on evaporation and settling ponds greatly amplify the evaporation rate. Essentially all of the evaporated water is lost to the atmosphere and carried over the Continental Divide. Other produced water is disposed of through deep injection. These deep aquifers generally provide little or no contribution to surface waters ... which is precisely why they are being used to dispose of potentially toxic waste water.25 Even in reverse osmosis technique there are significant water losses. This is because for every gallon of water treated (i.e., desalinized) several additional gallons of water are needed to carry off the salt extract. The latter - with even greater concentrations of salts and other harmful ingredients than the original brine - has to be discarded by some other method, presumably through evaporation or deep injection. The reverse osmosis recovery rate (the volume of desalinated water produced divided by the volume of water fed into the system) is typically 30% for purifying ocean water to drinking water standards, but the recovery efficiency decreases with increasing TDS. See, e.g., [37]. Some produced waters in the PRA are more saline than ocean water. See Table 1 earlier in these comments. Higher recovery rates can be achieved by using more permeable membranes. However, this will allow greater amounts of salinity and other harmful chemicals (e.g., benzene, toluene, MTBE) to pass through the membrane into the "treated" water.

Response: The State of Wyoming has primacy on this issue. BLM does not permit water wells, issue discharge permits, or grant water rights.

Comment: The RMP DEIS does not present data on the anticipated methods of produced water disposal and the respective treated volumes, so I cannot calculate what fraction of produced water will be lost through evaporation or deep injection. The information I have about water treatment in the PRA suggests nearly all produced water is currently being treated by evaporation with only one operating reverse osmosis facility (Anticline Disposal) which is treating an average of 15,000-20,000 gallons per day [36]. However, all of the treated water from this facility is being sold and re-used in the gas fields for drilling and fracing fluids. The treated water does not. satisfy drinking water standards, and none of the treated water is being discharged back into surface waters in the PRA. Even if this facility were permitted and able to discharge 20,000 barrels of treated water every day into the New Fork River, this would only increase surface water flows by less than 3 acre-feet per day. This is far less than sum of the reasonably foreseeable surface water depletions I outlined in the preceding pages (even ignoring water depletions from secondary employment and from evaporation, seepage and evapotranspiration losses associated with ponds, irrigation ditches, reservoirs, etc.). Thus, no matter how you slice it, there will still be a significant net reduction in surface flows under the new RMP. And this will harm, not help, the endangered species that depend on high flows in the Colorado River Basin.

Response: This is the responsibility of the individual private companies and the State of Wyoming.

Comment: 5. Assumptions stated in leasing documents imply that local surface and aquifer water resources will be provided for oil and gas operations. While water may be available in formations developed, the quality of water may impair subsurface resources. Recent Sublette Examiner (May 3, 2007 page 15; see attachment 2) Newspaper articles have noted a number of wells being monitored after Benzene and levels of other produced water pollutants were detected in wells in the gas fields.

Response: Water wells and surface water withdrawals require authorization from the Wyoming State Engineer’s Office. Water quality falls under the jurisdiction of WDEQ. BLM is coordinating/cooperating with both of these state agencies concerning the recent detections.

Comment: At public meeting the concern has been stated on leakage from liners which contain produced water and how liners may be ripped or intentionally cut to hasten emptying of production water pools with the resulting contaminates deposited in the glacial till or water courses in the RMP area. See Eric Stinson's testimony at the public meeting in the RMP in Pinedale in April, 2007.

Response: Through site inspections, BLM has occasionally noted that some pit liners have developed tears in areas at and above the pit fluid level. Where this has been noted, the operator has been required to lower the fluid level and patch the tear or remove all fluids and close the pit. BLM has no confirmation that pit liners have been ripped intentionally to drain the fluids. There are currently no produced water pits on BLM-administered lands. Operators are authorized through federal regulations to place produced water for up to 90 days in the reserve pits used for drilling operations. The reserve pits contain drill cuttings and excess drill mud that come back up the well bore. The drill mud by design is intended to seal formations and as such, would also have a strong tendency to seal the earth below any tears or rips in the liners. The BLM Pinedale Field Office also requires that operators use closed-loop drilling systems rather than reserve pits when ground water occurs within 50 feet of the ground surface.

Comment: PAGE: 4-174, SECTION: 4.15.7, RECOMMENDED CHANGE: REVISE [No produced waters would be discharged into surface drainages.] (STRIKEOUT) Produced water may be discharged into surface drainages when authorized by WDEQ. This would reduce the potential for channel incision, sediment transport, and water quality degradation associated with channel adjustments from that of Alternative 2. EXPLANTION: See Comments ## 60, 65

Response: Management actions and BMPs for surface discharge have been revised in the final EIS.

Comment: PAGE:2-141 SECTION: RECOMMENDED CHANGE:[b. In areas of concentrated oil and gas development, a groundwater monitoring program could be established to detect pollution and assure that the groundwater resource remains unaffected.](strikeout) EXPLANATION: Move, unrelated to objective.

Response: The action item is related to the objective of addressing point source pollution.

Comment: 2-139, Alternative 4, Objective 4 & Actions: The Objective is precatory and therefore discretionary and unenforceable. In addition, it does not actually require preventing degradation of waters by point source pollution, but merely re-quires point source pollution to be "addressed" (i.e. responded to) under "guidance" of other agencies. Action (a) is laudable - wellhead protection plans are urgently needed. Unfortunately, the proposed language does not set a time line for development of any wellhead protection plans and does not actually require that those plans be honored. All the language requires is that BLM assist in developing the plans. Furthermore, this language about wellhead protection falls under the "point source pollution" objective when non-point source pollution (e.g., spilled fracing fluids, leaching of residues from produced waters used for dust suppression on roads) also threatens ground waters. Action (b) requires nothing at all. It merely suggests that a groundwater monitoring program "could" be established, without actually requiring this. Even if such a program were developed, the DEIS does not provide any details about the monitoring activities so the public has no way to gauge whether it would be effective. Action (b) also limits application of possible ground water monitoring to "areas of concentrated oil and gas development" without saying what "concentrated" means. This would allow large areas of the PRA - where ground waters may be impacted by less concentrated activities - to be ignored.

Response: Objective 4 establishes the intent of BLM to cooperate with other agencies. These regulations and guidance provide the needed details.

Comment: 2-139, Alternative 4, Objective 5 & Actions: This Objective is sensible but, as with the others, it is just precatory and is not binding. And the Actions listed under this Objective only address produced water discharges. Other activities can cause damage to stream channels, including logging, road construction, pipeline construction, livestock grazing, ORV use, and other construction activities. Action (g.l) does not specify what "reclamation" means, so this would allow produced waters to be used for many different activities. Action (g.2) is incomprehensible: did BLM mean to say produced waters could be discharged on public lands only if there was NO other avenue for disposal available? Action (g.3) also allows discharge of produced waters in ways that can adversely impact ground and surface waters. It is essentially the same as Action (d) under Objective 1 in that it allows discharge of produced waters with TDS up to 2,000 mg/l. This means produced waters with relatively high TDS could be discharged onto grounds with near-surface aquifers containing potable waters with less than 500 mg/l that are being used for human consumption. This would allow degradation of ground waters. In addition, if produced waters with 1500-2000 mg/l TDS were disposed of on public lands (e.g., roads, reclaimed well pads), the water would quickly evaporate and the salt would accumulate in the soils. Repeated sprayings of produced waters on the same site would lead to increased soil salinity. Snowmelt and storm runoff would then dissolve the surface salts and carry the saline waters into surface waters. Action (g.4) would not address this problem because it only restricts produced water discharge that would adversely affect soil quality - specifically, infiltration and fertility - not ground water quality or surface runoff water quality. Salt can accumulate on soils without noticeably affecting in-filtration or fertility. Action (g.6) does not specify what the BLM deems to be "appropriate vegetation communities." Action (g.7) disallows surface runoff, but this would only apply to produced water discharge. Snow melt and storms could still cause surface runoff and carry salts accumulating from produced water discharge into surface waters. Action (g.8) relies on an "approved vegetation management plan" and "weed management plan" but these do not exist yet and are not included in the DEIS for public review and comment. Action (g.9) states that produced water disposal would be "closely monitored" but the DEIS does not actually require any particular type of monitoring. That Action also states "prompt action" would be taken to "address errors" but there is no explanation of what "prompt" means (it could mean a day, a month or a year), and "addressing" errors merely requires some response; it does not actually require correcting the error. And Action (g.12) - which states. reclamation irrigation, using produced waters, would not be "considered a primary means of water disposal" - does not actually limit how much produced water could be disposed of through irrigation. Over the short-term (e.g., seasonally or even for years) this language would allow the majority of produced waters to be disposed of through irrigation discharge so long as BLM does not "consider" that to be a primary means of disposal over the long-term.

Response: Information has been added to Appendix 5 to replace this section and provide further guidance. Reclamation can take many forms, and, therefore, the use of produced water needs to be afforded some flexibility. There would be interactions between the actions in this section. Therefore, the entire group of actions needs to be considered. Action g.2 requires that the limited irrigation allowed under this action would not be the only path for the water. So when the ideal volume of water to establish, but not maintain, (action g.10) vegetation is applied to the surface, there would not be resistance from the water source to stop the flow to the reclamation site. By law, WDEQ is responsible for water quality. Action g.3 acknowledges this fact. Actions g.4, g.5, and g.10 address the concerns regarding salt accumulations.

As stated before, WDEQ is responsible for water quality. Most of the reclamation efforts would be on uplands and the irrigation would be short term, potentially resulting in minor increases in soil salt content. Because only the upper limit is set by WDEQ regulations, the exact amount of additional salts cannot be accurately estimated. The appropriate vegetative communities would be determined in the individual reclamation plans. As stated before, one must look at the entire package and the interactions among the management actions. Timing, water quality, and volume would reduce the total potential for additional salts. The need to establish an appropriate vegetation community would also limit the total amount and

types of additional salts. Snow melt would be part of the process of vegetation reclamation. The variations in land and vegetation throughout the PFO require that reclamation goals be established on a site-specific basis. Therefore, any overarching reclamation plan would be general in nature with specific goals being relegated to specific locations.

Water quality is the purview of WDEQ. The need for successful reclamation would provide additional incentive to maintain adequate water quality. The potential number and types of errors that are inherent in the development of the hydrocarbon resource and reclamation are numerous and varied enough to preclude an inclusive list of prescribed actions at the RMP scale.

This set of actions is designed to allow for the possible use of the tool of irrigation. The amount of reclamation that might be irrigated is unknown. Whether or not irrigation would be a viable method of reclamation is unknown. The answers to these questions would most likely vary over time as would the need for transportation systems to move the water to the different sites. In some cases, the amount of reclamation may require the bulk of the produced water. This is acceptable, provided that when there is not a need for the water to maintain the appropriate vegetative community, it can be disposed of through other approved methods.

Comment: The only water-related direction in Appendix 5 are the following items: REDUCING IMPACTS TO AIR QUALITY

(a) Use water and dust suppressant on roads to achieve 50% control of road dust on 90% of BLM resource roads

REDUCING IMPACTS FROM FLUID MINERAL CONSTRUCTION, OPERATION, AND RECLAMATION

(b) Directional drilling.
(c) Drilling multiple wells from a single pad
(d) Closed drilling systems
(e) Transportation planning (i.e., to reduce road density and traffic volumes)
(f) Piping of produced liquids to centralized tank batteries offsite to reduce traffic to individual wells
(g) Bussing of workers (i.e., to reduce traffic volume)
(h) Flareless well completions
(i) Hard-line fracing
(j) Burying of distribution power lines and flow lines in or adjacent to access roads
(k) Design and construction of all new roads to a safe and appropriate standard, “no higher than necessary” to accommodate their intended use
(I) Reuse of the old roads or pads
(m) Interim reclamation of well locations and access roads soon after the well is put into production
(n) Avoidance of facility placement on steep slopes, ridge tops, and hilltops.
(o) Storage of chemicals within secondary containment in case of a spill
(p) Onsite bioremediation of oil field wastes and spills

RMP DEIS, Appendix 5, pages A5-2 and A5-3 (alphabetic enumeration added for reference). Mitigation item (a) - while reducing air pollution - would end up causing significant water depletions. In fact, achieving 50% dust reduction on 90% BLM resource roads would require vast amounts of water. In addition, using produced water for dust suppression would allow salts and other contaminants to enter ground waters and surface waters.

The other directives (b-p) are all laudable and have the potential to reduce water quality degradation. Unfortunately, as I've explained before, they are purely discretionary, so there is no assurance any would be carried out if adopted for the new RMP. I've also explained some problems with these measures (see previous discussion on Appendix 5 mitigation). Notably, there is no direction on what types and quantities of chemicals would require secondary containment, and there is no direction regarding the types of spills bioremediation could be used to address. Nor is there direction concerning bonding requirements for spill clean-up or bioremediation, such as eliminating benzene contamination in ground waters. Given that contamination of ground waters could be caused by many different sources (e.g., drilling operations), there is a need for this kind of direction.

Response: Appendix 5 has been revised in the final EIS.

Comment: Another problem with relying on State water quality standards is that the DEQ has not set water quality standards for some of the potentially harmful chemicals that may be used in drilling, completion, and stimulation of oil and gas wells. After identifying all chemicals that may be used for such purposes in the PRA, the BLM should develop specific water quality criteria that will protect human health (including chronic, long-term exposure to dilute concentrations).

Response: Water quality is the purview of the state.

Comment: (Emphasis supplied.) The DEIS does not evaluate lands for mineral withdrawal or potential NSO stipulations to protect water resources, even though there are Class 1 surface waters and Class I ground waters that could be adversely impacted by development in the PRA. I am asking BLM to adopt the following measures to protect areas with important water resources:

- To protect recharge areas of domestic ground water supplies, designate as unavailable for leasing and NSO all unleased lands along the Wind River Front (north and east of U.S. 191) as well as the recharge areas for Big Piney / Marbleton, La Barge, Daniel, Bondurant, and Hoback Ranches. Important recharge areas with existing valid leases should be prioritized for purchase and retirement using off site mitigation funds. To the extent practicable, NSO stipulations should also be applied to these lands. Recharge areas shown in Figure 6 which are not currently important for domestic water supplies should be designated NSO.
- Institute NSO stipulations over all "high" sensitivity aquifers (red areas in Figure 3).
- Institute NSO stipulations within 2 miles of any domestic use water well; minerals 4,000 feet or greater below the surface may be extracted using directional or slant drilling from permissible areas outside the 2 mile radius. Provided adequate ground water monitoring is conducted, this buffer should allow BLM to identify a contaminant plume before it can affect the health of people consuming well water. Where ground water movement is more rapid and ground water monitoring wells are scarce, a 3 mile NSO buffer should be applied.
- Institute NSO stipulations within 1 mile of any Class II or Class III ground water well used for agriculture or livestock.
- Withdraw from leasing and institute NSO stipulations within 1 mile of the Class 1 waters of the Upper Green River from the confluence of the New Fork River to the Wilderness Boundary. Where side drainages along the Green River are steep or contain flowing water for part of the year, a 2 mile NSO buffer should be used.

- Withdraw from leasing and institute NSO stipulations within 1/2 mile of the New Fork River and other Class 2 surface waters. Where side drainages are steep or contain flowing water for part of the year, a 1 mile NSO buffer should be used.
- Withdraw from leasing and institute NSO stipulations within any crucial or highly sensitive watershed (e.g., Tip Top watershed, Soap Holes watershed).
- Withdraw from leasing and institute NSO stipulations on all lands within any ACEC, Wilderness Study Area, or proposed Wild, Scenic or Recreational River corridor.
- NSO stipulations, as with all other direction in the RMP, should apply to federal and non-federal surfaces when federal leases of subsurface minerals are involved.

Response: The areas available and unavailable for oil and gas leasing have been revised in the final EIS. As a multiple use agency, BLM considered the management of many resources in determining appropriate areas to be available and unavailable for leasing. The suggestions for NSO stipulations would cover essentially all of the Pinedale planning area. It would not be reasonable or prudent to apply such restrictive stipulations over such an extensive area. NSO stipulations would prohibit activities that would not impact aquifers; while other activities that might have impacts would not be regulated by an NSO stipulation, which would apply only to oil and gas operations.

Comment: PAGE: 4-169, SECTION: 4.15.1, RECOMMENDED CHANGE: REVISE Wells would have the slight potential to affect groundwater quality and quantity through withdrawal, injection, or communication along the path of the well. Proper well drilling and completion methods could reduce these impacts. [but would not entirely eliminate them.] (STRIKEOUT) EXPLANATION: EIS overstates impacts to aquifer from drilling. WDEQ regulates reinjection which does not occur unless aquifer is not potable.

Response: This statement has been misinterpreted by the reviewer. BLM finds that the analysis is appropriate.

Comment: PAGE: 4-169, SECTION: 4.15.1, RECOMMENDED CHANGE: REVISE [Year-round] (STRIKEOUT) Drilling could affect watershed health and water quality, primarily through runoff during the times that soils are saturated. Roads and well pads, although mostly protected by a gravel surface, are more vulnerable to disturbance and rutting than when the soils are dry. This is a slight risk. EXPLANATION: Timing is a minor if any issue for drilling. Summer time drilling sees thunderstorms that cause flash floods and runoff from dirt roads. Impacts are equally intense.

Response: This statement has been misinterpreted by the reviewer. BLM finds that the analysis is appropriate.

Comment: PAGE: 4-169, SECTION: 4.15.1, RECOMMENDED CHANGE: ADD Increased truck trips to take produced water to private lands for disposal cause additional impacts on roads and water pollution as well. EXPLANATION: See Comments Ch. 2-61.

Response: Actions in the draft EIS are intended to reduce, not increase, truck trips.

Comment: The Final EIS (and any revised or supplemental draft EIS) must also fully discuss all conceivable “reuse” options for produced waters as well as drilling, completion and stimulation fluids. I have previously outlined some concerns about reuse of produced water, but these concerns were largely about using water that was not treated properly. The BLM should therefore evaluate the feasibility of requiring produced waters to be treated to potable standards rather than irrigation or agricultural use

standards. What technologies could achieve these standards reliably? What would the costs be of implementing these technologies, relative to the amount of revenues being generated by the gas fields?

Response: Water is the purview of the State of Wyoming

Comment: PAGE:2-151, SECTION: Sage Brush, RECOMMENDED CHANGE: [• Condensate and produced water would be transported from well locations by pipelines rather than by trucks when feasible.] (strikeout) EXPLANATION: Unnecessary and likely to cause greater surface damage and disruption than trucking. Local governments also point out that trucking out produced water has significant adverse environmental impacts that must be addressed. See also CLG Comments on PAPA SEIS.

Response: This action would help to achieve the objective of reducing habitat fragmentation and human presence in crucial habitats. The impacts of trucking water led to the inclusion of this action.

Groundwater and Aquifers

Comment: Too little information is provided as available to make sound decisions on what the aquifer and surface water resources are in the planning area as especially those areas influenced by the Green River and New Fork River drainages. Without adequate detailed analysis of the hydrological system in these drainages, correct decisions regarding land use are flawed since it is unknown as to the negative and cumulative direct and indirect effects of various developments on all resource uses. Contamination in one small area has the potential for spreading throughout a section or all an aquifer. The potential is too large to not address the potential for contamination of these watersheds that will affect downstream users within Wyoming, other states and international waters shared with Mexico.

BLM needs more scientific data on aquifers and watershed flows to realistically be able to determine the potential impacts of different disturbances of leasing options on continuing the overall health of the land resources.

1. Currently the area is in a prolonged and serious drought with state determinations of severity of drought on range and forage supplies. Newspaper articles document that ranchers have been receiving federal financial support to enable them to provide forage for livestock the past few years in Sublette County and in he majority of the RMP area.

2. Soil water recharge is slowed and the same impacts affect wildlife as cattle. On many of the ridges used by antelope during their migration there are small ephemeral ponds and springs of water. The sites are noticeable by the presence of “buffalo grass” (a common name by a local rancher) which is a 3-4 foot tall graminoid that is found associated with shallow surface water along roads and ridges in the general Cora and potholes area. Currently many of these ponds and springs are dry and the buffalo grass is not growing which suggests a lowering water table or little subsurface recharge. As mentioned in the draft EIS, antelope are water dependent as are other wildlife species, so land use decisions must include the direct and indirect cumulative impacts of actions that change the hydrology and surface flow in an area and could add to the detrimental effects on wildlife.

3. This current spring of 2007 there was little to no surface runoff as evidenced by the dry meadows and hayfields and creeks in this area. In my neighborhood, the hay meadows and streams off Noble Road had little water and were dry by early June. Even with the irrigation water from New Fork Lake, the water levels are lower than normal and many wetland areas are dry. Water flow information for recent years needs to be given more support given national NOAA predictions of the drying trend and expected changes regionally as noted in seasonal temperature increases and water shortages. This trend continues the larger scale one for the Wind River Mountains that has shown the glaciers are retreating and spring

summer runoff patterns are changing; various recent scientific studies have provided data on this changing pattern.

4. Other planning documents for leasing options imply water resources will be available and that annual recharge flow rates will be adequate to maintain water demands for resources such as agriculture and fisheries. These assumptions need to be verified by scientifically justifiable data of trends over years.

5. Assumptions stated in leasing documents imply that local surface and aquifer water resources will be provided for oil and gas operations. While water may be available in formations developed, the quality of water may impair subsurface resources. Recent Roundup Newspaper articles have noted a number of wells being monitored after Benzene and levels of other produced water pollutants were detected in wells in the gas fields.

6. At public meeting the concern has been stated on leakage from liners which contain produced water and how liners may be ripped or intentionally cut to hasten emptying of production water pools with the resulting contaminates deposited in the glacial till or water courses in the RMP area. See Eric Stinson's testimony at the public meeting in the RMP in Pinedale in April, 2007.

Response: The best available data were used in preparing the draft EIS. Drought is a factor that must be considered in many aspects of living in the West. However, its extent, duration, and effects are unpredictable, and it is difficult to predict appropriate actions in a document of this scope. Water quality monitoring and regulation are the purview of the State of Wyoming and are addressed through WDEQ. Issues of water rights and volumes of diversions are addressed through WSEO. Requirements for pond liners and other well site maintenance items are found in the application for permit to drill (APD) for each site. Compliance with APD conditions would be required.

Comment: Too little information is provided as available to make sound decisions on what the aquifer and surface water resources are in the planning area as especially those areas influenced by the Green River and New Fork River drainages. Without adequate detailed analysis of the hydrological system in these draipages, correct decisions regarding land use are flawed since it is unknown as to the negative and cumulative direct and indirect effects of various developments on all resource uses. Contamination in one small area has the potential for spreading throughout a section or all an aquifer. The potential is too large to not address the potential for contamination of these watersheds that will affect downstream users within Wyoming, other states and international waters shared with Mexico. BLM needs more scientific data on aquifers and watershed flows to realistically be able to determine the potential impacts of different disturbances of leasing options on continuing the overall health of the land resources.

Response: An expanded study of aquifer connection and function that will help to predict vulnerability to future contamination events is presently underway.

Comment: It is noted on p. 4-113, that pollutants would be introduced into aquifers. This is not acceptable.

Response: The statement that is referred to — "It is likely that under all alternatives that have considerable and rapid increases in oil and gas development, many of the nonmarket values associated with BLM lands will decrease in value. For example, with the surface and subsurface disturbances associated with drilling wells, there may be erosion, deforestation, area closures, and introduction of water pollutants into aquifers. This would decrease the values associated with water quality, wildlife habitat, recreation, and scenic resources" — is a statement of risks associated with the development of the hydrocarbon resources in the area. All reasonable and practical efforts will be taken to prevent and avoid

these undesirable consequences, but they cannot be entirely eliminated. This statement acknowledges this fact.

Comment: there is no scientifically plausible study that explains the underlying hydrology of the aquifers in the -- in this particular area that's under study right now. So there's no way that we can determine whether the existing drilling, or any of these future additional wells, how they're going to impact water quality that's going to be used for human consumption and livestock production.

Response: The first aspects of a study to look at the geology and morphology of the aquifers in the area are underway. The production companies are gathering the available data. This study is associated with WDEQ, and the developments following the discovery of backflow waters in industrial water wells are not directly addressed in the RMP because it is a WDEQ issue.

Comment: Unlike surface waters, which comprise only a small percentage of the Resource Area, ground waters exist under the entire region and are, to large extents, hydraulically connected throughout broad aquifers. As such, ground waters are more susceptible than surface waters to contamination from widely dispersed activities such as oil and gas drilling and hazardous material spills. Because the BLM has already authorized thousands of hydrocarbon wells to be drilled in the PRA - and because BLM is now proposing to allow thousands of new hydrocarbon wells to be drilled under the new RMP - impacts to ground water warrant very careful study.

Response: The qualities of the aquifers in the area are just beginning to be studied. At this point, all available data are being gathered but have not yet been fully analyzed. As a result, factors such as porosity, transmissivity connections between aquifers, or even the number and positions of aquifers have yet to be determined. Therefore, many of the questions asked in this letter regarding vulnerability, production, or interconnections of aquifers cannot be answered at this time.

Comment: The DEIS largely ignores impacts to ground waters in the PRA. The DEIS's entire description of potentially affected ground waters is only five paragraphs long and could fit on a single page. DEIS at 3-111 and 3-112. Moreover, the DEIS even suggests that ground water considerations are not important to the RMP decision: "This section [of the DEIS Affected Environment chapter] focuses primarily, on surface watersheds because these are the components of the hydrologic cycle most vulnerable to management choices. Groundwater has remained largely undeveloped in the planning area and is less likely to be affected by surface management decisions, although impacts may occur through oil and gas drilling activities."

Response: The lack of knowledge about the groundwater conditions was the reason for focusing on surface water in this section.

Comment: It is also incorrect to suggest surface waters are more vulnerable than ground waters to management choices. Both are critically important, and both are highly vulnerable. Unlike surface waters, which are often flowing and thus naturally replaced over short time frames, ground waters are nearly static and are slow to recharge in this part of the country. Contaminants introduced to ground waters, however, can still spread over large distances through gradual migration and diffusion. This means pollutants introduced at one site may eventually render ground water several miles away unsuitable for consumption or agricultural use. And once ground waters are contaminated it is often impossible to fully decontaminate them.

Response: The text has been revised in the final EIS.

Response: The qualities of the aquifers in the area are just beginning to be studied. At this point, all available data are being gathered but have not yet been fully analyzed. As a result, factors such as porosity, transmissivity connections between aquifers, or even the number and positions of aquifers have yet to be determined. Therefore, many of the questions asked in this letter regarding vulnerability, production, or interconnections of aquifers cannot be answered at this time.

Comment: The BLM should therefore produce an up-to-date discriminated wellhead map of the PRA for the public and decision-maker to review in the Final EIS. Where possible, the BLM should also, determine the depth of ground water wells and evaluate their sensitivity to drawdowns of the water table. The DEIS lacks any meaningful data on water well locations and depths in the PRA, and this omission must be corrected.

Comment: Given that the DEIS largely dismisses groundwater concerns, this document does not present any maps or illustrations to help readers understand the ground water environment in the PRA. Absent are maps of aquifer location (including depth to and thickness of usable ground water deposits), ground water quality, aquifer sensitivity, location of recharge areas, or aquifer recharge rates. The DEIS does not even present a map of existing and proposed ground water well locations in the PRA. This information is readily available and is essential for understanding where important ground waters occur and what risks would, be presented by the new RMP. Attached to these comments are maps available from the Wyoming State Water Plan [7] and the Spatial Data and Visualization Center [5]. These include maps of Wellhead locations recorded by the State Engineer's Office (Figure 1 [7]), Depth to Groundwater (Figure 2 [5]), Aquifer Sensitivity (Figure 3 [5]), and Aquifer Recharge Rates (Figure 4 [5]) in Sublette County. Although these maps were produced from data between 5 and 10 years old, they still provide a wealth of useful information for planning. For the new RMP EIS, the BLM can and should compile similar maps for the PRA using current data.1

Response: Given the speed of development and the size of the map reproduction, a well head map produced for the RMP would most likely be out of date and lacking accuracy on location at the time of publication.

Comment: The Depth to Groundwater map in Figure 2 shows much of the PRA has shallow aquifers (the lighter the shading on the map, the shallower the top of the water column). Shallow waters are more vulnerable to contamination from activities occurring on the surface, including produced water discharge and chemical spills. The DEIS does not present a map of water table depth for the PRA.

Response: What little is known about the subsurface geology of the area suggests that much of the area's geology is the result of fluvial deposits. Other portions of the area show more of a glacial influence. This combination often results in multiple discontinuous aquifers. This does not diminish the need to gain a more complete understanding of the aquifer system, but it does call into question the model of the system as being open and unconfined as presented in this assumption. A Management Situation Analysis (MSA) would be better suited than the RMP for dealing with the assumptions that there are multiple aquifers at different depths, that the resolution of the maps in the RMP would be limited, and that the information is available at a higher resolution from other sources.

Comment: The DEIS (page 3-111) does acknowledge there are eight major aquifers in the PRA. However, it does not provide any additional descriptions or graphic information that would allow readers to understand where these aquifers occur.

Response: The lack of information about the groundwater situation is responsible for this.

Comment: To offer a complete picture of the ground water resources in the PRA, the BLM should prepare a grid of stratigraphic maps (i.e., cross-sectional illustrations of the sediment column). The entire ground water resource in the PRA could be reasonably well mapped three-dimensionally by preparing such maps for E-W running lines of latitude spaced every 10 miles and N-S running lines of longitude spaced every 10 miles. Each stratigraphic map could show depth to the top of the water column along with applicable State water quality ratings for aquifers occurring at greater depths.2 Potentiometric maps are also needed to understand the ground water environment. I am requesting that these maps be prepared for the Final EIS and for any revised or supplemental Draft EIS.

Response: The geology of the PRA is a complex conglomeration of fluvial and glacial geology and would most likely take a more detailed study than is presented here. The process is underway to determine if this is true or not. Given the production schedule for the RMP, including this data would most likely be impractical.

Comment: The Aquifer Sensitivity map attached in Figure 3 shows much, of the PRA contains "highly sensitive" aquifers (depicted in red). This rating was given to areas exhibiting "high water table; sandy soils, and high hydraulic conductivity rates associated with alluvium" [5]. This includes most of the northern and western regions of the Pinedale Anticline. Ground waters in these areas are highly vulnerable to contamination from surface activities and should therefore be subject to the most stringent protections. Areas depicted in yellow on the map reflect the locations where medium-high sensitivity aquifers exist. These areas are generally rated slightly lower than high sensitivity aquifers "because of an increasing depth-to-water, and lower permeabilities in both soils and vadose zones." Id. Still, these areas are quite sensitive to contamination from surface activities and should therefore be subject to stringent protections. The DEIS never evaluates aquifer sensitivity and, instead, incorrectly treats all ground waters as if they were the same.

Response: Surface aquifer sensitivity was not considered in the formation of the draft RMP. Thank you for bringing it to our attention. The practices outlined in the RMP provide protections for the most sensitive of areas, and thus are appropriate for all.

Comment: The Annual Recharge Rate map provided in Figure 4 shows the vast majority of lands in the PRA exhibit recharge rates of less than 1 inch per year. This information is crucial for understanding how quickly ground water levels would recover when the water table is lowered through developments, such as natural gas production. Ground waters also feed springs and seeps important to wildlife; even relatively small drawdowns of the water table can dry up these ecological important wetlands. Because activities contemplated under the new RMP will result in aquifer drawdowns, BLM should identify and map the locations of any ground-water dependent wetlands and disclose this information in the EIS. The DEIS does not do this.

Response: The data have been considered in the preparation of the final EIS. The RMP is a summary document and as such does not contain maps with the needed resolution. Because all natural wetlands in this area are groundwater dependent to one extent or another, the wetland maps obtained from the National Wetlands Inventory (NWI) database http://www.fws.gov/nwi/ should be sufficient to the task. The complexity of the local geology prevents accurate statements of specific geologic connections at this scale. Because the RMP will not directly authorize any activities on the ground (such activities are dealt with on a project-specific basis), it is not possible to predict accurately the possible aquifer drawdowns. This analysis would be completed in site-specific NEPA analysis, such as for the Jonah and Pinedale Anticline gas fields.

Comment: There are Class I aquifers in many parts of the PRA, but the DEIS suggests they are limited to the margins, where little oil and gas drilling will occur. Again, graphical materials showing the locations

of the existing aquifers, discriminated by water quality class; are needed to understand the ground water resource and potential impacts to this resource. Figure 5 attached also shows Class I and Class II ground waters occur throughout the PRA [7].4

Response: The description of groundwater quality included in Section 3.15.2 of the DEIS is adequate for the RMP planning effort.

Comment: At the same time, the DEIS appears to downplay the poor quality of produced waters. In particular, the DEIS states "[g]roundwater produced in natural gas wells in the southeastern portion of the planning area, in the Jonah field area, varied in quality, but TDS averaged between 2,000 and 5,000 mg/L (BLM 2006). In these aquifers, untreated produced water is not suitable for domestic use, is only marginally suitable for agriculture, but is suitable for livestock use." DEIS at 3-112.

Response: WDEQ determines the appropriate uses for groundwater, and TDS is but one of many factors that are considered.

Comment: The U.S. Forest Service recently published the following representative data for ground waters produced in the PRA. None of these produced waters in the Pinedale area (table shown) would be suitable even for livestock use, and at least one water sample (from the Jonah 1 well) considerably exceeds the salinity of ocean water. Based on these data, the BLM's suggestion that produced waters in the PRA would be suitable for livestock appears to be incorrect.

Response: WDEQ determines the appropriate uses for groundwater. Iron, sodium, chloride, and TDS are a few of the many factors that are considered. The variety of ground water quality within the PFO area precludes broad statements as to general uses for all waters.

Comment: The DEIS also fails to discuss other potentially problematic components of the affected ground water environment. This includes radioactive content including uranium oxides, radium and radon, existing hazardous chemical contaminants such as benzene, and biological organisms that may have been isolated from the surface environment for hundreds of thousands or millions of years.

Response: WDEQ determines the appropriate uses for groundwater.

Comment: The BLM must fully describe the distributions and, contents of any ground water deposits that may be brought to the surface, drawn down, or contaminated by activities allowed under the new RMP.

Response: WDEQ determines the appropriate uses for groundwater.

Comment: Disclosing how many oil and gas wells may be drilled through aquifers is not the same thing as evaluating how ground waters would be impacted from the various activities associated with the drilling. Disclosing how many acres of land would be subject to vegetation management (e.g., logging) is not the same thing as quantifying the impacts that may result from these activities.

Response: The RMP is an overview document. Many factors outside the scope of the RMP document will affect the amount of actual activity that occurs on the ground. The RMP tries to provide direction for these activities but cannot predict the final total amount without setting specific upper and lower amounts of activity. As a result, the exact consequences of each alternative are difficult to predict. The impact analysis is appropriate for the scope of the draft EIS. Because the RMP will not authorize any on-the-ground activities, it is not possible to predict specific impacts of on-the-ground projects that have not yet been proposed.

Comment: There are many ways ground waters and surface waters can be contaminated by BLM-authorized activities in the Pinedale Resource Area. The RMP DEIS does not discuss any possible contamination mechanisms, much less evaluate the potential impacts. The following are examples of some of the water contamination mechanisms I am aware of; there are surely others.

Response: The ongoing groundwater study associated with PAPA and the Jonah Field will help to answer these questions. At this time the data required for the analysis is not available.

Comment: The obvious impact from lowered water tables is reduced production from ground water wells used for domestic and agricultural purposes. These wells. are primarily in the alluvium and Wasatch aquifers. In some cases, ground water depletions will lower the water table below existing well bottoms, which means BLM-authorized activities could dry up private wells and/or require re-drilling wells to greater depths. This will have social and financial impacts on residents. It is my understanding at least two near-surface water wells in the Jonah field have gone dry since gas drilling started there. Even where ground water wells are not dried up from depression of the water table, there will be lower hydrostatic pressure on the remaining wells. This will reduce flow from ground water wells, which will also adversely impact ground water users. More energy will also be required to pump water to the surface from greater depths, which means greater financial costs to water users. In addition, when there is less ground water in an aquifer, contaminants introduced into the remaining ground waters will have higher concentrations. Higher concentrations of contaminants (including salinity, benzene, etc.) will present greater health risks to water users. The RMP DEIS does not address any of these impacts.

Response: The aquifer system in the Pinedale Field Office is complex. Efforts are made in the drilling and completion of hydrocarbon and industrial water wells to isolate the aquifers of domestic and shallow stock wells. Details of these actions are covered in the individual field development plans and EISs. Because the domestic and shallow stock wells are completed to shallow aquifers, they are more susceptible to yearly water availability and drought. The ongoing groundwater study associated with the Jonah and PAPA fields should provide some information when the data are analyzed.

Comment: Lowered water tables will also adversely impact surface waters and wildlife. This is because a significant portion of ground water recharge in the PRA discharges to the surface through springs and directly to streams and rivers. See, e.g., [81 at 3-72. This surface discharge is a con-sequence of the relatively shallow depth to water throughout the PRA. See Figure 2 attached. As water tables are lowered throughout the PRA, due largely to natural gas development, some springs and wetlands will dry up, and there will also be less water flows in affected streams and rivers. These reductions in surface flows will not only harm resident wildlife, but as I will discuss later, they will also adversely impact endangered species and their habitats downstream, far from the PRA. The RMP DEIS does not address any of these problems. How many springs, intermittent streams and other wetlands in the PRA are currently fed by ground waters? How much river water (e.g., in the New Fork and Green Rivers) originates from discharge of ground waters in the PRA? How sensitive are these surface waters to ground water depletions? How much of this surface water influx would be eliminated by the projected draw downs in the water table under each RMP alternative? These are the types of questions the NEPA process was designed to answer, yet the RMP DEIS ignores them.

Response: The ongoing groundwater study associated with the Jonah and PAPA fields should provide some information when the data are analyzed.

Comment: The PAPA Draft SEIS (page 4-84) suggests near-surface ground waters drawn down by oil and gas development would rapidly recover within 10 years. This is clearly incorrect given the very low recharge rates in the PRA. See, e.g., Figure 4 attached. With an average recharge rate of less than 1 inch per year throughout most of the PRA - and with perhaps half of this recharge discharging to surface

waters rather than replenishing the aquifers ([8] at 3-72) - it will take decades and possibly centuries for ground water levels to recover from 10-30 foot drawdowns. This, in turn, means impacts to residents who depend on ground water - and impacts to wildlife, wetlands and other aquatic ecosystems - will continue long after the new RMP is itself revised 15-20 years from now.

Response: The ongoing groundwater study associated with the Jonah and PAPA fields should provide some information when the data are analyzed.

Comment: Extracting large quantities of ground water from the alluvium and Wasatch aquifers will also reduce the water carrying capacity of the sediments in those formations. Currently, water is filling the pore spaces and balancing hydrostatic pressure. When the water is removed, how-ever, the hydrostatic pressure will compact the sediments and permanently reduce porosity. As a result, as recharge gradually occurs in subsequent decades, the aquifers will no longer hold as much water. This impact will be exacerbated by all of the compacted roads and well pads that are being constructed throughout the gas fields where the water table draw downs are the most severe. The RMP DEIS also completely ignores this important issue.

Response: The State of Wyoming has primacy on this issue. BLM does not permit water wells or grant water rights.

Comment: Limit ground water use to sustainable rates so that withdrawal is balanced by recharge.

Response: Water is the purview of the State of Wyoming. BLM does not have authority to limit groundwater use.

Comment: Where ground water discharge feeds springs, ponds, intermittent streams, and other wet-lands, near-surface ground water should not be removed in quantities that may reduce discharge to these surface waters. Where ground water discharges into rivers or streams, the RMP should require BLM to estimate reductions in surface water flows (i.e., depletions) associated with past, present and reasonably foreseeable future ground water drawdowns from BLM-authorized activities. Water depletions should be fully mitigated as discussed below (surface water depletions).

Response: Water is the purview of the State of Wyoming. BLM does not have authority to limit groundwater use.

Geology and Soils

Comment: A major point is that the basic surficial geology is glacial till over bedrock formations such as the Lance and Green river formations. The porosity of glacial till allows for subsurface vertical and horizontal movement. Dr. Dennis Dahms of Iowa State University has published numerous articles on the surficial geology of the Pinedale and Wind River Area. I can supply you with an email from him regarding the potential for contamination in water courses associated with the potholes area proposed for ACEC status. The same general conditions exist throughout most of the surficial geology in the PRM area and the same types of affect on water quality would occur on a broader scale than just the potholes region. The topology from the Wind Rivers extends west beyond Highway 191 with similar terrain to the potholes area, which is recognized as deserving special management status.

Response: No specific area is proposed for special management status.

Comment: To address these sources of potential surface water contamination, I am requesting that BLM prepare accurate maps for the PRA showing (i) salinity content of soils, (ii) erosion potential of soils, and

(iii) any other soil conditions that relate to surface water quality (e.g., hydric soils). These maps should be included in the final EIS and any revised or supplemental draft EIS.

Response: Detailed soil surveys are presently underway in the PFO area. These soil surveys will make it possible for a more accurate focusing of erosion control efforts than provided for in previous analyses. Unfortunately, the data will not be available in time for publication of the RMP.

Comment: The proposed depth to water action trigger is also inappropriate. It would require corrective action when there is "Accelerated stream bank soil loss." I suspect this trigger actually needs to be switched with the one for the monitoring item for soil erosion on stream banks and flood plains, which reads: "Water table is shrinking beyond average precipitation fluctuations". Assuming the latter is actually the trigger that would be used to monitor depth to water, then it is appropriate. However, the BLM should specify what constitutes "average precipitation fluctuations" along with the criterion the agency will use to determine when a particular water table is "shrinking beyond average precipitation fluctuations." Specifically, what threshold would have to be reached before corrective action would be taken? And what action would BLM take if depth to water was found to be increasing beyond that threshold?

Response: Table A11-1 has been revised in the final EIS.

Comment: Porosity and Soil Compaction. The monitoring item for depth to water also includes monitoring of soil compaction, porosity, and permeability. These are excellent and necessary. Unfortunately, there are no trigger items specified for these conditions. BLM should determine baseline porosity in all aquifers used for domestic, agricultural and livestock uses, as well as the recharge areas for these aquifers. BLM should also take action to prevent further porosity losses if monitoring ever indicates porosity has declined by more than 10%, cumulatively (e.g., from average porosity of 20% to 18%). This may require prohibiting new road and well pad construction (directional drilling off-site may still be allowed) and prohibiting additional ground water removal (since in situ ground water helps maintain porosity by balancing hydrostatic pressure).

Response: Table A11-1 has been revised in the final EIS.

Comment: Regarding the action triggers for soil erosion, the one proposed for upland areas would be when soil loss is "accelerated beyond natural levels." This is ambiguous. What is the threshold erosion rate that would have be observed before corrective action would be taken? Would there be different thresholds for different slopes and soil types? Would there be different thresholds for different distances from surface waters? Without specifying the actual trigger criteria, BLM could allow substantial soil erosion and even irreversible slope damage before any corrective action is taken. Furthermore, what action would BLM take to correct this problem? Once a road, pipeline or well pad is constructed, it may be difficult to correct the resulting erosion. This is another reason why strong, measurable prescriptive standards are needed to restrict development on sensitive soils.

Response: Table A11-1 has been revised in the final EIS.

Riparian, Surface Water, Floodplain

Comment: I would like to focus your attention to the Upper Green River 100 Year Floodplain map 3-14 of the EIS and compare it to the enclosed "Wetlands and Flood Zones with 500 Foot Wetland Buffer Zones" map by FEMA dated 5-29-07 of the same area. This system is part of the Headwaters of the Green River. The map shows springs, creeks, potholes and riparian zones indicating a complex hydrology. This water runs into the Green River. Why do FEMA's maps recognize so much more water resources than the

BLM's? The EIS does not address the risks to the watershed and to the Green River (Classified as a #1 Blue Ribbon River) caused by the Hydro-Carbon Industry.

Response: The FEMA map uses a broad brush approach to defining the 100-year floodplain. The wetlands and floodplain map is based on existing waters and a set distance from them. It does not consider the elevation of adjacent lands.

Comment: It is important for the Draft EIS to disclose to the public and other reviewers that different uses must be protected in the different waterbodies in the planning area. EPA recommends the Final EIS included a map of the surface waters and their respective classification under the Wyoming DEQ Surface Water Standards. For example, the Draft Supplemental EIS for the Pinedale Anticline noted that "all of the Green River, upstream of the confluence with the New Fork River is designated as Class I water under the Wyoming DEQ Surface Water Standards (WDEQ, 2001), meaning that they are "outstanding" waters that may not be degraded." EPA further recommends that the Final EIS expand on how the management actions in the RMP (i.e. oil and gas development, grazing, vegetation management) will ensure the designated uses of the surface waters are not impaired and how those waters will be monitored.

Response: A link to the website for the Wyoming Department of Environmental Quality water quality standards has been included in Chapter 3 of the final EIS to provide access to current water classification information. In addition, information on Class I waters within the planning area has been included in the final EIS.

Comment: The "Watershed and Water Quality" section of Chapter 3 of the DEIS does not even mention the State of Wyoming classifications of surface waters in the region. For instance, Fremont Lake and the segment of the Green, River from Bridger Wilderness Boundary down to the confluence with the New Fork have been designated Class 1 "Outstanding Waters" by the State [3]. Such surface waters "are those ... in which no further water quality degradation by point source discharges ... will be allowed," and "nonpoint source pollution must be controlled through best management practices." Id. Clearly, in order to understand where pollution discharges must either be prohibited or highly regulated, the public and the decision-maker should be apprised of the locations of any Class 1 surface waters in or near the PRA.

Response: Information on Class 1 waters within the planning area has been incorporated into the final EIS. Fremont Lake is not included in the planning area and is therefore not described in Chapter 3 of the draft EIS or final EIS.

Comment: Many other surface waters in the PRA are classified as Class 2 (Fisheries and Drinking Water), Class 3 (Aquatic Life Other Than Fish) and Class 4 (Agriculture, Industry, Recreation and Wildlife). Yet the DEIS does not show or describe where these waters are or what water quality protections apply to them. This is another critical omission.

Response: WDEQ determines the appropriate uses for water. The WGFD classifies water for wildlife and recreational use. These sources are referenced rather than quoted.

Comment: There is a terse discussion of water quality classifications presented in the "Wildlife and Fish section of Chapter 3. See DEIS at 3-130. However, there is no map provided, and. this information needs to be in the Watershed and Water Quality section where readers interested in surface waters are going to look for the information.

Response: The WDEQ determines the appropriate uses for water. The WGFD classifies water for wildlife and recreational use. These sources are referenced rather than quoted.

Comment: I am requesting that the BLM prepare a map of the lands in and around the PRA showing surface waters by State classification. A color system should be used to discriminate surface waters of different classes. The Watershed and Water Quality section of the "Affected Environment" chapter in the Final EIS (and in any revised or supplemental Draft EIS) should also discuss what these classifications mean and what restrictions apply to them.

Response: A link to the website for the Wyoming Department of Environmental Quality water quality standards has been included in Chapter 3 of the final EIS to provide access to current water classification information.

Comment: The RMP DEIS does present a discussion of the State trout fisheries classifications. RMP DEIS at 3-129. However, the fisheries classifications are not mentioned in the Watershed and Water Quality section of Chapter 3. In addition, the RMP DEIS does not include a map showing the State's fisheries classifications in the PRA [10]. A copy of the State Trout Fisheries Classification Map for the Upper Green River Basin - as reproduced in the State Water Plan [7] is attached as Figure 7. The DEIS should graphically show the locations of Class 2 and Class 3 fisheries so readers can judge the risk of potential impacts to these waters.

Response: Fisheries information received from the WGFD is presented in the Wildlife and Fisheries section of the final EIS.

Comment: Another omission in the DEIS is a map showing the locations of all wetlands in the PRA. Map 3-11 in Volume 2 of the DEIS shows some wetland vegetation communities. However, this is not the same as a wetland map. In fact, Map 3-11 does not even show many of the major rivers and lakes in and around the PRA. The Green River in the vicinity of Daniel, for instance, is mostly depicted as "Agricultural/Urban" vegetation. Moreover, Map 3-11 is so coarse that many smaller wetlands are omitted. This includes springs, seeps, ponds and intermittent streams. The 100-Year Floodplain Map (3-14) shows many streams and rivers throughout the PRA, as well as some lakes and ponds, but again it is too coarse to show all potentially affected wetlands and water bodies.

Response: The maps included in the draft EIS include the best available data and are shown at a scale that allows for appropriate analysis of resources. The (USFWS) NWI map (http://www.fws.gov/nwi/) may not be usable at the RMP map scale.

Comment: I am requesting that BLM produce a refined map (or perhaps several maps collectively covering the entire PRA) to display the locations of all known wet-lands. It would be most helpful if different types of wetlands were displayed in different colors, such as blue for lakes and ponds, green for permanent rivers and streams, orange for intermittent streams and seasonal wetlands (e.g., high-water flooded zones, oxbows) and red for springs and seeps. To understand how rivers and streams may be impacted by depletions or discharges (e.g., from produced water discharge), it would also be helpful if BLM produced a separate map to discriminate flowing surface waters by flow rate.

Response: The maps included in the draft EIS include the best available data and are shown at a scale that allows for appropriate analysis of resources. The USFWS NWI map (http://www.fws.gov/nwi/) may not be usable at the RMP map scale.

Comment: A related aspect of the surface water environment is floodplains. Although floodplains are dry much of the time, they do become surface water areas during wet periods. The DEIS 100-Year Floodplain Map (3-14) is useful but is too coarse to understand how these sensitive areas have been impacted from past development (e.g., existing roads, well pads and pipelines) and could be further impacted from contemplated development under the new RMP. With uncertainties in how the PRA will be affected by

climate change, I believe it would be prudent to map the 500-year and 1,000-year floodplains for the RMP EIS. A single map could use different colors or gray shading to depict the 100-year, 500-year and 1,000-year floodplains.

Response: The 100-year floodplain map is based on FEMA and HUD data. There are no restrictions set forth in the RMP with regard to the 500- or 1,000-year floodplains, both of which have time frames that far exceed the expected life of the document.

Comment: For these reasons I am asking the BLM to expand the CIAA for Watersheds and Water Quality to include (1) the entire watersheds of the PRA (up to any applicable divide), and (2) and all surface waters outside those watersheds and across applicable divides (e.g., Lander side of the Winds) - which may be adversely impacted by air pollutants emitted from activities occurring on BLM lands within the PRA.

Response: Potential impacts to alpine lakes from acid deposition are included in the Air Quality cumulative impact analysis area (CIAA) area (Map 4-5) and discussion in Section 4.19.3.

Comment: The water quality section in Chapter 4 of the RMP DEIS does not attempt to estimate degradation of surface waters from sediment loading, such as from erosion of soils at well pads, dirt roads and pipeline corridors.

Response: Limited amounts of this type of analysis were undertaken for the PAPA and Jonah Field but were not summarized for the RMP because the output of the predictive models is based on contributing areas, soil, and vegetation which changes dramatically outside the study areas and thus introduces a great deal of potential error.

Comment: No baseline data are provided for the natural (background) sediment loading of surface waters such as the New Fork and Green Rivers.

Response: Stream sediment data could be obtained from USGS stream gauging stations, but as to how much of this might be natural background sediment and how much is human caused or human caused on BLM lands would be difficult if not impossible to determine.

Comment: No data are provided on the current sediment loading from existing roads, well pads, pipeline corridors, livestock grazing, ORV use, coal-bed natural gas water discharges, etc.

Response: This data might be modeled, but the number and degree of assumptions (existing surface disturbance, interconnections of flow paths, soil properties, etc.) that would need to be made make this impractical.

Comment: No data are provided to estimate potential additional sediment loading impacts caused by future increases in such activities under the RMP and beyond. Without this information, it is impossible for readers and the decision-maker to determine the extent to which surface waters in and downstream from the PRA would be adversely impacted in a cumulative sense.

Response: Given the conditions presented in the previous two comments, adding the additional factor of projected disturbance to the mix requires even greater speculation.

Comment: Even if the DEIS's WEPP modeling were defensible and yielded accurate predictions, the DEIS does not use those data to estimate impacts to surface water quality. Not all eroded soils would end up in surface waters. The BLM must attempt to validate the WEPP model predictions, disclose the

assumptions and methodologies for public review, correct any identified. problems with the model, and then use the results to predict impacts to surface waters. The cumulative impacts analysis must include all sources of soil erosion and surface water sediment loading, including erosion from well pads; roads (for any purpose), pipelines, facilities, ORV use, livestock, vegetation management (e.g., logging and fire), and other activities in the region.

Response: If you have a better soil erosion prediction model and the data to populate it, we would be interested in looking at it. The data regarding the Water Erosion Prediction Project (WEPP) are available for public review but not in the RMP.

Comment: The DEIS also fails to disclose cumulative impacts associated with ground and surface water depletions. In particular, there is no discussion of how much surface water would flow through the PRA without human extraction of water (i.e., the natural baseline condition), how much surface water is currently being removed for human uses (e.g., irrigation), or how much surface water may be removed under each alternative. This information is available in the State Water Plan [7] and other sources. Nor does the DEIS disclose how much ground water is currently being extracted from aquifers in the PRA or how much additional ground water would likely be extracted under each alternative RMP. Without this information it is impossible to understand how water quantities will be cumulatively affected under the new RMP.

Response: Water diversions are the responsibility of the Wyoming State Engineer's Office. As many of these diversions are to private lands and used at the discretion of those who hold the water right, it is out of the scope of this document

Comment: Although the RMP DEIS (page 4-168) acknowledges that surface waters at higher elevations are susceptible to water quality changes due to deposition of air pollutants, the DEIS never actually analyzes the cumulative impacts that would result from this pollution. There are no baseline data for natural (i.e., pre-industrialization) and current water quality conditions in surface waters that would be cumulatively impacted by air pollutant deposition. There are no data presented on the natural levels of depositional air pollutant concentrations. There are no data given for the current concentrations of depositional air pollutants, such as generated by existing oil and gas wells in the region, from or coal-fired power plants in the region, or from motor vehicle use upwind (e.g., Salt Lake City region) from the PRA.

Response: Potential impacts to alpine lakes from acid deposition are included in the Air Quality CIAA area (Map 4-5) and discussion in Section 4.19.3.

Comment: Furthermore, the Watersheds and Water Quality CIAA completely excludes numerous alpine lakes in the Wind River Mountains that would experience water quality declines due to acid deposition from air pollutants released on BLM lands in the PRA. Indeed, the RMP DEIS acknowledges that "alterations in water quality resulting from atmospheric depositions have less of an effect at the lower elevations than in the mountainous regions." DEIS at 4-168. The Wind River Mountains generally lie downwind (based on prevailing wind patterns) from the Jonah and Pinedale Anticline fields. It actually appears the CIAA for the water impacts analysis was deliberately drawn to exclude the alpine lakes, even though they are among the most sensitive waters in the vicinity to acid deposition.

Response: Potential impacts to alpine lakes from acid deposition are included in the Air Quality CIAA area (Map 4-5) and discussion in Section 4.19.3.

Comment: PAGE: G-18 - G-19 CHANGE: PROPER FUNCTIONING CONDITION (PFC). A riparian-wetland area inventory and monitoring tool used to determine whether: [is considered to be in proper functioning condition when](STRIKEOUT) adequate vegetation, landform, or large woody debris is

present to dissipate stream energy associated with high waterflow, thereby reducing erosion and improving water quality; to filter sediment, capture bedload, and aid floodplain development; to improve flood-water retention and ground-water recharge; to develop root masses that stabilize streambanks against cutting action; to develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary to fish production, waterfowl breeding, and other uses; and to support greater biodiversity. The functioning condition of riparianwetland areas is a result of interaction among geology, soil, water, and vegetation.[(Prichard, et al. 1998). There are two categories of wetlands. Lentic areas are created by a stable water table such as playas, fens, areas around lakes, marshes, etc., and lotic areas are in riverine environments.](STRIKEOUT) EXPLANATION: Last part of definition not included BLM Technical Reference 1737-9 PFC terminology, is out of place and should be moved to Wetland definition in glossary. Definition should also clarify that since the 1997 adoption of the Wyoming Healthy Rangeland Standards, PFC is an element of the Fundamentals of Rangeland Health for watersheds but only as a qualitative assessment (monitoring) tool used to characterize the resource conditions so that the status can be evaluated relative to land health standards. BLM Manual H-4180, I-6, III8, III- 10 (2001); IM WY 98-031 (1998). Specifically, PFC is one several suggested monitoring methods appropriate for gathering data used to evaluate indicators for Wyoming's riparian and wetland vegetation standard identified in the Rangeland Health Standards. Rangeland Monitoring Protocol, IM WY-2001-054, Attachment 1 (2001). PFC, therefore, is an inventory and monitoring tool; it is no longer a standard or management objective. Attachment 4 (management objectives relate to resource attributes such as indicators for rangeland health).

Response: The definition for Proper Functioning Condition is directly from BLM Technical Reference 1727-15 (1998) and cannot be modified to read as something else.

Comment: The RMP DEIS also fails to address other surface water depletions in the PRA. These include evaporation and seepage losses from ponds (e.g., stock ponds and CCC ponds), impoundments, irrigation ditches and reservoirs scattered around the Resource Area. Additional depletions occur from evapotranspiration by cottonwood trees and other vegetation growing along the edges of these unnatural water bodies. Some of these water uses are authorized by parties other than the BLM. Nonetheless, BLM is required to evaluate the resulting surface water depletions in the cumulative impacts analysis. 40 C.F.R. § 1508.7.

Response: It is not necessary for the RMP EIS to present a compendium of all scientific knowledge. The EIS appropriately analyzes water depletions that can be reasonably expected to occur.

Comment: The ecological impacts of surface water depletions are also very problematic. While people can move out of areas when there is not enough water to go around, the native species that inhabit rivers and streams in the region cannot. Depletions of surface waters cause reduced flows which directly eliminates aquatic habitat. Depletions also indirectly affect rivers and streams by causing increased water temperatures, reduced dissolved oxygen, increased salinity and sedimentation effects, reduced sand bar formation, siltation of gravels and bottom vegetation, stagnation of backwaters, and other adverse impacts. The RMP DEIS does not evaluate the direct or indirect impacts of surface water depletions that would result from BLM authorized activities in the PRA. Nor does the DEIS evaluate the cumulative water depletions from BLM authorized activities and all other past, present and reasonably foreseeable future actions in the region. In, fact, the DEIS does not even estimate the surface water depletions that would result from BLM activities. The Final EIS (and any revised or supplemental draft EIS) must correct these omissions. As I will now discuss, because the surface water depletions are endangering numerous aquatic species, the BLM must also take aggressive action to avoid and eliminate water depletions wherever possible.

Response: The RMP does not authorize specific activities that deplete water from the Colorado River system. Water depletions can have effects as you have stated. Water rights and water use are under the jurisdiction of the State of Wyoming. Proponents that anticipate the use of water in a project will be required to determine the amount of water that will be needed and, if it is a federal action, that amount would need to go through formal consultation with the USFWS for effects to endangered fish species downstream from Wyoming. If water used is from municipal sources or is determined not to be connected to surface flows in the Colorado River system, then consultation is not needed. Because of the variety of ways water can be used, its source, the timing of use, etc., it is impossible to estimate accurately the total amount that all project proponents will use in the future at the land use plan stage. These amounts will be determined at the site-specific 'activity' plan stage through an EA or EIS and formally consulted on at that time. BLM would be responsible for any mitigation for projects it proposes that would deplete water (e.g., rangeland water developments, etc.) and other project proponents (e.g., oil and gas companies) would be responsible for their depletion mitigation. In general, however, impacts from water depletions could be discussed in the Biological Assessment and final EIS.

Comment: Due to the existing severely depleted state of the Colorado and Green Rivers, the U.S. Fish and Wildlife Service (FWS) has concluded that very small additional depletions - even if just a few acre-feet - will jeopardize the continued existence of the four endangered fish species. See, e.g., [49]. The endangered fish are the bonytail (*Gila elegans*), razorback sucker (*Xyrauchen texanns*), Colorado pikeminnow (*Ptychocheilus lucius*), and humpback chub (*Gild cypha*). At least two of these species are critically endangered. Indeed, the FWS has reported "Razorback suckers are in imminent danger of extirpation in the wild" (see [49] at 10), and the recovery goal for the bonytail is to "prevent immediate extinction." See, e.g., [50] at 205. The RMP DEIS does not address water depletion impacts on these endangered species. In fact, as far as I can tell, the BLM has not even initiated Section 7 consultation with the FWS over water depletion impacts associated with the revised RMP.

Response: The RMP does not authorize specific activities that deplete water from the Colorado River system. Water depletions can have effects as you have stated. Water rights and water use are under the jurisdiction of the State of Wyoming. Proponents that anticipate the use of water in a project will be required to determine the amount of water that will be needed and, if it is a federal action, that amount would need to go through formal consultation with the USFWS for effects to endangered fish species downstream from Wyoming. If water used is from municipal sources or is determined not to be connected to surface flows in the Colorado River system, then consultation is not needed. Because of the variety of ways water can be used, its source, the timing of use, etc., it is impossible to estimate accurately the total amount that all project proponents will use in the future at the land use plan stage. These amounts will be determined at the site-specific 'activity' plan stage through an EA or EIS and formally consulted on at that time. BLM would be responsible for any mitigation for projects that it proposes that would deplete water (e.g., rangeland water developments, etc.) and other project proponents (e.g., oil and gas companies) would be responsible for their depletion mitigation. In general, however, impacts from water depletions could be discussed in the Biological Assessment and final EIS.

Comment: In particular, I am asking the BLM to determine. the following water depletions using best available data or - where the cost of obtaining this data can be shown to be truly exorbitant - to estimate the depletions based upon theoretical approaches or research methods generally accepted in the scientific community as per 40 C.F.R. § 1502.22(b) (4): • surface water withdrawals for BLM authorized activities in the Upper Green River Basin (e.g., water removed from municipal surface water supplies, streams and irrigation ditches for dust suppression, cement, and drilling, completion and stimulation fluids)18

- surface water withdrawals by companies conducting activities in response to BLM authorizations in the Upper Green River Basin (e.g., washing company vehicles used in the gas fields, cleaning facilities and other equipment, etc.)19

- surface water depletions associated with water use by people who move to the region to fill jobs created by BLM authorized activities in the Upper Green River Basin (including drilling and production jobs)20
- evaporation, seepage and evapotranspiration losses associated with reservoirs, constructed ponds, impoundments, gravel pits and quarries that expose ground water, and irrigation ditches on BLM and other federal lands in the Upper Green River Basin
- direct surface .water withdrawals for BLM office and administrative uses- in the Upper Green River Basin (including BLM vehicle washing and lawn watering) along with surface water use from people employed by BLM in the Upper Green River Basin.22
- direct surface water withdrawals for BLM and U.S. Forest Service fire fighting efforts in the Upper Green River Basin23
- surface water depletions from drawing down the ground water table in the PR.A. from conventional natural gas, oil and CBNG development.

Response: The RMP does not authorize specific activities that deplete water from the Colorado River system. Water depletions can have effects as you have stated. Water rights and water use are under the jurisdiction of the State of Wyoming. Proponents that anticipate the use of water in a project will be required to determine the amount of water that will be needed and, if it is a federal action, that amount would need to go through formal consultation with the USFWS for effects to endangered fish species downstream from Wyoming. If water used is from municipal sources or is determined not to be connected to surface flows in the Colorado River system, then consultation is not needed. Because of the variety of ways water can be used, its source, the timing of use, etc., it is impossible to estimate accurately the total amount that all project proponents will use in the future at the Land Use Plan stage. These amounts will be determined at the site-specific 'activity' plan stage through an EA or EIS and formally consulted on at that time. BLM would be responsible for any mitigation for projects that it proposes that would deplete water (e.g., rangeland water developments, etc.) and other project proponents (e.g., oil and gas companies) would be responsible for their depletion mitigation. In general, however, impacts from water depletions could be discussed in the Biological Assessment and final EIS.

Comment: PAGE: G-8 CHANGE: EPHEMERAL SURFACE WATERS – refers to streams, [lakes,](STRIKEOUT) or other surface water bodies, which have open water only during or immediately after periods of rainfall or snowmelt. EXPLANATION: Given the resource area's semi-arid climate, rainfall and snowmelt do not produce ephemeral lakes. See Wyoming Department of Water Quality, Water Quality Rules and Regulations, Section 2(a)(xiii) (only recognizing and defining ephemeral streams). Unlikely occurrence would fall within term "other surface water bodies."

Response: Playas occur in the planning area. This statement will remain as is.

Comment: PAGE: G-10 CHANGE: IDENTIFIED 100-YEAR FLOOD PLAINS – Those areas delineated by the [Army Corps of Engineers](STRIKEOUT) Federal Emergency Management Agency for legal 100-year floodplain delineation. EXPLANATION: The Federal Emergency Management Agency, working with local governments, sets the 100-year floodplain boundaries through flood insurance rate studies. If there are identified 100-year flood plains in the resource area (regulatory designation for area with 1 percent chance of flood occurrence in any given year), then the plan would need to address impacts. Executive Order 11988, 42 Fed. Reg. 26951 (1977).

Response: The definition has been revised in the final EIS.

Comment: PAGE: G-11 CHANGE: INTERMITTENT SURFACE WATERS - Refers to streams, [lakes,](STRIKEOUT) or other surface water bodies that have open water during a portion of the year, [or during particularly wet years they may have open water throughout the year. . .](STRIKEOUT) EXPLANATION: Given the resource area's semi-arid climate, there are no intermittent lakes. See Wyoming Department of Water Quality, Water Quality Rules and Regulations, Section 2(a)(xxiv) (only recognizing and defining intermittent streams). Unlikely occurrence would fall within term "other surface water bodies." In addition, in arid and semi-arid climates, an intermittent stream does not maintain a perennial "open water" flow, although permanent pools of standing water may be present at points along the stream or other surface water body. Discussion Paper: Addressing Water Quality Standards Issues Regarding Effluent Dependent and Effluent Dominated Waters App. A. (2003).

Response: BLM believes the statement is appropriate. This statement will not be changed in the final EIS.

Comment: PAGE: 4-189 SECTION: 4.17.1 RECOMMENDED CHANGE: REVISE [Since any impact on natural water resources is also an impact on fisheries, impacts to fisheries can be inferred from Section 4.15, which discusses impacts on riparian areas and water quality.](STRIKEOUT) Four endangered species outside of Wyoming are affected adversely by water depletions within the planning area due to changes in water quantity, timing, and flow. See the biological assessment that meets the requirements for ESA Section 7 consultation. EXPLANATION: Possible impacts on water is not a depletion.

Response: These statements are accurate as written and no change is needed.

Comment: PAGE: 4-189 SECTION: 4.17.1 RECOMMENDED CHANGE: DELETE [The health of fisheries within the planning area is directly related to the overall health and functional capabilities of riparian resources, which in turn are a reflection of watershed health.](STRIKEOUT) Any activities that affect the ecological condition of the watershed and its vegetative cover may [would directly](STRIKEOUT) affect the aquatic environment. Any substantial disturbance to soils or changes in vegetative cover may affect [would have an effect on](STRIKEOUT) watershed health and water quality, which in turn may affect [and would therefore have an effect on](STRIKEOUT) associated fisheries. The degree of impact attributed to any one disturbance or series of disturbances would be influenced by location within the watershed, time and degree of disturbance, existing vegetation, and precipitation. Water quality and watershed management actions designed to achieve standards as measured by PFC in riparian areas would improve fish habitat in areas not currently at PFC. EXPLANATION: Overstates the relationship and is inaccurate as written.

Response: The statement is accurate as originally written except for possibly changing "would" to "may" in some instances. These impacts could be beneficial or adverse.

Comment: PAGE: 4-189 SECTION: 4.17.1 RECOMMENDED CHANGE: REVISE Surface disturbances near streams and watercourses may increase [would result in](STRIKEOUT) accelerated erosion and runoff. When significant, it will increase [increasing](STRIKEOUT) stream flow and sediment and nutrient loads to local channels. Sedimentation of a given channel could impact fisheries by reducing habitat complexity, resulting in a lower diversity of prey organisms. Increased turbidity would also result from increased sediment input, decreasing light penetration and inhibiting visual predation by fish. [Surface disturbance near streams that results in substantial removal of riparian vegetation could increase current velocity, putting additional strain on fish and reducing nutrient cycling. In addition to increased sediment input, stream bank disturbance could impact fisheries by creating bank instability, which could alter flow and destroy pool-riffle formations necessary for fish survival. Increased nutrient loading of streams could also impact fisheries by increasing primary production above natural levels,

which would degrade habitat and decrease oxygen levels.](STRIKEOUT) EXPLANATION: As an impact for RMP alternatives, cannot assume BMPs not used.

Response: The first change is acceptable and clarifies the meaning. The rest of the paragraph is appropriate as originally written and will remain unchanged because it is conditionally qualified.

Comment: PAGE: 3.93, SECTION: 3.13.1, RECOMMENDED CHANGE: Revise Map 3-11 to conform to revised definition of wetlands. EXPLANATION: Following two decisions of the U.S. Supreme Court, the Corps of Engineers and the Environmental Protection Agency revised its wetlands guidelines to exclude those areas lacking a significant nexus to interstate water. Rapanos v. United States & Carabell v. United States (June 5, 2007).

Response: The isolated wetlands that are the subject of these changes located within the PFO are too small to be represented on the maps within the RMP.

Comment: PAGE: 3-111, SECTION: 3.15.1, RECOMMENDED CHANGE: Revise map and discussion of flood plains to identify those on public land. Revise sentence to read as follows: The status of the functioning condition of riparian vegetation along the public land segments of major waterways was documented using the PFC method. EXPLANATION: Map 3-14 displays the flood plain without regard to public or private land. This suggests the acreage total is not just public land.

Response: The acreage total given is for BLM-administered public lands. No change is determined to be necessary.

Comment: PAGE: 4-166, SECTION: 4.15.1, RECOMMENDED CHANGE: REVISE Degradation of stream channel and land health conditions can be quite rapid. Recovery although faster in riparian areas than uplands is often a much slower process. EXPLANATION: Recovery along riparian areas is rapid compared to uplands.

Response: The statement made in the “explanation” is not always true and not germane to this document.

Comment: PAGE:2-141 SECTION: RECOMMENDED CHANGE: Surface disturbing and construction activities (for example, mineral exploration and development activities, pipelines, power lines, roads, recreation sites, fences, wells) that could adversely impact water quality, wetlands, or riparian habitat would avoid the area within 500 feet of or on 100-year floodplains, wetlands, or perennial streams, and within 100 feet of the edge of the inner gorge of intermittent and large ephemeral drainages. Proposals for linear crossings and other projects in these areas would be considered on a case-by-case basis. EXPLANATION: As was true for #131, the scope of the restrictions exceed authority. The purpose of most range improvements “impact” riparian habitat with the objective of improving it. As written, these projects would be precluded. The limits on ephemeral drainage projects lack any basis in the law. They are not regulated under clean water act. It makes more sense to regulate intensively to meet objectives rather than prohibit.

Response: This is the same language as present in the Green River RMP and is being placed in the Kemmerer RMP. It has not precluded range projects in the Rock Springs Field Office. Ephemeral drainages may not be regulated under the Clean Water Act under all circumstances. Maintaining land health and function is the responsibility of BLM. The 500-foot from the edge of riparian areas and 100-foot from inner gorge are standard practices in the adjacent field offices of Kemmerer and Rock Springs.

Comment: PAGE:2-141 SECTION: RECOMMENDED CHANGE: Delete. [f. Where threats to Class I waters are identified from federal lands or management actions, or approved public land uses, BMPs that

address the threat would be implemented on all contributing federal lands.](strikeout) EXPLANATION: Delete. There are no Class 1 waters in Wyoming. See Green River Basin Water Plan (2001).

Response: Class 1 waters are defined by the state water quality regulations as those in which no further water quality degradation by point source discharges other than from dams will be allowed. The main stem of the Green River, including the Green River Lakes from the mouth of the New Fork River upstream to the wilderness boundary, Fremont Lake and adjacent wetlands are Class I waters based on WDEQ documents. The figure (2-4) in the Green River Basin Water Plan from the Wyoming Water Development Commission is from Wyoming Game and Fish trout stream analysis. It uses the same classification names but reflects different data.

Comment: 2-139, Alternative 4, Objective 2 Actions: Given that the DEIS indicates all management direction would be discretionary, there is no assurance any of this direction would be followed. Action (d) allows the BLM to "maintain" degraded riparian areas in a degraded state. In addition, there is no direction for important range-related issues such as placement of salt licks, regulating livestock congregtaion to protect water quality (e.g., coliforms, nitrates) and stream banks.

Response: Action d on page 2-139 is a visual standard for VRM Class III. This standard does not relate to riparian area function.

Comment: PAGE:2-139 SECTION: RECOMMENDED CHANGE: REVISE Objective 1 Collaborate with the state to achieve the uses and numerical standards specified by the WDEQ, [reduce the number of streams listed as impaired, and](strikeout) to prevent listing of [additional](strikeout) streams as impaired under the Clean Water Act, Section 303(d). EXPLANATION: None of the streams in the planning area is classified as impaired. RMP reflects erroneous information to the extent that it implies that some streams are impaired.

Response: The objective has been updated in the final EIS.

Comment: PAGE:2-140 SECTION: RECOMMENDED CHANGE:b. The 100-year floodplains, and wetlands, [and riparian areas](strikeout) would be avoidance areas for closed to new permanent facilities (for example, storage tanks, structures, pits). Proposals for linear crossings in these areas would be considered on a case-by-case basis. Rights-of way necessary to divert water and develop water would be issued. EXPLANATION: RMP illegally limits development of water rights. The Executive Order does not prohibit such construction and BLM cannot lawfully deny access or right-of-way necessary to develop water.

Response: This statement does not affect water rights.

Comment: PAGE:2-140 SECTION: RECOMMENDED CHANGE: c. Surface disturbing and construction activities (for example, mineral exploration and development activities, pipelines, power lines, roads, recreation sites, fences, wells) that could adversely impact water quality, wetlands, or riparian habitat would avoid the area within 500 feet of or on 100-year floodplains, wetlands, or perennial streams, and within 100 feet of the edge of the inner gorge of intermittent and large ephemeral drainages. Proposals for linear crossings in these areas would be considered on a case-by-case basis. EXPLANATION: The avoidance criteria are too broad both in terms of size and activities to be limited. As written no range improvements to protect or improve riparian habitat would be allowed. It would also preclude diversion of water rights.

Response: This is the same language as present in the Green River RMP and is being placed in the Kemmerer RMP. It has not precluded range projects in the Rock Springs Field Office. The language provides for linear projects and would not preclude diversion of water rights.

Comment: PAGE:2-140 SECTION:2.4 RECOMMENDED CHANGE: b. The 100-year floodplains, wetlands, and riparian areas would be closed to new permanent facilities (for example, storage tanks, structures, pits) except those designed and implemented to enhance wetland or riparian area condition or function, necessary to divert water, or related to rangeland or vegetation improvement project. Proposals for linear crossings in these areas would be considered on a case-by-case basis. EXPLANATION: Most of the flood plains and wetlands are fee simple and BLM has no jurisdiction. The restriction, while said to be based on Executive Orders 11988, 11990, imposes restrictions not required by either the order or the rules. As written, it prohibits fences, pumps and pipelines, all of which are needed by most livestock operations. It would also interfere with rights-of-way necessary to make use of water rights. In many cases, there is no other alternative.

Response: Just because a project would be implemented for livestock grazing management does not mean it belongs in a floodplain. The language is appropriate as presented in the draft EIS. For most range projects, it should not be difficult to show how the project would help to enhance riparian condition or function.

Comment: Even though water is arguably the most important and vulnerable resource in the region - and should there-fore have been one of the most thoroughly analyzed and detailed topics of discussion in the DEIS - water-related concerns were given only superficial treatment. Of particular concern, the DEIS contains no actual analysis of potential impacts to ground or surface waters. And the management direction proposed in the RMP DEIS for “protecting” ground and surface waters is vague, discretionary, incomplete and will not actually protect these waters.

Response: Water quality was not raised as a primary planning issue during the planning process. In addition, regulation of water is the authority of WDEQ, not BLM.

Comment: PAGE: 4-168, SECTION: 4.15.1, RECOMMENDED CHANGE: REVISE Forestry practices that increase snow accumulation and alter forest floor composition could change the duration and timing of stream flow, which could potentially affect water quality and quantity. This could improve the overall watershed yield, but could also cause undesirable alterations to stream channels and riparian areas, such as downcutting, widening, or other types of channel degradation. Stream channel scouring can benefit other species and improve water flows. Forest removal could also affect the nutrient balance in a watershed by increasing nitrates, carbon, and phosphorus to streams following [logging deforestation] (STRIKEOUT). Catastrophic wildfires would lead to deforestation and the [The] (STRIKEOUT) addition of these nutrients can cause eutrophication of waters. This would be a minor impact. EXPLANATION: EIS overstates impacts. Proper logging is not “deforestation.” Increased water flows can benefit stream channels as well.

Comment: The RMP should prohibit activities that pose risk of increasing salinity in tributaries of the Colorado River. This includes disturbance of saline soils, discharge of produced waters with TDS higher than native stream water, and spraying of high-TDS produced waters on surfaces where storm runoff and snow melt will carry accumulated salts into surface waters.

Response: Water is the purview of the State of Wyoming.

Water Supply, Depletion

Comment: 4. Other planning documents for leasing options imply water resources will be available and that annual recharge flow rates will be adequate to maintain water demands for resources such as agriculture and fisheries. These assumptions need to be verified by scientifically justifiable data of trends over years.

Response: No other planning document will make the leasing decisions for the Pinedale RMP planning area.

Comment: • Water depletions are also not adequately considered in the RMP DEIS. Impacts of depletions on drinking water wells are of special significance. Impacts of draw downs of water tables are not addressed.

Response: Water depletions are covered in the field development documents and are also the jurisdiction of the Wyoming State Engineer's Office.

Comment: DEIS at 3-108. With thousands of ground water wells scattered throughout the PRA it is incorrect for BLM to suggest ground water resources are "largely undeveloped." The Wyoming Department of Environmental Quality (DEQ) has reportedly expressed concern that, with in-creasing development throughout the region, near-surface aquifers may not be adequate to meet demand in 50 years, and waters in deeper aquifers will therefore become increasingly important [6]. The DEIS ignores future demands for ground water, even though near-term contamination can render ground waters unusable long after the next RMP expires.

Response: The text has been revised in the final EIS.

Comment: Beyond contamination of ground and surface waters, these resources can also be adversely impacted by depletions. Because the PRA is an arid environment, even relatively small depletions can have significant consequences. The DEIS largely ignores depletions and associated impacts. As I discussed previously, there will be a huge amount of produced water taken out of the ground in the Pinedale Resource Area when the new RMP is implemented. By 2015, some-where between 25 and 40 million barrels of produced water - 3,000 to 4,500 acre feet - will be extracted each year [32]. This is just produced water extracted from conventional gas wells in the PAPA and Jonah fields. Additional produced water. will be extracted through other oil and gas development, including. CBNG. Over the life. of the new RMP, it is likely more than 300 million barrels - over 12 billion gallons - of produced water will be extracted from aquifers. This is in the neighborhood of 40,000 acre-feet. On top- of this, vast amounts of near-surface ground waters will be extracted, using conventional water wells, for oil and gas field development, such as making cement and watering roads for dust control. This water will be taken from the alluvium and Wasatch aquifers. The ground water depletions - associated with near-surface water depletions and produced water extraction from deeper aquifers. - will have adverse impacts.

Response: Depletions are dealt with by the U.S. Fish and Wildlife Service. BLM complies with its regulations.

Comment: I estimate these losses are collectively resulting in over 10,000 acre-feet of depletions each year, and there are other losses not listed here. For example, creating openings in a forest canopy can allow for increased wind scour of the snow pack and thereby reduce water yield during snow melt. See, e.g., [51] at 34. The RMP DEIS does not provide sufficient information about proposed logging and vegetation management techniques to allow estimation of the possible water depletions that could result from those activities. I believe constructing roads and well pads in sagebrush and woodland habitats can also lead to increased wind scour and thereby cause greater water depletions. The BLM should make an

aggressive good faith effort identify and quantify any other sources of water depletions on BLM lands in the Colorado River Basin.

Response: The RMP does not authorize specific activities that deplete water from the Colorado River system. Water depletions can have effects as you have stated. Water rights and water use are under the jurisdiction of the State of Wyoming. Proponents that anticipate the use of water in a project will be required to determine the amount of water that will be needed and, if it is a federal action, that amount would need to go through formal consultation with the USFWS for effects to endangered fish species downstream from Wyoming. If water used is from municipal sources or is determined not to be connected to surface flows in the Colorado River system, then consultation is not needed. Because of the variety of ways water can be used, its source, the timing of use, etc., it is impossible to estimate accurately the total amount that all project proponents will use in the future at the land use plan stage. These amounts will be determined at the site-specific 'activity' plan stage through an EA or EIS and formally consulted on at that time. BLM would be responsible for any mitigation for projects that it proposes that would deplete water (e.g., rangeland water developments, etc.) and other project proponents (e.g., oil and gas companies) would be responsible for their depletion mitigation. In general, however, impacts from water depletions could be discussed in the Biological Assessment and final EIS.

Comment: Even without knowing the magnitude of some of the water depletions that are occurring in the PRA, given the precarious state of the endangered fish species - coupled with FWS's "jeopardy" biological opinions on much smaller water depletions elsewhere in the region - there is no question that the activities contemplated in the new RMP will jeopardize the existence of the endangered Colorado River fish. The proposed RMP (alternative 4) and the other alternatives evaluated in the DEIS do not incorporate any meaningful direction that would prevent or fully mitigate further deleterious water depletions in the PRA. Historically, the FWS has assessed water users a small "one-time" fee, typically a bit over $10 per acre-foot, as mitigation for identified water depletions. Revenues from these fees have been paid into the Upper Colorado River Endangered Fish Recovery Program. Unfortunately, as evidenced by the continuing highly imperiled status of the bonytail and razorback sucker - and the on-going unacceptably low flows in the Colorado River and its tributaries - it is clear this fee-based system is not adequate to avoid jeopardy. Given that the existing depleted condition of the Colorado River is continuing to jeopardize the fish species, it is not enough to purchase an equivalent amount of water rights to offset anticipated additional depletions. Significantly increased flows are needed to restore the habitats (e.g., sand bars and back-waters) of these species. This will require securing greater flows than would be otherwise needed to offset anticipated new depletions.

Response: All actions have risks associated with them. BLM cooperates with the USFWS to address depletions, at the same time attempting to balance the needs of the public for resources that have the potential to affect water depletions.

Comment: PAGE: A3-7 SECTION: RECOMMENDED CHANGE: [It is estimated that livestock well developments would result in approximately 3.2 acre-feet of water depletion to the Colorado River System and contribute to the reduced and regulated flows in the remaining reaches of the fragmented river systems that the Colorado squawfish, bonytail chub, humpback chub, and razorback sucker still inhabit (Stanford and Nelson 1994).](STRIKEOUT) EXPLANATION: Statement assumes conditions that are unlikely to be true. Wells would have to tap into aquifers directly affecting river, rather than separate aquifer. Second it would assume that use would override flow regulation in Flaming Gorge Reservoir. Third well would be large enough to significantly affect system. Statement is unlikely to be true even if theotretically possible and standards should be built on performance not worst case.

Response: Court decisions have upheld the ruling that any water depletion from the Colorado River system will adversely affect endangered species downstream from the PFO. BLM is required to estimate

the amount of water depletion from its actions based on the RFD for BLM-initiated activities. Without additional information on groundwater aquifer connectivity to surface waters, BLM will assume that shallow livestock water wells contribute to the surface flows.

Comment: Activities that may occur under the new RMP have the potential to cause water depletions in this basin. This includes vegetation management near the Rim and water depletions associated with oil and gas development in the vicinity of the Rim. Nevertheless, the RMP DEIS does not assess or even mention that activities allowed in the PRA could impact these species by contributing to water depletions in the Snake River Basin. Even though the activities on BLM lands in the PRA may cause relatively small depletions in the Snake River, this river is so depleted already that even small additional depletions may jeopardize these imperiled fish and snail species.

Response: All actions have risks associated with them. BLM cooperates with the USFWS to address depletions at the same time attempting to balance the needs of the public for resources that have the potential to affect water depletions.

Comment: PAGE: 4-188 SECTION: 4.17.1 RECOMMENDED CHANGE: DELETE [In general, water depletions occur when water is removed from flowing rivers and streams, or when water is pumped from groundwater aquifers that recharge (are directly connected with) rivers and streams. Groundwater and surface water interaction typically occurs in shallow aquifers; increased depths reduce the likelihood of impacts from groundwater pumping.](STRIKEOUT) EXPLANATION: Not an impact relating to RMP

Response: Water depletions due to actions on public lands occur on a frequent basis within the PFO. The impacts as described are accurate.

Comment: The new RMP must include direction to minimize surface water depletions from all activities in the PRA, including water used for gas development, irrigation ditches, and evaporation from pits and ponds. In particular, the new RMP should prohibit surface water depletions from activities (e.g., dust suppression or cement production) for which there is a feasible, low-impact alternative that would involve less depletion. The new RMP must require adequate mitigation for surface water depletions - determined from annual assessment of BLM-authorized activities (direct, indirect and cumulative depletions) - to help recover the T/E species in the Colorado River and Snake River. I believe securing 5 acre-feet of mitigation flows for every acre-foot of anticipated depletions is reasonable and request that the new RMP adopt this (regardless of FWS policy).32

Response: Water is the purview of the State of Wyoming.

Monitoring, Mitigation

Comment: What means of groundwater monitoring in and around the sites, where the lagoons are located have been implemented? With the mention of monitoring Wells, Monitoring Wells should be installed from recommendations from a hydro geologist to properly monitor groundwater movement and chemical levels. These should be installed near riparian and residential areas within recommended and specified distances, to properly maintain a proper scientific examination and monitoring of the gas drilling operations. These monitoring Wells shall be tested on a weekly and monthly basis. This would provide a proper view of a contamination situation of one should occur to provide data to implement control and management of any deleterious material from the fracing and drilling operations as well as accidental lagoon breechings.

An emergency action plan must be drafted, formulated and put into the EIS to contain and manage any breeching at the lagoons as well as drilling operations, should monitoring wells indicate the presence and movement of contamination. Reviewing and monitoring of the test data should be done by the WYDEQ

and EPA. Who tests and monitors the soil under the lagoon once the lagoons have been abandoned? If the soils are found contaminated an emergency action plan would be put into the EIS to manage such events. A lagoon abandonment plan should be incorporated withy the EIS to properly manage the abandonment and legal closure of such areas. The closure plan must list the chain of custody of the contaminated soil and the disposal areas for such soil. The closure plan should outline the verification that clean soil conditions exist and who signs off on it.

Response: WDEQ is in charge of monitoring all water quality violations.

Comment: There are no requirements for extraction companies to report or monitor ground water affected by drilling.

Response: These requirements are located in the individual field development documents.

Comment: Stream Channel Geometry. This is yet another laudable addition to the monitoring plan. My concerns about this item are similar to the others. First, monitoring is only required every 1-3 years, when significant changes in stream channel geometry/morphology can occur in a single season. I recommend monitoring stream channels in the spring and in the fall, at least for surface waters in the vicinity of and downstream from areas of considerable ground disturbance (including logging and prescribed burn sites). Monitoring should also be done after a 10-year storm event occurs in the watershed for a stream. As with the other monitoring items, this one also fails to specify the criteria that would be used to determine when corrective action would have to be taken and what the correction action(s) would be.

Response: Table A11-1 has been revised in the final EIS.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following: • Annual precipitation in the Upper Green River Basin so changes in surface water flows from activities in the PRA can be gauged. • Estimated flows in the Colorado River at Glen Canyon Dam to help gauge impacts on endangered Colorado River fish and on downstream water users.

Response: This monitoring information is out of the scope of the RMP analysis.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following: • Estimated water consumption (including net surface water depletions) attributable to people directly and indirectly employed in the region from BLM-authorized activities. • Estimated total annual ground and surface water depletions in the PRA from all uses and activities authorized by BLM.

Response: This monitoring information is out of the scope of the RMP analysis.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following: • Estimated water conservation achieved each year in the Upper Green River Basin, allowing BLM to track progress (or lack thereof) in recovering the river system year-by-year.

Response: This monitoring information is out of the scope of the RMP analysis.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following: The estimated annual salinity contribution to the Colorado River via the Green River and its tributaries; this should include the natural (background)

contribution along with the estimated contributions attributable to BLM-authorized activities in and around the PRA (including produced water disposal). • The pH of sampled surface waters in the Wind River Mountans.

Response: This monitoring information is out of the scope of the RMP analysis.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following: • The annual loss of glacial ice (in acre-feet per year) in the Wind River Mountains from climate change and projections of future loss benchmarks (e.g., 50% of remaining glacier ice will be lost by year 20XY). • Estimated total acres of natural wetlands in the PRA (including seeps and springs that may be impacted by ground water depletions).

Response: This monitoring information is out of the scope of the RMP analysis.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following: • Information gathered on the migration of ground waters in and around the PRA, including the migration rate(s) of any contaminated ground water plumes.

Response: This monitoring information is out of the scope of the RMP analysis.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following: The annual numbers and types of hazardous material releases in and around the PRA associated with BLM-authorized activities (e.g., drilling, fracing and associated transport); this is to include diesel spills, spills from accidents on highways, overflow of produced water tanks, and reported spills at oil and gas support facilities located on private lands.

Response: This monitoring information is out of the scope of the RMP analysis.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following: • The measured radioactivity of produced waters and emissions, and the tonnage of materials removed from the PRA each year (including equipment and produced waters) found to be sufficiently radioactive as to require special handling and/or disposal as radioactive waste.

Response: This monitoring information is out of the scope of the RMP analysis.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include • Total number of surface or ground water quality violations in and downstream from the PRA attributable to BLM-authorized activities.

Response: This monitoring information is out of the scope of the RMP analysis.

Comment: I am asking that BLM prepare a revised or supplemental Draft EIS that addresses the issues discussed above. This should include a proposed list of aquatic management indicator species. The information gathered from all monitoring and evaluation items should also be made available annually to the public through a monitoring and evaluation report. See, e.g., 40 C.F.R. § 1505.3(d) ("Upon request, make available to the public the results of relevant monitoring"). Since the monitoring plan is a key part of BLM's mitigation effort in the new RMP, the annual monitoring and evaluation report should also disclose BLM's "progress in carrying out mitigation measures ... which were adopted by the agency." Id. at § 1505.3(c).

Response: The draft EIS was appropriate in scope as published. Revisions have been made in some areas in response to the public comments gathered. BLM does not plan to prepare a revised or supplemental draft EIS for the Pinedale RMP revision.

Comment: The DEIS does not rigorously explore alternative mitigation measures to protect watersheds and surface and ground water resources. Throughout my comments I have explained short-comings in the proposed management direction for the new RMP. Examples include:

- The proposed management direction, including mitigation, is entirely discretionary.
- Much of the proposed management direction is not prescriptive and improperly relies on vague "intents" and "outcomes" rather than clear, measurable and enforceable limits.
- There is no management direction proposed for some key water quality issues, including contamination of ground waters from drilling and fracing fluids, ground water drawdowns, surface water depletions, salinity increases from activities such as surface disposal of produced waters with high salinity, and radioactive contamination of waters.
- The monitoring plan is discretionary, and for many types of impacts, the monitoring plan does not set measurable "action triggers" to trigger corrective action (i.e., mitigation).
- Where the monitoring plan does specify measurable action triggers, they are so permissive that significant degradation could occur before corrective action (i.e., mitigation) would be taken, such as allowing water quality to violate State standards before any effort to halt pollutant discharge is taken.

Response: The RMP is not an encyclopedia of all knowledge and potential actions by all parties associated with the area.

Comment: Why does BLM believe it is not practicable to make management direction - including mitigation - fully binding on the agency? Why does BLM believe it is not practicable to institute management direction with clear, measurable and enforceable limits? Why does BLM believe it is impracticable to provide management direction for drilling, completion and stimulation fluids, such as prohibiting the use of certain problematic chemicals? ... for ground water drawdowns? ... for salinity increases from produced water disposal? ... for radioactive materials monitoring and disposal? Why does the agency believe it is not practicable to set clear and measurable "action triggers" for monitoring and mitigation that would halt impacts before they become significant? It appears BLM has carefully designed the management direction to provide greatest flexibility, not greatest environmental protection. An agency's desire to have maximum discretion does not make it impracticable to adopt strong enforceable management direction that will actually "prevent or eliminate damage to the environment and biosphere." 42 U.S.C. § 4321.

Response: The RMP will not authorize any on-the-ground activities. It is not possible to design appropriate mitigation unless a specific project proposal is being analyzed.

Comment: Appendix 3 of the RMP DEIS presents BLM's proposed "Mitigation Guidelines and Operating. Standards Applied to Surface Disturbing and Disruptive Activities - Alternatives 2, 3 and 4." The mitigation items for "Soils, Watershed and Water" are presented on page A3-5 of that appendix and comprise a total of 8 mitigation items. These items only address soil erosion and a few fish habitat issues. There is no proposed mitigation for water contamination, increased salinity, protection of ground water wells, addressing surface water depletions, or other important water issues. Moreover, the scant "mitigation" that is presented in Appendix 3 will not even be binding. Instead, the BLM states: "The

guidelines and standards are examples of mitigation measures that could be applied, as appropriate, based on site-specific environmental analysis for individual proposals. The use and application of specific mitigation measures would be made during the environmental process for individual proposals. The mitigation measures or operating standards could change or be modified, based on new information." RMP DEIS, Appendix 3 at A3-1 (emphasis added). In other words, none of the standards or mitigation in the new RMP would be binding or enforceable. That management direction would be nothing more than suggestions which could be ignored at the project-level. This is shameful. This approach will not ensure any minimum protections for natural resources (water or otherwise). And it turns the FLPMA planning process in to a complete waste of time and funding.

Response: Water is the responsibility of the State of Wyoming. The interactions of soil, water, and vegetation result in multiple benefits for multiple aspects. By addressing soil and fish water quality, vegetation and many other aspects are addressed at the same time. Appendix 3 has been revised in the final EIS.

Comment: I have saved Monitoring and Evaluation for the last topic because, no matter how RMP strong management direction is, significant impacts can still occur if the BLM does not carefully monitor and evaluate conditions to determine when problems are occurring. Appendix 11 of the RMP DEIS contains a "Resource Monitoring Table" that "identifies the indicator that will be monitored to detect change in resource conditions, the method or technique of monitoring, the locations for monitoring, the unit of measurement for monitoring, the frequency and duration for monitoring, and the action triggers or thresholds that indicate the effectiveness of the management action." See DEIS at A11-2. For "Water Quality, Watershed and Soils Management." Broadly speaking, this is a comprehensive and well-thought-out set of monitoring items. I do have concerns about some of the fine points, though. Water Quality. To begin, surface water quality should also be monitored after spills into the waters, not just annually. And it should be monitored at 4-6 month intervals due to changes in stream flows, with at least one sample set collected. during minimum flows while uses and activities are occurring near the waters. When peak flows occur, there would rarely be a noticeable violation of water quality standards, yet the same input of contaminants could trigger a violation during low flows. Also, there is no water quality monitoring for acid deposition in high elevation lakes. A representative set of lakes should be sampled in several regions of the Wind River Mountains at least once annually during late summer. It is my understanding the USFS does some limited monitoring of such waters, in cooperation with BLM. Why is this not discussed in the DEIS? What has the monitoring revealed?

Response: Water quality and water quality monitoring is the purview of the state. This includes post spill monitoring. Specific field development plans such as those for the Jonah and the PAPA require the proponents to measure water quality. This may change with changes to the field development plans.

Comment: PAGE:2-140 SECTION: RECOMMENDED CHANGE: f. BLM would cooperate in implementing [collaboratively establish with stakeholders](strikeout) a strategy for assessing baseline conditions and monitoring surface and groundwater resources potentially affected by public land uses. EXPLANATION: BLM has no jurisdiction but RMP should commit to follow direction of local governments Conservation districts and WDEQ have jurisdiction and programs. BLM commitment to follow would assist in the implementation.

Response: This entire management action has been deleted from the final EIS.

Comment: DEIS, Appendix 3, page A3-5 (alphabetic enumeration added for reference). Proposed mitigation items (a) and (b) sound nice but they do not require protection of aquatic habitats (e.g., spawning gravels) from activities outside the stream corridor which cause stream channel erosion. Roads, clearcuts and other surface disturbing activities located well away from stream channels can cause stream

channels to blow out from increases in water yield, even if those activities do not cause appreciable upland soil erosion. There is no direction proposed to prevent such adverse changes. The same is true of Mitigation items (c) and (d). Mitigation item (e) only says soil erosion would be controlled; it does not explain how this would be achieved. The same is true of Mitigation item (f) regarding revegetation. What criteria will BLM use to determine when "revegetation" has occurred? Would a site be sufficiently revegetated to satisfy the RMP if 25% of the lands are revegetated? ...50%? ...75%? What about vegetated species composition? What would be done if initial revegetation efforts fail (a common problem in high arid environments)? Who pays for revegetation efforts? There is no useful direction in the RMP DEIS on such questions. Instead, the "direction" is essentially a rough outline of BLM's intentions. Mitigation items (g) and (h) are more specific, and prescriptive, but they are "guidance" and therefore are not binding. In addition, these provisions would only apply to "highly erodible soils." Why is there no direction for moderately erodible soils? When such soils are disturbed on steep slopes or in drainage channels, this can result in severe soil erosion. And why is there no similar direction for other sensitive soils, such as those susceptible to rilling and rutting or to compaction?

Response: Appendix 3 has been revised in the final EIS.

Comment: For ground water quality monitoring, it is good BLM is including an action trigger related to water migrating from one aquifer to another, but it is unclear what action BLM would take if/when this trigger occurred. Actually, this is a general problem with the monitoring plan - each monitoring plan item in the table states that corrective actions would be taken but it does not say what the corrective actions would be. How would BLM determine when water is migrating between aquifers (e.g., due to drilling or fracing)? NEPA not only requires monitoring, it also requires "enforcement ... where applicable for any mitigation." 40 C.F.R. § 1505.2.

Response: Water quality is the purview of the state.

Comment: Aquifer Drawdowns. It is also nice to see BLM proposing to monitor "depth to water." However, Appendix 11 indicates this would only be done in "riparian areas." The areas where ground water drawdowns are occurring in the PRA generally do not coincide with riparian areas. In fact, ground water is being removed most rapidly from under upland areas in the Jonah and PAPA fields, far from riparian areas. This should be corrected. Depth to water should be monitored at all available ground water wells within 3-5 miles of any oil or gas well (including CBNG). In addition, given the large volumes of ground water that would be extracted each year, depth to water should be monitored annually, not once every 2-3 years.

Response: Water is the purview of the state. This also applies to drawdowns of aquifers as well. The water table shrinkage mentioned in the table is primarily associated with stream channel functions and local unconfined water tables.

Comment: Surface flows. The stream flow monitoring is also a welcomed and essential addition to the monitoring plan. Monthly monitoring is sound, though twice-monthly sampling is advisable during late summer when aquatic ecosystems are often the most vulnerable to low flow conditions (e.g., high water temperatures, low dissolved oxygen, sediment loading, etc.). The BLM should also disclose the locations of the gauging stations that would be used for this monitoring. If they are all upstream of the major centers of activity (e.g., PAPA and Jonah fields), they would not provide any useful information about how activities authorized by BLM are impacting surface water flows. The trigger action for "stream flow" - when trends indicate increased sediment loading and deterioration in water quality - also seems inappropriate. While such conditions should trigger some action, stream flows should be based on some ecologically-based minimum acceptable flow threshold. The threshold for each stream should be well above the minimum flow needed to sustain the aquatic ecosystem; the RMP should not allow aquatic

ecosystems to collapse or suffer significant harm before action is taken to correct low flows. Furthermore, the RMP should require comparison of historic flows month-to-month. This is needed because, as explained earlier in these comments, ground water depletions are likely to cause reductions in surface water flows in the PRA. If stream flow declines are observed that do not correlate to precipitation, this would indicate ground water drawdowns are adversely affecting surface flows. These depletions would then need to be corrected through ESA consultation to avoid jeopardizing the continued existence of imperiled species downstream.

Response: Table A11-1 has been revised in the final EIS. This is a USGS and WDEQ responsibility. BLM does not monitor surface flows.

Comment: Indicator Species. Yet another excellent item in the monitoring plan is the use of macroinvertebrate indicator species. I do not believe sampling should only be done once every 2 to 10 years, as proposed. In arid environments, subject to low seasonal flows and high sediment and salinity input, significant changes in benthic communities can occur in less than two years. I suggest annual monitoring of macroinvertebrates. I also feel the action trigger for this monitoring item is far too permissive. Basically, it would allow the entire population of macroinvertebrates to disappear before corrective action could be taken. BLM should monitor population changes of macroinvertebrate indicator species and take corrective action when populations are observed to have declined noticeably, but well before the population disappears. Beyond tracking species which indicate good water quality conditions, BLM should also monitor populations of macroinvertebrates that indicate declining water quality or aquatic ecosystem degradation. The Naididae worms mentioned earlier in these comments would be one example since they indicate changes in sedimentation [42].

Response: Table A11-1 has been revised in the final EIS.

Comment: I believe vertebrate, and plant species should also be used as indicators of water quality and the health of aquatic ecosystems. Algaes and other aquatic plants can reveal declines toward eutrophic conditions, native trout are indicators of siltation (e.g., loss of spawning habitat) and water temperatures, dippers also reveal high water quality conditions, and other aquatic species can be used as indicators of naturally turbid waters. BLM should produce a candidate list of invertebrate, vertebrate and plant species it feels are indicators of water quality (good or bad). This proposed list should be peer-reviewed by scientists with expertise on indicator species (including Wyoming benthic organisms), as well as by the general public.

Response: Table A11-1 has been revised in the final EIS.

Regulatory Authority, Laws, and Legal Requirements

Comment: Page Number & Issue:4-172: “Surface discharge of produced waters would be considered if WDEQ approval was obtained and it could be demonstrated that the augmented flows would not cause significant environmental damage, as defined by the Wyoming Standards for Rangeland Health.” Recommendations: BLM should defer to state agency with primacy jurisdiction.

Response: BLM is deferring to the state with regard to water, where the state has primacy. With this statement, BLM is stating its primacy in the area where it has legal authority..

Comment: There are many directives the BLM should include in the RMP to direct BLM officers and field staff in how to protect watersheds and ground and surface water resources in the PRA. Why is there no “common” direction for preventing salinity increases in surface waters? This is certainly an issue that applies to any conceivable RMP. The proposed management direction does not even recognize legal requirements related to preventing salinity increases in the Colorado River Basin. Why is there no

direction for preventing or minimizing surface water depletions in the PRA ... or minimizing ground water drawdowns? Addressing water depletions is another objective that must be met for any conceivable RMP, so there should be some direction on this issue that is "common to all alternatives." The same can be said of preventing soil erosion, protecting ground waters and surface waters from hazmat spills and produced water discharges, preventing contamination from radioactive materials (NORM), and protecting recharge areas from degradation.

Response: There are many interactions between maintaining healthy water catchments as provided for under EO 11990 and 11988 and the other aspects mentioned. Because of the complexities of land management, greater flexibility is available under the general direction of the executive orders than would be available under specific guidance for individual events. BLM will follow all legal requirements, policy, and agency directives. It is not necessary to restate legal requirements in the RMP. Management actions and BMPs for surface discharge have been revised in the final EIS.

Endangered Fish, Habitat

Comment: Appendix 18 of the DEIS contains the following direction for the four endangered Colorado River fish species:

- Permitted public land users will pay the current surface water depletion fee to the National Fish and Wildlife Foundation (NFWF) for every acre-foot of surface water (average annual depletion) used from the Colorado River system. Additional provisions for large depletions (greater than 100 acre-feet/year) include the following:
- The development and implementation of an in streamflow work plan with concurrence by the implementation committee An appropriation or acquisition of water rights sufficient to substantially protect the in-stream flow needs of the endangered fishes in the Colorado River
- The development of proposed strategies to protect the tributary inflows that con-tribute to the Colorado River.
- Emergency shut-off valves must be installed on petroleum product pipelines within the 100-year floodplain of critical habitat.
- There are several problems with this direction. First, because this language is in an appendix and because the BLM has characterized the direction in the DEIS as being mere "guidance," there is no assurance these directives would ever be followed.

Second, as I discussed previously, the one-time "water depletion fee" being assessed for additional water depletions is grossly inadequate to help protect and recover the endangered fish. Despite the assessment of these fees, the water flows in the Colorado River continued to decline and reached historic lows over the past few years. Given the severely depleted state of the Colorado River, higher fees are needed to mitigate any additional depletions and help restore the river ecosystem.

Third, the bulleted direction only applies to "large depletions" exceeding 100 acre-feet/year. Individual gas wells and other activities could cause 100 acre-feet of depletions every year and never trigger the directives. There are thousands of gas wells being drilled. The cumulative water depletion could be enormous - thousands of acre-feet/year - which could easily jeopardize the endangered fish species. Yet so long as individual wells don't exceed 100 acre-feet/year in depletions there would be no requirement to take action or mitigate the impacts. This is piecemealing. The RMP must require mitigation (e.g., acquisition of water rights) for the cumulative water depletions, not just the larger incremental depletions.

Finally, the BLM would only, develop an streamflow work plan later, outside the RMP process and presumably without public input. And this plan would have to be approved by an "implementation committee." The DEIS does not explain what this committee. is, who is on it, and how it would operate. If the committee operates on consensus, then it is doubtful any substantive changes would be made to improve streamflows because at least one member of the committee would, likely object. The agency needs to discuss this important issue since the endangered Colorado River fish are the species most vulnerable to extinction from BLM-authorized activities in the PRA.

Response: As stated on page A18-8, the depletion fee would be for the average annual depletion on projects that are determined to deplete water from the Colorado River system. For any depletion, consultation with USFWS is required. The payment of a fee for use in the recovery of endangered fish species was established by USFWS as part of the Colorado River Recovery and Implementation Program Recovery Action Plan (RIPRAP). This plan states: "Under the Recovery Program, proponents of new water projects which undergo Section 7 Endangered Species Act consultation have agreed to pay a one-time depletion fee based on a project's average annual depletion." That fee is adjusted annually for inflation. The RIPRAP "...identifies the specific recovery actions which must be accomplished in order for the Recovery Program to serve as the reasonable and prudent alternative to jeopardy to the continued existence of the endangered fishes and to avoid the likely destruction or adverse modification of critical habitat..." The RIPRAP is revised often to accommodate changes to the recovery status of the fishes. The website address to see these updates is http://www.fws.gov/mountain-prairie/crrip/rip.htm. Through direction in the RMP, BLM will continue to consult with USFWS on any actions that affect endangered species. The actual project-specific actions that need to be implemented by BLM for recovery of endangered species will be directed by USFWS through the consultation process and through recovery plans such as the RIPRAP.

Comment: PAGE: 4-188 SECTION: 4.17.1 RECOMMENDED CHANGE: DELETE [Water impoundments change the hydrologic characteristics of the watershed and impact fish habitats by altering water temperatures and the timing and volume of flow, minimizing the effects of flushing flows and altering sediment transport within the system. In addition, impoundments constructed on streams containing populations of fish, invertebrates, or amphibians could limit movement between required habitats. Reservoirs with habitat sufficient to support salmonid populations would increase habitats available for potential trout fisheries. In addition, small reservoirs (including beaver dams) can improve stream flow, especially later in the season, by increasing water storage in the soil profile and releasing it gradually.](STRIKEOUT) EXPLANATION: Not an impact relating to RMP

Response: Since right-of-way requests to construct impoundments on public lands have occurred in the past, it is quite possible that they could occur in the future. Thus the impacts as described could occur.

Watershed

Comment: Section 3.15 watershed in water quality service to groundwater it is stated "the section focuses primarily on service watersheds because these are the components of the hydrologic cycle most vulnerable to management choices. Groundwater has remained largely undeveloped in the planning area and is less likely to be affected by surface management decisions although impacts may occur through oil and gas drilling activities." This office disagrees with the focus on watersheds only.. Watersheds to contribute the rivers ands streams which drain the land. Rivers and stream are the low points where ground water naturally migrates to via elevational differentials. Therefore groundwater and surface waters all end up contribute to the same focal point, rivers and streams. The rivers and streams being an important valuable resource for wildlife, cattle, agricultural and human activities are influenced by the groundwater. Section 3.15 (continued…) Moreover drinking water from wells, in between the river/stream/low points and the gas well (point of contamination), connected to groundwater sources are also affected by the flow of groundwater and will eventually be under the influence of the plume created

by possible contamination. The penetration of these deep gas Wells through the aquifer and the injection of proprietary chemicals mixes with the groundwater. This groundwater flows toward the low points of local rivers and streams near the gas well. Monitoring and plans as previously mentioned should be detailed in the EIS. The statement of " impacts may occur though oil and gas drilling activities" hints of the BLM pre-knowledge of possible contamination and therefore all the more recent that detailed plans and monitoring should be outlined and detailed in the EIS.

Response: The focus on surface watersheds is because we lack information about the groundwater system in the area and are presently working to gain additional information. At this time, there is not sufficient data to do otherwise. As the studies produce data and understanding, they shall be provided to the public.

Much of the shallow groundwater does contribute to the surface water system. However, the deeper ground water, which is the focus of much of the controversy, is below the level of the river system and thus is not directly connected to the surface water system.

One of the ironies of studying groundwater is that it requires a well and the implied disturbance to the aquifer in order to even become aware of its existence. This is especially true for complex fluvial deposits such as are encountered in the Pinedale Anticline Production Area (PAPA) and the Jonah field. These portions of the Earth's crust were created by ancient river channels meandering over the land surface and have been frequently compared in complexity and structure to a large bowl of potato chips. In short, it is a very complex system. Beginning with the initial PAPA EIS, all wells within 1 mile of an active hydrocarbon well have been monitored for water quality. Each well is initially monitored for both hydrocarbons and mineral analysis. Each subsequent year, every well is then sampled for mineral content at a minimum and may be sampled for hydrocarbon content as well. The hydrocarbon test selected for this monitoring was sensitive enough to detect levels sufficient to exceed the WDEQ MCLs. In other words, these tests were sufficient to determine if the water being tested met all legal requirements. Livestock and domestic wells in the area tend to use shallow aquifers. All industrial wells completed under the PAPA and Jonah documents are designed to isolate these waters to prevent any problems. The gas wells are at least two orders of magnitude deeper than water supply wells. Costs and operational procedures dictated that an individual well might not be sampled for hydrocarbons with every sampling event. A saline gradient (deeper waters and those aquifers associated with the hydrocarbon production zones are saltier than the more shallow aquifers associated with the water wells in question) allowed for monitoring of undesired well communication, which would trigger a more complete investigation.

Unforeseen events, associated with human error, in early 2007 resulted in produced water being introduced into a limited number of wells. This was detected by the existing monitoring program and triggered a WDEQ investigation and a cleanup of the contaminated wells. As part of this investigation a more sensitive test for hydrocarbons was used on all the water supply wells within the PAPA and the Jonah fields. This round of tests detected levels of hydrocarbons in sampled wells, some of which were below MCL. It is at this point that a great many questions developed:

1. What is the source of the hydrocarbons: natural, introduced through the drilling procedure, or the result of communication between deep and shallow aquifers along the annulus of the well?

2. Whose jurisdiction does this low level detection fall under? The hydrocarbon levels for the most part do not exceed MCL and are not violating WDEQ regulations. BLM monitors surface compliance, well construction, and product metering. The Wyoming State Engineer's Office (WSEO) monitors well location and water use. The Wyoming Oil and Gas Commission (WOGC) monitors hydrocarbon production and well location.

3. What is to be done about this detection of low levels of hydrocarbons?

Wells that exceed MCL are placed in the WDEQ Voluntary Remediation Program, but the majority of wells with hydrocarbon detections were below MCL, meaning that their beneficial use was not degraded, and the source is not known. To answer these and other questions, all parties involved (federal, state, and private) have started an investigation to determine the nature of the contamination and the aquifer complex. At this point, all available data are being gathered and analyzed to determine what data gaps exist and which ones need to be filled to answer the questions of both source and potential future actions. This process is presently underway and is not yet fully defined. It is hoped that it will yield results in time. If sound results are produced prior to the publication of the Pinedale RMP/final EIS, appropriate data and guidelines will be incorporated either into the RMP or the appropriate subordinate documents. The need for an aquifer delineation study was presented early on in the process, but it was determined through the Pinedale Anticline Working Group (PAWG) that proper well drilling procedures and the monitoring of water wells within the production area would be sufficient. This appeared to be the case until the events and monitoring of early 2007.

WDEQ has primacy in terms of waters within the State of Wyoming. BLM works in cooperation with WDEQ to maintain the health of the land and the water that flows off it, but it is WDEQ that has the final authority with regard to water. Groundwater monitoring and studies are underway but will not produce significant results for some time. A decision was made to proceed with the planning process and generate an RMP at the same time as the ground water studies continued. As a result, the RMP will not have all of the data that will eventually become available as it is being written and will need to incorporate data as it becomes available. The establishment and maintaining of monitoring programs are associated primarily with individual projects, such as the PAPA and Jonah field developments. It is impractical and in some cases illegal to halt development until a complete body of data has been gathered, analyzed, and incorporated into proposed actions. As a rule, monitoring plans are standalone documents that reference an EIS or EA that has been written for a specific project. The RMP is an overarching document that defines the general guidelines for future actions. The new RMP does not change the content of the previous EISs and EAs such as those for the Jonah field and PAPA or their associated monitoring plans. Appendices 3 and 5 as well as portions of Table A11-1 has been revised in the final RMP/EIS.

Comment: The DEIS's arbitrary Watershed CIAA boundary excluded from impact analysis major portions of the. higher elevation watersheds feeding into the Green River, New Fork River and Big Sandy River. The Watershed Boundary map provided in the DEIS (Map 3-13) also fails to show where affected watersheds extend beyond BLM lands.

Response: Map 4-11 shows the extent of the watersheds beyond the boundaries of the planning area. BLM feels that the appropriate level of watershed hydrologic unit codes (HUCs) were included in the CIAA.

Comment: Another conspicuous omission in the RMP DEIS is information on crucial watersheds and areas of hydrologic concern identified in the 1988 Pinedale RMP [11]. The 1988 RMP included the following direction: "Management actions will emphasize the reduction of soil erosion and sediment and salinity contributions to the Green River Basin water system .... Of particular importance will be those areas with highly saline soils such as Soap Holes Basin and crucial watersheds where surface disturbance will be minimized. These crucial watersheds are generally found within the boundaries of the ground water recharge zones (Map 7)." 1988 RMP at 19 (emphasis supplied). A copy of Map 7 from the 1988 RMP is attached to these comments as Figure 6. It is not referenced in the revised new RMP DEIS. That map shows most of the PRA consists of "Ground Water Recharge Zones" so it is also clearly relevant to describing the affected water environment. The recharge zones include the northern and. eastern portions of the Pinedale Anticline Project Area, all of the South Rim area, and essentially all lands with moderate to high potential for Coal Bed Natural Gas development, (DEIS, Map 4-2).

Response: Detailed soil surveys are presently underway in the PFO area. These soil surveys will make it possible for a more accurate focusing of erosion control efforts than provided for in previous analyses. Unfortunately they will not be available in time for publication of the RMP.

Comment: The RMP DEIS also states the BLM would develop an "activity plan for reducing erosion and channel degradation" in the Tip Top watershed, and would develop a separate "watershed and recreation plan" to reduce sedimentation (soil erosion) in the Stuart Point - Mount Airy area. Id. After many decades of managing the public lands, it is astonishing to me that BLM still has not completed these essential tasks. In any case, it seems the BLM is intending to develop management direction for these key issues in a vacuum, at some unspecified future dates with no public involvement.

Response: Higher management priorities since completion of the 1988 RMP have precluded completion of these watershed plans. The management actions in the draft EIS are intended to address erosion and watershed health on a planning-area scale. A number of management actions have been implemented since 1988 to control erosion in the Tip Top area with good results..

Toxins, Turbidity, Pollution

Comment: The State Water Quality Rules require that "[a]ll Wyoming surface waters shall be free from substances and conditions or combinations thereof which are attributable to or influenced by the activities of man, in concentrations which produce undesirable aquatic life." See [3], Section 28 (Undesirable Aquatic Life). The State Rules also require Class 2 waters to be "free from substances, whether attributable to human-induced point source discharges or non point source activities, in concentrations or combinations which will adversely alter the structure and function of indigenous or intentionally introduced aquatic communities." See [3], Section 32. Although the State water quality criteria for iron are fairly permissible, moderate dissolved iron concentrations can be harmful to aquatic species. As shown in the produced water composition data I summarized in Table 1, some produced waters have iron concentrations in excess of 10 mg/l and approaching 100 mg/l. Such concentrations can be problematic to aquatic species and discharge of such waters may, therefore, violate Section 28 or 32 of the State Water Quality Rules - even if there is no violation of the water quality criteria for iron. The DEIS does not address these potential impacts from produced waters. What concentrations of chromium, silver and. iron are in "treated" produced waters that may be discharged to surface waters? What limits will be imposed on the concentrations of these materials in produced waters that would be discharged into surface waters such as the New Fork River?

Response: WDEQ has primacy with regard to the management of water quality.

Comment: The PAPA Draft SEIS ([8] at 3-82) states that treated water must pass toxicity testing - including testing on trout fingerlings, water fleas and minnows - before being discharged into surface waters. However, this testing will apparently only address acute toxicity effects on two components of the aquatic ecosystem (fish and one type of invertebrate). It will not re-veal potential chronic lethality and sub-lethal impacts (including those of low-concentration carcinogens and mutagens) and possible bio-accumulation effects. Nor will it reveal potential problems with introducing organisms previously isolated in ground-waters into surface waters. And it will not address sediment production and increased turbidity downstream that would result from increased localized water discharges into streams. The RMP Final EIS (and any revised or supplemental draft) must address these issues related to surface water degradation from produced water disposal.

Response: WDEQ has primacy with regard to the management of water quality.

Comment: There is evidence sediment discharge from gas field development may already be having adverse impacts on surface waters. As I noted earlier, a 2005 macroinvertebrate analysis revealed the

presence Naididae worms in the New Fork River [42]. The Water Resources Task Group acknowledged that "[t]his sediment dwelling worm can be an indicator of sedimentation or algae development. It can be a one-time occurrence from a tributary or a developing chronic situation." Id. The New Fork River has been subject to sediment influx due to construction work on the Paradise Road and nearby well pads and facilities. The RMP DEIS does not address this issue. If the worms are indicative of increased sedimentation associated with BLM-authorized activities, this would constitute a violation of Section 32 of the State Water Quality Rules [3] which requires that Class 1, 2 and 3 surface waters be "free from substances, whether attributable to human-induced point source discharges or non point source activities, in concentrations or combinations which will adversely alter the structure and function of indigenous or intentionally introduced aquatic communities." Section 28 of the Rules (Undesirable Aquatic Life) also requires that "surface waters shall be free from substances and conditions or combinations thereof which are attributable to or influenced by the activities of man, in concentrations which produce undesirable aquatic life." Id.

Response: Analysis of subsequent samples of microinvertebrates indicates a decreasing population of the little sediment dwelling worms. Therefore, it is a more complex situation than might occur with a steady increase in numbers. The RMP does not need to contain all the information of the tiered documents.

Comment: The DEIS does not evaluate any such potential impacts. What are the estimated natural sediment loadings for surface waters in the PRA? How much additional sediment will enter each stream from human activities (e.g., roads, well pads, pipelines, logging, etc.)? Where will sediments enter streams? Are the anticipated sediment loads likely to adversely impact the aquatic environment, such as by covering trout spawning habitat? What monitoring will be done to identify sediment influx before it becomes serious? What specific management direction will BLM adopt to correct activities that are causing sedimentation of surface waters? I could not find answers to these questions in the DEIS for any of the alternatives.

Response: BLM does not have the resources to gather the background data or run field office–wide projections under various development scenarios at this time. BMPs and onsite corrective actions will be used to control sedimentation and other impacts of development.

Comment: The DEIS does not evaluate impacts associated with any sources. of increased salinity. Nor does it discuss the Salinity Control Act (P.L. 93-320, as amended) or the Colorado River Salinity Control Program / Environmental Quality Incentives Program. The latter establishes a policy of "no salt return whenever practicable" and requires a showing that prevention of salt discharge is not practicable before new saline discharges are allowed through NPDES permitting [45]. Several alternatives described in the DEIS do not appear to adhere to these policies. Even Alternative 4 allows salinity increases, provided they can be "remediated." DEIS at 2-139.

Response: The Colorado River Salinity Control Act is mentioned on page 3-110.

Comment: PAGE: G-15 CHANGE: NON-POINT SOURCE POLLUTION - [Pollution whose source is not specific in location. The source of the discharge is dispersed, not well defined, or constant.](STRIKEOUT) Non-point sources of pollution, as distinguished from "point sources" defined in Section 502(14) of the Clean Water Act of 1987, are diffuse in nature, difficult to assess, and result from land use activities in which contaminated runoff flows into surface water or percolates into ground water. Many factors, such as precipitation, soil type, slope, geology, vegetative cover, depth to groundwater, and distance to surface water can affect whether a land use will cause nonpoint source pollution. The site-specific nature of these factors, coupled with local economic and cultural considerations, are conducive to prevention and restoration activities which are best addressed and implemented through local initiatives and voluntary implementation by individual landowners. EXPLANATION: Definition revised to conform

to definition in Wyoming DEQ, Division of Water Quality's Nonpoint Source Management Plan with which BLM must comply under Executive Orders 12088 and 12372, and §§ 319(k) and 301(k) of the Clean Water Act of 1987.

Response: The definition is appropriate as given in the draft EIS.

Comment: The RMP DEIS also fails to discuss impacts to surface and ground waters from various other potential sources of degradation. Some examples include: septic tanks, septic fields, and sewage treatment lagoons; landfills (including historic dumping sites) and transfer stations; chemicals used for mosquito spraying in and around the PRA; junk yards and other maintenance facilities in or bordering BLM lands; and outdoor shooting ranges (sources of lead contamination). The Final EIS (and any revised or supplemental draft EIS) must disclose the potential impacts from these and other sources of ground and surface water degradation in the PRA.

Response: Many of these sources are not the responsibility of BLM and most frequently do not occur on BLM lands; therefore, they are out of the scope of this document. For those sites that are on BLM lands, some have associated documents, some do not. Because such sites are quickly created by anyone who wants to dump a load of garbage and are not recorded with BLM, it is difficult to keep track of their locations. There have been concerted efforts in the past to clean up known sites, but they are created at a greater rate than they are dealt with. The RMP is being assembled using the best available data.

Comment: The management direction "common to all alternatives" should consist of the full set of the direction needed to provide the basic essential protections for watersheds and water resources from all conceivable harms. This must include direction to prevent and remediate ground water contamination, direction to avoid or minimize of ground water drawdowns, direction to prevent surface water depletions, direction to avoid salinity increases in surface and ground waters, direction to protect waters from radioactive discharges (including non-point source run-off), and so on. None of these important water issues is addresed in the Executive Orders or State Water Quality Standards cited in the RMP DEIS direction. From this set of minimum essential direction the BLM can formulate other alternatives that use varying degrees of increased protections. The approach the BLM is pursuing in the RMP DEIS appears to be based on the idea that some alternatives should be allowed to impact ' ground and surface waters so long as the impacts do not violate the two EOs or water quality standards for surface waters, and so long as BLM has a "response" plan in place, for hazmat spills. This approach is fundamentally wrong.

Response: The complexity of land management, variety of agencies and agency responsibilities, the changing nature of technology, and the level of documentation in the RMP contraindicate the creation of such specific guidelines. Much of this suggestion is related to State of Wyoming responsibilities.

Comment: Prohibit the storage, use and transport of hazardous materials - in quantities exceeding 100 gallons or capable of contaminating more than one million gallons (3 acre-feet) of water, whichever is less - on lands overlying "high" sensitivity aquifers (red areas in Figure 3).

Response: BLM does not have regulatory authority in these areas and cannot mandate action on the part of the agencies that enforce the regulations.

Livestock Grazing

Response: This statement has been misinterpreted by the reviewer. BLM finds that the analysis is appropriate.

PAGE: 4-173, SECTION: 4.15.7, RECOMMENDED CHANGE: REVISE [Livestock grazing] (STRIKEOUT) Grazing by wildlife, wild horses and livestock has the potential to impact water quality

and watershed resources. Heavy utilization of forage in riparian areas or uplands can lead to a loss of vegetation, soil compaction, and bank instability, causing increased erosion, sedimentation, and higher loads of salt and nutrients, such as nitrate and phosphate, in streams. EXPLANATION: More biased and inaccurate text

Response: It is reasonable for the EIS to reveal potential impacts from grazing animals on water quality and watershed resources. BLM finds that the analysis is appropriate.

Comment: PAGE: 4-183 SECTION: 4.17.3 RECOMMENDED CHANGE: REVISE Placement of water development projects for livestock in certain areas could lead to a redistribution of livestock on crucial winter ranges and away from more sensitive riparian areas. [, resulting in the loss of sufficient forage needed to maintain wildlife herd numbers during winter.](STRIKEOUT)Water developments that are maintained throughout the year can be beneficial to wildlife where other water sources are limited. Properly distributed water developments can be used to facilitate rotational or other livestock grazing schemes to improve rangeland health and also provide better forage for wildlife. Well-designed water developments (reservoirs) and associated riparian vegetation create nesting, feeding, and brood-rearing habitat for waterfowl, greater sage-grouse, and other migratory birds. The development of water sources in dry regions would allow wildlife use to expand into habitats that previously were used only seasonally. Dispersion of wildlife to access water sources reduces potential impacts from predators; however, livestock use around water sources may [would](STRIKEOUT) also alter vegetative diversity found in these mesic areas, [potentially reducing habitat quality for a wide variety of wildlife species, including sage-grouse.](STRIKEOUT) EXPLANATION: Second half of statement untrue due to utilization levels and rangeland health management. The immediate area around water source is so small as not to have impact on “habitat quality for variety of species.” Also unlikely to alter vegetative diversity.

Response: The analysis has been rephrased in the final EIS.

Wildland Fire and Fuels

General Comment Responses: *No GCRs are associated with this category.*

Comments on Document/Suggested Changes

Comment: PAGE:2-142 SECTION: RECOMMENDED CHANGE: Add: Wildfire management would conform to air quality standards and objectives. EXPLANATION:

Response: This issue is dealt with in "Management Guidance Common to All Alternatives" Section 2.3.13.

Comment: PAGE: 4-174, SECTION: 4.15.7, RECOMMENDED CHANGE: ADD Wildfires will have impacts on watershed due to short term increase in water flows and related soil erosion.

Response: See the updated text in paragraph 6 on page 4-153. This section describes both the short- and long-term impacts of fire. Most of the vegetation within the planning area is part of a naturally mixed- or high-severity fire regime (i.e., fire severity of partial or total overstory removal). The impact analysis in the final EIS has been updated for clarity.

Fire Frequency

Comment: PAGE: 4-175, SECTION: 4.16.1, RECOMMENDED CHANGE: Correct fire history Local governments question assumption of no more than 2 fires a year.

Response: The current BLM Fire Management Plan for the area indicates an average of 4 fires per year from 1980 through 2003 (72 fires in 24 years). Data from 1970 to 1980 indicate 2.3 fires per year (23 fires in 10 years). Data from 2004 through 2007 show 2.3 fires per year (9 fires in 4 years). The total is 104 wildland fires in 38 years. This is an average of 2.7 fires per year.

Comment: PAGE:4.276 SECTION:4.16.1 RECOMMENDED CHANGE: CHECK The potential for wildland fires within the planning area to seriously damage sensitive resource values is considered to be low in areas proposed for WFU as well as in areas considered for appropriate management response. EXPLANATION: MSA identifies conifer stands at 98% morbidity, which would correlate to wind river Front.

Response: The Pinedale MSA contains no mention of 98% morbidity within conifer stands. There are stands that have bark beetle infestations and a particular tree species within an individual stand may approach this, but it is not field office–wide.

Comment: PAGE: 4-189 SECTION: 4.17.1 RECOMMENDED CHANGE: DELETE [Wildlife species have adapted to survive the pattern of fire frequency, season, size, severity, and uniformity that characterized their habitat in pre-settlement times. Historically, low-intensity fires created mosaics resulting in more variability in vegetation seral stage, species composition, vertical stratification, and improved herbaceous understory. If the fire frequency or severity increases or decreases from presettlement patterns, habitat for many species would decline. Animal-fire studies have shown a reorganization of animal communities in response to fire, with increases in some species and decreases in others (Smith 2000). In areas where fire exclusion has changed species composition and fuel arrays over large areas, subsequent fires without prior fuel modification are unlikely to restore pre-settlement vegetation and habitat. In the last 10,000 years, fire in North America ecosystems has not operated in isolation from other disturbances or has occurred independent of human influence (Smith 2000).](STRIKEOUT) EXPLANATION: Not an impact common to all

Response: Wildland fire is an impact common to all alternatives in this section.

Catastrophic Fire

Comment: PAGE: 4-153, RECOMMENDED CHANGE: ADD Catastrophic fires in forest stands with high mortality stands or on grasslands can destroy organic material in soil and greatly inhibit regeneration. There are also short-term erosion and water pollution impacts Wildfire can also cause mortality of wildlife and sensitive species and remove important habitat components. EXPLANATION: Not all wildland fires are beneficial.

Response: This section describes both the short- and long-term impacts of fire. Most of the vegetation within the planning area is part of a naturally mixed- or high-severity fire regime (i.e., fire severity of partial or total overstory removal). The impact analysis in the final EIS has been updated for clarity.

Comment: PAGE: 4-189 SECTION: 4.17.1 RECOMMENDED CHANGE: [Over the past several decades, human intervention in fire suppression has led to unnatural fuel-loading conditions that could allow wildfires to burn with greater intensity.](STRIKEOUT) Using fire as a habitat management tool in a sage-steppe ecosystem may have effects if improperly used such as converting desirable shrub and perennial grass stands to annual grasses or maintaining annual grass communities. EXPLANATION: Western history is replete with stories of widespread and catastrophic fires long before fire suppression policy.

Response: There is no good definition for “catastrophic” fire. Many large fires have occurred in natural settings within a historic range of variability. Human activity has also been directly responsible for some of the “catastrophic” large fires in the Upper Midwest around the turn of the century and in logging slash in some areas of Idaho in 1910 as well as the Tillamook burn(s) starting in the 1930s. I would suggest that some but not all of the vegetative types found in the Pinedale Field Office have been affected by fire suppression activities. Foremost among these is the sagebrush/grass ecosystem.

Off-highway Vehicles (OHV)

Comment: PAGE:4-177 SECTION:4.16.1 RECOMMENDED CHANGE: Add With fewer OHV users in back country fewer fires will be reported and there is an increased risk of wildfire spreading. EXPLANATION:

Response: In an area such as this, with low fire frequency, it is doubtful that OHV riders would ever be a significant source of fire reporting.

Comment: PAGE: 4-179 SECTION: 4.16.1 RECOMMENDED CHANGE: ADD Fewer OHV recreationists will hamper fire reporting and fire suppression. Limits on OHV use for emergencies and fire fighting will increase risk of wild fire spreading out of control.

Response: In an area such as this, with low fire frequency, it is doubtful that OHV riders would ever be a significant source of fire reporting. Mechanized equipment usage on wildland fires often cause more long-term environmental damage than the fire through INNS introduction, erosion, and creation of unauthorized roads and trails. The constraints in the draft RMP are appropriate for the values at risk.

Timber Harvest

Comment: PAGE: 4-179 SECTION: 4.16.1 RECOMMENDED CHANGE: EXPLANATION: Impacts not the same if less timber allowed.

Response: Alternative 4 now considers up to 200 acres of forest treatment per year with 1,600 CCF/800 thousand board feet (MBF) of forest product.

Habitat

Comment: PAGE: 4-181 SECTION: 4.17.3 RECOMMENDED CHANGE: ADD Impacts resulting from wildfire and prescriptive burns would change habitat, cause mortality, habitat loss, fragmentation, avoidance or displacement of animals from management areas, noise disturbance, and increased traffic during fire fighting. EXPLANATION: EIS needs to disclose that wildfire has similar or greater impacts.

Response: The text on pages 4-189-191 deals with these issues.

Local Coordination

Comment: PAGE:2-142 SECTION: RECOMMENDED CHANGE: Add the following: Coordinate wildfire management plans and implementation with local and state fire districts and with local governments. EXPLANATION: This important objective is entirely omitted. It is however crucial to wildfire management, especially since much of the planning area is private land.

Response: Although coordination with state and local fire authorities is implicit in this section, it is never directly spelled out. The final EIS has been updated to include this goal. Please note that the document refers to wildland fire management rather than wildfire. Wildland fire is any fire in the wildlands, while wildfire is only unwanted wildland fire.

Wildlife and Fish Habitat

General Comment Responses:

Comments:

- While grizzly bears are slated to be removed from the threatened list -- a controversial move -- their habitat would be decimated by wider drilling activities: when bears see an intrusion into their range, they simply avoid the area that would require their negotiating human presence, thus drastically reducing their range and their eventual population numbers.
- The grizzlies, as I understand it, have been delisted. I think that that language should be stricken, the entire paragraph. If there's a need for language about the grizzly, it should be paired down to pertinent information rather than just a wish list for the grizzly rather -- or similar to the T & E stuff.

Response: After delisting, grizzly bears are protected as a BLM sensitive species under BLM Manual 6840-Special Status Species Management. In addition, the ESA requires that the FWS, in cooperation with the states, monitor the species for a minimum of 5 years to assess each species' ability to sustain itself without the ESA's protective measures. If, within the designated monitoring period, threats to the species change or unforeseen events change the stability of the population, then the species may be relisted or the monitoring period extended (http://www.fws.gov/endangered/recovery/delisting.pdf).

Comments:

- PAGE: 2-147, RECOMMENDED CHANGE: Revise: Reevaluate merit and environmental impacts of elk feedgrounds. EXPLANATION:See Comment #143.
- PAGE: 2-148, RECOMMENDED CHANGE: [c. Surface occupancy would be prohibited on feedgrounds except authorized activities to maintain feedground facilities and manage wintering elk.] (strikeout) EXPLANATION: Condition not warranted nor supported by data.

Response: The feedgrounds are evaluated in the draft EIS and final EIS. Just because a particular alternative does not eliminate them does not mean that elimination was not considered.

Comments:

- PAGE: 2-147, RECOMMENDED CHANGE: j. To minimize fragmentation and human presence in winter ranges, access to big game crucial winter ranges outside producing gas fields would be limited to existing designated access routes. Exceptions could be allowed to provide reasonable access to private or state-owned lands and other interests in land or permits. EXPLANATION: See Comment #163.
- PAGE: 4-186 SECTION: 4.17.1 RECOMMENDED CHANGE: Elk have until now been able to find suitable undisturbed habitats away from human activity; however, continued development could lead to abandonment of historic ranges (in the last native winter foraging area on the Wyoming Range) (Johnson 1985). A study conducted by Hayden-Wing Associates (1990) found a similar response in the Graphite Hollow/Rock Creek Winter Range where elk moved 0.5 to 2.4 miles away from a well site but returned or moved only a short distance based on screening of project. Biologists now conclude that elk habituate to non-threatening activities.. EXPLANATION: Taylor 2005

Response: Phillips and Alldredge (2000) and Shively et al. (2005) demonstrated a 30% reduction in elk calf recruitment as a result of an activity as benign as simulated recreational hiking imposed during the calving season. Freddy et al. (1986) studied the impacts to wintering mule deer from people on foot and snowmobiles. Rowland et al. (2000 and 2005) provides a discussion of elk distribution in relation to roads, and Sawyer et al. (2007) discusses elk habitat selection in the Jack Morrow Hills of Wyoming and considers the impact of roads.

Comments:

- Where is mention of the critical wildlife corridors whose fragmentation would cause further depletion of the populations of major big game and other species? (See SDSBT comments Eagle Prospect, Figures 1 and 2). Where is there even a mention that the planning area lies within the Greater Yellowstone Ecosystem and that this draft plan can and will have an impact on the environment and economies of the entire Wyoming/Idaho/Montana tri-sate region?

- The data presently available conclusively demonstrate the health of the sage-grouse population and trends in quality of the available habitats in the Pinedale Resource Area have markedly declined over at least the last 10 years. The overall trend in number of sage-grouse counted in spring is down and the number of inactive leks has increased. The DEIS should have presented data on trends in numbers of active sage-grouse leks, counts of males on leks, and production data such as chicks per hen which would have allowed a thorough analysis for identifiable areas within the Resource Area. These data are available for the Pinedale Resource Area (WDGF files). Failure to present these data in the DEIS is a significant omission and underscores the unscientific and/or unprofessional analysis of the marked changes in sage-grouse abundance over the last 10 years in the Pinedale Resource Area. In the absence of presentation of these data, an adequate analysis of the direct and cumulative impacts of the four proposed alternatives is not possible, especially for the 'Intensively' and 'Minimally' Development Areas.

- There is a major wildlife (both deer and antelope) corridor and bottleneck on the Hoback Rim. Current Game and Fish maps show this but it is not recognized in the RMP Environmental Impact Statement. Alternative 4 actually designates this area as Controlled Surface Use leasing category, which allows surface occupancy. Aside from Trapper's Point, other major corridors do not seem to be addressed in this Alternative either.

Response: Updated migration corridor maps have been developed between BLM and the Wyoming Game and Fish Department (WGFD).

Comments:

- The BLM places undue reliance on the Holloran (2005) study regarding the potential impacts of natural gas development activities on sage-grouse. In discussing the Helloran study, and any potential conclusions derived therefrom, the BLM should specifically disclose the fact that BLM purposefully waived the seasonal and timing stipulations normally associated with sage-grouse leks and specifically allowed the operators to drill near an active lek during the strutting season in order to assess the potential impacts. The conclusion in the Holloran study that existing stipulations are not adequate therefore appears unfounded. Moreover, even prior to the release of the Holloran study, the BLM issued new policies increasing protections for sage-grouse. The new protections include new surface use restrictions, timing limitations, and L\W additional surveys prior to operations in sage-grouse habitat. See Wyoming Instruction Memorandum 2004-057 (August 16, 2004). These mitigation measures were eventually incorporated into the Pinedale Resource Management Plan ("RMP") through a maintenance action.

- Pg. 4-186, paragraph three, discusses the impacts of gas development on the PAPA to sagegrouse and specifically states that "Research has shown that sage-grouse will tolerate one well per section within 3 miles of a lek (Holloran 2005)". Holloran specifically states that his findings are premised on the assumption that any impact to sage-grouse is a negative response and a determination of what a grouse will not accept. Therefore, any impact resulted in a negative finding and NO impact was the only positive response. As mitigation measures are intended to reduce impacts, not necessarily eliminate impacts, this test was overly stringent. As can be seen from the graph, identified as Figure 6, attached to this document, average male lek attendance in the PAPA is increasing as it is outside the PAPA and else where in the State even though it is at a lower level on impacted vs. un-impacted leks. While this is perceived by Holloran to be negative we consider it positive as birds are being maintained within the developed area due to the implementation of the standard sage-grouse stipulations. Paragraph 4 states that "Sage-grouse could repopulate an area following energy development, but there is little evidence suggesting grouse would attain pre-development levels" but as can be seen in Figure 1, below, grouse are common in developed oil and gas fields in Wyoming. Generally, the data of sufficient quality does not exist by which to determine if pre-development numbers are attained. The decline that occurred in the late 1980's and early 1990's was range wide in scope and any comparison of current male lek attendance numbers with numbers seen prior to that decline are inappropriate and not relevant to a discussion of impacts of the development as, again, range wide the species has not achieved pre decline numbers. Also in paragraph 4 it states "Other studies conducted on greater sage-grouse indicate that noise could adversely affect the communication abilities of lekking males." Page 2-144 provides "c. Noise generating activities would be minimized through the application of BMPs such as high efficiency mufflers." The implementation of BMPs in reducing impacts must be acknowledged in the impacts analysis found in Chapter 4. Paragraph 5 reiterates the discussion of the lack of tolerance of males to development activities greater that 1 well per 699 acres, please see the discussion above, Holloran reaches this conclusion based on any impact to the bird, not the maintenance of the bird within the field area. It is further stated "Overall declines in male lek attendance approached 100% when the distance from leks to drilling rigs, producing wells and main haul roads decreased …" this observation was based on the purposeful impact of leks by BLM to determine the impact of unrestricted gas development on the sage-grouse. BLM PFO purposely impacted leks in the PAPA by excepting the standard stipulation, a copy of one of the APD authorizations is provided in Figure 3, below. Further, as illustrated in Figure 1, male lek attendance in the PAPA continues to increase in spite of impacts to individual leks as it does in a number of other oil and gas fields in the state. Paragraph 6 provides evidence that female sage-grouse have high fidelity to their natal nesting habitat; Kaiser 2006 found that this is not necessarily the case, stating "there was little, if any, natal nest site fidelity shown by yearlings", and "adult hens were willing to shift their breeding lek, despite substantial lek fidelity normally exhibited."

Response: Holloran's research was not the only energy-related study on the impacts to sage-grouse populations. Braun, C. E., O. O. Oedekoven, and C. L. Aldridge, 2002, Oil and gas development in western North America: effects on sagebrush steppe avifauna with particular emphasis on sage grouse, Transactions of the North American Wildlife and Natural Resources Conference 67:337-349; Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham, in press, Greater sage-grouse winter habitat selection and energy development, Journal of Wildlife Management; Kaiser, R. C., 2006, Recruitment by greater sage-grouse in association with natural gas development in western Wyoming, Thesis, University of Wyoming, Laramie, Wyoming; Lyon, A. G., and S. H. Anderson, 2003, Potential gas development impacts on sage-grouse nest initiation and movement, Wildlife Society Bulletin 31:486-491; Walker, B.L., D.E. Naugle, and K.E. Doherty, in press, Greater sage-grouse population response to energy development and habitat loss, Journal of Wildlife Management. Furthermore, allowing one well to be drilled by waiving the NSO does not change the fact that there are large-scale lek declines in the Jonah as

well as the Anticline gas developments. This trend is not only seen in the populations found in the Upper Green River Basin but also the Powder River Basin.

Comments:

- Mitigation measures (App. 3) and Best Management Practices (App. 5) are inadequate formalities at best. Mitigations that are non-binding, with no clear time frames and no guidelines for how funding or personnel staffing for implementation will be achieved are pointless. Phrases like "could be required," "are encouraged," "should be minimized by any reasonable measures," and "should be avoided" are dangerous subtleties which leave., avenues for environmental degradation wide open, and successful mitigation all but unnecessary for Operators to achieve. Instead, there need to be concrete plans laid for how mitigation will occur, funding will be derived, and how strict and heavy fines will be instated for non-compliance.

- We believe that across all of the alternatives, the draft RMP is lacking specific and quantifiable criteria for fluid mineral best management practices in reducing impacts to big game crucial winter range; is insufficient in describing the off-site or compensation mitigation process; and fails to set thresholds for impacts to wildlife. Such thresholds are critical for the appropriate management of pronghorn and should be set by the WGFD to include species-specific parameters below which mitigation measures will automatically be mandated. Measurable population parameters include minimum population size, minimum adult and juvenile survival rates, and minimum fawn:doe and buck:doe ratios.

- Impacts to wildlife species also cannot be adequately determined without greater information regarding locations of well, facility, and road sites. Impacts such as fragmentation and barriers to movement and migration can be effectively analyzed only when the actual location of well pads, facilities and roads are known. Impacts to big game species, particularly in crucial winter range, differ significantly depending on whether the development is concentrated in one area of the range or spread throughout. Likewise, impacts to sage grouse depend on this distribution of development. Finally, Appendix 3's list of performance-based standards describes measures intended to mitigate impacts to wildlife. What is missing, however, is any indication of where or when or if any of these measures would be employed. Without knowing how many and which measures will be used, it is impossible to use these performance-based standards as a way of identifying and comparing the environmental impacts associated with this RMP.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. Appendices 3 and 5 have been revised in the final EIS.

Comments:

- The black-footed ferret (Mustela nigripes) conservation measures and best management practices listed in the DEIS are not the same as those listed in the programmatic BA and corresponding Service concurrence letter dated January 10, 2006, and found at the Bureau's website http://www.bhn.gov/vvy/st/en/programs/Wildlife/blf-fenet.html. The Service suggests changing the conservation measures in the DEIS, if appropriate.

- Some conservation measures and effects determinations included in the draft BA were not consistent with the Bureau's Statewide Programmatic Species-Specific section 7 consultations (programmatic BAs and BOs) or Appendix 18 of the DEIS. The Service encourages the Bureau to

review the programmatic BAs and BOs and revise the draft BA and Appendix 18 of the DEIS, if appropriate.

Response: The conservation measures will be updated for the final EIS, the ROD and the BA.

Comments:

- Draft BA, Page 46, Lines 17-22 The draft BA states: "This list of potential conservation measures identified within this BA is meant to be a tool to (1) educate new biologists as to which onservation measures have been or may be used to minimize impacts to listed, proposed, or petitioned species in Wyoming; and (3) assist the PFO in developing mew conservation measures for Statewide Programmatic Biological Assessments for each T&E species that has the potential to occur in the planning area." The Service believes this paragraph was carried forward from earlier versions of lists of conservation measures which were previously not finalized in the form of completed programmatic BAs and BOs. Since the programmatic BAs and BOs for the majority of the listed species have now been completed and the Bureau has committed to implementing specific protective measures, the above paragraph, as written, no longer applies. The Service suggests striking this paragraph in its entirety or, at a minimum, modifying its meaning to reflect the current status of the Terms and Conditions of the completed programmatic BOs. Since the completion of the programmatic BAs and BOs, it is the Service's understanding that the conservation measures present in the statewide consultations are Bureau-committed measures which the Bureau shall implement according to the various relevant Bureau's State Office directive memoranda issued to the Bureau field offices across Wyoming.
- Draft BA, Page 45, Line 36-37 The draft BA states "if avoidance is not possible, informal consultation with the USFWS would be initiated." The Service believes that this statement may more appropriately read, "informal or formal consultation with the USFWS will be initiated for site-specifix projects which may affect listed species."
- The Bureau states: "To ensure compliance with mitigation measures presented in this BA and in project applications, BLM and/or a project proponent, in coordination with BLM, will assess potential impacts to threatened and endangered species during construction and/or implementation of those projects. These impacts will be assessed on a case-by-case basis during construction and/or implementation of those projects. Project-wide mitigation measures may be waived on a case-by-case basis by BLM if a thorough analysis determines that the resource for which the measure was developed will not be impacted." The Service believes that these impacts from potential projects should be assessed prior to project approval by the Bureau and section 7 requirements should be fulfilled at that time by the Bureau for all activities that the Bureau has determined "may affect" a listed species or its designated critical habitat. When the Federal agency proposing an action determines that a "may affect" situation exists, they must either initiate formal consultation or seek written concurrence from the Service that the action is "not likely to adversely affect" listed species. Also, the Service prefers the term "impact minimizing measures" instead of "mitigation measures." The Service does not "mitigate" for threatened and endangered species. Instead, the Service formally consults with action agencies that "may affect" listed species and determines whether those agencies' actions will jeopardize the continued existence of listed species, while identifying Terms and Conditions to minimize "take". We suggest removing the term "mitigation" for threatened and endangered species throughout the BA and DEIS where it occurs.

Response: The text of the BA has been changed.

Comments:

- PAGE: 3-116, SECTION: 3.17.1, RECOMMENDED CHANGE: Insert data regarding drought and effects of increased predators on antelope, mule deer, elk, and moose. EXPLANATION: While all of the game animal populations are up or stable, there is no recognition of the impacts of drought and predator numbers on game animals.
- As the RMP states, large game wildlife herds are increasing in population or are stable. This is an important indictor for the area as we seek the maximum natural gas development for the area. I hope the ROD will reflect this dynamic.
- Comment**:** BLM has failed to justify the need for large block NSO areas to protect wildlife habitat. According to Chapter 3, all population trends are stable or exceed population objectives for big game animals. Clearly, no new measures, particularly large blocks of NSO, are necessary to protect big game species since existing practices have ensured their health.

Response: The data in the table represents the population trends of the entire Herd Unit, which should not be confused with the local population effects. The impacts of the PAPA or the Jonah developments may not translate into the Herd Unit population trends immediately. Furthermore, just because a Herd Unit is stable does not mean the local population is stable. Recent data indicate that, in particular, mule deer populations are significantly below the population objective.

Comments:

- On winter ranges, mule deer are easily disturbed by snowmobile traffic and even nonmotorized visitors (Freddy et al. 1996). This can be a critical factor, because metabolic costs of locomotion in snow can be five times as great as normal locomotion costs for mule deer (Parker et al. 1984). Thus, due to the sensitivity of mule deer to disturbance on winter ranges and the crucial nature of winter range performance to maintaining healthy deer populations, mule deer winter ranges must be withdrawn from all road construction and development, particularly oil and gas development, which would increase the level of human disturbance on these winter ranges.
- Mule deer typically summer in montane forests and woodlands and use foothills areas for spring and fall transitional ranges, but typically winter in the low basins on BLM lands. Riparian areas are the primary summer range of mule deer (Compton 1974). The BLM should manage summer ranges for the benefit of mule deer populations.
- The DEIS also fails to account for the important of mule deer transitional range. One study found that seasonal migrations of mule deer in the Green River Basin took as long as 90 days to complete, which reflects the importance of transition ranges to this mule deer herd. Sawyer et al. 2005. Another study found that the Sublette mule deer herd is highly migratory and mule deer spend 5-6 months per year on transition ranges. Sawyer and Lindzey 2001. Although winter range is important to the survival of the herd, the importance of transitional range should not be ignored. This opinion is echoed in the DEIS itself by stating in reference to winter, summer and transitional range that "the loss or degradation of one will not be compensated for by the others, and the mule deer population will suffer in the long term" Pinedale RMP DEIS at 3-117. Although BLM recognizes the importance of transitional range, it does nothing to protect this important habitat.10 A study of big game species in the Green River Basin found that the most critical big game migration route was the Trapper's Point bottleneck, which has been reduced to an effective width of <0.8-km. Sawyer et al. 2005. Because this vital migration route has already been significantly reduced by development, special attention should be paid to keeping it intact as small changes in land use or habitat alterations could potentially sever established migration routes. While Alternative 3 provides 9,540 acres for the Trapper's Point Area of Critical Environmental Concern (ACEC), BLM's Preferred Alternative only allots 4,160 acres. Because

of the critical role of the Trapper's Point bottleneck in maintaining migratory populations of mule deer and pronghorn in the Pinedale planning area, the maximum area should be protected by ACED designation.

Response: Alternative 3 and all of the areas unavailable for leasing and NSO areas aim to effectively protect all big game habitats.

Comments:

- I think there are a few areas where your plan is lacking because of out-dated or old data. The sage grouse section may be the best example of that. Please have it peer reviewed.

- I don't know if I agree with the arguments being made about the sage grouse. I'd suggest you have more experts review it (peer review) before finalizing the RMP.

Response: BLM did not conduct any sage-grouse studies for the purpose of the RMP revision. Sage-grouse studies were conducted by gas companies and independent researchers.

Unique Comments:

Comments on Document/Suggested Changes

Comment: PAGE: 4-182 SECTION: 4.17.3 RECOMMENDED CHANGE: REVISE Habitat [loss,](STRIKEOUT) degradation, [fragmentation, and species displacement](STRIKEOUT) from approved linear features (e.g., power lines, roads, pipelines) and other permitted facilities would occur. Linear ROW features could [fragment habitat and](STRIKEOUT) disturb vegetation, increase erosion, and degrade the quality of riparian areas, watersheds, and habitats if features cannot be avoided or mitigated. Most impacts of short duration will limited effect. Impacts from buried pipeline construction could last for 30–40 years or more, depending on the time required for full reclamation of pre-disturbance vegetation, including sagebrush. EXPLANATION: Overstates impacts by huge margin. There may be habitat degradation but there may also be improvements, i.e. conversion from brush to palatable forage or improved sage brush stands. Power lines, pipelines do not "fragment habitat." Assumptions omit identified benefits entirely making this a one-sided discussion and "chicken little."

Response: The impact analysis is appropriate as stated in the draft EIS.

Comment: We find the current federal and state management of our wildlife resources to be reactive, with no clear plans to maintain, improve or restore habitats so vital to the future of our wildlife populations. Accordingly, we insist that the following corrective actions be considered and implemented: 7. Exceptions should not be based on industry desires, but on biological data and proceed when deemed acceptable by scientific proof and review.

Response: Please see Appendix 8. These factors are taken into consideration when evaluating whether an exception should be granted or denied.

Comment: PAGE: G-22 - G-23 CHANGE: [SURFACE (HUMAN) DISRUPTIVE ACTIVITY – The physical presence sounds and movement of people and their activities that are likely to cause displacement of or excessive stress to wildlife during critical life stages (breeding, nesting, birthing) or during periods of severe winter weather conditions. Examples of disruptive activities include noise, traffic, or human presence regardless of the purpose of the activity. Stipulations to mitigate Disruptive Activities can be absolute or timingbased.](STRIKEOUT) EXPLANATION: Restrictions on lesser, non-ground disturbing impacts identified in the definition of disruptive activity regulate wildlife population,

not habitat. Under the Federal Land Policy and Management Act (FLPMA), BLM is only charged with the management of fish and wildlife habitat, and the Wyoming Game and Fish Department (WGFD) has been delegated the authority to manage resident fish and wildlife resources in the State. 43 U.S.C. §§ 1701(a)(8), 1732(b). BLM lacks authority to regulate many of the human activities. ACTIVITIES DISRUPTIVE TO WILDLIFE definition added to replace SURFACE (HUMAN) DISRUPTIVE ACTIVITY based on R. Taylor's report. See above

Response: The definition is appropriate as given in the draft EIS.

Comment: Chapter 4 Page 192 1st paragraph Commentor WGFD The RMP needs to consider our Comprehensive Wildlife Conservation Strategies as directed by Instruction Memorandum No. 2006-114.

Response: BLM complies with state and national policy.

Comment: Impacts to wildlife are not quantified. Will WDFD herd unit objectives be met? There is a lot of dancing around herd unit objectives in this section. While all alternatives predict gloom and doom for our wildlife, there is the potential to require best management (not just mention it as a potential if "practicable"), slow the pace of development, and delay further leasing until existing fields have been reclaimed. This would be the goal of a conservation alternative. The proof of the lack of such is in this impacts section.

Response: We acknowledge in the impacts analysis that there are impacts to the animals from these stresses, but we cannot determine at this time what the population impacts will be.

Comment: I have worked outdoors on federal lands during the last decade in Oregon, Washington, California, and Arizona, and have backpacked in the upper Green River Basin's Wind River Range. In my years of exploration, I find that the wild and pristine places are too few and far between. In addition, there are patches of relatively unaltered lands scattered about the public land system. For someone who has field surveyed many areas altered by past clear cuts, historic mining, and other natural resource development activities, these small pockets, while not pristine, are also important for their wildlife and ecological values. Please consider these values when deciding on your proposed action.

Response: Some of these small pocket areas are being considered ACECs for protection as SMAs, wilderness study areas and Wild and Scenic Rivers. Information about these protections can be found on pages 4-212 through 232

Comment: Commit to areas where preservation should be the dominate goal: migration corridors, critical winter ranges, buffer zones and edges of mesas! Honestly disclose habitat loss and enforce guidelines of rehabilitation to include SAGE, and slow drilling down until rehab is completed.

Response: Protection will be afforded in the Unavailable Areas in addition to the ROW exclusion and avoidance areas found on Map 2-32.

Comment: The 1.2 million-acre Upper Green River Valley is the largest expanse of publicly owned winter wildlife habitat in Greater Yellowstone. The environmental impact of the project as proposed goes FAR beyond the actual footprint of the gas wells themselves. It would include roads, pipelines and transmission lines, harm crucial wildlife habitat, and could pollute the fisheries of the Green and New Fork rivers.

Response: Please see Cumulative Impacts to Wildlife and Fish Habitat pages 4-254 through 4-256.

Comment: The following objectives are necessary to propagate Sublette County wildlife populations as we have known them in the recent past. They include the following: 4. Reclamation of our wildlife and human habitats should become priority items in the federal and state government agendas.

Response: Reclamation plans are developed at the project-specific EIS level.

Comment: Page: 2-148, Recommended Change: Delete and revise all of text for unavailable areas. Withdrawn [Unavailable] (strikeout) Areas Subject to a secretarial withdrawal, the withdrawn areas will be managed as follows: a. Consistent with lease terms and other legal rights, management actions on existing leases within the withdrawal [unavailable areas] (strikeout) would be designed to protect important habitats [by excluding surface occupancy and/or disturbance to] (strikeout) the extent this restriction does not violate the leaseholder's/operator's lease rights. [Management actions/projects designed to maintain or improve wildlife habitat would be excluded from this restriction.] (strikeout) Other permitted uses may continue. Explanation: Surface use and disturbance can be mitigated. The blanket assumption that all wildlife are harmed by surface use or human activities is false.

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Comment: Page: 3-100-101, Section: 3.13.2, Recommended Change: Delete the entire Section of Other Special Status Species identified by The Nature Conservancy or listed in Wyoming Natural Diversity Database.

Explanation: The BLM manual provide for sensitive species management based upon state lists. DM 6840 Special Status Species (1-17-2001). Special status species are "These are species which are proposed for listing, officially listed as threatened or endangered, or are candidates for listing as threatened or endangered under the provisions of the Endangered Species Act (ESA); those listed by a State in a category such as threatened or endangered implying potential endangerment or extinction; and those designated by each State Director as sensitive." DM 6840.01. Sensitive species do not include those on The Nature Conservancy or University Wyoming list of native species. Nor does the University of Wyoming describe these species as "imperiled." Thus these are not special status species and do not qualify for special status management. The Nature Conservancy is a private nonprofit without any legal standing to identify special status species. BLM guidelines for special status species do not provide for recognition of species identified by private groups. The manual does encourage BLM to develop cooperative partnerships and identified The Nature Conservancy as on such private sector group. DM 6840.22C.3. Local governments are also identified as a separate group to be partners with BLM. Using The Nature Conservancy data base and failing to develop any partnership with other private sector groups such as the Wyoming Stockgrowers' is just plain biased. The RMP lacks any data that these species are "locally or regionally rare or imperiled."

Response: The State of Wyoming sensitive species lists are maintained by the Wyoming Natural Diversity Database, a coordinated effort of the University of Wyoming and the Nature Conservancy. The species described in Chapter 3 are all considered imperiled within Wyoming. These species are not provided any special management in the Chapter 2 alternatives of the EIS; however, it is appropriate for BLM to acknowledge their possible presence in the planning area, which is what Chapter 3 does. BLM is unaware of any sensitive species lists maintained by the Wyoming Stockgrowers or any other private sector organization.

Sage Grouse

Comment: Page A5-2, "Avoidance of surface disturbing and disruptive activities in suitable sage-grouse nesting and early brood-rearing habitat within 2 miles of an occupied lek, or in identified sage-grouse nesting and early brood-rearing habitat outside the 2-mile buffer from March 15 through July 15."

Comment: There appears to be no limit on regulating surface disturbance beyond the 2-mile buffer and arguably there is no basis for extending the 2-mile buffer. The current sage-grouse stipulations (1/4 mile NSO and 2-mile timing restriction) is adequate to maintain the species.

Response: The intent of the sage-grouse nesting restriction is to protect sage-grouse nesting habitat while the birds are actively nesting. The 2-mile radius is based on studies that indicate most of the nesting occurs within this zone. The studies also acknowledge that a percentage of the nesting occurs in areas more than 2 miles from a lek. This BMP provides for site-specific COAs to be applied when a project is proposed during the nesting period in areas outside the 2-mile radius when onsite inventory determines active nesting or evidence of past nesting.

Comment: BLM Failed to Utilize Available Scientific Information. BLM itself has designated the Greater sage grouse as a "sensitive" species.12 Pinedale RMP DEIS at 3-123. In doing so, the agency made a commitment to use "all methods and procedures which are necessary to improve the condition of special status species and their habitats to a point where their special status recognition is no longer warranted." BLM Manual 6840 at .01. Pursuant to BLM policy, "[l]and use plans shall be sufficiently detailed to identify and resolve significant land use conflicts with special status species without deferring conflict resolution to implementation-level planning." Id. at .21J. The Preferred Alternative fails to meet these commitments.

The Preferred Alternative in the DEIS opens nearly all significant sage grouse habitat to new leasing. Pinedale RMP DEIS, Maps 2-9 and 2-36. Moreover, the mitigation measures imposed on oil and gas development discussed for the Preferred Alternative in the DEIS are inadequate to prevent the downward trend of sage grouse populations in the planning area.13 BLM itself admits that the Preferred Alternative would subject sagebrush-obligate species to island effects, which could limit genetic diversity and population distributions. Furthermore, as discussed herein, BLM's proposed mitigation of applying a 2-mile buffer to leks in "Minimally Developed Areas" and, essentially, no buffer in "Intensively Developed Fields" will inadequately protect sage grouse leks across the planning area.

The DEIS simply fails to make use of available scientific data that would aid BLM in evaluating, anticipating, and preventing impacts to sage grouse. Scientific data has shown that even a minimal level of development within 3-5 km of a sage grouse lek negatively influences breeding activity. In fact, recent information from a doctorate dissertation on the impacts of oil and gas development to Greater sage grouse in the Pinedale Anticline revealed that, as development increased, lek activity declined up to 100%. Holloran (2005). Based on these findings, both Holloran (2005) and Connelly et al. (2000) recommend implementing at least a 5 km buffer around active sage grouse leks.

Despite these recommendations, a '-mile NSO buffer around known sage grouse leks remains BLM's mitigation measure of choice in Wyoming. NWF and WWF do not believe that this buffer is adequate to conserve Greater sage grouse and their habitat. The United States Fish and Wildlife Service repeatedly has stated that this ¼ -mile buffer should not be considered as appropriate mitigation for sage grouse.

Yet, BLM apparently will require no functional buffer around active sage grouse leks in "Intensively Developed Fields" within the Pinedale Resource Area. Instead, the only "actions" proposed to achieve the objective of ensuring "long-term species sustainability" and "functioning habitats" (Pinedale RMP DEIS at 2-143) are to "implement mitigation to minimize direct, indirect, and cumulative impacts of surface disturbing activities on greater sage grouse and to design and implement surface disturbing activities to minimize impacts on greater sage grouse habitats to the extent practicable." Pinedale RMP DEIS at 2-143. This "mitigation" to "minimize impacts" is too vague to meet the requirements of NEPA and inadequate to prevent unacceptable impacts to sage grouse. By choosing to implement no meaningful

mitigation in "Intensive Developed Fields," BLM essentially is writing-off breeding populations in these areas.

Response: As established in the 1988 Pinedale RMP, the entire planning area is open to oil and gas leasing, with the exception of the Wilderness Study Areas. The areas unavailable for leasing have been revised in the final EIS. The proposed plan does not "open" areas to new leasing; rather, it makes 435,000 acres that were available for leasing under the 1988 RMP, unavailable to new leasing under the RMP revision. BLM is committed to conservation of sage-grouse and its habitat.

BLM has reviewed the available scientific literature regarding sage-grouse and has incorporated protective measures for sage-grouse habitats to the extent possible. BLM has legal commitments to holders of valid, existing oil and gas leases. It is not possible to establish large, undeveloped buffers around sage-grouse leks in areas where a number of operators hold valid, existing oil and gas leases.

It is not possible, with current technology and knowledge, to maintain functioning sage-grouse habitats on a meaningful scale in an intensively developed gas field. BLM must honor the lease rights of holders of existing valid oil and gas leases. The Proposed Plan attempts to provide, on a landscape scale, undisturbed habitats in the Unavailable for Leasing areas to maintain viable populations in the planning area during the period that the Intensive Fields are being developed and produced. Lek surveys and other monitoring suggest that young sage-grouse are dispersing from the fields and forming new leks in undeveloped areas. The Proposed Plan is intended to maintain these undeveloped areas as functioning sage-grouse habitats.

Comment: Road development can lead to lek abandonment (e.g., Braun 1986). In western Wyoming, Lyon (2000) found that for sage grouse leks within 3 km of oil and gas developments, grouse hens successful at raising their broods selected habitats farther from roads than unsuccessful hens. This finding indicates that habitats near roads experience reduced brood survivorship. Thus, we seek a moratorium on all road-building within 3 miles of a lek site.

Response: Page 2-144 states that vehicular activity would be limited to existing roads and trails, and transportation planning is required within 5 years of ROD, page 2-135.

Comment: The following information is provided for your use in the evaluation of proposed actions and their potential effects to the sage-grouse. The Service has determined that the greater sage-grouse is unwarranted for listing at this time. However, the Service continues to have concerns regarding sage-grouse population status, trends and threats, as well as concerns for other sagebrush obligates. Greater sage-grouse are dependent on sagebrush habitats year-round. Habitat loss and degradation, as well as loss of population connectivity have been identified as important factors contributing to the decline of greater sage-grouse populations rangewide (Braun 1998, Wisdom et al. 2002). Therefore, any activities that result in loss or degradation of sagebrush habitats that are important to this species should be closely evaluated for their impacts to sage-grouse. Around important breeding habitat (leks, nesting or brood rearing habitat), the Service recommends no project-related disturbance from March 1 through June 30, annually. Minimization of disturbance during lek activity, nesting, and brood rearing is critical to sage-grouse persistence within these areas. Likewise, if important winter habitats are present, the Service recommends no project-related disturbance from November 15 through March 14.

We recommend you contact the Wyoming Game and Fish Department (WGF'D) to identify important greater sage-grouse habitats within the project area, and appropriate mitigative measures to minimize potential impacts in the RMP planning area. The Service recommends surveys and mapping of important greater sage-grouse habitats where local information is not available. The results of these surveys should be used in project planning, to minimize potential impacts to this species. No project activities that may exacerbate habitat loss or degradation should be permitted in important habitats.

In Wyoming, information suggests that greater sage-grouse populations are negatively affected by energy development activities, especially those that degrade important sagebrush habitat, even when mitigative measures are implemented (Braun 1998, Lyon 2000, Naugle et al. 2006). Greater sage-grouse populations can repopulate areas developed for resource extraction after habitat reclamation for the species (Braun 1987). However, there is no evidence that populations attain their previous levels and reestablishment of sage-grouse in a reclaimed area may take 20 to 30 years, or longer (Braun 1998). Recent information from a doctoral dissertation on the impacts of oil and gas development to greater sage-grouse in the Pinedale. Anticline found that as development increased, lek activity declined up to 100 percent (Holloran 2005). Therefore, the authorized activities under the RMP should be carefully evaluated for long-term and cumulative effects on the greater sage-grouse, since reclamation may not restore populations to pre-activity levels. The Bureau should ensure activities authorized under the Pinedale RMP do not exacerbate greater sage-grouse declines on either a local or range-wide level.

In 2000, the U.S. Forest Service, the Bureau, and the Service signed a Memorandum of Understanding (MOU) with the Western Association of Fish and Wildlife Agencies (WAFWA) to conserve the greater sage-grouse and its habitat. This MOU outlined the participation of Federal and State wildlife agencies, including the WGFD, in greater sage-grouse conservation, and these commitments should be considered in project planning in sage-grouse habitat. Additionally, unless site-specific information is available, greater sage-grouse habitat should be managed following the guidelines by Connelly et al. 2000 (also known as the WAFWA guidelines). The WAFWA guidelines state that energy-related facilities should be located greater than 2 miles from active leks unless the habitat is mapped.

Response: BLM is working with WGFD on identifying and mapping greater sage-grouse habitats within the planning area. BLM will comply with the MOU with the Western Association of Fish and Wildlife Agencies (WAFWA) to conserve the greater sage-grouse and its habitat.

Comment: Page 2-70 of the Draft RMP states that vehicular activities in suitable greater sage-grouse nesting, early brood rearing, and winter concentration areas would be limited to existing roads and trails during dates established for sage-grouse activity. The BLM needs to better define the phrase "existing roads and trails." Does the phrase pertain to roads and trails in existence as of the date the RMP is adopted, or roads and trails in existence as of the date the seasonal stipulation takes effect each year? If the prohibition relates to roads and trails in existence when the RMP is released, the BLM has effectively eliminated ROWs across significant portions of the planning area. Further, the statement on page 2-71 that states "no seasonal restrictions would be applied to development in greater sage-grouse lekking, nesting, early brood rearing, or winter habitats," appears to conflict with a statement on page 2-70 indicating that seasonal stipulations would be applied to roads. The BLM should resolve this inconsistency in the Final EIS.

Response: These definitions are explained in Chapter 3, page 3-89 and do not just apply to recreational activities. This designation is applied to prevent vehicle use cross-country during the sage-grouse nesting and brood rearing season. The statement on page 2-70 intends to protect important sage-grouse habitats to the extent possible when developing access roads to new wells.

Comment: Management of sagebrush habitats to benefit sage-grouse is not considered.

Response: The reasoning behind the areas unavailable for leasing and the NSO areas is to provide intact sagebrush habitats for sage-grouse and other sagebrush obligates.

Comment: Further, most of the areas used by sage-grouse in severe winters should be included in ACECS.

Response: These areas are currently being delineated by BLM and WGFD. The ACEC designation does not prohibit development in areas that are already leased or under production. BLM felt that making areas unavailable for leasing or at minimum designating NSO areas would provide more protection than the ACEC designation.

Comment: We find the current federal and state management of our wildlife resources to be reactive, with no clear plans to maintain, improve or restore habitats so vital to the future of our wildlife populations. Accordingly, we insist that the following corrective actions be considered and implemented: 3. Sage grouse habitat requirements should be placed above. all conflicting uses. These birds are sagebrush obligates and are most surely headed for listing under the Endangered Species Act. If state and federal agencies could manage sage grouse populations effectively, the mule deer and pronghorn antelope populations would thrive.

Response: BLM will comply with the WAFWA MOU to conserve the greater sage-grouse and its habitat.

Comment: The literature cited in the DEIS on sage-grouse is not adequate nor current as Braun et al. (2002) is not cited on the impacts of oil and gas activities on sage-grouse, Rowland (2004) is not cited on effects of habitat management practices, Schroeder et al. (2004) is not cited on overall distribution of sage-grouse and sagebrush habitats, Connelly et al. (2004) on overall status of sage-grouse is not cited, and the multiple peer-reviewed publications of M. J. Holloran outside of his Thesis (1999) and Dissertation (2005)are not cited.

Response: Updates to the sage-grouse information in Chapter 3 have been made in the final EIS.

Comment: Overall, the DEIS fails to take a “hard look” at all of the direct, indirect, and cumulative environmental consequences of the development that will result from the preferred Alternative. The DEIS does not meet the conditions of professional integrity concerning sage-grouse issues as required by the National Environmental Policy Act.

Response: The impact analysis has been enhanced in the final EIS

Comment: All of the Alternatives will lead to further declines in numbers of Greater sage-grouse (36 leks are already inactive) (Map 2-28) and will lead to further extirpation of local populations of this BLM ‘Sensitive’ species.

Response: The impact analysis acknowledges that there will be impacts to sage-grouse.

Comment: Many areas proposed for gas production in the western United , States, including the Pinedale Resource Area, have been among the most productive for sagebrush-dependent wildlife, especially sage-grouse. Thus, increased development of energy resources in sagebrush steppe habitats has the potential toy and has negatively affected sage-grouse. The Draft EIS for the Pinedale RMP should recognize and analyze this fact to a much greater extent to create a land use„ plan that will be useful for decision-making targeted at protecting and maintaining-populations of greater sage-grouse and their habitats.

Response: The impact analysis acknowledges that there will be impacts to sage-grouse.

Comment: There is substantial recent information available about sage-grouse in southwest Wyoming (Holloran 1999, 2005, and resulting peer-reviewed publications; Lyon 2000). These data are only lightly covered in the DEIS.

Response: The impact analysis in the final EIS has been updated to include more recent information.

Comment: The available data that have been mapped in the DEIS are those on location of leks with a general overlay of brood and suspected nesting and brood-rearing use areas based on 2-3 mile concentric circles from known lek sites. However, there is solid knowledge (Lyon 2000, Holloran 2005) about sage-grouse habitat use outside of the lek locations in the Pinedale RMP area. These data are sufficiently precise for meaningful use, especially for spring, nesting, and brood rearing habitat.

Response: BLM and WGFD are in the process of collecting sage-grouse seasonal habitat use information on a landscape scale throughout the planning area.

Comment: The most important areas are those used in winter, for nesting, and for brood use. Emphasis has been placed on breeding areas (lek locations) as these sites are relatively easy to locate. However, number of active leks is dependent on winter survival and recruitment of yearlings produced in the previous year. Recruitment of yearlings is driven by nest success. Thus the overall quality of all components of sage-grouse habitat is key to maintaining populations over time (Connelly et al. 2000). Focus on breeding areas tends to ignore the other important components of sage-grouse habitats that are probably even more important to sustaining overall distribution and population size.

Response: The goals and objectives of this RMP are to maintain functionality and sustainability of habitats for all of the sage-grouse's life stages. At this time we do not have landscape scale habitat use information throughout the Upper Green River Basin so the geographic information systems (GIS) analysis created for the maps in Volume 2 were based on the 2-mile sage-grouse nesting buffer from the lek.

Comment: Winter-Maps showing the location of sage-grouse winter use areas in the Pinedale Resource Area are not shown in the 1DEIS. Focus should immediately be placed on locating and mapping sage-grouse winter-use areas throughout the RMP area. This should have the highest priority, as over winter survival is critical to population maintenance (Beck 1977, Zablan et al. 2003). Without over winter' survival, all other needs of sage-grouse become extraneous. Detailed maps should e prepared for both "average" or "normal" winters and severe winters which happen every 7-10 years.

Response: BLM and WGFD are currently creating these maps, and the decisions will be updated to protect sage-grouse winter concentration areas.

Comment: Once these winter use areas are located and mapped; they should be described using standard measures for live sagebrush canopy cover, height, etc. following the approach of Connelly et al. (2000). Once identified, these areas must receive special attention (for example, designation as "Areas of Critical Environmental Concern") to reduce or prevent disturbance during winter, wild fire, and management activities that make them less useful to sage-grouse. Special attention should be given to any disturbance that reduces amount of live sagebrush, leaf surface, canopy cover, and height.

Response: The ACEC designation does not prohibit development in areas that are already leased or under production. However, these areas will receive special attention when outlining habitat management goals (especially if surface disturbing actions are proposed) to prevent actions that would remove these habitats from the landscape.

Comment: The BLM has the ability to readily identify sage-grouse winter-use areas following these scientific papers and should rapidly do so before identifying zones for Intensively Developed Fields, Minimally developed Areas, Large Block NSO Areas, and Unavailable Areas (pages2-143-146).

Response: BLM and WGFD are currently creating these maps and the decisions will be updated to protect sage-grouse winter concentration areas.

Comment: 2. Leks-The available data on leks in the Pinedale Resource Area (not precisely identified in the DEIS) are quite robust but it is likely that not all active lek sites (116) have been located and the status (active, inactive [36? Map 2-28], < 2 years, > 2years) of many sites mapped is poorly known. Further, there are gaps (some leks have not been counted every year) in the count data, and the number of counts/lek in a given year obviously varies. The available long-term trend in numbers of cocks has declined as reported in the DEIS. Since active sage-grouse leks are relatively easy to locate during late March and April, standard surveys of all areas within the Pinedale Resource Area should be conducted in April 2008 and continuing at 3-year intervals. All known lek sites should be checked for activity in spring 2007. Those classified as active should be counted (number of cocks) 3-4 times each spring at 7-10 day intervals starting in late March-early April, depending upon weather conditions, and continuing into early May every year. Those classified as inactive should be checked in late April early May every 2-3 years to ascertain any change in status. UTM (or GIS) coordinates for all lek sites should be taken and plotted on base maps.

Response: BLM and WGFD are currently using the methodology you have stated in this comment.

Comment: 3. Nesting-Adequate recent data on areas used for sage-grouse nesting in the Pinedale Resource Area does exist (but are not presented in the DEIS outside of general 2-3 mile concentric circles around leks) in specific areas (Lyon 2000, Holloran 2005) Because sage-grouse have been shown to nest at a variety of distances from active leks and use a variety of microsites for nest placement, it is difficult to identify all nesting areas. Thus, the Connelly et al. (2000) Guidelines should be followed to offer some protection to habitats useful for nesting at distances up to 3-4 miles from active leks. Since most actual nesting occurs within this distance (Braun et al. 1977, Hausleitner 2003) (with some nests at much greater distances, Lyon 2000), it is most reasonable to depict nesting habitat as all sagebrush areas with > 10% live canopy cover of sagebrush (primarily A. tridentata vaseyanq,, A. t. wyomingensis, A. tripartita, A. nova, and A. cana depending upon location) antra healthy understory of native grasses and forbs that are within this distance from c, leks. Since active lek sites can be located, identifying concentric areas within a 4-mile radius (Hausleitner 2003) around each lek site will include most nesting sites and is presently the only reasonable method to map potential nesting areas.

Response: BLM and WGFD are in the process of collecting sage-grouse seasonal habitat use and understory sage canopy structure to better protect nesting habitats beyond the 2-mile radius marker.

Comment: 4. Brood-rearing -Broods, upon hatching, use areas close to the locations of successful nests and progressively move towards moist areas upon desiccation of vegetation in the uplands. Review of the available data (in the DEIS) suggests only general knowledge exists of where broods have been observed despite the work of Lyon (2000) and Holloran (2005). Brood data appear to not have been mapped in relation to known sources of water (at ground level) or at riparian sites along streams, springs, etc. This should be done so that additional management consideration can be given to these areas. Management that should be in place includes movement of livestock to avoid degradation of plant communities in moist sites and riparian areas, and fencing to allow livestock access to water only in sites where erosion and plant community degradation would not be expected or could be controlled.

Response: These efforts are being conducted in areas beyond the Lyon (2000) and Holloran (2005) study sites, Much of the riparian habitats mentioned occur within private land ownership. Watershed function, specifically stream and riparian habitats, are managed by all disciplines. All degradation issues whether from livestock or excess surface waters are mitigated to achieve watershed functionality.

Comment: Early brood survival is believed to be a problem throughout Wyoming (Draft Wyoming Greater Sage Grouse Conservation Plan 2002). Early brood survival is most affected by insect and succulent forb availability within secure (good hiding cover provided by grasses and forbs) habitats

(Connelly et al. 2000). Late brood rearing habitat is primarily in close proximity (< 1 mile) of sites with moisture and succulent forbs adjacent to escape cover provided by live sagebrush (Connelly et al. 2000). The Pinedale RMP DEIS should identify all potential brood-use areas or provide a mechanism for identifying them and make provision for protecting them because of their crucial role in the sage-grouse life cycle. Brood-use areas are closely tied to moisture (wet seeps, springs, riparian areas, water developments for livestock, etc.) which supports green forage (primarily forbs). These areas can be readily located and can be easily mapped. The Pinedale DEIS RMP should present a plan for obtaining maps that depict areas useful to sage-grouse broods.

Response: BLM and WGFD are currently creating these maps, and the decisions will be updated to protect sage-grouse brood-rearing areas.

Comment: In addition to the already substantial oil and gas development impacts, there are the ! additive effects of livestock grazing, power line and road placement, ranch building; placement, and past management treatments of sagebrush steppe areas to improve forage for livestock. All of these factors (and many more) have cumulative effects 2-on ecosystem health and trends in numbers of all animals that are dependent upon the sagebrush steppe. Teasing apart the specific impacts is not possible without detailed analysis of existing data followed by replicated studies. What is clear is that continuing practices presently in place or those proposed (large increases in number of wells and associated infrastructure) will not improve conditions for or knowledge about local populations of sage-grouse. They will only lead to continued decline in health of the sagebrush habitat and in the distribution (the area of useful habitat is markedly decreasing) and abundance of sage-grouse. The Pinedale RMP DEIS should acknowledge these conditions and facts, analyze their consequences in view of the proposed management, and institute actions to prevent negative impacts to sage-grouse.

Response: Many of the factors mentioned are currently being researched and will have implications to future management strategies. The purpose of adaptive management is to be able to apply current research immediately.

Comment: Long-term monitoring efforts (20-30 years at the minimum and most likely through the life of the gas and oil development, i.e., 50-60 + years) and research studies to tease apart the specific impacts of energy development and other multiple use activities are critically needed in the Pinedale Resource Area. These efforts should focus on public lands (and include immediately adjacent private and State lands) and be funded by Federal land management agencies, the oil and gas industry, and the livestock industry. Monitoring is briefly mentioned (Appendix 11) but no mention is made of what procedures will be followed if sage-grouse populations continue to decline.

Response: The efforts mentioned are current and ongoing. BLM will apply the best available science to manage sage-grouse habitats.

Comment: Scientific study has not identified a minimum viable population size or specific habitat size requirement for any population of sage-grouse. Further, habitat quality varies greatly depending upon soil factors, aspect, elevation, moisture, temperatures, management prescriptions, past and present uses, etc. Thus, there is no one definition or description of habitat quality that fits all situations as it is known that some sage-grouse populations persist in extremely degraded and marginal appearing habitats. It is also hypothesized that such populations are at great risk of extirpation as populations in similar habitat conditions have completely disappeared. Therefore, because of the difficulties in determining minimum viable population size and defining key habitat parameters for sage-grouse, it is imperative that a conservative approach is taken towards management of activities that could compromise sage-grouse habitat and fragment local populations. A reasonable conservative approach would be to adopt the Connelly et al. (2000) Guidelines in terms of distances around active leks for no surface occupancy,

residual cover to encourage nest success, etc. These Guidelines are based on the best science available at that time (2000). Recent publications from northwest Colorado (Hausleitner 2003) and the Pinedale area in Wyoming (Holloran 2005) have verified and improved the state of the available knowledge. The Guidelines and the recent publications cited are based on data and are peer-reviewed unlike most of the material presented in the Pinedale RMP DEIS.

Response: A conservation approach is being taken in the areas unavailable for leasing, as well as the NSO areas proposed. Additional management strategies will be developed if other uses conflict and sage-grouse continue to decline.

Comment: Problems with defining minimum viable population size or describing habitat quality are compounded with the addition of consideration of the effects of predation. Highways, roads, and power lines, for example, degrade habitat quality by increasing fragmentation, noise, and dust while attracting generalist predators and making search (by predators) of more linear areas and smaller habitat patches easier. Further, data on number and type of predators prior to apparent changes in habitat quality are not available nor are past or present predation rates in designed studies with treatments and controls. In general, predation events on birds are believed (reviewed by Cote and Sutherland 1997) to be affected by habitat quality no matter how it is defined. It is logical that prey animals are more secure in undisturbed habitats that have low fragmentation and better shrub structure coupled with a diverse understory of grasses and forbs. Adding structures such as--buildings, power lines, fences, and creating smaller, less diverse patches of habitats within the sagebrush steppe intuitively benefits potential predators of sage-grouse.

Response: These issues are considered and mitigated at the EIS and site-specific planning levels.

Comment: Review of existing documents for the Pinedale Resource Area indicates the BLM has consistently ignored sage-grouse needs and the scientific literature upon which developed guidelines (Braun et a1.1977, Connelly et al. 2000) to maintain sage-grouse populations are based. Most seriously, the BLM has chosen a 0.25-mile distance from active leks for avoidance of or restrictions on development even though the scientific literature (Holloran 2005) indicates there should be no manipulation of sagebrush habitats within 3 miles of active leks (Connelly et al. 2000). The 0.25-mile restriction seems to have been created to justify existing practices and is not based on any reputable science. The BLM's own analysis (see Pinedale Anticline Project Draft EIS 1999: 5-34 as an example) (also Holloran 2005) reports that, “of leks with at least one well within a 0.25-mile radius, four times as many are inactive than active" and that "more than three times as many leks with at least one oil or gas well within a 0.50-mile radius are inactive”. Oil and gas well site development as well as development of roads, power lines, etc. all cause manipulation of habitat and reduction in area useable to sage-grouse.

Response: BLM has complied with the WAFWA MOU in formulating management for sage-grouse habitats.

Comment: Further, BLM documents (for example, Atlantic Rim Coalbed Methane Projects, Cow Creek Pod and most other DEIS documents in Wyoming, Montana, and Colorado) indicate, “exceptions [for any restrictions] may be granted if the activity will occur in unsuitable [nesting = breeding] habitat”. This type of language (Appendix 2 and elsewhere) continues to be used in the DEIS for the Pinedale Resource Area without any scientific explanation of why habitats may be “unsuitable” (for sage-grouse). Appendix 12 of the DEIS, Seasonal Wildlife Stipulation by Alternatives, is inadequate, even for Alternative 3. The other Alternatives almost completely ignore greater sage-grouse needs (especially Alternative 2). The stipulations presented, especially when one realizes that all can be waived by the Authorized Officer, fail to meet any reasonable standard for content or scientific merit. The effect of this failure to provide adequate mitigation of the impacts on sage-grouse could be the extirpation of sage-grouse in large

portions of the Upper Green River Valley as the footprint (Connelly et al. 2004) of the present and planned activities is without precedence.

Response: Habitats may be unsuitable for a number of reasons including lack of sagebrush cover, presence of previous disturbance, unsuitable vegetation types. More information on this topic has been added to the final EIS.

Comment: The Alternatives (pages 2-99 to 101, 2-143 to 146) attempt to reassure readers the DEIS has given adequate thought to maintaining sage-grouse --populations by planning to manage by Intensively Developed Fields (where sage grouse will have no status), Minimally Developed Areas (which retain the 0.25 mi NSO restriction around leks which has been demonstrated to be negative for sage-grouse), Large Block NSO Areas (which retain the 0.25 mi NSO restriction around leks and which will eventually also be open for oil and gas development activity), and a nebulous category of Unavailable Areas which will essentially have the same management as Minimally Developed Areas and Large Block Areas. My professional view is that this is just shuffling names to try to indicate that sage-grouse and their important habitats are being favorably managed. As far as can be determined from the DEIS, it is highly probable that all areas will be developed for oil and gas if there is any evidence that oil and gas may occur on any parcel or tract.

Response: More information on how the oil and gas management areas would work and the requirements for allowing development in NSO areas or leasing in unavailable areas has been added to the final EIS. It is BLM's intent that the unavailable areas remain unavailable for leasing to provide wildlife habitat and other values during development of the current active gas fields. Similarly, it is BLM's intent that the NSO areas not contain surface developments.

Comment: As part of its mitigation guidelines and standard practices for surface disturbing activities (i.e., Fluid Minerals, Appendix 5 and elsewhere), BLM has generally imposed restrictions on activity within 2-3 miles of leks before the 8:00 AM and after 8:00 PM interval from 15 March through 15 July (to benefit nesting females and broods) within 2-3 miles from leks depending upon Alternative (Pinedale DEIS, Appendix 5, Best Management Practices). There are many inconsistencies (based on specific Alternatives) in the DEIS on restrictions which are promoted as benefiting sage-grouse (pages 2-100 to 101, 2-143 to 146). Only those presented for Alternative 3 may have some merit for sage-grouse. These stipulations and or restrictions in Alternative 3 should be the minimum for all Alternatives if sage-grouse are to persist in the Pinedale Resource Area. These stipulations must be enforced during the breeding and nesting periods as there is little monitoring of adherence to restrictions and those in place can be modified or excepted by the Authorized Officer.

Response: BLM has complied with the WAFWA MOU in formulating management for sage-grouse habitats.

Comment: In actual practice, there is little protection from physical disturbance of habitats useful to sage-grouse nesting outside of the inadequate 0.25-mile radius from active leks. Most critically, there is no recognition of the importance of sage-grouse winter use habitat and no stipulations to help protect these habitats. The BLM also fails to adequately address the cumulative effects on sage-grouse of all treatments (not limited to oil and gas developments). It is clear, based on my professional experience and the Connelly et al. (2004) analyses that actions that are underway and are planned will seriously threaten and endanger the health and persistence of greater sage-grouse in the Pinedale Resource Area.

Response: BLM has complied with the WAFWA MOU in formulating management for sage-grouse habitats.

Comment: Nowhere is there mention of the possible negative effects of seismic activities. It appears the BLM has avoided recognition of short-term effects of trails, crushing of vegetation, and direct and indirect impacts to sage-grouse from use of large vehicles involved in this activity. Unfortunately, there apparently have been no studies on the immediate impacts of seismic activities. Until demonstrated otherwise, seismic activities should be considered as factors that are negative for sagebrush habitats as they provide trails for increased predator access, they fragment habitats useful to sage-grouse, they decrease live sagebrush and fortis needed by sage-grouse, and could potentially disrupt breeding and nesting activities. BLM should require the oil and gas industry to fund well-designed scientific research on the effects of seismic activities on sage-grouse and their habitats. Protective steps should be immediately taken based on the findings of these studies including those of Holloran (2005).

Response: A discussion of the impact of seismic activity has been added to the final EIS.

Comment: Present mitigation measures to protect sage-grouse and their habitats in the Pinedale Resource Area DEIS are minimal (Appendix 2-3) and only relate to stipulations or restrictions on activity. None of the mitigation protocols is true mitigation, the protocols are not specific to actual mitigation and they are not mitigation for any past or present losses. The protocols have little scientific basis even for reclamation (Appendix 3-9) as there is no apparent intent to reclaim land to be useful for sage-grouse throughout the year for all life processes. The BLM should endorse and follow the "Guidelines to manage sage grouse populations and their habitats" (Connelly et al. 2000). The Guidelines are based on scientific, peer-reviewed studies which have been found to be conservative (Hausleitner 2003, Holloran 2005). Neither industry nor the BLM has been quick to adopt the Connelly et al. (2000) guidelines nor the findings of Hausleitner (2003) and Holloran (2005) because their implementation, while very useful for sage-grouse conservation, would affect the direction of the BLM oil and gas leasing program and industry practices.

Response: BLM has complied with the WAFWA MOU in formulating management for sage-grouse habitats.

Comment: Consideration should also be given to following the concluding comments of Braun et al. (2002) that strongly recommend that it is the responsibility of the oil and gas industry to demonstrate their activities have no negative impacts initially, short-term, or over the long-term. Effective mitigation practices, in addition to those in the Guidelines (Connelly et al. 2000), include permanent and seasonal road closures, burial and or modification of power lines, removal or modifications of fences and other structures, fertilization of sage-grouse winter ranges with nitrogen, and reduction or complete permanent elimination of other uses such as livestock grazing, especially on areas where oil and gas production is permitted. Mitigation should also consider those impacts that can be reasonably expected including cumulative (with other factors) effects. Full mitigation would require increasing the number (on a per unit basis) of sage-grouse in non-affected areas to equal the reduction in numbers of sage-grouse in affected areas. Research on developing methodology to enhance sagebrush habitats (to support higher densities of sage-grouse) should also be productive.

Response: Many of these mitigation standards are currently being implemented. Industry is currently contesting peer-reviewed research on the effects of energy development to sage-grouse populations. BLM is committed to working with the grazing permittees on implementing strategies that are ecologically sound and will increase sage-grouse nesting success.

Comment: To further mitigate the impacts from the significant oil and gas developments that are in place and being planned for the Pinedale Resource Area, the BLM should also designate, as part of the RMP revision process, multiple Areas of Critical Environmental Concern (ACECs) to protect at least 90% of sage-grouse winter use areas. The boundaries of these areas should follow the results of Recommendation # 1 (Winter) on page 4. These areas will be critical to maintaining population persistence over time. I

strongly recommend that a full section be developed on mitigation practices to benefit greater sage-grouse. The lack of a full mitigation plan with strategies is a major flaw in the DEIS.

Response: An ACEC designation would not prohibit development in areas that are already leased or under production. It is not possible to design specific mitigation at the RMP level because the RMP will not directly authorize any on the ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used must be tied to a specific proposal where specific impacts can be predicted. Appendix 3 contains mitigation measures and operating standards for sage-grouse habitats. The appendix will be updated over time as additional mitigation measures are developed. ACEC establishment for sage-grouse winter concentration areas is considered in the final EIS.

Comment: Assessment of the long-term effects of any use or disturbance, especially oil and gas or other energy-related development, on sage-grouse and the health of the sagebrush steppe should be based on collection and analysis of population information in spring, collection and analysis of harvest information, and numbers of birds counted in selected winter habitat. Sage-grouse population statistics collected in spring are those related to number of active leks per unit of area and total number of cocks counted on a sample of randomly selected, statistically defensible accessible leks. Harvest data collection should focus on analysis of wings for changes in ratios of chicks/hen and males to females in both adult (including yearlings if not separable) and chick age classes. Once winter use areas are identified, standardized line transects should be established and annually sampled (using aircraft) following current sampling theory to estimate number of birds present. Sampling should occur immediately following fresh snowfall or during maximum snow accumulation

Response: WGFD currently uses these techniques to collect and analyze population trends. BLM will coordinate with WGFD habitat biologists on developing long-term transect in sage-grouse winter habitats.

Comment: Appendix 11, “Monitoring and Evaluation” appears to be the monitoring guidelines (Table A 11-7) for the DEIS. The ‘trigger’ for action for sage-grouse is “Declining trend in the number of males and females” without any explanation of what will be done or how it will be monitored other than counts of birds on leks. This is totally inadequate for monitoring and evaluating habitat quality and quantity or for monitoring sage-grouse population health. It is notably deficient as it fails to demonstrate that scientific protocols will be used and the results will be properly evaluated. This again indicates the lack of emphasis placed on sage-grouse and apparent acceptance by the BLM of the potential extirpation of the species in this area. The evidence indicates this is already occurring as counts have gone to zero (abandoned) on 36 leks (Map 2-28).

Response: Monitoring of wildlife populations is generally conducted by the Wyoming Game and Fish Department (WGFD). In the case of sage-grouse, some joint monitoring with WGFD and BLM occurs. BLM would coordinate monitoring efforts with the WGFD and would use the proper protocols, as established at the time of survey. Much research on sage-grouse is being conducted, and monitoring protocols and management recommendations could change based on current research. BLM is committed to taking actions necessary for proper management of the greater sage-grouse.

Comment: The importance of sustained, long-term monitoring cannot be overstated. It is clear that oil and gas development will negatively affect sage-grouse populations (Braun et al. 2002, Holloran 2005) and only the magnitude of the impacts is unknown (some counts of males on leks in the Pinedale Resource Area have gone tii¬zero and 36 leks are inactive). The oil and gas industry should fund the monitorin and long-term research needed throughout the life of the RMP and the Pinedale RMP should make this a specific requirement in any new oil and gas development projects. This critical monitoring should continue until sage-grouse populations return to pre-disturbance levels, which could exceed 30 years. Cause and effect,, studies using an active adaptive management approach (Walters 1986) are

necessary to fully understand the implications of oil and gas development on sage-grouse. The industry has the responsibility to demonstrate their activities have no negative impacts initially, short-term, or over the long-term on the distribution and abundance of sage-grouse in areas explored and developed for oil and gas production.

Response: BLM and WGFD have been conducting long-term monitoring efforts since the 1990s and will continue to do so. Research efforts are being funded by industry lead mitigation groups such as the Tom Thorne fund. However, there are mitigation efforts such as the Cooperative Sagebrush Initiative that only has a small percentage of their coffers dedicated to research projects. Most of the wildlife mitigation groups are committing to on-the-ground projects and do not wish to fund research.

Comment: The DEIS for the Pinedale Resource Management Plan fails to attempt to incorporate even minimal suggestions on identification and protection of winter habitats, there is a lack of data on brood habitats, and there is no consideration of scientifically defensible buffers for NSO around active leks in the preferred alternative (#4). The discussion of Monitoring in the DEIS is minimal and consideration of mitigating impacts on sage-grouse is essentially non-existent. These problems need to be corrected to have a scientifically valid document, as well as one that will be useful for guiding management activities.

Response: Management actions in the Preferred Alternative are designed to protect sage-grouse habitats. Research and identification of habitats is a continuing process. Protections would be applied to habitats as they are identified.

Comment: None of the 4 Alternatives adequately describe or analyze the expected impacts on sage-grouse distribution and abundance within the Pinedale Resource Area as a result of any specific Alternative or the preferred Alternative. My professional judgment is that all Alternatives (including the No Action Alternative) will fail to slow or cause the long-term declines in sage-grouse populations to stabilize.

Response: We are unable to quantity specific population impacts on sage-grouse.

Comment: Specific mitigation to benefit sage-grouse is rarely proposed other than some timing restrictions which have not been demonstrated to be effective, a 0.25-mile NSO restriction around active leks, and a 2-3 mile buffer around leks during the sage-grouse nesting and brood-rearing periods. Further, all of stipulations and restrictions can be exempted, waived, or modified upon request of the operator despite suggestions that there would be no exceptions to wildlife stipulations. Use of Adaptive Management is not mentioned. These limitations strongly suggest that the proposed ‘itigation’ (which really is not true mitigation) will have little or no value for protecting, supporting, or sustaining sage-grouse in the Pinedale Resource Area.

Response: BLM has complied with the WAFWA MOU in formulating management for sage-grouse habitats.

Comment: It is important to note that Greater sage-grouse are a BLM ‘Sensitive’ species. Sage-grouse are listed in Appendix 9, Special Status Species, without any discussion as this Appendix is only a listing of species.

Response: Information on Special Status Species management has been added to Chapter 2 of the final EIS.

Comment: The Pinedale Resource Area DEIS should clearly identify the importance of this area for greater sage-grouse and the BLM must accept their responsibility in maintaining and enhancing habitats

on public lands within the Resource Area to ensure this species is not further considered for Federal listing under the Endangered Species Act. The DEIS for the Pinedale RMP clearly fails to present any scientific evidence that greater sage-grouse will benefit or even persist for the next 20 years under any of the four Alternatives described.

Response: The draft EIS adequately discloses impacts that would occur to sage-grouse over the projected life of the plan.

Comment: Recommended Mitigation Measures: 1. The BLM should adopt a policy of no surface disturbance within at least 3 miles of occupied leks as data (Holloran 2005) clearly show negative impacts to sage-grouse at the present distance of 0.25 miles and up to at least 3 miles. This is the minimum needed to maintain sage-grouse populations in this area.

Response: This restriction was included in Alternative 3 of the draft EIS.

Comment: Recommended Mitigation Measures: 2. All areas used by sage-grouse during both average or "normal" and severe winters should be located, mapped, and given special protection from wild fire, manipulation of sagebrush, and human-induced disturbance. This is the minimum needed to maintain sage-grouse populations in this area. At least 90% of these newly mapped winter-use areas should be designated as a network of ACECs.

Response: BLM and WGFD are currently creating these maps and the decisions will be updated to protect sage-grouse winter areas. ACEC establishment for sage-grouse winter concentration areas is considered in the final EIS.

Comment: Recommended Mitigation Measures: 4. Management of mid to late summer brood-rearing areas should encourage forb regrowth while maintaining at least a 6 inch residual grass height with taller (> 24 inches in height), live sagebrush of > 15 % canopy cover in close (< 200. yds) proximity for use as escape cover. This is the minimum needed to maintain sage-grouse populations in this area.

Response: The effects of past treatments in terms of habitat structure and wildlife use are currently being studied. The information may be used to recommend grazing management and mitigation strategies to achieve the ecological site conditions you have outlined.

Comment: Recommended Mitigation Measures: 5. Mitigation should be emphasized and required for all activities known to negatively impact sage-grouse. Mitigation measures could include, but are not limited to: burial or modification of power lines, off set drilling, road closures ands time restrictions, changes in livestock grazing, nitrogen fertilization of winter and nesting areas, removal or modification of existing fences, etc. Full mitigation would be to replace the exact number of sage-grouse impacted by development activities by increasing the number per unit of area that the remaining areas can support to °" equal the number displaced. This is the minimum needed to maintain sage-grouse populations in this area. Mitigation should be better identified within the DEIS with development of a specific section for sage-grouse. A realistic view of the length of time for reclamation as a mitigation tool to benefit sage-grouse should be presented.

Response: These suggestions have been added to the mitigation list in the final document. BLM will address mitigation of impacts to habitats, not population numbers.

Comment: Recommended Monitoring Requirements: 1. Standardized line transects in identified winter use areas should be established and annually sampled (using aircraft) following current sampling theory

to estimate changes in numbers of birds present. Sampling should immediately follow fresh snowfall or during maximum snow accumulation.

Response: BLM and WGFD are currently creating these maps based on this type of methodology.

Comment: Recommended Monitoring Requirements: 2. Standard surveys of all areas to locate active leks should be conducted in spring 2008 and continue at 3-year intervals. This will provide data on lek extinction and recruitment. This is the minimum needed to monitor sage grouse populations in this area.

Response: These efforts are currently being implemented.

Comment: Recommended Monitoring Requirements: 3. All potential mid to late summer brood-rearing areas should be mapped based on moisture and green forb availability during the late June through late August interval. Management of mid to late summer brood-rearing areas should encourage forb regrowth while maintaining at least a 6-inch residual grass height with taller (> 24 inches in height), live sagebrush of > 15% canopy cover in close (< 200 yds) proximity for use as escape cover.

Response: BLM and WGFD are currently creating these maps and the decisions will be updated to protect sage-grouse brood-rearing habitats.

Comment: Recommended Monitoring Requirements: 4. Leks classified as active should be counted (number of cocks present) 3-4 times each spring at 7-10 day intervals starting in late March-early April and continuing into mid May. Those leks classified as inactive should be checked in late April/early May every 2-3 years to ascertain change in status. This is the minimum needed to monitor sage grouse populations in this area.

Response: These efforts are currently being implemented.

Comment: Recommended Monitoring Requirements: 5. The vegetation in areas used by sage-grouse during both average and severe winters should be described as to live sagebrush canopy cover, height, etc.

Response: BLM will coordinate with WGFD habitat biologists on developing long-term transects in sage-grouse winter habitats.

Comment: Recommended Monitoring Requirements: 6. Harvest data based on examination of sage-grouse wings collected from hunters should continue on a well-defined population basis. Statistics needed to measure responses of sage-grouse to treatments and development activities are those relating to nest success, chicks per hen, and age/gender composition. This is the minimum needed to monitor sage-grouse populations in this area.

Response: These efforts are currently being implemented.

Comment: Analysis and Other Management Issues: 2. Replicated long-term studies are urgently needed to understand the effects of grazing practices and habitat fragmentation on predator numbers and predation rates on sage-grouse. These studies must involve treatments and controls on a landscape basis.

Response: A multiyear predator study is currently underway in the Upper Green River Basin to determine what role they may have in sage-grouse success.

Comment: Analysis and Other Management Issues: 3. Nesting areas are difficult to locate at a population or subpopulation scale and all area within 4 miles of active leks (Hausleitner 2003) should be considered

nesting and early brood-rearing habitats. This is the minimum needed to maintain sage-grouse populations in this area.

Response: Because of the quality of habitat within the planning area, we have considered all habitat within 4 miles of active leks as nesting and early brood-rearing habitats.

Comment: Analysis and Other Management Issues: 4. Early chick survival has been identified as a problem in Wyoming (and elsewhere). Enhancing the forb and grass component in nesting areas (which are also early brood rearing sites) should be a priority.

Response: This has been a priority of many of the mitigation projects proposed in the planning area.

Comment: Analysis and Other Management Issues: 5. The cumulative impacts of all human-induced activities within a given, defensible sage-grouse population unit should be studied over a period sufficiently long (at least 20-30 years) to be able to predict actual long- and short-term effects. When industry is involved in causing the impacts, they should be expected to fully support, financially, all studies as they have the burden to demonstrate their activities are not negative to sage-grouse.

Response: This information will be gathered by continuing to conduct yearly lek counts and population analysis.

Comment: Also, I'd suggest taking another look at your Sage Grouse data. Can you have some experts review it (peer review) before the final decision is made.

Response: The sage-grouse information was provided by WGFD in conjunction with research conducted in the planning area.

Comment: Sage Grouse Lek Locations and Identified Habitat: The Sage Grouse map illustrates how much area they utilize for brood rearing and nesting and a large Lek this is not shown on the draft RMP. There is an excellent habitat that combines a vast system of springs, riparian areas, sage brush cover, and forage which allows these birds to flourish in the area. The unique attributes of this area for sage grouse show how unsuitable leasing and mineral development is here.

Response: Sage-grouse lek maps have been updated in the final EIS. The areas unavailable for oil and gas leasing have been revised in the final EIS.

Comment: The last thing I hope you look at is the sage grouse section of the plan. I just don't think your numbers are right and I hope you have it peer reviewed before making a final decision.

Response: The sage-grouse information was provided by WGFD in conjunction with research conducted in the planning area.

Comment: It is important however for those whose jobs it is to oversee the energy industry to use the most up to date and adequate data when proposing regulation on our industry. In addition it is important to draft regulations based on solid peer reviewed research and not to just follow the emotion of the week. I prime example of this is the incomplete data used to sage grouse population.

Response: The sage-grouse information was provided by WGFD in conjunction with research conducted in the planning area.

Comment: The BLM is suggesting an increase in land protection for Sage Grouse where the NSO would grow from 1/4 mile to anywhere from 3 to 4 miles. What is the justification for such a large increase? Are such land use decisions appropriate in an RMP? Would it be better to review these decisions more on a project by project basis? Does science support the NSO designations and has the science been pier review? How much gas production will be lost with the expanded NSO stipulation and what are the socioeconomic ramifications?

Response: This information is substantiated by peer-reviewed research conducted by Allison Lyon (2000), Matt Holloran (2006), Rusty Kaiser (2006), and Walker et al. (2007) in the planning area. Information has been peer reviewed in Holloran, M.J. and S.H. Anderson, 2005, Spatial Distribution of Greater Sage-Grouse Nests in Relatively Contiguous Sagebrush Habitats, The Condor 107:742–752; and also in Holloran, M.J., B.J.Heath, A.G. Lyon, S.J. Slater, J.L. Kuipers, and S.H. Anderson, 2005, Greater sage-grouse nesting habitat selection and success in Wyoming, Journal of Wildlife Management 69(2):638-649.

Comment: I am concerned that some of the sage grouse science has not been pier reviewed. I think the BLM should seek more information prior to expanding NSO requirements from 1/4 mile buffers to the propose 3 to 4 mile buffers. The BLM must do a better job justifying such determinations in an RMP.

Response: This information has been peer reviewed in Holloran, M.J. and S.H. Anderson, 2005, Spatial Distribution of Greater Sage-Grouse Nests in Relatively Contiguous Sagebrush Habitats, The Condor 107:742–752; and in Holloran, M.J., B.J.Heath, A.G. Lyon, S.J. Slater, J.L. Kuipers, and S.H. Anderson, 2005, Greater sage-grouse nesting habitat selection and success in Wyoming, Journal of Wildlife Management 69(2):638-649.

Comment: Sage Grouse: Again there is a major difference between what the BLM shows and what the Wyoming Game and Fish shows regarding the Sage Grouse Map. Please look at Map 2-28 of the EIS and the enclosed "Sage Grouse Lek Locations and Identified Habitat" map. One clearly sees that the range is much further north on our ranch and according to our observation, is expanding. The most northern Lek in the Game and Fish report is not even included in the BLM map.

Response: Sage-grouse lek monitoring data are updated yearly. The decisions will be updated to reflect new information on sage-grouse habitat use.

Comment: Page Number & Issue: Chapter 1 1-8: "Populations of greater sage-grouse have declined in the planning area, and some intensively developed areas no longer provide functioning sage-grouse habitats." Recommendations: Provide data source, citation and base of comparison or modify and/or delete statement.

Response: The data source is the WGFD 2007 sage-grouse data lek history reports.

Comment: The greater sage-grouse is presently hunted in Wyoming and it is illogical for this species to be both hunted and classified as a Special Status Wildlife Species. On page 3-123 under the BLM Sensitive Wildlife Species section, it is stated "Greater sage-grouse are the most numerous and widespread game bird within the planning area…" [Emphasis added] The current management model for these birds is nothing short of contradictory and we urge BLM to provide a clear framework for how these species and its habitats will be managed in the future.

Response: BLM does not have authority over WGFD hunting regulations.

Comment: Page Number & Issue:4-186: "Well densities exceeding one well per 699 acres are likely to lead to declines in male sage-grouse lek attendance (Holloran 2005). Overall declines in male lek attendance approached 100% when the distance from leks to drilling rigs, producing wells, and main haul roads decreased, in conjunction with the number of wells within 5 km and the total length of main haul roads within 3 km (attributed to traffic volume and vehicle activity during the strutting period) of the lek increased (Holloran 2005). Finally, active leks in energy-developed areas are experiencing a lack of yearling male recruitment. Assuming a yearly male mortality of 50%, a lek could become inactive in 4-6 years if yearling sage-grouse recruitment does not occur (Kaiser 2006)." "Mineral development would likely deplete water from the Colorado River system." Recommendations: Provide peer reviewed citations.

Response: Peer-reviewed citations supporting this information have been included in the final EIS.

Comment: Page A5-2, "Avoidance of surface disturbing and disruptive activities in suitable sage-grouse nesting and early brood-rearing habitat within 2 miles of an occupied lek, or in identified sage-grouse nesting and early brood-rearing habitat outside the 2-mile buffer from March 15 through July 15." Comment - There appears to be no limit on regulating surface disturbance beyond the 2-mile buffer and arguably there is no basis for extending the 2-mile buffer. The current sage-grouse stipulation (¼ mile NSO and 2-mile timing restriction) is adequate to maintain the species.

Response: BLM analyzed an appropriate range of alternatives. According to the following peer-reviewed scientific literature, the current restrictions are not adequate: Holloran, M. J. and S.H. Anderson, 2005, Spatial Distribution of Greater Sage-Grouse Nests in Relatively Contiguous Sagebrush Habitats, The Condor 107:742–752; Holloran, M.J., B.J. Heath, A.G. Lyon, S.J. Slater, J.L. Kuipers, S.H. Anderson, 2005, Greater sage-grouse nesting habitat selection and success in Wyoming, Journal of Wildlife Management 69(2); 638-649; Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham, in press, Greater sage-grouse winter habitat selection and energy development, Journal of Wildlife Management.

Comment: Page 2-70 of the Draft RMP states that vehicular activities in suitable greater sage-grouse nesting, early brood rearing, and winter concentration areas would be limited to existing roads and trails during dates established for sage-grouse activity. The BLM needs to better define the phrase "existing roads and trails." Does the phrase pertain to roads and trails in existence as of the date the RMP is adopted, or roads and trails in existence as of the date the seasonal stipulation takes effect each year? If the prohibition relates to roads and trails in existence when the RMP is released, the BLM has effectively eliminated ROWs across significant portions of the planning area. Further, the statement on page 2-71 appears to conflict with a statement on page 2-70 of the RMP DEIS that states "no seasonal restrictions would be applied to development in greater sage-grouse lekking, nesting, early brood rearing, or winter habitats. The BLM should resolve this inconsistency in the Final EIS.

Response: This statement does not mean that new access roads would not be permitted if necessary. This has more to do with off-road vehicles including surveyors going off road during the sage-grouse seasonal restrictions and further impacting sage-grouse offspring and habitats.

Comment: The restrictions on development attributable to wildlife objectives under Alternative 3 are unnecessarily restrictive. In both Intensively Developed Fields and Minimally Developed Areas the BLM would unreasonably restrict development. For example, limiting vehicle use to existing roads and trails within even intensively developed fields is unreasonable and unnecessary, particularly if portions of those fields are currently undeveloped. Requiring NSO stipulations within three miles of sage grouse leks is similarly unnecessary and conflicts with current BLM state-wide policy. Although the BLM intends to limit activities within sage-grouse winter concentration areas, the BLM has not mapped or identified such areas.

Response: According to the following peer-reviewed scientific literature, the current restrictions are not adequate: Holloran, M. J. and S.H. Anderson, 2005, Spatial Distribution of Greater Sage-Grouse Nests in Relatively Contiguous Sagebrush Habitats, The Condor 107:742–752; Holloran, M.J., B.J. Heath, A.G. Lyon, S.J. Slater, J.L. Kuipers, S.H. Anderson, 2005, Greater sage-grouse nesting habitat selection and success in Wyoming, Journal of Wildlife Management 69(2): 638-649; Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham, in press, Greater sage-grouse winter habitat selection and energy development, Journal of Wildlife Management. Winter concentration maps are currently being developed by BLM and WGFD and the record of decision will be updated upon completion.

Comment: Data used to address sage grouse population is incomplete and should be reviewed prior to next draft - used data that was not peer reviewed to make decisions - in certain areas they suggest increasing the NSO from 1/4 mile to 3 or 4 miles which would be very difficult.

Response: The sage grouse data used for the draft EIS was the best available information to date. The analysis has been updated in the final EIS to include new research.

Comment: The RMP DEIS does not fully evaluate or protect the crucial ranges of sage grouse, wintering, lek areas, nesting, and brood rearing, all of which must be provided in suitable condition to maintain sage grouse populations.

- Minimum viable population sizes have not be adequately determined or analyzed.
- BLM continues to adhere to a 0.25 mile development exclusion perimeter around leks even though the scientific literature shows this has no validity and that a 3 mile perimeter is needed.
- Monitoring provisions for sage grouse need to be substantially improved.
- There is a special need to identify winter concentration areas and fully protect them.

Response: No one has conducted a study on the minimum viable population sizes. BLM and WGFD have a very strong monitoring program in this planning area. In addition, sage-grouse winter concentration maps are being developed and will be added to the record of decision upon completion.

Comment: Naugle 2006 also documents the impacts of coalbed methane gas development on sage grouse and shows a bleak future for the bird in CBM fields. Although the DEIS has almost no discussion of CBM development in the planning area, except as it discusses mineral development in general, we point BLM again to this study and urge that greater protections be developed for the sage grouse in the planning area.

Response: Management actions for sage-grouse have been updated in the final document.

Comment: A number of raptors and medium-sized mammalian carnivores prey on sage grouse. Sage grouse nest predators include bobcats, golden eagles, red fox, badgers, common ravens, and coyotes (Heath et a1. 1997). Hulet et al. (1986) found that the Uinta ground squirrel was the most important nest predator in their southern Idaho study area. The maintenance of appropriate habitat and adequate cover, particularly on nesting and brood-rearing habitats, is important to ensure that predation rates do not increase to abnormal levels. In addition to maintaining cover, it is important to avoid the construction of tall structures that serve as raptor perches and concentrate predation pressure, like powerlines and gas condensate tanks, near these habitats.

Response: Please see page 2-144 for text which discusses these issues.

Comment: Mesic meadows and surface waters are focal points of sage grouse activity during certain times of year. Mesic sites associated with springs, seeps, and streams are critical for sage grouse on a yearlong basis, and assumes even greater importance as brood rearing habitat (Autenreith et al. 1982). Call and Maser (1985) stated, "We believe that free water is an essential component of sage grouse habitat", but noted that "[s]age grouse may do well in the absence of free water where they have access to succulent vegetation." (p. 4). Oaldeaf (1971) found that the presence of surface water was an important factor that increased the value of meadows as grouse rearing habitat. Thus, management for sage grouse should include special emphasis on protecting wet meadows, springs, and seeps.

Response: The RMP provides protection for riparian areas, page 2-140.

Comment: The availability of forage with a high nutritional content is an important factor determining brood success. Broods require forbs, insects and cover for growth, concealment and shade (Autenreith 1985). The diet of sage grouse chicks is dominated by insects in the first week of life, with forbs becoming more important as time progresses (Call and Maser 1985). Oakleaf (1971) reported that succulent forbs dominated the diets of brood-rearing hens and juveniles until the chicks reached 11-12 weeks of age. Drut et al. (1994a) found that in the area with high sage grouse productivity, insects and forbs made up 80% of chicks' diets, while sagebrush buds made up 65% of diets in the area of low sage grouse productivity. These researchers reached the following conclusions: "Substantially lower consumption of forbs and invertebrates and increased reliance on sagebrush may affect chick growth and survival, which would be reflected in long-term differences in productivity between areas. Insects are a critical nutrition source for developing chicks" (p. 93). Dunn and Braun (1986) argued that meadows, as important forb-producing areas, should be preserved. Thus, the BLM should manage sage grouse brood-rearing habitat to maximize high quality forage for chicks.

Response: Livestock grazing and other activities will be managed to achieve Wyoming Standards for Rangeland Health, page 2-118.

Comment: Researchers appear to be unanimous in their recommendations that sage grouse winter habitat be protected from disturbance. Kerley (1994) recommended, "Because shrub stands used during winter (category 3 stands) make up a small proportion of available habitats, these patches on south facing slopes, as well as other traditional wintering sites, should not be treated [to remove or reduce shrubs]" (p.113). Connelly et al. (2000) concurred, recommending against habitat manipulation. in sagebrush stands of 10-30% canopy cover heights of at least 25 cm to protect winter habitats. According to Beck and Braun (1980), "Areas of winter concentrations of sage grouse need to be documented and afforded maximum protection" (p. 564). Lyon (2000) recommended that sage grouse wintering habitats be placed off-limits to oil and gas development. Thus, in the Pinedale planning area, the BLM needs to rapidly identify sage grouse winter concentration areas and place the areas off-limits to surface disturbance and vegetation treatments.

Response: BLM and WGFD are currently identifying winter concentration areas, which will be updated in the record of decision.

Comment: Call and Maser (1985) stated that spraying should not occur within the breeding complex (which they defined as within 2 miles of a lek), and should also be forbidden in known grouse winter ranges. Taking into account the negative effects of vegetation treatments on sage grouse nesting and lekking areas, and uncertainty in the overall extent of sage grouse nesting habitat surrounding lek sites in the Great Divide region, the BLM should prohibit vegetation treatments within 3 miles of sage grouse lek sites.

Response: The effects of past treatments in terms of habitat structure and wildlife use are currently being studied. The information may be used to recommend grazing management and mitigation strategies to achieve the ecological conditions for sage-grouse that you have outlined.

Comment: Coal mining can impact sage grouse populations through major local decreases in recruitment (Braun 1986); local distribution patterns and decreases in lek use are the principal effects, with disturbance, rather than habitat loss, being the primary factor (Remington and Braun 1991). Klott (1987) recommended that areas near sage grouse leks be avoided for the purposes of strip mining. We concur, and ask the BLM to withdraw lands within 3 miles of a sage grouse lek from lands suitable for surface mining under SMCRA.

Response: As part of the planning process, BLM issued a call for coal lease applications. No interest in coal in the planning area has been expressed. It is not likely that the coal in the planning area will be developed.

Comment: Oil and gas development poses perhaps the greatest threat to sage grouse viability in the region. In a study near Pinedale, sage grouse from disturbed leks where gas development occurred within 3 km of the lek site showed lower nesting rates, traveled farther to nest, and selected greater shrub cover than grouse from undisturbed leks (Lyon 2000). According to Lyon (2000), impacts of oil and gas development to sage grouse include (1) direct habitat loss from new construction, (2) increased human activity and pumping noise causing displacement, (3) increased legal and illegal harvest, (4) direct mortality associated with reserve pits, and (5) lowered water tables resulting in herbaceous vegetation loss. Pump noise from oil and gas development may reduce the effective range of grouse vocalizations (Klott 1987). Thus, lek buffers are needed to ensure that booming sage grouse are audible to conspecifics during the breeding season. Connelly et al. (2000) recommended, “Energy-related facilities should be located >3.2 km form active leks” (p. 278). But Clait Braun (pers. comm.), the worlds most eminent expert on sage grouse, recommended even larger NSO buffers of 3 miles from lek sites, based on the uncertainty of protecting sage grouse nesting habitat with smaller buffers. Thus, areas within 3 miles of a sage grouse lek should be put under year-round “No Surface Occupancy” stipulations.

Response: The reasons mentioned are why a 3-mile NSO was applied to Alternative 3, page 2-101.

Comment: For allotments where sage grouse nesting is known to occur, shifting on-off dates (if necessary) could minimize the chances of impacts to nesting sage grouse, and livestock drives should be routed to avoid sage grouse leks during the strutting and nesting seasons.

Response: This recommendation is being analyzed at this time. The information you have outlined may be used to recommend grazing management and/or mitigation strategies to achieve the ecological conditions for sage-grouse.

Comment: Certainly, off-road vehicle use in sage grouse nesting habitats has negative consequences for the grouse. Call and Maser (1985) made the following recommendations concerning off-road vehicle use and sage grouse: Organized motorcycle or four-wheel drive races across sage grouse nesting habitat, however, can cause substantial loss of production from direct destruction of nests, from abandonment of nests during egg-laying, from destruction of young chicks, or from all three. If sage grouse production is a management goal, then it is wise to postpone such races until after the first of September when the birds are old enough to fly out of harm’s way (p. 19). We concur, and urge the BLM not only to avoid the proliferation of new roads and user-created vehicle routes in nesting habitats but also to schedule events away from nesting habitats and avoid scheduling them during the nesting period.

Response: Page 2-144 states that vehicular activity would be limited to existing roads and trails and transportation planning is required within 5 years of ROD, page 2-135. Recreational events would not be permitted within sage-grouse habitats.

Comment: In addition to destroying the insects and forbs required by sage grouse broods, the spraying of insecticides and herbicides may cause direct mortality of sage grouse. In a Montana study, Wallestad (1975) found that treatment of 24% (751 acres) of suitable sagebrush habitat around one lek resulted in a 50% reduction of cocks, while treatment of 11% (640 acres) of suitable habitat around a second lek showed no change in sage grouse numbers; during the same time period, sage grouse numbers at control leks with no sagebrush treatment increased over 300%. Klebenow (1970) found that spraying of nesting habitat caused a long-term cessation of nesting activity in the area. Blus et al. (1989) found that the spraying of two types of insecticides over grouse was fatal to 78% of grouse, and hypothesized that insecticides have played a role in regionwide sage grouse declines. Standards should be issued preventing the spraying of insecticides in sensitive sage grouse habitats during periods where these habitats are occupied.

Response: Spraying of insecticides is not permissible on BLM lands. Herbicide spraying has been permitted but will be analyzed against the NEPA more critically in the future, for the reasons you stated.

Comment: Current BLM nest buffers of 1/a mile for controlled surface disturbance and 2 miles for seasonal stipulations are grossly inadequate to maintain sage grouse viability in the Great Divide planning area. The lek buffer must be based not only on maintaining the lek but also the nesting habitat that surrounds the lek. In addition, seasonal prohibitions that prohibit only construction activities near leks are pointless: If roads or wells are built near leks during the off-season, the resulting regular vehicle traffic will have major negative impacts when the sage grouse are present, effectively circumventing any mitigative value of delaying construction activities.

Response: Page 2-144 states that vehicular activity would be limited to existing roads and trails and that transportation planning is required within 5 years of ROD, page 2-135.

Comment: The DEIS indicates that surface-disturbance activities and oil and gas development may occur within 1/4 mile of greater sage-grouse (Centrocercus urophasianus) leks within areas designated as "intensively developed oil and gas fields." The Service is concerned that disruptive activity within close proximity to sage-grouse leks may result in non-use of those traditional lekking areas and lead to fragmentation of sage-grouse habitat and disappearance of this species from the surrounding landscape. Under the preferred alternative of the proposed RMP, these impacts could be exacerbated by the fact that areas designated by the Bureau as "minimally developed oil and gas areas" could receive "intensively developed oil and gas field" status, if an oil and gas discovery is made in those areas currently designated as "minimally developed".

Response: BLM will comply with the WAFWA MOU to conserve the greater sage-grouse and its habitat.

Comment: The following information is provided for your use in the evaluation of proposed actions and their potential effects to the sage-grouse. The Service has determined that the greater sage-grouse is unwarranted for listing at this time. However, the Service continues to have concerns regarding sage-grouse population status, trends and threats, as well as concerns for other sagebrush obligates.

Greater sage-grouse are dependent on sagebrush habitats year-round. Habitat loss and degradation, as well as loss of population connectivity have been identified as important factors contributing to the decline of greater sage-grouse populations rangewide (Braun 1998, Wisdom et al. 2002). Therefore, any activities that result in loss or degradation of sagebrush habitats that are important to this species should

be closely evaluated for their impacts to sage-grouse. Around important breeding habitat (leks, nesting or brood rearing habitat), the Service recommends no project-related disturbance from March I through June 30, annually. Minimization of disturbance during lek activity, nesting, and brood rearing is critical to sage-grouse persistence within these areas. Likewise, if important winter habitats are present, the Service recommends no project-related disturbance from November 15 through March 14.

Response: The discussion of impacts to sage-grouse habitats has been revised.

Comment: We recommend you contact the Wyoming Game and Fish Department (WGFD) to identify important greater sage-grouse habitats within the project area, and appropriate mitigative measures to minimize potential impacts in the RAMP planning area. The Service recommends surveys and mapping of important greater sage-grouse habitats where local information is not available. The results of these surveys should be used in project planning, to minimize potential impacts to this species. No project activities that may exacerbate habitat loss or degradation should be permitted in important habitats.

Response: BLM and WGFD are in the process of identifying and mapping sage-grouse nesting and brood-rearing habitats. These maps will be added to the record of decision upon completion.

Comment: In Wyoming, information suggests that greater sage-grouse populations are negatively affected by energy development activities, especially those that degrade important sagebrush habitat, even when mitigative measures are implemented (Braun 1998, Lyon 2000, Naugle et al. 2006). Greater sage-grouse populations can repopulate areas developed for resource extraction after habitat reclamation for the species (Braun 1987). However, there is no evidence that populations attain their previous levels and reestablishment of sage-grouse in a reclaimed area may take 20 to 30 years, or longer (Braun 1998). Recent information from a doctoral dissertation on the impacts of oil and gas development to greater sage-grouse in the Pinedale Anticline found that as development increased, lek activity declined up to 100 percent (Halloran 2005). Therefore, the authorized activities under the RMP should be carefully evaluated for long-term and cumulative effects on the greater sage-grouse, since reclamation may not restore populations to pre-activity levels. The Bureau should ensure activities authorized under the Pinedale RMP do not exacerbate greater sage-grouse declines on either a local or range-wide level.

Response: BLM will comply with the WAFWA MOU to conserve the greater sage-grouse and its habitat.

Comment: In 2000, the U.S. Forest Service, the Bureau, and the Service signed a Memorandum of Understanding (MOU) with the Western Association of Fish and Wildlife Agencies (WAFWA) to conserve the greater sage-grouse and its habitat. This MOU outlined the participation of Federal and State wildlife agencies, including the WGFD, in greater sage-grouse conservation, and these commitments should be considered in project planning in sage-grouse habitat. Additionally, unless site-specific information is available, greater sage-grouse habitat should be managed following the guidelines by Connelly et al. 2000 (also known as the WAFWA guidelines). The WAFWA guidelines state that energy-related facilities should be located greater than 2 miles from active leks unless the habitat is mapped.

Response: BLM will comply with the WAFWA MOU to conserve the greater sage-grouse and its habitat.

Comment: In “Minimally Developed Areas” BLM’s the Preferred Alternative proposes a 2-mile seasonal “avoidance area” around leks in addition to the 1%-mile NSO buffer. Yet, the agency itself admits that “data indicate a 2-mile buffer would inadequately protect sage-grouse leks, nesting success, and recruitment of yearlings within a Minimally Developed Area.” Pinedale RMP DEIS at 4-210. Mitigation measures are intended to offset negative impacts, thereby protecting wildlife species. NWF and WWF do not understand why BLM would choose to implement mitigation measures that it knows will be inadequate.

Other BLM offices are exploring some innovative strategies for protecting sage grouse in RMPs. BLM's Little Snake Field Office in Colorado recently released its draft RMP/EIS for the Little Snake planning area. Included in the DEIS for the revised Little Snake RMP is a novel approach to improving sagebrush habitat functionality by limiting fragmentation. This management alternative provides that "to maintain and improve large blocks of functional sagebrush communities, oil and gas operators could opt into an agreement to limit habitat fragmentation in return for easing timing limitation stipulations and allowing year-round drilling." Little Snake RMP DEIS at 2-16. The arrangement would apply to all areas located within 4 miles of a sage-grouse lek site and 8 designated large patches of sagebrush habitat; exceptions granted for easing timing limitations would not apply to the 'A-mile NSO buffer for sage grouse. The agreement would stipulate that no more than 5% of the surface area of each lease or unit would be disturbed at any time. BLM hopes to encourage operators to develop proposals that leave larger blocks of sagebrush habitat undisturbed within a project area by clustering facilities and carefully designing road and pipeline systems to minimize disturbance.

Similarly, BLM's Miles City Field Office in Montana just released its Draft Supplement to the Montana Statewide Oil and Gas EIS and Amendment of the Powder River and Billings RMP. In it, the agency proposes an alternative that includes another phased development approach where BLM would limit the percentage of disturbance on BLM surface or on private surface overlying federal minerals within each identified crucial wildlife area to no more than 20% over a 20-year period. NWF and WWF encourage BLM to look at more aggressive approaches to conserving sage grouse and sage grouse habitat within the Pinedale Resource Area.

Response: The draft supplemental EIS for the Pinedale Anticline Planning Area is proposing these very alternatives that the commenter mentioned in the two examples given. These actions would carry through into the RMP once the ROD is signed for the supplemental EIS. Many of the recommendations mentioned are considered BMPs found in Appendix 5. BMP application is developed at the field development planning level.

Comment: The Monitoring Strategy Detailed for Sage Grouse in the DEIS is Inadequate.Appendix 11 "Monitoring and Evaluation" indicates that the "trigger" for taking action to conserve sage grouse is a "[d]eclining trend in number of males and females." As noted by Dr. Clait Braun, this monitoring strategy will not supply adequate information on the vitality of sage grouse populations within the planning area. Winter habitat is also not adequately addressed in the DEIS. This is partially due to the fact that the winter habitat of sage grouse has not been adequately researched or mapped. This should be done prior to commencement of the oject so that well pads and other facilities are not placed directly in winter habitat.

Response: BLM and WGFD are developing sage-grouse winter concentration area maps which will be added to the record of decision upon completion.

Comment: Examples of species specific information on fragmentation and impacts from roads and oil and gas development from field biologists and the scientific literature that should be considered in this RMP include the following. Lyon and Anderson (2003) found that female nest initiation rates declined 24% in disturbed areas. Preliminary results of an ongoing study of sage-grouse in Montana coal-bed natural gas (CBNG) developments showed an active lek had one third the density of wells within two miles of the lek compared with an inactive lek, and that "active leks and leks with moderate to large numbers of males were often found adjacent to CBNG fields but rarely within CBNG" (Naugle et al. 2006).

Response: The impact analysis has been updated in the final EIS.

Comment: Examples of species specific information on fragmentation and impacts from roads and oil and gas development from field biologists and the scientific literature that should be considered in this RMP include the following.

Sagebrush Obligate Birds Impacts: The American Bird Conservancy (2007) lists sage brush habitat as the most threatened bird habitat in the continental United States. Inglefinger (2001) found that for lands within 328 feet (100 meters) of a road or well pad the density of sagebrush obligate birds drops by 50 percent regardless of the amount of activity on the road.

Response: The impact analysis has been updated in the final EIS.

Comment: As part of this RMP and Draft EIS, BLM proposes to manage sage grouse habitat based on the classification of the specific area as intensely developed, minimally developed, or NSO with the ultimate management objective of maintaining "sufficient undisturbed or minimally disturbed greater sage-grouse source habitats to ensure long-term species sustainability and functioning habitats". Actions to achieve this objective for minimally developed areas include time restrictions and prohibiting surface disturbing activities within 0.25 mile of occupied leks. EPA notes, however, that recent long-term studies on the effects of wellfield development to greater sage-grouse lek attendance indicate that the 0.25 mile buffer surrounding leks, within which surface disturbing activities would be prohibited, is insufficient to maintain function of lek habitats due to wellfield activities and associated noise (Holloran 2005 and. Ecosystem Research Group, 2006).

Recognizing that the science continues to emerge on this issue, EPA recommends further analysis of the potential impacts to sage grouse and the potential effectiveness of the actions proposed to meet the sage grouse habitat objective. EPA recognizes the wildlife management expertise of the U.S. Fish and Wildlife Service and the Wyoming Game and Fish Department, and encourages BLM to continue to coordinate with these agencies to assess whether the proposed plan will provide an effective means of ensuring long-term species sustainability, to identify the best available science, and to develop effective adaptive management.

Response: BLM will comply with the WAFWA MOU to conserve the greater sage-grouse and its habitat.

Comment: Page 4-73 "Geophysical operations would be restricted during the 5-month window where greater sage-grouse habitats occur." Comment - No scientific justification has been provided for this restriction and it must be eliminated. It has never been demonstrated that geophysical operations harm wildlife, including sage-grouse. The low impact, transient nature of geophysical operations has a near zero impact on the environment. It must be acknowledged that because geophysical operations have such little impact on the environment, and yet greatly increases oil and gas drilling success which results in significant reduction of total drilling and associated environmental impact, geophysical operations should be encouraged instead of restricted.

Response: There have been significant amounts of research on the impacts of human presence, roads, vehicle use, etc., in remote areas. As you stated, the research conducted by Gillin and Irwin (1985) in the BTNF seismic activity caused displacement of elk within home ranges by an average of three-quarters of a mile. The geophysical industry has not proven that there is little impact to the environment. Scarification can still be seen in areas where thumper trucks have been used as if linear treatments were conducted over thousands of acres.

Comment: Page A5-2 "Avoidance of surface disturbing and disruptive activities in suitable sage-grouse nesting and early brood-rearing habitat within 2 miles of an occupied lek, or in identified sage-grouse nesting and early brood-rearing habitat outside the 2-mile buffer from March 15 through July 15."

Comment - There appears to be no limit on regulating surface disturbance beyond the 2-mile buffer; and, arguably there is no basis for extending the 2-mile buffer. The current sage-grouse stipulation (¼ mile NSO and 2-mile timing restriction) is adequate to maintain the species. APPENDIX 12 - SEASONAL WILDLIFE STIPULATIONS FOR ALL SURFACE DISTURBING ACTIVITIES Page A12-1 Under the heading of Restricted Area for winter sage-grouse habitat, activities are restricted from November 15 - March 14. Comment - It would be more realistic to add the word "crucial" after the word "identified" under the Restricted Area column. Sage grouse, like big game animals will winter on a much larger area than is crucial to them during severe winter conditions. "Identified winter habitat" would likely include the entire sagebrush vegetation type in the planning area, which would result in excessive and unfounded restrictions.

Response: According to the following peer-reviewed scientific literature, the current restrictions are not adequate: Holloran, M. J. and S.H. Anderson, 2005, Spatial Distribution of Greater Sage-Grouse Nests in Relatively Contiguous Sagebrush Habitats. The Condor 107:742–752; Holloran, M.J., B.J. Heath, A.G. Lyon, S.J. Slater, J.L. Kuipers, S.H. Anderson, 2005, Greater sage-grouse nesting habitat selection and success in Wyoming, Journal of Wildlife Management 69(2): 638-649; Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham, in press, Greater sage-grouse winter habitat selection and energy development, Journal of Wildlife Management. Winter concentration maps are currently being developed by BLM and WGFD and the record of decision will be updated upon their completion. These areas do not occur in all of the sage brush habitats because much of the sagebrush is covered in snow for 6 months out of the year. The most important areas are the windswept areas where sagebrush is exposed.

Comment: Item: Page 3-119. Under the heading of Greater Sage-Grouse it is stated that Greater sage-grouse are discussed below under Special Status Wildlife Species. Comment - Since the greater sage-grouse is hunted in Wyoming it is more appropriately discussed under the Game Birds section. It is not reasonable for this species to be both hunted and also classified as a Special Status Wildlife Species. On page 3-123 under the BLM Sensitive Wildlife Species section it is referred to as: "–the most numerous and widespread game bird in the planning area."

Response: Despite the fact that greater sage-grouse are still hunted under WGFD regulations and are the most numerous and widespread game bird within the planning area, numerous studies and nationwide studies have documented large-scale historic declines. For this reason, BLM has designated this species as sensitive and why the Governor of Wyoming is putting tremendous effort into managing this species.

Comment: Item: Page A12-1. Under the heading of Restricted Area for winter sage-grouse habitat it restricts use from November 15 - March 14. Comment - It would be more realistic to add the word "crucial" after the word "identified" under the Restricted Area column. Sage grouse, like big game animals will winter on a much larger area than is crucial to them during severe winter conditions. "Identified winter habitat" could include the entire sagebrush vegetation type in the planning area and result in an excessive restriction.

Response: Winter concentration maps are currently being developed by BLM and WGFD and the record of decision will be updated upon their completion. These areas do not occur in all of the sagebrush habitats because much of the sagebrush is covered in snow for 6 months out of the year. The most important areas are the windswept areas where sagebrush is exposed.

Comment: This Pinedale RMP planning area provides several million-acres of exceptional habitat for sage grouse. While present data are too limited to conclusively evaluate the overall health of the Upper Green's sage grouse populations and trends in the available habitat, there are worrisome signs. In recent years there has been a local decline in spring counts of sage grouse numbers and site inspections have indicated substantial disturbance in almost all habitat in the Valley. Besides the impacts from the current

natural gas development boom, new housing, power line and road corridors, and livestock grazing have all affected sage grouse habitats. The DEIS fails to adequately consider these cumulative impacts on sage grouse and other wildlife species. Studies are needed to confirm the extent and specifics of how these activities harm local populations, and it is clear that continuing with present practices will result in habitat decline and reduced distribution and numbers of sage grouse throughout the Valley.

Furthermore, shrub communities in the Green River Basin are the single most important habitat type for supporting the tens of thousands of wintering mule deer and pronghorn. However, inventory data on BLM lands is limited and habitat management typically receives low priority by the BLM. The only comprehensive vegetation inventory conducted in the Pinedale Resource Area was done on BLM lands located between North Piney Creek and Fontenelle Creek, during 1988 and 1989 (Cundy 1989). The purpose of the Cundy (1989)'s inventory was to evaluate shrub community conditions on mule deer winter ranges.

Response: BLM is currently collecting fine-scaled habitat data to assess the seasonal habitat use across landscapes. This information will be used for mitigation projects, habitat improvement projects, and project planning to maintain functional habitats across the landscapes. Alternative 3 and all of the areas unavailable for leasing and NSO areas aim to effectively protect seasonal habitats for all sagebrush obligate species.

Comment: Pg 2-143 to 153 Wildlife and Fish Habitat Management Management Objectives and Actions: Objective 1 Maintain sufficient undisturbed or minimally disturbed habitats to protect wildlife resources… General Observation: Generally the goals, objectives and actions described are related to the protection of habitat with the caveat of "to the extent practicable" in regards to oil and gas fields determined to be "intensively developed areas". It is clear that any of the four oil and gas management areas could evolve into an intensively developed area in the off chance that a significant resource is discovered, the feasibility of this occurring is limited due to the management prescriptions places on the Large Block NSO and Unavailable areas. The "traditional multiple use management and accommodating all approved uses to the extent possible" focus of Minimally Developed Areas should be stressed but as written the management focus for this area is on wildlife not "all approved uses". Specific Comments: Objective 2 Maintain sufficient undisturbed or minimally disturbed greater sage-grouse source habitats to ensure long-term species sustainability and functioning habitats within the planning area. Actions Intensively Developed Fields - this section does not set unreasonable restrictions or expectations for fields determined to meet the definition of intensively developed. Minimally Developed Areas a. The restrictions on the use of existing roads and trails in areas of sage-grouse activity do not provide any clarity as to the proximity of the road or trail to grouse breeding, nesting/early brood rearing or winter use areas. Generally lekking, nesting and early brood rearing area restrictions would be applied within a two mile radius of the lek as found in (b). Winter concentration areas need to be defined so that vehicle access can be appropriately limited. f. The prohibition of surface disturbing activities in sage-grouse winter concentration areas should be limited to areas of severe winter habitats as described in HWA 2006 (Hayden-Wing Associates, LLC. July 2006. Vegetation and habitat analysis of critical wintering areas for greater sage-grouse. Prepared for US Department of Energy, National Energy Technology Laboratory, Tulsa, Oklahoma.). Large Block NSO Areas – It is unrealistic to lease areas as large as those illustrated in Map 2- 9 with NSO restrictions placed on their development.

Response: BLM does not have the authority to prohibit development of existing valid leases. It is BLM's intent that the unavailable and NSO areas remain undeveloped and provide valuable wildlife habitat. However, to the extent that existing leases are present in these areas, some development could occur. The Large Block NSO areas have been removed from the final EIS.

Comment: Pgs 4-180 to 4-211 4.17 Wildlife and Fish Habitat 4.17.3 Impacts Common to All Alternatives General Observation: This section does not consistently discuss the value of the BLM applied stipulations and BMPs. For example, pg 4-183 "Proper design of linear crossings and BMPs would minimize these impacts" is recognized yet when discussing noise from compressor stations it is not recognized that implementation of BMPs such as placing the station downwind of a lek or behind a topographic barrier or installing enhanced muffler systems would mitigate potential impacts to sage-grouse leks. The application of and appreciation for the use of BMPs and stipulations must be discussed to make the impacts analysis valid. The lack of acknowledgment of these mitigating actions is pervasive throughout the impacts analysis. Additional examples of this lack of disclosure are provided below, there are many more that are not specifically mentioned.

Response: BMPs are implemented on a site-specific basis and do not universally require onsite mitigation. In addition, it is not always possible to use topographic barriers or place compressor stations downwind from an active lek. As experience in the existing fields has shown, it cannot be generally assumed that implementation of a BMP would completely mitigate impacts.

Comment: Sensitive Species: The discussion of impacts to sensitive species from domestic livestock grazing under the preferred alternative is limited to the following discussion: "Management actions to achieve or maintain a seral stage appropriate for the maximum benefit of Colorado River cutthroat trout would alter the management of livestock in Colorado River cutthroat trout habitat areas. Livestock management strategies could include forage allocation reductions, deferred or shortened grazing periods, use of riparian pastures, increased cattle herding, increased fencing, and upland water development. "Increased emphasis on maintaining and improving habitats for sensitive species would result in limiting range improvements and altering livestock grazing management where grazing activities impact the integrity of the species or their habitat." The September 20, 2002 BLM Wyoming Sensitive Species Policy and List states the following:

"Bureau of Land Management (BLM) Manual 6840 establishes Special Status Species (SSS) policy for plant and animal species and the habitat on which they depend. This SSS policy refers not only to species protected under the Endangered Species Act (ESA), but also to those designated by the State Director as Sensitive. The manual states "Sec. 06D - Sensitive Species: State Directors, usually in cooperation with the State wildlife agency, may designate sensitive species. By definition the sensitive species designation includes species that could easily become endangered or extinct in the state. Therefore, if sensitive species are designated by the State Director, the protection provided by the policy for candidate species shall be used as the minimum level of protection". The policy further sets out how the Wyoming BLM is to manage sensitive species. It also notes the intent of the sensitive species designation is to ensure actions on BLM administered lands consider the welfare of these species and do not contribute to the need to list any other Special Status Species under the provisions of the ESA.

Management requirements that apply to the species on the BLM Wyoming Sensitive Species List are to avoid or minimize adverse impacts and maximize potential benefits to species whose viability has been identified as a concern by reviewing programs and activities to determine their potential effect on sensitive species. Requesting technical assistance from the FWS, and any other qualified source, on actions that may affect a sensitive species is recommended. It is not the intent of this list to track species range-wide or even statewide as this is done by other entities (WYNDD, WGFD, FWS, GAP, etc.) rather the BLM's obligation is to determine distribution and manage habitats. It is also the intent of this list to emphasize planning, management, and monitoring of these species.

IM 97-118 continues by reiterating BLM policy to ensure actions authorized, funded, or carried out by BLM do not contribute to the need for any species to become listed as a candidate, or for any candidate species to become listed as threatened or endangered. Early identification of BLM sensitive species is

advised in efforts to prevent species endangerment, and state directors are encouraged to collect information on species of concern to determine if BLM sensitive species designation and special management are needed.

The BLM's sensitive species manual requires the following from field office managers:

F. Field Office Managers are responsible for implementing the special status species program within their area of jurisdiction by:
1. Conducting and maintaining current inventories for special status species on public lands.
2. Providing for the conservation of special status species in the preparation and implementation of recovery plans with which BLM has concurred, interagency plans and conservation agreements.
3. Ensuring that all actions comply with the ESA, its implementing regulations, and other directives associated with conserving special status species.
4. Coordinating field office activities with Federal, State, and local groups to ensure the most effective program for special status species conservation.
5. Ensuring actions are evaluated to determine if special status species objectives are being met.
6. Ensuring all actions authorized, funded or carried out by BLM follow the interagency consultation procedures as outlined in 50 CFR Part 402- Interagency cooperation -Endangered Species Act of 1973, as amended.
7. Ensuring results of formal section 7 consultations, including terms and conditions in incidental take statements, are implemented.

In regards to planning area, the BLM must conduct and maintain current inventories for sensitive species, must comply with directions in the Programmatic Mountain Plover Biological Evaluation, and must ensure that any approved alternative meets the objectives set for special status species. The RMP should require site-specific surveys before approving any action, including authorizing grazing in permit renewals, when analyzing allotment management plans, when authorizing range improvements and water developments, and other management activities.

Sage grouse: Sage grouse depend almost entirely on sagebrush for food and protection from predators. In the summer, the birds depend on the grasses and plants that grow under the sagebrush to provide nesting material, as well as high protein insects that are critical to the diet of chicks in the first few months of life. In winter, almost 99 percent of their diet is sagebrush leaves and buds. Recent estimates indicate that the sage grouse populations have declined by approximately 86 percent from historic levels. One of the greatest threats to sage grouse populations is the destruction and loss of habitat from a variety of management activities including livestock grazing. Yet, the DEIS fails to consider these how past vegetation improvement projects and other management activities across the planning area.

In presettlement times, the range of the sage grouse paralleled the range of big sagebrush. Basin big sagebrush provides important cover for sage grouse. Populations of sage grouse have declined primarily because of loss of habitat due to overgrazing, elimination of sagebrush, and land development. Sage grouse populations began declining from 1900 to 1915, when livestock utilization of sagebrush rangeland was heavy. In the 50's and 60's, land agencies adopted a policy of aggressive sagebrush control in order to convert sagebrush types to grassland. Chaining, frequent fire, and herbicide treatments reduced sagebrush by several million acres and sage grouse numbers plummeted drastically.

Sage grouse historically occurred throughout the range of big sagebrush (A. tridentata), except on the periphery of big sagebrush distribution or in areas where it has been eliminated. Sage grouse prefer mountain big sagebrush (A. t. ssp. vaseyana) and Wyoming big sagebrush (A. t. ssp. wyomingensis) communities to basin big sagebrush (A. t. spp. tridentata) communities. Sage grouse are totally dependent

on sagebrush-dominated habitats. Sagebrush is a crucial component of their diet year-round, and sage grouse select sagebrush almost exclusively for cover.

When not on the lek, sage grouse disperse to the surrounding areas. Some females probably travel between leks. Patterson reported that in Wyoming, 92 percent of sage grouse nests in Wyoming big sagebrush were in areas where vegetation was 10 to 20 inches (25-51 cm) tall and cover did not exceed 50 percent.

Response: The standards and guidelines or an ecosystem analysis approach to assess livestock grazing is meant to assess the viability of the habitat across the landscape. If problems are found, changes in fences could occur throughout the planning area, additional fences may be considered for management purposes if they do not impede movement of migratory game species. In addition, fences attract avian predators by creating new perches, which can be detrimental to BLM sensitive species management. BLM understands the commitment to protect sensitive species in accordance with the 6840 Manual, in addition to BLM's federal regulatory requirements under the ESA. Currently, BLM is collecting baseline vegetation inventories on the effects of historic sagebrush treatments. This information will be the basis for habitat management as well as offsite mitigation programs.

Comment: Pg 4-198 first partial paragraph, states "Timing limitation have been found to be inadequate to maintain species such as sage-grouse in a developed field." The recent development activity in the PAPA began in 1998, as illustrated in Figure 6, ten years later greater sage-grouse continue to occupy the field as they do the surrounding area; therefore the BLM timing stipulations are effective in maintaining the species in the field. As stated earlier in these comments, BLM purposely impacted two leks by lifting the spatial and temporal stipulations normally implemented to mitigate impacts to the greater sage-grouse. Clearly, if these limitations are removed to benefit the Intensely Developed Fields scenario and activities are taking place within the ¼ mile and two mile radii of active leks during the lekking, nesting and early brood rearing periods impacts similar to those document by Holloran for the Lovatt Draw and Mesa Springs leks should be expected. Such impacts should not be seen in the Minimally Developed Areas scenario though some reduction in average male lek attendance may occur. First full paragraph on the same page discusses West Nile virus as a possible extraordinary stressor on sage-grouse. Given the generally limited days of heating in the planning area WNV is not expected to be an issue. Perhaps, Terry Creekmore, Wyoming State Department of Health, could be a source of information relative to this topic.

Response: Allowing one well to be drilled by waiving the NSO does not change the fact that there are large-scale lek declines in the Jonah as well as the Anticline gas developments. This trend is not only seen in the populations found in the Upper Green River Basin, but also the Powder River Basin.

Comment: In places, the number of young sage grouse simply is not enough to sustain a stable population. Sage grouse have one of the lowest recruitment rates of any upland game bird in North America. Loss of habitat, predation, drought, and poor weather conditions during hatching and brooding periods have been cited as factors leading to poor recruitment.

Lack of adequate nesting and brooding cover may account for high juvenile losses in many regions. A decline in preferred prey may also result in increased predation on sage grouse. Nest losses to predators vary throughout the range of sage grouse, but predators are more successful in areas of poor-quality nesting habitat. Wyoming, in general, has the strongest sage grouse population in the world. Fragmentation of the habitats upon which this population depends will slowly unravel the entire presently linked sage-grouse population in Wyoming. This has already happened in most other states with disastrous results and has already started in Wyoming -- most noticeably at the periphery of the historical distribution. Once this continuity becomes fragmented, the overall distribution fabric is lost and sage-

grouse populations will become disjointed and subject to greatly reduced abundance as well as local extirpation.

Response: BLM agrees that sage-grouse is an important species, which is why BLM recognizes it as a sensitive species in the planning area and why special management actions are afforded for the sage-grouse in the proposed RMP final EIS.

Comment: Page 4-210, first paragraph, states that large block NSO could protect "big game crucial winter range and sage-grouse lek sites, that would be unable to withstand any disturbance at any time of the year." This is a very misleading statement, we know these species, ungulates and sage grouse, are able to withstand some limited human disturbance during the most sensitive seasons as it seen on the Mesa and elsewhere. The sensitivity of the species in those areas is limited to the specific season of use. While it is true that the habitat would be protected by the Large Block NSO it is also protected in the Minimally Developed scenario and to a lesser extent in the Intensively Developed scenario by the restrictions laid out on pages 2-143 to 2-153. Further this paragraph expresses that these habitats within the large Block NSO are at risk of "becoming population sinks if the surrounding habitats are developed". The probability of the Large Block NSO areas, that have previously been leased, becoming population sinks due to intensive development taking place is significantly overstated. Paragraph 3 states that "Wildlife habitat would generally only be protected if a mineral commodity is not present for extraction" all the development scenarios provide habitat protection to some extent, with Alternative 4 providing the least. Paragraph 8 discusses grazing and the need to rest "treated areas" from livestock grazing for two years. This prescription does not take into account types of treatment or drought/precipitation, both of which could aid in determining the rest period needed, longer or shorter. The discussion does not provide information regarding why the treatment may have been done or where replacement livestock grazing opportunities would occur. The final paragraph on page 4-210, continued on pg 4-211, discusses sage-grouse nests relative to lek locations and states that a 2-mile buffer would inadequately protect leks, nesting and juvenile recruitment within the Minimally Developed Area. This statement falsely characterizes the findings of Holloran (2005) and Kaiser (2006). Their research projects took place in the PAPA, an area of ongoing intensive development. Holloran's work was specifically manipulated by BLM to determine the impacts of development activity, without mitigating stipulations and COAs, on sage-grouse. The Minimally Developed Areas scenario and sagegrouse protective stipulations found on pg 2-144 are significantly more protective than those currently in place in the PAPA and especially more protective when contrasted to the situation that was seen at the Lovatt Draw and Mesa Springs leks where protective stipulations were removed. The potential impacts to the grouse from the Large Block NSO and Unavailable scenarios are hugely overstated as the protections provided in these areas are greater than those provided by the Minimally Developed scenario. The second full paragraph on pg 4-211 describes the potential impact to raptors from limiting raptor surveys to ½ mile around a proposed activity and states that "preventing take of raptors would present a great challenge." This statement completely mis-states the stipulations/COAs found on Pg. 2-151 which requires that prior to initiating surface disturbing actives raptor surveys would be conducted within a one mile radius of the proposed activity and that "c. Activities would be designed and mitigated to prevent take of raptors." These same protective requirements are found in all four development scenarios. The Ch. 4 analysis of potential impacts on pg 4-211 must be re-written to reflect the surveys required for all levels of exploration and development, and reflect that protection for raptors would extend to one mile around proposed activities.

Response: Holloran's research was not the only energy-related study on the impacts to sage-grouse populations. Braun, C. E., O. O. Oedekoven, and C. L. Aldridge, 2002, Oil and gas development in western North America: effects on sagebrush steppe avifauna with particular emphasis on sage grouse, Transactions of the North American Wildlife and Natural Resources Conference 67:337-349; Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham, in press, Greater sage-grouse winter habitat selection and energy development, Journal of Wildlife Management; Kaiser, R. C., 2006, Recruitment by greater

sage-grouse in association with natural gas development in western Wyoming, Thesis, University of Wyoming, Laramie, Wyoming; Lyon, A. G., and S. H. Anderson, 2003, Potential gas development impacts on sage-grouse nest initiation and movement, Wildlife Society Bulletin 31:486-491; Walker, B.L., D.E. Naugle, and K.E. Doherty, in press, Greater sage-grouse population response to energy development and habitat loss, Journal of Wildlife Management. Furthermore, one well was allowed to be drilled by waiving the ¼-mile NSO; the timing restrictions were still in place. This does not negate the fact that there are large scale lek declines in the Jonah, as well, as the Anticline gas developments. This trend is not only seen in the populations found the Upper Green River Basin but also in the Powder River Basin.

Comment: Several scientists have researched and documented the biology and habitat requirements for sage grouse during their various life stages. These life stages include leks or breeding, nesting, brood-rearing and wintering. Braun et al (1977) in their review found that leks or breeding sites were generally open areas surrounded by sagebrush and that nesting areas appeared to occur within a few kilometers of the lek sites. The maximum distance between leks and nesting sites reported was 12.9 km, with 59% being within 3.2 km. Successful nest sites had significantly greater sagebrush canopy cover (27%) as opposed to unsuccessful sites at 20%. An important component of the nesting sites is also the cover provided by herbaceous vegetation, particularly grasses. Connelly et al (2000) reported a range of grass height at nest sites between 14 – 34 inches and a mean of 20 inches with canopy cover of grasses ranging from 4 to 51% with a mean of 16%. During brood-rearing, grouse with chicks preferred more open sagebrush uplands at about 10% - 14% canopy, while loafing of adults occurred in stands with 30% canopy. Beginning in June and during mid-late summer, broods moved to more mesic sites such as meadows. Hockett (2002) stressed the importance of riparian and wet meadow sites during summer and fall. Wintering sites were reported to have greater than 20% sagebrush canopy cover.

Connelly et al (2000) summarized characteristics of sage grouse habitat in the following table which is reproduced from their paper. The sagebrush canopy characteristic for breeding habitats is reported as a broad range, but it is important to remember that successful nests occur in areas with canopy cover at the high end of the range or higher. Diets of sage grouse vary through the year and by age. Sage grouse depend entirely on sagebrush from October through April. In May, they shift to a forb-dominated diet (20 – 60%) with the remainder being mostly sagebrush. They shift back to sagebrush during September. Chicks begin life depending heavily on insects at about 60%, then shift to a forb dominated diet with about 15% sagebrush during the second month.

Braun et al (1977), Welch et al (1990) , Connelly et al (2000) report that spraying, burning and mechanical treatments of sagebrush resulted in declines of sage power lines, fences, reservoirs, ranches, farms and housing developments have resulted in sage grouse habitat fragmentation and loss. Structures such as fences and power lines provide perch sites for raptors that prey on sage grouse and also result in injury or death when grouse collide with these. Connelly et al (2000) and Hockett (2000) reported that sage grouse have high seasonal fidelity to seasonal ranges and females return to the same area to nest each year. Promoting additional cattle concentrations to invade important nesting habitat will have negative effects on these birds, but then BLM provides no information on sage grouse use areas in relation to existing and proposed developments or to areas in good or poor condition. No analysis was done as to the effects of these disturbances combined with livestock grazing on sage grouse populations on these allotments.

Beck and Mitchell (2000) and Hockett (2002) reviewed the effects of livestock grazing on sage grouse. They report that livestock, by consuming herbaceous vegetation and reducing grass cover needed to conceal grouse nests from predation, reduce grouse production. Ground squirrels favored by high levels of grazing, combined with drought conditions account for significant nest predation—but again this impact was not disclosed. The depletion of forbs and loss of associated insects can directly impact chick

survival. Mattise (1995) noted that "we have poor strategies for protecting important brood rearing habitat during severe drought conditions. Riparian areas, springs and seeps are not being managed to provide vegetative recovery and enhancement." BLM should set standards in the RMP specifically designed to protect these resources so that they provide the habitat components need by sage grouse. Otherwise, the proposed decision would be counter to current science.

Considerable local information is available about sage-grouse use areas in Wyoming (Lyon 2000, M. J.Holloran 2001-02 Study; Heath et al.,1997). Most of the available data that have been mapped are those on location of leks. There is general knowledge about sage-grouse seasonal habitat use areas outside of the lek locations, with Lyon (2000) presenting the best generalized overview. Braun (2002) noted the following for the development of the Pinedale RMP and they should be incorporated into the RMP:

1. Winter— Focus should immediately be placed on locating and mapping sagegrouse winter-use areas throughout the area. This should have the highest priority, as over winter survival is critical to population maintenance. Maps should be prepared for both "average" or "normal" winters and severe winters which, happen every 7-10 years. Once these areas are located and mapped, they should be described using standard measures for live sagebrush canopy cover, height, etc. following the approach of Connelly et al. (2000). Once identified, these areas should receive special attention (for example, designation as "Areas of Critical Environmental Concern") in order to reduce or prevent disturbance during winter, wild fire, and management activities that make them less useful to sage-grouse. Special attention should be given to any disturbance that reduces amount of live sagebrush, leaf surface, canopy cover, and height. (Which grazing does—authors words not Brauns).

2. Leks--The available data on leks suggest that not all active lek sites have been located and that the status (active, inactive [< 2 years. > 2years]) of each site mapped is poorly known. Further, there are gaps (some leks are not counted every year) in the count data and number of counts/lek in a given year varied. The available long-term trend in numbers of cocks appears to be down but the problems identified make data analysis difficult. Since active sage-grouse leks are relatively easy to locate during late March and April, standard surveys of all areas within the proposed project area should be conducted and continued at 3-year intervals. All known lek sites should be checked for activity in spring. Those classified as active should be counted (number of cocks) 3-4 times each spring at 7-10 day intervals starting in late March-early April, depending upon weather conditions, and continuing into early May. Those classified as inactive should be checked in late April/early May every 2-3 years to ascertain any change in status. UTM (or GIS) coordinates for all lek sites should be taken and plotted on base maps.

3. Nesting-- Lyon (2000) describes habitats used for nesting. Because sage-grouse have been shown to nest at a variety of distances from active leks and use a variety of micro sites for nest placement, it is difficult to identify all nesting areas. Thus, the Connelly et al. (2000) guidelines should be followed to offer some protection to habitats useful for nesting at distances up to 3 miles from active leks. Since most actual nesting occurs within this distance (Braun et al. 1977) (with some nests at much greater distances), it is most reasonable to depict nesting habitat as all sagebrush areas with > 10 % live canopy cover of sagebrush (primarily A.tridentata vaseyana, A. t. wyomingensis, A. tripartita, A. nova, and A. cana depending upon location) and a healthy under story of native grasses and forbs. Since active lek sites can be located, identifying concentric areas within a three mile radius around each lek site that will include most nesting sites is presently the only reasonable method to map potential nesting areas.

4. Brood-rearing--Broods, upon hatching, use areas close to the locations of successful nests and progressively move towards moist areas upon desiccation of vegetation in the uplands. A review of where broods have been observed in relation to known sources of water (at ground level) or at riparian sites along streams, springs, etc. should be done so that additional management consideration can be given to these areas. Management that should be in place includes movement of livestock to avoid degradation of

plant communities in moist sites and riparian areas and fencing to allow livestock access to water only in sites where erosion and plant community degradation would not be expected or could be controlled. Lyon (2000) suggests that early brood survival is a problem in the area she studied southwest of Pinedale. Early brood survival is most affected by insect and succulent forb availability within secure (good hiding cover provided by grasses and forbs) habitats (Connelly et al. 2000). Late brood rearing habitat is primarily in close proximity (< 1 mile) of sites with moisture and succulent forbs adjacent to escape cover provided by live sagebrush (Connelly et al.,2000).

These scientific papers and reports provide a significant body of knowledge that BLM should have relied upon in addressing sage grouse needs and monitoring in the RMP. We also recommend the BLM review "A Blueprint for Sage-grouse Conservation and Recovery" by Braun (2006) and that the BLM comply with the recommendations in the "Conservation Assessment of Greater Sage-Grouse and Sagebrush Habitats" by Connely et. al. (2004) and make those recommendations standards for any activity that is proposed in sage grouse habitat. Only then can the public be assured that the BLM has complied with the requirements of its own sensitive species manual.

Response: The implementation of lek buffers, seasonal stipulations, NSO areas, and areas unavailable to leasing aim to effectively protect seasonal habitats for all sagebrush obligate species. Detailed analyses of impacts to sage-grouse from all activities that would take place within the planning area (including livestock grazing) are included in Chapter 4 of the draft EIS. Winter concentration maps are being developed by BLM and WGFD for incorporation into the approved plan. These areas do not occur in all of the sagebrush habitats because much of the sagebrush is generally covered with snow for 6 months of the year. The most important areas are the windswept areas where sagebrush is exposed. The best available data on sage-grouse leks were used in developing the draft EIS. Sage-grouse lek data have been updated and incorporated into the final EIS. Protection of leks is not limited only to the leks that were identified at the time the draft EIS was developed. Upon discovery of new leks, protection measures would be applied to those as well. Varying levels of protection of nesting habitat were analyzed in all management alternatives. An NSO stipulation within 3 miles of active leks was analyzed in Alternative 3 of the draft EIS. Livestock grazing will be managed to meet the Standards for Rangeland Health, which are designed to achieve a sustainable, functioning rangeland ecosystem. BLM has incorporated the Connelly guidelines, to the extent practicable, given BLM's requirement to manage multiple resources and resource uses. All available literature was reviewed and considered in development of the draft EIS.

Comment: Guidelines for Management of Sage Grouse and Migrant Bird Habitat. These authors (Braun et al, Connelly et al, and Welch et al) have provided a variety of guidelines for management of sage grouse habitat. These include:

- Sagebrush eradication should not be practiced. Treatments can be used to thin dense sagebrush stands to a range of sagebrush cover from 15% to 25%. Burns should be avoided in xeric Wyoming big sagebrush habitats). Only small burns to create mosaics in mountain big sagebrush should be contemplated and these are considered experimental.
- Rehabilitation following wildfire or other disturbances should focus on re-establishing sagebrush and native herbaceous plants. Annual grass establishment following fire is detrimental. Grazing should not be allowed on seeded areas until plant recruitment has occurred.
- Range seedings should focus on establishing forbs, native grasses and sagebrush. Monoculture seedings of crested wheatgrass and other non-natives are discouraged.
- Applying insecticides to summer habitat is not recommended.

- Livestock use around water sources and wet meadows in brood rearing areas should be regulated through fencing or other management to restrict overuse.
- Grazing practices should be adjusted to maintain residual grass growth essential for nest concealment and then delay grazing the same areas until after nesting.
- Plot sage grouse use areas including leks, nesting areas, wintering sites, meadows and summer range or brooding areas on maps.
- No sagebrush will be treated or removed until a comprehensive plan has been formulated for management of the area.
- Sagebrush control projects will include provisions for long-term quantitative measurement of vegetation before and after to determine effects on habitat and whether objectives were met.
- No sagebrush control projects will be done on areas where live cover is less than 20%, on steep slopes or upper slopes with skeletal soils where big sagebrush is less than 30 cm.
- No sagebrush control along streams, meadows or intermittent drainages. A 100 meter strip of live sagebrush should be left on each edge of meadows and drainages.
- When sagebrush control is found to be unavoidable, treatment measures should be applied in irregular patterns using topography and other ecological considerations. Widths of treated and untreated areas can vary except treated areas will not be wider than 30 meters and untreated areas will be at least as wide.
- Manage breeding habitats to support 15 – 25% canopy cover of big sagebrush, perennial herbaceous cover ≥18 cm in height with ≥ 15% canopy cover of grasses and ≥ 10% canopy cover of forbs.

Partners in Flight (Paige and Ritter, 1999) provide management recommendations for sage grouse and migratory birds obligate to sagebrush-steppe. These include:

- Identify and protect those habitats that still have a thriving community of native understory and sagebrush plants.
- Maintain large, continuous blocks of unfragmented habitat
- Maintain seeps, springs, wet meadows and riparian vegetation in a healthy state
- Avoid practices that convert sagebrush to non-native grassland or farm land.
- Maintain stands of sagebrush for a balance between shrub and perennial grass cover.
- In large disturbed areas, sagebrush and perennial grasses may need to be reseeded to shorten recovery time.
- To maintain bluebunch wheatgrass vigor, avoid grazing during the growing season until plants begin to cure. Bluebunch wheatgrass is especially sensitive to heavy grazing during the growing season. Recovery of these plants following heavy grazing during a single spring can require 8 years under the best management and environmental conditions.
- Grazing plans will depend on the current condition and plant composition of the area. Defer grazing until after crucial growth periods. Note that in the presence of cheatgrass, deferred grazing can favor the cheatgrass.

- For sage grouse maintain average grass height of at least 18 cm in May and early June. Sharp-tailed grouse require 20 cm.
- Consider livestock exclusion from heavily damaged areas, particularly wet sites.
- Livestock concentrations around water developments can increase cowbird parasitism.
- Use fences with smooth top and bottom wires for exclosures around wet sites.

Response: Currently, BLM is collecting baseline vegetation inventories on the effects of historic sagebrush treatments. This information, coupled with commenters' statements, are and will be used to justify any future treatments needs including offsite mitigation projects.

Comment: Miller and Eddleman (2000) also provide an excellent review of sage grouse ecology, habitat and management. They emphasize that sage grouse habitat management plans must take into account landscape heterogeneity, site potential, site condition and habitat needs of sage grouse during different parts of their life cycle (breeding, nesting, brood rearing, wintering). They also stress the importance of accurate resource inventories and assessments before making management decisions as to when and how each community across the landscape should be managed. Grazing management plans must identify potential conflicts between sage grouse and livestock. Again, these specific management recommendations should be incorporated into the RMP and compliance should be made mandatory for any project proposed in sage grouse habitat.

Furthermore, the DEIS ignores the impacts of livestock-caused weed invasion of areas near water sources, fences, bedding grounds, trails, and the associated spread of weeds outward by livestock transport/vectors, from these intensive zones of disturbance. This harms essential sage grouse habitats and the habitats of other special status species. The rampant cheatgrass spread in zones of fire or other disturbance will doom sage grouse and other sagebrush obligate species in these lands. As BLM has failed to adequately describe and assess the impacts of livestock in weed infestation and spread based on current science and site-specific data, it has not adequately evaluated impacts.

We are particularly concerned that BLM has failed to consider the impacts associated with vegetation treatments across the planning area. For example, the DEIS notes the following: "The objective of most vegetation treatments is to reduce shrub cover and increase herbaceous forage production. Vegetation treatments are commonly designed to mimic natural wildland fires, which have been occurring on these rangelands for thousands of years. Currently the most common vegetation treatment is prescribed burning, which kills woody vegetation such as big sagebrush. Prescribed fires usually burn at lower temperatures than wildfires, enabling a much quicker recovery time for the surviving, fire-tolerant plant species. The ground surface temperature may damage, but usually does not destroy, the root crown of fire-tolerant perennial grasses. This enables herbaceous forage to flourish after the competition for light, nutrients, and water is removed. "Sagebrush treatments completed in the 1960s and 1970s involved herbicide spraying, which successfully removed sagebrush from several thousand acres. Sagebrush naturally reestablishes itself within its habitat following natural fire within 5 to 40 years. In the absence of natural fire cycles, vegetation treatments are needed to maintain the proper balance of shrub and herbaceous species on the rangelands. This benefits livestock that graze the forage, but also provides benefits to wildlife owing to increased habitat diversity, forage production and vigor, stream and spring flows, soil stability, and nutrient cycling. The use of vegetation treatments in sensitive sage-grouse habitat continues to be controversial, and any vegetation treatments in those areas would need to be designed to maintain or improve the specific components of the sagebrush plant communities that may be most limiting to the local sage-grouse populations (emphasis added). "The purpose of vegetation treatments since 1988 has been to create diversity in even-aged stands of sagebrush and improve big game winter range habitat, as well as increase the quantity and quality of forage for livestock. Since 1988, 8,700 acres

have been prescribed burned, 3,660 acres have had herbicide applied for brush control, and 4,440 acres have been treated mechanically (Table 3-4)."

Response: Currently, BLM is collecting baseline vegetation inventories on the effects of historic sagebrush treatments. This information, coupled with commenters' statements, are and will be used to justify any future treatments needs including offsite mitigation projects. The standards and guidelines or an ecosystem analysis approach to assess livestock grazing is meant to assess the viability of the habitat across the landscape. If problems are found, changes in management strategy are required.

Comment: In discussing the potential impacts of oil and gas development on page 3-124, the BLM fails to describe the significant increase in sage-grouse populations since 2003. According to the information presented in the Pinedale Anticline SDEIS, Figure 3.22-2, it appears sage-grouse populations on the Mesa and in the vicinity of PAPA and Jonah Field are at all time highs. The dramatic increase in the sage-grouse population since 2003, a time period that has included significant increases in oil and gas development in Jonah Field and PAPA, may indicate that oil and gas development is not adversely impacting sage-grouse to the extent previously disclosed, that BLM's mitigation measures and management directives are effective, or that the slight decrease in sagegrouse populations in the early part of this decade was actually caused by factors other than oil and gas development. The BLM should revise page 3-124 to more accurately reflect the current trends and protections available for sage-grouse in the Pinedale Resource Area.

Response: A few years of increased grouse production has not negated the overall nationwide sage-grouse historic declines. These increases have not substantially increased the sage-grouse population in the basin to pre-decline levels. The following peer-reviewed studies indicate energy-related activities have contributed to the decline: Braun, C. E., O. O. Oedekoven, and C. L. Aldridge, 2002, Oil and gas development in western North America: effects on sagebrush steppe avifauna with particular emphasis on sage grouse, Transactions of the North American Wildlife and Natural Resources Conference 67:337-349; Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham, in press, Greater sage-grouse winter habitat selection and energy development, Journal of Wildlife Management; Kaiser, R. C., 2006, Recruitment by greater sage-grouse in association with natural gas development in western Wyoming, Thesis, University of Wyoming, Laramie, Wyoming; Lyon, A. G., and S. H. Anderson, 2003, Potential gas development impacts on sage-grouse nest initiation and movement, Wildlife Society Bulletin 31:486-491; Walker, B.L., D.E. Naugle, and K.E. Doherty, in press, Greater sage-grouse population response to energy development and habitat loss, Journal of Wildlife Management.

Comment: The RMP DEIS also fails to describe the significant increase in sage-grouse populations since 2003. According to the information presented in Figure 3.22-2 in the PAPA SDEIS, it appears sage-grouse populations on the Mesa and in the vicinity of PAPA and Jonah Field are at all time highs. The dramatic increase in the sage-grouse population since 2003, a time period that has included significant increases in oil and gas development in Jonah Field and PAPA, may indicate that oil and gas development is not adversely impacting sage-grouse to the extent previously considered, that BLM's mitigation measures and management directives are effective, or that the slight decrease in sage-grouse populations in the early part of this decade was actually caused by factors other than oil and gas development. The BLM also fails to note the significance of two new active leks in the vicinity of Jonah Field and PAPA, suggesting populations of sage-grouse are effectively utilizing habitat outside areas potentially disturbed by oil and gas operations. The BLM should revise the RMP EIS to reflect this updated data and to more accurately reflect the current trends and protections available for sage-grouse in the Pinedale Resource Area.

Response: A few years of increased grouse production has not negated the overall nationwide sage-grouse historic declines. These increases have not substantially increased the sage-grouse population in

the basin to pre-decline levels. The following peer-reviewed studies indicate energy-related activities have contributed to the decline: Braun, C. E., O. O. Oedekoven, and C. L. Aldridge, 2002, Oil and gas development in western North America: effects on sagebrush steppe avifauna with particular emphasis on sage grouse, Transactions of the North American Wildlife and Natural Resources Conference 67:337-349; Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham, in press, Greater sage-grouse winter habitat selection and energy development, Journal of Wildlife Management; Kaiser, R. C., 2006, Recruitment by greater sage-grouse in association with natural gas development in western Wyoming, Thesis, University of Wyoming, Laramie, Wyoming; Lyon, A. G., and S. H. Anderson, 2003, Potential gas development impacts on sage-grouse nest initiation and movement, Wildlife Society Bulletin 31:486-491; Walker, B.L., D.E. Naugle, and K.E. Doherty, in press, Greater sage-grouse population response to energy development and habitat loss, Journal of Wildlife Management.

Comment: As far as the sage grouse is especially one that's a problem. Pretty much all alternatives, all the maps of the management areas and special recreational areas in the Alternative 4, the entire corridor from -- on the Green River and the New Fork are considered management areas and those are all 100 percent private areas except for a few places where it corners in, and so I think that's wrong. If those -- to assume that you're going to manage the private area is wrong.

Response: BLM does not presume to manage private lands.

Comment: PAGE:2-143 SECTION: RECOMMENDED CHANGE:Objective 2 In coordination with local conservation districts, maintain sufficient undisturbed or minimally disturbed greater sage-grouse source habitats to ensure long-term species sustainability and functioning habitats within the planning area. EXPLANATION:Much of the sage grouse habitat is on private land and coordination is necessary to facilitate habitat management.

Response: BLM, NRCS, USFWS, WGFD, the Upper Green River Sage-Grouse Working Group, etc., are always willing to work with private landowners to coordinate habitat management techniques for the betterment of sage-grouse.

Comment: PAGE:2-144 SECTION: RECOMMENDED CHANGE:Revise: f. New power lines would be buried where economically and technologically feasible to minimize predation of sage grouse. EXPLANATION:Burying power lines is a minor contribution to sage grouse habitat and causes greater surface disturbance and loss of habitat. While it might reduce raptor predation, it does nothing for coyote predation. Better mitigation is to support predator control for both ravens and coyotes.

Response: The Upper Green River Sage-Grouse Working Group, of which BLM is a member, has initiated a project to determine the population extent and predation effects of ravens on sage-grouse. Predator control is costly, and unless it is continuous it does not achieve the desired results. As management agencies, we should be looking at why predator populations have increased. For example, are there more food sources than in the past? Are the generalist species out-competing the specialists, and is there a way to eliminate the food source?

Comment: PAGE:2-144 SECTION: RECOMMENDED CHANGE:Revise FEIS to document need for restrictions. EXPLANATION: a,b,c,d,e,f h, and i put leases off limits for about 5 months out of the year. First, these restrictions cannot be enforced as to existing leases without these stipulations, Second, FEIS does not document that these are the least restrictive methods. IM 2005-069. Third, recent increases in sage grouse numbers and other science suggests that predators are a major factor, rather than undisturbed habitat. Fourth, much of the alarm was raised during drought and with increased precipitation, area has seen more grouse. Finally, RMP should delete all the restrictions and instead adopt performance based

standards tied to sage grouse numbers and healthy sage brush biome. If habitat is maintained and improved and predators controlled, then grouse numbers should take care of themselves.

Response: A few years of increased grouse production has not negated the overall nationwide sage-grouse historic declines. Predation is only one factor regarding sage-grouse population declines; starvation, dehydration, and stress also contribute. The entire RMP is based on a performance-based approach, and BMPs will only work if operators are willing to commit to them 100%.

Comment: PAGE: 3-121, SECTION: 3.17.1, RECOMMENDED CHANGE: Add discussion of raven, recognizing both its significant role as a predator and status as a pest species to be controlled. Ravens are also commonly found throughout the planning area. Ravens are predatory birds, and are classified as a pest in Wyoming. The raven is believed to be a significant factor in sage grouse predation. Ravens also benefit from poorly handled garbage.

Response: The Upper Green River Sage-Grouse Working Group, of which BLM is a member, has initiated a project to determine the population extent and predation effects of ravens on sage-grouse.

Comment: PAGE: 3-123, SECTION: 3.17.1, RECOMMENDED CHANGE: Revise: After nesting, the hens move to brood areas that support forb understory or succulent vegetation (i.e., riparian areas or irrigated fields, which are almost entirely in private ownership) and high populations of insects in late spring and late summer. EXPLANATION: Sage grouse use forb understory as much or more than "succulent vegetation." Especially in the planning area, the riparian and irrigated fields are privately owned. Chapter 3 needs to accurately disclose private land within the boundaries of the planning area, rather than blend public land with private land.

Response: BLM and WGFD are collecting sage-grouse brood-rearing habitat use and location data for these habitats. The extent of sage-grouse use on private lands at this time is anecdotal, due to the lack of permission on a landscape basis to gather this data.

Comment: PAGE: 3-124, SECTION: 3.17.1, RECOMMENDED CHANGE: Chapter 3 needs to re-examine causative factors in 1998 and 1999 declines. Population numbers have increased with reduction in drought area. Nevertheless, sage grouse predators are at an all time high.

Response: A few years of increased grouse production has not negated the overall nationwide sage-grouse historic declines. Predation is only one factor regarding sage-grouse population declines; starvation, dehydration, and stress also contribute.

Comment: PAGE: 4-181 SECTION: 4.17.1 RECOMMENDED CHANGE: ADD Predators will continue to affect wildlife numbers, especially sage grouse. EXPLANATION: EIS must disclose impacts of predators on wildlife, especially sage grouse. EIS fails to disclose and address this significant impact on wildlife.

Response: The Upper Green River Sage-Grouse Working Group, of which BLM is a member, has initiated a project to determine the population extent and predation effects of ravens on sage-grouse.

Comment: PAGE: 4-186 SECTION: 4.17.1 RECOMMENDED CHANGE: [Well densities exceeding one well per 699 acres are likely to lead to declines in male sage-grouse lek attendance (Holloran 2005). Overall declines in male lek attendance approached 100% when the distance from leks to drilling rigs, producing wells, and main haul roads decreased, in conjunction with the number of wells within 5 km and the total length of main haul roads within 3 km (attributed to traffic volume and vehicle activity during the strutting period) of the lek increased (Holloran 2005). Finally, active leks in energy-developed areas

are experiencing a lack of yearling male recruitment. Assuming a yearly male mortality of 50%, a lek could become inactive in 4–6 years if yearling sage-grouse recruitment does not occur (Kaiser 2006).](STRIKEOUT) EXPLANATION: Again this discussion is not common to all and further is the subject of substantial disagreement within scientific community.

Response: All of these peer-reviewed studies have shown the same impacts as Holloran's study. Braun, C. E., O. O. Oedekoven, and C. L. Aldridge, 2002, Oil and gas development in western North America: effects on sagebrush steppe avifauna with particular emphasis on sage grouse, Transactions of the North American Wildlife and Natural Resources Conference 67:337-349; Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham, in press, Greater sage-grouse winter habitat selection and energy development, Journal of Wildlife Management; Kaiser, R. C., 2006, Recruitment by greater sage-grouse in association with natural gas development in western Wyoming, Thesis, University of Wyoming, Laramie, Wyoming; Lyon, A. G., and S. H. Anderson, 2003, Potential gas development impacts on sage-grouse nest initiation and movement, Wildlife Society Bulletin 31:486-491; Walker, B.L., D.E. Naugle, and K.E. Doherty, in press, Greater sage-grouse population response to energy development and habitat loss, Journal of Wildlife Management.

Comment: Recommended Mitigation Measures: 3. Adherence to time of use for restriction of activities from 8:00 PM through 8:00 AM during the breeding and nesting periods should be strictly monitored and enforced. This is the minimum needed to maintain sage-grouse populations in this area.

Response: This restriction is currently being used and will be better enforced now that a law enforcement office is being added for the planning area.

Comment: Chapter 4 Page 57 1st paragraph Commentor WGFD The time frame for activities around active leks is 8:00 p.m. to 8:00 a.m. not midnight to 9:00 a.m.

Response: Corrections have been made to Chapter 4.

Comment: Recommendation 3: Larger management areas with no surface occupancy from oil and gas development must be set up in the course of this RMP process to protect wildlife. Areas must include winter, crucial winter, transitional, migratory and parturition habitats for ungulates and winter, breeding, nesting and rearing habitats for sage-grouse. No exceptions should be granted within these areas. No conversions should be allowed to other oil and gas management areas without a full supplemental EIS.

Response: The language for conversion, and the areas available for oil and gas leasing, have been modified in the final EIS.

Comment: The DEIS indicates that surface-disturbance activities and oil and gas development may occur within %a mile of greater sage-grouse (*Centrocercus urophasianus*) leks within areas designated as "intensively developed oil and gas fields." The Service is concerned that disruptive activity within close proximity to sage-grouse leks may result in non-use of those traditional lekking areas and lead to fragmentation of sage-grouse habitat and disappearance of this species from the surrounding landscape. Under the preferred alternative of the proposed RMP, these impacts could be exacerbated by the fact that areas designated by the Bureau as "minimally developed oil and gas areas" could receive "intensively developed oil and gas field" status, if an oil and gas discovery is made in those areas currently designated as "minimally developed".

Response: BLM will comply with the WAFWA MOU to conserve the greater sage-grouse and its habitat.

Comment: REFERENCE: Appendix 2 – 2. Wildlife Mitigation Guideline, pg A2-3 DESCRIPTION OF ISSUE: The guidelines use the term "important habitat" where as in other sections of the document the term crucial or critical habitat is used. SUGGESTED REVISION/ACTION: The document seems to use the terms important or crucial randomly and appear to use them interchangeably which they aren't based on the definitions in the glossary.

Response: These habitat designations are not random. In some cases, the habitat designations come from WGFD; other designations are labeled important because they are important seasonal habitats. For example, sage-grouse lekking, nesting, brood rearing, and wintering habitats are all equally important to the continued success of the bird.

Comment: The restrictions on development attributable to wildlife objectives under Alternative 3 are inappropriate. Even in Intensively Developed Fields such as PAPA, the BLM would unreasonably restrict ongoing development. Limiting vehicle use to existing roads and trails within intensively developed fields is unreasonable and unnecessary, especially given the fact APC has not yet fully developed its acreage on the eastern and western edges of the PAPA. Requiring NSO stipulations within three miles of sage grouse leks is similarly unnecessary and conflicts with current BLM state-wide policy. The BLM has not mapped or identified sage grouse wintering areas.

Response: Alternative 3 is the conservation alternative—all wildlife objectives were based on published scientific research conducted within the planning area. It is reasonable, and required under NEPA, to analyze an alternative that could restrict oil and gas activities.

Comment: The BLM must revise its management of Intensively Developed Fields and Minimally Developed Areas under Alternative 4. The BLM must insert the world "reasonably" before the word minimize wherever the word is used in the description of the alternative. For example, on pages 143-144, the BLM indicates that oil and gas operations in Intensively Developed Fields will be managed to minimize impacts on sage grouse. Construed literally, this language could be viewed as limiting the BLM's flexibility and the operators' ability to effectively develop a lease. The language could also create additional litigation and paperwork for the BLM because the agency would be required to demonstrate for each oil and gas project how impacts to various resources, such as sage grouse or noise, were minimized.

Response: The concept of adaptive management is meant to expand the flexibility of management options between the operators and BLM. The final EIS has been revised to apply performance-based management to the activity plan level, where it is more appropriate, rather than the RMP level.

Comment: PAGE: G-7 CHANGE: DOCUMENTED LEK – Any lek that has been identified as Active, Inactive, [Unknown,](STRIKEOUT) or Occupied. EXPLANATION: By definition, an unknown lek is one that has not been documented, G-24 line 17-18, and definition needs to be corrected.

Response: These leks have been identified as active in the past and are known to contain strutting birds; however, they may not have been surveyed for activity that season.

Comment: PAGE: G-1 CHANGE: ABANDONED LEK - A lek in an otherwise suitable habitat that has not been active [during a consecutive ten-year period](STRIKEOUT). Before a lek is designated "abandoned" it must be confirmed as "inactive" (see definition under "Inactive Lek") [in at least four non-consecutive strutting seasons spanning ten years.](STRIKEOUT) EXPLANATION: This definition should be revised to reflect the outcome based management principles under which the RMP is being developed. The terms are prescriptive and should be omitted. The fact that definition was taken from expired Wyoming IM 2004-057 does not validate the definition. An IM cannot provide a stand alone

justification for BLM's definition, especially expired, supervisory instructions of a state office. BLM's definition must be supported by a rational basis. See Fallini et al., 162 IBLA 10, 36, 44 (2004).

Response: This IM had been incorporated into the 1988 RMP thorough a maintenance action, which is within our legal rights. Until this document is finalized, the 1988 RMP still dictates operational guidance. BLM and WGFD approved these definitions. The management direction for this RMP is still prescriptive and therefore defining lek activity is perfectly acceptable.

Comment: Analysis and Other Management Issues 1. Habitat guidelines published by Connelly et al. (2000) should be incorporated into preparation of a "desired future condition" to be achieved to improve nest success and early chick sage-grouse survival. These Guidelines represent the state of knowledge about greater sage-grouse and are based on published studies. This is the minimum needed to enhance sage-grouse populations in this area.

Response: Appendix 3 contains mitigation measures and operating standards for sage-grouse habitats. The appendix will be updated over time as additional mitigation measures are developed.

Eagles, Raptors, Migratory Birds

Comment: Golden eagles, their nests and young are strictly protected under the Bald Eagle Protection Act (16 USC 668a-d). This species is very popular with the wildlife viewing public, and conversely has historically suffered from shooting as well as poisoning directed at terrestrial predators. The maintenance of viable golden eagle populations should be an important consideration in the new RMP. Conservation efforts should focus on protecting nest sites and important foraging areas, such as prairie dog colonies. Golden eagles are highly territorial. Even when surface-disturbing activities such as strip mining are located away from golden eagle nest sites, the destruction of important foraging habitats, such as prairie dog colonies, within the territory of nesting pairs can be a major problem for the viability of nesting golden eagles (Tyus and Lockhart 1979).

Response: BLM is required to uphold the Bald and Golden Eagle Protection Act, the Migratory Bird Act, and the 6840 BLM sensitive species manual (in which the white-tailed prairie dog is listed).

Comment: The primary impact to raptor populations is direct disturbance of raptors on the nest, leading to reductions or loss of viability for eggs or nestlings. Disturbance of nesting raptors may cause nest abandonment, damage to the eggs, subject eggs or nestlings to cooling, overheating, or dehydration leading to mortality, prevent young nestlings from receiving sufficient feedings to remain viable, and cause premature fledging (Parrish et al. 1994). Thus, the BLM should establish adequate nest buffers (on the order of 2 miles in diameter) around nest sites, preventing all construction of developments (such as wells and roads) that would lead to future disturbance of nesting raptors through focusing human activities in these areas. Seasonal restrictions are insufficient; a well or road constructed outside the nesting season is still likely to lead to nest abandonment or reductions in recruitment due to disturbance from vehicle traffic that does occur during the nesting period. The overall landscape-scale effects of widespread industrialization threaten the viability of raptor populations through habitat loss and fragmentation. Nest buffers currently in force are unlikely to safeguard the viability of native raptors in the Pinedale planning area.

Response: Currently, BLM has found no literature that supports a 2-mile raptor nesting buffer. In addition, BLM is committed to protecting raptors and other migratory birds from the actions you have described under the Migratory Bird Treaty Act (of 1918) (MBTA).

Comment: Pg. 2-151 states that prior to initiating surface disturbing actives raptor surveys would be conducted within a one mile radius of the proposed activity. c. states that activities would be designed and

mitigated to prevent take of raptors. These requirements are ignored in the impacts analysis found in Ch 4 (pg 4-211), specifically: Before initiation of surface disturbing activities within potential raptor habitat, surveys would be conducted for nesting, roosting, and foraging activity within a half-mile radius of the proposed activity. This approach would preclude protection of ferruginous hawk and bald eagle nests that require a 1-mile buffer from a proposed disturbance during the nesting and winter roosting periods. This suggests that new nests found 0.5 to 1 mile from the proposed activity could be adversely affected simply because their presence was not known, which is unacceptable under the "take" provisions of the MBTA and the ESA. Failed mitigation measures for raptors could result in take (violation of the MBTA). As new mitigation measures for raptors are developed, preventing take of raptors would present a great challenge. These same protective requirements are found in each of the other development scenarios, Minimally Developed Areas, Large Block NSO and Unavailable. The Ch. 4 analysis of potential impacts found on pg 4-211, and copied above, must be re-written to reflect the surveys required for all levels of exploration and development, and reflect that protection for raptors would extend to one mile around proposed activities. These requirements are intended to preclude "take". Unavailable Areas This section has two requirements identified as "c", the second is written in a different format from the corresponding requirement found in the Large Block NSO section and should be rewritten to be consistent with the Large Block NSO verbiage. This entire section should be rewritten to reduce redundancy and eliminate conflict, for example, "f" "prohibit raptors from successfully fledging offspring would be prohibited" is mitigated by the implementation of the "b", "c" and "e" requirements.

Response: BLM intends to protect raptors to the fullest extent of its management authority in all four of the designated areas to prevent a violation under the MBTA. The impact analysis has been updated in the final EIS.

Comment: PAGE:2-149, RECOMMENDED CHANGE:Revise: 1. Mountain plover: Surveys demonstrating nesting presence could result in surface disturbing activities being prohibited from April 10 to July 10 on a case-by case-basis. EXPLANATION: Plovers are found in cultivated fields so surface disturbance is not harmful. It is reasonable to limit surface disturbance at nest sites.

Response: This COA is to protect mountain plover nests from surface-disturbing activities during the nesting season. The Colorado Division of Wildlife has found that mountain plovers do nest frequently in cultivated fields, and it has a strong program working with ranchers to prevent activities from destroying nests during the haying season.

Comment: The DEIS indicates that the Bureau will have different levels of protection for raptor nests depending on where the nests are located within the Bureau's four designated area categories: Intensively Developed Fields, Minimally Developed Areas, Large Block No Surface Occupancy (NSO) Areas, or Unavailable Areas. The Service wishes to remind the Bureau that disruption of raptors during nesting may result in a violation of the MBTA. The Service recommends using adequate buffer zones and seasonal timing stipulations to protect nesting raptors in all areas. under the Bureau's management authority.

Response: BLM intends to protect raptors to the fullest extent of our management authority in all four of the designated areas to prevent a violation under the MBTA. The management actions for raptors have been changed to reflect this.

Comment: REFERENCE: Wildlife and Fisheries Pg. 4-211 DESCRIPTION OF ISSUE: The document states that it "…is unacceptable under the take provision of the MBTA and ESA…" SUGGESTED REVISION/ACTION: This statement is incorrect and should be edited to correctly state that the MBTA protects migratory birds and there is no provision for "take". The majority of the protected species nests are only covered under MBTA when the nest is active (eggs or young).

Response: The MBTA does not permit "take", which means that you cannot allow it to happen. Under stringent circumstances you can request a "take" permit from USFWS. The final EIS has been revised.

Comment: Migratory Bird Nesting Habitat: The draft RMP fails to show the presence and habitat of sand hill cranes, blue herons, trumpeter swans, and ducks. The abundance of spring fed ponds, snow ponds, riparian areas, and creeks create an ideal environment for migratory birds in this area. The lack of disturbances allow these animals to enjoy a safe place to be. This area is quite unsuitable for leasing and mineral development.

Response: The wildlife information has been updated in the final EIS. The areas unavailable for oil and gas leasing have been revised in the final EIS.

Comment: Welch (2002) compared paired plots throughout the West and concluded that the burning of sagebrush reduces avian abundance and diversity. Birds found only in unburned sagebrush sites included American kestrel, Brewer's sparrow, broad-tailed hummingbird, sage grouse, mountain bluebird, sage sparrow, sage thrasher, and Swainson's hawk, while burrowing owl was among birds found only on burned sites (Welch 2002). Prescribed burn projects, if planned at all under current climate conditions, should be conducted in a manner that does not threaten the viability of sagebrush obligate passerines.

Response: Prescribed burning projects would not be conducted during the passerine nesting season; in addition, most burning would occur during the fall due to moisture index and weather patterns.

Comment: PAGE: A18-8 SECTION: Bald eagle RECOMMENDED CHANGE: These provisions shall not apply if the bald eagle is delisted. EXPLANATION: RMP should reflect the fact that a recommendation to delist the bald eagle has been pending for several years.

Response: The current conservation measures found in the Wyoming Statewide Programmatic Bald Eagle Biological Assessment and Biological Opinion (or other recent Biological Opinions [BOs]) containing bald eagles, will remain in effect until the national USFWS office develops the use of permits if "take" of a bald eagle is anticipated, but unavoidable. Currently, there is no provision for "take" of bald eagles under the MBTA or the BGEPA. By continuing the use of current practices to limit disturbance to bald eagles (nesting and roosting areas), BLM and the various activities that BLM authorizes will remain compliant with the MBTA and the BGEPA. The USFWS is in the process of preparing regulations that would authorize, under limited circumstances, the use of permits if "take" of an eagle is anticipated, but unavoidable. Additionally, after August 8, 2007, USFWS will have a regulatory mechanism in place to honor existing "take" authorizations under the ESA for bald eagles. During the interim period, until USFWS completes a rulemaking for permits under the BGEPA, they do not intend to prosecute BLM for incidental "take" of any bald eagle under the MBTA or BGEPA, if such take is in full compliance with the terms and conditions of an incidental take statement issued to the action agency or applicant under the authority of Section 7(b)(4) of the ESA or a permit issued under the authority of Section 10(a)(1)(B) of the ESA. Therefore, BLM will continue to apply the conservation measures it has in the past until USFWS provides a way for unintentional, unavoidable "take" to occur.

Comment: PAGE: G-10 CHANGE: [HISTORICAL RAPTOR NESTS - Any raptor nest or site that has been destroyed, but was historically recorded and documented. Temporal and spatial limitations will not apply.](STRIKEOUT) EXPLANATION: This definition appears to reference volunteer programs which check historical nest sites for recent activity. Volunteer programs bear no relevance to RMP management decisions, and the definition should be stricken.

Response: The source of the nest site information is not of significance as long as the nest site locations were validated. Recent field surveys have verified that most of these historical locations are correct.

Comment: The maintenance of avian biodiversity is best approached at the ecosystem scale. Germano and Lawhead (1986) found that bird diversity was highest in pinion juniper scrub and lowest in grassland, with sagebrush and shadscale-greasewood showing intermediate values. In one study, bird diversity was positively correlated with vertical habitat diversity but not patch heterogeneity (Germano and Lawhead 1986). The new RMP should have as one of its goals to maintain the viability and distribution of all avian species native to the region.

Response: See objective 5, page 2-150, this objective is set to maintain the distribution and habitats of the species mentioned.

Comment: This comment is from page 19. The BLM has historically mapped and surveyed for plover nesting areas on a catch-as-catch-can basis, limiting efforts to lands slated for imminent development projects. A broader and more comprehensive survey of nesting plovers by trained personnel is needed throughout the planning area.

Response: BLM has plans to conduct planning area–wide surveys, although it has been limited in the past by personnel, time, and funding issues.

Pronghorn

Comment: Vagrant lichens may be important pronghorn winter forage on windblown benches during severe winters (Thomas and Rosentreter 1992), and these lichens are significantly reduced through trampling by cattle and eliminated by domestic sheep grazing. The relationship between pronghorns and vagrant lichens may be commensal, as pronghorns may also assist in the dispersal of vagrant lichens (Rosentreter 1997).

Although vagrant lichens have apparently been studied little in Wyoming, they are widespread in other cold-desert shrubsteppes in the Great Basin province. In Wyoming, occurrences have been recorded for Aspicilia fruticulosa in Uinta County (Rosentreter 1993), for Dermatocarpon reticulatum in Yellowstone National Park and the Bighorn Basin (Rosentreter and McCune 1992). Dermatocarpon species have been found in sagebrush steppe habitats associated with pools of standing water in winter and spring for the interior Columbia River Basin (Rosentreter and McCune 1992). Surveys should be undertaken to identify the occurrence and distribution of vagrant lichens of the taxa Aspicilia, Dermatocarpon, Masonhalea, and Xanthoparmelia , occurring in cold deserts in the western U.S. (Rosentreter 1993) within the lands managed by the Pinedale Field Office, particularly in cold desert shrubsteppe habitats and on windblown ridges. Rosentreter (1997) proposed a number of management recommendations for conserving vagrant lichen populations, and we endorse these recommendations. Further study of the distribution and abundance of vagrant lichens on pronghorn winter ranges in the planning area is needed.

Response: Alternative 3 and all of the areas unavailable for leasing and NSO areas aim to effectively protect all big game habitats. BLM is not in a position to initiate studies on lichens, but would incorporate findings produced by researchers into future management.

Comment: Barbed-wire fences are known to be a major impediment to pronghorn migration and dispersal. Taylor (1975) reported, “Fences were an important factor preventing optimum range use by antelope” in the Red Desert (p. 1). He added that “[u]npublished department data indicate that the wintering areas have been reduced by roughly one half because of fences” (p.2). Bruns (1977) found that fences are major impediments to winter travel, as are roadways with high traffic volume. Fences also aid coyotes in catching pronghorns (e.g., McNay and O’Gara 1982), potentially inflating predation losses. Taylor (1975) recommended that “Fences which cross migration routes should be removed or at least modified to allow ready passage by pronghorns under adverse weather conditions...” (p. 47). Bruns (1977) recommend a minimum clearance of 46 cm and a barbless lower strand for fences. Rosentreter

(1997) recommended that fences which could affect pronghorn dispersal be modified so that the bottom wire is smooth (not barbed) and is kept more than 60 cm (24 inches) above the ground. Under this alternative, there should be no new fence construction, illegal fences should be removed, and all remaining fences should at least conform to antelope passage requirements set forth by WGFD.

Response: The BLM Manual Handbook H-1741-1 fencing guidelines will be adhered to on all BLM lands. In addition, efforts to mitigate the major impediments along migration routes are currently being investigated.

Comment: Enclosed is a series of maps showing pronghorn use of the RMP area based on GPS locations obtained from our research. It is our hope that this information will inform sound management decisions by the BLM that support wildlife and wildlife habitat in the Upper Green River Basin. Thank you again for the opportunity to provide these comments.

Response: This information has been updated in the final EIS.

Comment: Examples of species specific information on fragmentation and impacts from roads and oil and gas development from field biologists and the scientific literature that should be considered in this RMP include the following.

Pronghorn Impacts: The discussion in the Draft RMP of pronghorn disturbance from roads and development was concerning, particularly the statement that "While there are few published studies on the reaction of pronghorn to disruptive human activities, roads, fences and pipelines are known to fragment habitat and impede or block pronghorn movement." (Draft RMP, p. 4-255). We agree that fewer biological studies are available for pronghorn than some other species mentioned in the Draft RMP, but significant information is available.

Pronghorn are a species that must be able to move freely across an open landscape for food, habitat, and mates. Past management planning by the BLM suggests that route densities exceeding lmi/mi2 will cause negative impacts on pronghorn populations (BLM 1999). Wyoming Game and Fish Department (2007) note that pronghorn are particularly flight sensitive and avoid areas of dense energy development. The agency cites pronghorn avoidance disturbance distances that "range from 0.25 mi (Autenrieth 1983) to 0.6 mi (Easterly et al. 1991)."

A study in central Arizona showed that pronghorn generally exhibited a weak avoidance of areas within 3,168 feet of a maintained road, as well as areas near non-maintained dirt roads and four¬wheel-drive trails (Ockenfels et al. 1994). The same study observed that males (and perhaps females) avoided habitat within 0.25 miles of highways. Additionally, pronghorn may be more strongly affected by the noise and activity associated with a road than by the road bed itself (Ockenfels et al. 1994), suggesting that temporal occupancy restrictions are particularly important.

A study of pronghorn from the University of Wyoming for the Wyoming Department of Transportation Research Center demonstrated that pronghorn tend to occupy areas with lower densities of primary roads and other rights of way (Sheldon et al. 2006). This study also supports discussion that pronghorn strongly avoid fencing and fencing along paved roads. Van Riper and Ockenfels (1998) found that in more than 3,000 movements that were recorded, not one pronghorn ever crossed a fenced road.

Perhaps the most significant research on pronghorn and oil and gas development is an ongoing study by Berger et al. (2006) in the Pindale RA. The research suggests that the configuration and density of well pads and other surface disturbances adversely affect pronghorn habitat use. This paper documents findings from the first year of a 5 year monitoring study funded by oil and gas companies and done in

coordination with wildlife managers at the BLM and Wyoming Fish and Game Department. A subset of the results from the report includes: "A growing array of gas fields, roads and attendant human infrastructure is altering the suitability of habitat for wildlife. continual fracturing of previously undisturbed lands is leading to reduced usage and abandonment of habitat parcels, particularly those less than - 600 acres in size.

Snow depth in excess of - 20 centimeters affects use of local habitats. However, once the density of gas wells and attendant infrastructure reaches a threshold, pronghorn no longer us these areas irrespective of snow depth. Based on 56,992 data points generated from global positioning system (GPS) radio collars, none of the collared animals used areas within the Jonah Gas Field. Pronghorn generally shunned concentrated gas fields, and there was no evidence to suggest animals altered their 24-hour activity patterns to utilize these areas at night when human disturbance was reduced." (Berger 2006). An updated report including the second year's field work is due out shortly and should be considered in developing the final alternative for the Pinedale RMP. While it is important to acknowledge the latest science on wildlife impacts, this information is of limited value as a simple discussion in the Environmental Consequences chapter of the Draft RMP. Its real value is in building a knowledge base to draw on for the process of crafting management alternatives. The BLM acted arbitrarily and failed to meet its requirements to fully consider the best science in crafting and evaluating management alternatives was used to shape and to evaluate alternatives.

Response: The impact analysis has been updated in the final EIS.

Comment: The designation of a new ACEC at Trapper's Point encompassing 9,540 acres that would permanently preserve from development the pronghorn migration bottleneck. We believe that the maximum amount of protection is required at this site. Indeed, our continuing studies demonstrate perceived threats by pronghorn when they move through this area, as evidenced by the speed at which they travel and their reduced foraging rates (Figure 1). A further narrowing of the available habitat will only exacerbate energetic demands as they travel through this area.

Response: BLM finds that the Trapper's Point ACEC as proposed in the Preferred Alternative in the draft EIS is appropriate. The areas unavailable for oil and gas leasing have been revised in the final EIS; this would help to provide further protection of habitats outside the proposed ACEC area.

Comment: The Wildlife Conservation Society would support a Resource Management Plan that preserves and protects functioning pronghorn crucial winter ranges, migration routes and bottlenecks; maintains and enforces seasonal stipulations on development; minimizes the development footprint through directional drilling and clustering of infrastructure; incorporates transportation planning to reduce road density; designates portions of the planning area as unavailable for oil and gas leasing in response to the identified resource needs of pronghorn; and sets quantifiable thresholds for impacts to wildlife. Maps and figures attached to email

Response: The draft EIS considers most or all of these suggestions. It is unfortunate that gas fields already exist in some areas of important pronghorn habitat, so that wildlife habitat characteristics are not the only consideration in devising areas unavailable for leasing. Seasonal stipulations protect individuals, not habitats. When development carried out in the unrestricted season reaches a density that makes the habitat unattractive to wildlife, there is little or no benefit to be gained from seasonal stipulations.

Comment: While competition for forage between pronghorns and cattle or wild horses is rarely an issue, access to water may be a focal point for conflict between these species. Taylor (1972) reported that antelope are quite wary and easily disturbed when watering. In the Red Desert, pronghorns avoid water

sources when they were crowded with domestic cattle or wild horses (Miller 1980). Water developments that minimize crowding may be beneficial for pronghorns.

Response: Currently the JIO management team is looking at water developments that are beneficial to wildlife and livestock to decrease pressure in existing areas.

Deer

Comment: Re: Mule Deer Seasonal Range and Migration Corridors This map shows the extent of Mule Deer usage and migration from the Rim east to the Green River. This is an important area of Spring-Summer-Fall range that is not shown on the draft BLM RMP. On the lower portion of the map is shown a large area of Crucial Winter/Yearlong Mule Deer range which, is not shown on the BLM draft. The Mule Deer begin to stream through this area around early May; depending upon snowpack. The Mule Deer will graze across these ranges until the snow melts sufficiently to allow them to access to the higher elevations where many will migrate to their summer areas. By late May we see the does up in our aspen and pine forests where they will calve/fawn. After calving these Mule Deer range from the wooded areas of our ranch to the National Forest throughout the summer. During the Summer the Mule Deer come out in the mornings and evenings to graze on the open rolling hills below the woods. In the Fall there will be a constant stream of deer migrating through the open areas during the morning and evening. The Hay Draw/Hay Gulch area, just east of Highway 191, is of special importance due to the combination of trees, forage, and water. The Spring, Summer, and Fall utilization of the Rim to Green River by Mule Deer is a very good sign of a vital healthy habitat that should not be leased and disrupted. I would like you to know that I am strongly against allowing any mineral leasing in the Upper Green, Upper New Fork, and Hoback Rim areas. This is some of the most beautiful country in the United States, why ruin it? The wintering grounds for antelope, deer, and sage chickens has already been destroyed south of Pinedale. Now you want to take away the home for the elk also. The crystal clear streams and lakes will fill with mud and debris from run off and erosion. Trout fishing will be destroyed. Please don't allowing leasing or drilling in these pristine areas.

Response: Updated migration corridor maps are being developed between BLM and WGFD and the decisions will be updated to protect the corridors and bottlenecks. WGFD re-drew the big game seasonal maps in 2006 and the maps within this document reflect these changes.

Comment: If I am correctly interpreting maps 2-7,8,9 and maps 2-15 and 16, the "large block NSO areas" include very little critical pronghorn crucial winter range and only a small portion of mule deer crucial winter range. Thus, for these big game animals, little protection of crucial habitat is afforded by this designation. The BLM should clarify just how much crucial big game habitat would potentially be afforded protection under the "large block NSO" designation. Another problem with these areas is that they are linked by only one known migration corridor, the Trapper's Point Bottleneck, that is also in jeopardy of being developed under Alternative 4 because of the size reduction in the Trapper's Point ACEC. Page 4-218 indicates that the Trapper's Point migration area will be protected under Alternative 3 because of the size of the ACEC that extends through the staging and feeding areas at Cora Butte. Alternative 4 compromises this area by reducing the size of the ACEC and narrative suggests that the area will be protected from "surface disturbing activities and subsequent habitat fragmentation would not occur," but there is no indication as to how this protection will occur. The document acknowledges the importance of this migration area and on page 4-255 reports that 6 of 8 known migration corridors in the planning area have already been compromised. The RMP/DEIS must specify how the remaining two migration corridors, one of which I assume is the Trapper's Point Bottleneck, will be protected under Alternative 4. Sawyer et al. (2005) discuss the importance of migration routes for mule deer and pronghorn in the Pinedale area. In my opinion the ACEC in Alternative 3 should not be compromised because of the importance of this area to migrating mule deer and pronghorn populations. My experience working with mule deer in Colorado's Piceance Basin (Garrott et al. 1987) and with pronghorn in

Wyoming's Red Desert (Alldredge and Deblinger 1988) verifies the importance of both feeding and staging areas for these big game animals. Transition ranges provide the last opportunity for animals to build energy reserves prior to the onset of winter and thus enhancing over-winter survival. These areas are also the first ranges encountered during spring migration and the place where animals, especially females in late stages of pregnancy, can begin to replenish both lean and fat body mass following winter catabolism (Torbit et al. 1985). The importance of maintaining these areas is acknowledged in the DEIS (4-256) with the following statement, "disturbance threshold and the result of further surface disturbance and habitat fragmentation regarding these populations is unknown.

Response: Table 2-33 on pages 2-183 through 2-190, Areas of Fluid Mineral Lease Conditional Requirements by Hydrocarbon Potential (Approximate Federal Subsurface Acres) for Coalbed Natural Gas, indicates the acres of crucial winter range that will have an NSO designation. The protection is afforded through making the area unavailable for oil and gas leasing and prohibiting surface-disturbing activities, land disposal, and mineral location. Updated migration corridor maps are being developed between BLM and WGFD, and the decisions will be updated to protect the corridors and bottlenecks.

Comment: The document repeatedly assumes that big game animals will move to alternate habitats when displaced by anthropogenic activities (for example, see pages 4-210, 4-225). Page 4-259 acknowledges that there are few alternative habitats, thus, if alternate habitats do exist, they need to be identified, their condition and current use discussed. If, in fact, these alternative habitats are available and have the ability to support additional displaced animals, the public needs to be assured of this and assured that displaced animals can access the new habitats and that these habitats will be protected from future disturbance. Sawyer et al. (2006) did demonstrate mule deer shifting use from preferred, to less preferred habitats as energy development proceeded but they also reported a 46% reduction in numbers of animals wintering on the mesa portion of the Pinedale Anticline. They further determined, unequivocally, that mule deer were not simply moving to alternative habitats in substantial numbers when development occurred. These findings might suggest that habitats are already saturated to carrying capacity and that there are actually limited alternative habitats available to support displaced animals. Concentrating animals in habitats can decrease over-winter survival and ultimately lead to population reductions as discussed by Bartmann et al. (1992), White et al. (1987) and Hobbs (1989).

Response: The document assumes displacement of animals due to human activity but does not assume that other suitable habitats exist for displaced animals to occupy. The impact analysis states that, over time, displaced animals would occupy less suitable habitats and that population reductions would be the ultimate result.

Comment: Habitat fragmentation is only mentioned in the document and there is no attempt to assess impacts to big game animals resulting from fragmentation of habitats. Paragraph 1 on page 4-255 speculates that habitat fragmentation may be so extensive that isolated populations of big game animals will remain only in areas where habitats remain intact. If this is the case, then the BLM must more thoroughly discuss and consider habitat fragmentation in the DEIS. Quite likely the reduction in numbers of mule deer wintering on the Pinedale Anticline in light of a 2% direct habitat disturbance (Sawyer et al. 2006) is at least partially explained by fragmentation of habitats as well as avoidance of disturbed areas. The BLM has failed to adequately discuss and consider implications of habitat fragmentation that will result from implementation of any of their alternatives. The following references provide insights into fragmentation and use of that information with GIS technology would allow a better assessment of the impacts to big game resulting from habitat fragmentation (Franklin et al. 2002, D'Eon et al. 2002, McGarigal and Cushman 2002 and Jaeger 2000).

Response: BLM acknowledges in the impacts analysis that there are impacts to the animals due to habitat fragmentation, but BLM cannot determine at this time what the population impacts will be.

Comment: Why a small area north of Cora and another small area north of Mema are identified as mule deer parturition areas and nowhere else has amazed me since the original RMP. Apparently no further investigation of these crucial ranges has been done in 20 years.

Response: BLM receives big game seasonal habitat information from WGFD. WGFD updated the crucial winter ranges in 2006; the Department is currently remapping the parturition habitats.

Comment: This map shows the extent of Mule Deer usage and migration from the Rim east to the Green River. This is an important area of Spring-Summer-Fall range that is not shown on the draft BLM RMP. On the lower portion of the map is shown a large area of Crucial Winter/Yearlong Mule Deer range which, is not shown on the BLM draft. The Mule Deer begin to stream through this area around early May; depending upon snowpack. The Mule Deer will graze across these ranges until the snow melts sufficiently to allow them to access to the higher elevations where many will migrate to their summer areas. By late May we see the does up in our aspen and pine forests where they will calve/fawn. After calving these Mule Deer range from the wooded areas of our ranch to the National Forest throughout the summer. During the Summer the Mule Deer come out in the mornings and evenings to graze on the open rolling hills below the woods. In the Fall there will be a constant stream of deer migrating through the open areas during the morning and evening. The Hay Draw/Hay Gulch area, just east of Highway 191, is of special importance due to the combination of trees, forage, and water. The Spring, Summer, and Fall utilization of the Rim to Green River by Mule Deer is a very good sign of a vital healthy habitat that should not be leased and disrupted.

Response: The big game habitat maps have been updated to include the most recent data from WGFD. The areas unavailable for oil and gas leasing have been revised in the final EIS.

Comment: 11. Appendix 5. There do not appear to be any best management practices or mitigations that specifically address production phase impacts. Sawyer et al. (2006) suggest that reducing disturbance to wintering mule deer may require restrictions or approaches that limit the level of human activity during both production and development phases of the wells. They further suggest that limiting public access and developing road management strategies may also be a necessary part of mitigation plans. The final RMP should better describe how production and development phase impacts will be minimized through mitigation measures or required best management practices.

Response: Appendix 5 contains many BMPs that could be implemented in the production phase. For example, directional drilling implemented at the development phase would continue to have benefits throughout the productive life of the field. These BMPs are not organized by the stage of field develop, but rather by the resources they would serve to protect. Furthermore, BMPs continue to be developed as technology advances.

Comment: The BLM indicates on page 4-185 that the Big Piney mule deer herd in the vicinity of the Big Piney/LaBarge CAP has likely moved away from its traditional winter range, but admits that it has no studies to support that assumption. Rather than engage in speculation, the BLM should consult with the Wyoming Game & Fish Department to see if the population has been impacted. If mule deer are not still utilizing the area, the BLM should waive seasonal stipulations in the area and allow year-round operations.

Response: WGFD has re-delineated the season use areas of all of the big game species, and there are still large areas of crucial winter range on the EOG leases.

Comment: Research also has shown that timing limitations may not be achieving their desired results.7 Where well densities range from 4-16 pads per section (as in the Pinedale planning area), the number of

producing well pads and associated human activity may negate the effectiveness of timing restrictions on drilling activities as a means of mitigation (Sawyer et al. 2006). Sawyer et al. (2006) recommend that mitigation measures seeking to minimize disturbance to mule deer on winter range consider all human activity across the entire project area and not be restricted to the development of wells or to crucial winter ranges. However, the BLM has failed to take this important information into account in the Pinedale RMP DEIS. Instead, the Preferred Alternative focuses on timing limitations in arturition areas and crucial winter range as primary mitigation measures for big game.

Response: The impact analysis reveals that population impacts may occur.

Comment: Examples of species specific information on fragmentation and impacts from roads and oil and gas development from field biologists and the scientific literature that should be considered in this RMP include the following.

Mule Deer Impacts: Multiple studies have shown that the area of indirect impacts from roads or oil and gas infrastructure for mule deer is substantially larger than that of direct impacts on mule deer (Rost and Bailey 1979, Freddy et al 1986, Lutz 2003 and Sawyer 2006). Lutz et al. (2003) states that mule deer can be pressured into using less-preferred or lower-quality habitat, and that this could negatively affect an individual's energy balance "and ultimately decrease population productivity especially on winter range."

Response: This issue was covered in the impacts analysis.

Comment: This is a continuation of Comment 2592. Freddy et al. (1986) found that mule deer are shown to alert, exhibiting a stress response to snowmobiles at a distance of 1542 feet (470 meters) and are less likely to use the habitat for normal life functions. Wyoming Game and Fish Department (2007) used this figure to calculate a 170 acre area of reduced habitat effectiveness around each well pad. An ongoing multi year field study by Sawyer et al. (2006) of VHF and GPS-collared mule deer on the Pinedale Anticline found that deer utilized habitat progressively farther from roads and well pads over three years of increasing gas development and showed no evidence of acclimating to energy-related infrastructure and activities. Deer were found to move to previously low use areas (from preferred to less preferred habitat) that the authors suggest may have implications on survival and reproduction. These findings also suggest that the commonly used mitigation measures of prohibiting oil and gas activities in the winter months are not effective. The progressively greater average displacement of deer from well pads was found to average 1.6 miles (2.7km) the first year, 1.9 miles (3. lkm) the second year and 2.2 miles (3.7km) in the third year. Sawyer et al. (2006) provide excellent guidelines for management planning for oil and gas development: "In deep-gas fields like the PAPA, where well densities range from, 4 to 16 pads per section (2.58 km2), the number of producing well pads and associated human activity may negate the potential effectiveness of timing restrictions on drilling activities as a means of reducing disturbance to wintering deer. Mitigation measures designed to minimize disturbance to wintering mule deer in natural gas fields should consider all human activity across the entire project area and not be restricted to the development of wells or to crucial winter ranges. Reducing disturbance to wintering mule deer may require restrictions or approaches that limit the level of human activity during both production and development phases of the wells. Directional-drilling technology offers promising new methods for reducing surface disturbance and human activity. Limiting public access and developing road management strategies may also be a necessary part of mitigation plans." (emphasis added, Sawyer et al. 2006).

The Wyoming Game and Fish Department classifies the impact of oil land gas development on mule deer as "moderate" for 1 well pad per square mile (640 acres), "high impact" for 2-4 well pads per square mile and "extreme" for greater than 4 well pads per square mile (Wyoming Game and Fish Department 2007a). The agency recommends that "well field developments not exceed 1 pad location per square mile

within mule deer crucial winter ranges because it is unlikely habitat effectiveness can be maintained at higher densities (based on reviews of Sawyer et al. 2005, 2006).” At the “extreme” impact level of greater than 4 wells per square mile the agency states that “The function and effectiveness of crucial winter habitat will be severely compromised. Long-term consequences are continued fragmentation and disintegration of the winter range complex, leading to decreased survival, productivity and ultimately, loss of carrying capacity for the herd.” Notably all well pad densities projected for oil and gas fields in the Draft RMP (p. A10-1) exceed even the “moderate” impact level of 1 well pad per square mile.

Response: The impact analysis has been updated in the final EIS.

Comment: Pg 4-185, first paragraph, 60 acre spacing does not exist. This paragraph states “However, there is no scientific information that supports that the mule deer herd would maintain its occupancy in these areas if oil and gas activity increased over time.” In the alternative, there is not scientific information that supports the contention that mule deer will not maintain occupancy in areas developed for oil and gas extraction; in fact mule deer are found in many producing oil and gas fields in Wyoming. Many of the impacts attributed to “All Alternatives” are too broadly written and are not accurate reflections of what can be anticipated by the specific alternatives. It must be recognized that the impacts described in Sawyer et al. 2006 are those of the intense development that has occurred in the PAPA and that the mule deer population appears to have stabilized; the response of mule deer to less intensively or minimally developed oil and gas fields has not recently been studied.

Response: The results of the Sawyer et al. (2006) study does not indicate that the Sublette mule deer herd is stabilized, nor does this study make any assumptions of the population effects of the herd unit. This study was meant to determine the effects on the subset of the herd unit that winter on the Mesa. The results have indicated that the mule deer have not habituated to the development and have experienced declines in population.

Comment: PAGE: 3-116, SECTION: TABLE 3-32, RECOMMENDED CHANGE: Insert assessment of habitat capability to sustain 2005 WGFD population objectives. EXPLANATION: The WGFD 2005 population objectives also need to be assessed to determine whether the habitat can support the projected numbers. The largest gaps appear to be mule deer on the Wyoming Range, where 2005 WGFD objectives would double the population, and Moose in Sublette County. If the differences are attributed to herd management area boundary differences then the table should have a footnote explaining that.

Response: This information is taken directly from the WGFD JRC reports.

Elk

Comment: Beginning on page 4-184 the DEIS provides some generic discussion of potential impacts and uses two outdated references on physiological stress which to me, as a professional working in this area, is overstating the obvious. When confronted with anthropogenic stimuli, big game animals generally respond by fleeing which depletes essential energy reserves (Parker et al. 1984, Freddy et al. 1986 and Hobbs 1989) and continued negative stimuli may result in shifts in habitat use patterns; this is generally accepted knowledge. Time to move on and answer the question, “so what does this mean to big game populations?” There are some site-specific data (Sawyer et al 2005, 2006 and Berger et al. 2006) that would allow calculation of habitat losses and population impacts associated with energy development. Phillips and Alldredge (2000) and Shively et al. (2005) demonstrated a 30% reduction in elk calf recruitment as a result of an activity as benign as simulated recreational hiking imposed during the calving season. There will be population impacts to big game animals resulting from implementation of any alternative discussed in the RMP/DEIS, and the RMP/DEIS fails to provide, or even attempt to provide, any meaningful analysis of these impacts.

Response: BLM acknowledges in the impacts analysis that there are impacts to the animals from these stresses, but BLM cannot determine at this time what the population impacts will be.

Comment: Over 1,000 Elk winter on the Franz and Black Butte Wyoming Game and Fish Feedgrounds. In the Springtime these Elk utilize the private ranch lands of the Rim and Upper Green River for early season forage and calving. There is minimal human presence and the Elk can go over these lands undisturbed. In the latter part of May the Elk start calving on our spring riven benchlands and in the nearby woods. This occurs mostly on the private ranch lands due to availability of early season feed. There is too much snow up in the National Forest lands to the north. The Elk can be seen out in the open areas during the mornings and the evenings. During the daytime the elk are seen down in the draws where the springs run and up in the wooded areas. Once the calves are born the cows and calves head to the wooded areas of our ranch as well as the adjacent Bridger Teton National Forest. Part of the herd stays in the area of Hay Draw/Hay Gulch to the east of Highway 191 during the entire slimmer. In the Fall the elk return to the private ranch lands as the snow pushes them to areas where feed is abundant. The private ranch lands provide an exceptional transitional range for the Elk in the area. As the accompanying wetland area map shows there is abundant water in the form of springs and creeks. For these reasons(water, feed, minimal human presence) the Rim and Upper Green River Valley should not be leased.

Response: The status of the Upper Green area has been changed to Unavailable for Leasing in the final EIS.

Comment: Elk: There are over 1,000 head of Ellc wintering on the Franz and Black Butte Feed grounds. Many of them calve-out in the spring on the protected benches and woods on the Quarter Circle Five Ranch, which lies in the middle of the 2 feed grounds. They are left undisturbed by humans and calve out peacefully. After the calves are born they head for the timber on the adjoining National Forest or stay in the dark timber in the Hay Draw or Hay Gulch pastures on the QC5. In the fall the Elk return to graze on private ranch lands until it snows over and move to the feed grounds. Once again, please take a look at map 3-20 Big Game Parturition Areas of the EIS and compare it to the enclosed Wyoming's Game and Fish map entitled "Elk Seasonal Range and Parturition" as of 5/7/07. In this case, the BLM fails to even recognize this established elk (calving) parturition area that has been in existence as long as we've owned the ranch. It is a prime calving ground because of natural cover, upland water sources and minimal human and livestock disturbance.

Response: These changes were identified and have been updated for the final EIS. Any future changes will also be incorporated into the record of decision.

Comment: Thomas et al. (1988) asserted that hiding and thermal cover are critical components of elk winter range, and that patches of cover greater than 200m wide are more effective than smaller blocks. With this in mind, extensive security areas comprised of forested habitat must be retained on winter ranges.

Response: BLM has very little forest habitat within its jurisdiction. Due to snow depth, these areas tend not to provide winter range. However, efforts to maintain or enhance these areas for better elk forage are currently underway.

Comment: Furthermore, Thomas et al. (1988) asserted that winter logging on elk winter range is disruptive to elk, and thus a moratorium should be placed on winter logging on winter ranges under this alternative. In general, natural processes should prevail on winter ranges, and natural disturbances should be allowed to proceed unhindered by management. Limited extractive activities may be allowed in these areas if they are consistent with maximizing the habitat capabilities of terrestrial and aquatic wildlife.

Response: Winter logging generally has not been approved on BLM lands, not only for the reasons mentioned, but also due to access difficulties. These habitats receive a large snow load and are not accessible in the winter.

Comment: Elk are grazers, and their summer range requirements center around forest opening and edge habitats (Marcot et al. 1994). Compton (1974) found that elk in the Sierra Madre concentrated their summer use in subalpine parks, and found heavy autumn use in aspen cover types. Strickland (1975) noted that subalpine and mid-elevation parks formed the primary summer range of elk. Several studies have shown that closed-canopy forests are required by elk for thermal cover during summer (Patterson 1996, Millspaugh et al. 1998, Cooper and Millspaugh 1999). Hiding cover may be an important or even limiting factor in predominantly open habitats; Patterson (1996) found that in a study area where woodlands made up only 8% of the landscape cover, wooded habitat was the most important variable determining elk distribution. According to this study, the average size of woodland patches used by elk was 9 times greater than average patch size, and elk preferred thermal cover of trees during summer. For this reason, the BLM should restrict the logging or other reduction of wooded patches in the areas in the planning area that are elk habitat.

Response: The logging that is occurring in elk habitat is to protect and enhance native elk ranges and increase forage, particularly in aspen stands experiencing conifer encroachment.

Comment: On winter ranges, elk are highly susceptible to disturbance. They are so sensitive to human disturbance that even cross-country skiers can cause significant stress to wintering animals (Cassirer et al. 1992). Disturbance during this time of year can be particularly costly, since the metabolic costs of locomotion are up to five times as great when snows are deep (Parker et al. 1984). The regular vehicle traffic associated with oil and gas fields constitutes a significantly higher threshold of disturbance, and thus would cause even greater stress to the animals. Thus, all human activities should be prohibited on elk winter ranges between November 15 and April 30.

Response: This is the current standard for any surface-disturbing activities in elk winter ranges.

Comment: Wildlife and fish habitat management goals include contradictory objectives. While earlier discussion involved the Alternative 3's desire to not have ACEC designation for elk areas due to the proximity of various feedgrounds, this goal includes an objective to get elk off of feedgrounds and back on native range. Clearly this needs revisiting. If there are special management areas or ACEC's that have native big game winter range that needs protection the BLM should be proactive and consider protecting some of these areas.

Response: Please see pages 3-135 through 3-138. BLM is proposing a scenario where elk feedgrounds are no longer managed on BLM lands in order to protect elk seasonal habitats by encouraging the animals to forage in their native ranges. Right now the habitat surrounding the feedgrounds is severely altered due to foraging pressure from the large numbers of elk using the feedgrounds and due to the problems associated with brucellosis. BLM is proposing to protect native elk winter ranges in the Beaver Creek ACEC.

Comment: Page 2-31 "The Riley Ridge Project Monitoring Program would be continued. Further monitoring would include gathering of geological data in the Deadline Ridge-Graphite Hollow crucial elk winter range to aid in preparation of the proposed activity plan. Monitoring would be coordinated with other resource monitoring programs such as wildlife, surface and ground water quality, grazing, and cultural resources, as appropriate." Comment - Before continuing the Riley Ridge Project Monitoring Program, it is necessary to explain the tangible benefits that have been achieved. BLM has not provided any information as to the results of the current monitoring program; nor has it been explained why it

should be retained. Without this information, it is impossible to justify its retention. BLM needs to provide information supporting the need for the program, including the findings and benefits, in the Final EIS or it should be eliminated.

Response: The monitoring program that was required in the Riley Ridge project ROD never happened, which is why there has been no information reported. The monitoring program is presented here as a part of Alternative 1, the continuation of existing management, because it is part of the 1988 RMP ROD.

Comment: Page 4-185 "Elk have until now been able to find suitable undisturbed habitats away from human activity; however, continued development could lead to abandonment of historic ranges (in the last native winter foraging area on the Wyoming Range) (Johnson 1985)." Comment - The Johnson 1985 citation appears to be an opinion found in a set of notes somewhere. It is not part of an official agency report or scientific publication. Johnson's opinion on this subject is more professionally and scientifically represented in: Johnson, B.K., L.D. Hayden-Wing, and D.C. Lockman, 1990, Response of elk to development of Exxon's Riley Ridge Gas Field in western Wyoming. pp. 42-55 in R.L. Callas, D.B. Koch, and E.R. Loft, eds., Proceedings of the 1990 western states and provinces elk workshop. California Department of Fish and Game, Eureka.

Page 4-186 "A study conducted by Hayden-Wing Associates (1990) found a similar response in the Graphite Hollow/Rock Creek Winter Range where elk moved 0.5 to 2.4 miles away from a well site." Comment - Although this is a true statement, it is an incomplete and inaccurate portrayal of elk response to drilling and production in that it only states what elk did during the drilling period. A more accurate statement, set forth in the abstract of this study and described elsewhere in the document, would be that: "On both winter and calving ranges, elk moved out of or away from areas where construction activities were occurring and returned when these intensive activities ceased." Furthermore, it is stated on page 4-29 of the DEIS that: "No significant effect of Exxon's well field activities on total numbers of elk using the GH/RC winter range, or elk harvest in the Big Piney Herd was found." Such selective quoting of literature misrepresents the findings of the study and appears intent on misleading the reader. The research contained in this report (Hayden-Wing Associates. 1990) has been published and can be found in the following reference: Johnson, B.K., L.D. Hayden-Wing, and D.C. Lockman, 1990 Response of elk to development of Exxon's Riley Ridge Gas Field in western Wyoming. pp. 42-55 in R.L. Callas, D.B. Koch, and E.R. Loft, eds., Proceedings of the 1990 western states and provinces elk workshop. California Department of Fish and Game, Eureka.

Page 4-210 "Geophysical actions during wildlife-sensitive time periods would likely disturb wildlife, causing reduced fitness, temporary habitat abandonment, or nest abandonment." Comment - The low impact, transient nature of seismic operations requires that seismic operations not be lumped together with other activities that are longer in term and cause surface impacts. It must be recognized that the data derived from geophysical operations significantly reduces environmental impacts from drilling activities due to less overall drilling and associated activities. Therefore, we recommend the statement referenced above be deleted and replaced with the following: "Geophysical operations by their very nature are transient and result in near zero impacts to the environment, and therefore are not subject to wildlife-sensitive time periods".

Response: There have been geophysical operations over a number of years including using helicopters, dropping off groups of people on the ground to string geophones for thousands of source and receiver points, free standing drill rigs drilling holes for underground explosives, thumper trucks driving across large landscapes crushing the vegetation and leaving trails in otherwise undisturbed vegetation. The magnitude of these actions does not constitute near zero impacts. Therefore, BLM disagrees with the requested text changes. To address the misleading part of the comment; the text on page 4-185 clearly states all of the points that the commenter stated were missing.

Comment: Item: Page 4-186 – First complete sentence states that: "A study conducted by Hayden-Wing Associates (1990) found a similar response in the Graphite Hollow/Rock Creek Winter Range where elk moved 0.5 to 2.4 miles away from a well site." Comment - Although this is a true statement, it is an incomplete portrayal of elk response to drilling and production in that it only states what elk did during the drilling period. A more accurate statement, set forth in the abstract of this study and described elsewhere in the document, would be that: "On both winter and calving ranges elk moved out of or away from areas where construction activities were occurring and returned when these intensive activities ceased." Furthermore, it is stated on page 29 of this report that: "No significant effect of Exxon's well field activities on total numbers of elk using the GH/RC winter range, or elk harvest in the Big Piney Herd was found." The research contained in this report (Hayden-Wing Associates. 1990) has been published and can be found in the following reference: Johnson, B.K., L.D. Hayden-Wing, and D.C. Lockman. 1990. Response of elk to development of Exxon's Riley Ridge Gas Field in western Wyoming. pp. 42-55 in R.L. Callas, D.B. Koch, and E.R. Loft, eds., Proceedings of the 1990 western states and provinces elk workshop. California Department of Fish and Game. Eureka.

Response: The text on page 4-185 clearly states all of the points that the commenter stated were missing.

Comment: The draft RMP does not adequately address the issue of elk feedgrounds that are conducted by the Wyoming Game and Fish Department (WGFD) on BLM jurisdiction. This treatment of a significant action, artificial feeding of elk, is not sufficient to meet the legal standards and direction that the BLM must adhere to. A simple MOU with the WGFD is not sufficient and a 1981 EA for elk feedgrounds failed to analyze disease impacts and did not adequately analyze a reasonable range of alternatives to feedgrounds. The BLM must fully comply with all laws including but not limited to the Federal Land Policy Management Act (FLPMA), Administrative Procedures Act (APA), and National Environmental Policy Act (NEPA) before authorizing elk feedgrounds.

Response: We are analyzing the elimination of the feedgrounds in one alternative, and specific on-the-ground management of the feedground is not an RMP decision. The RMP is an allocation document that determines whether the feedgrounds are going to continue.

Comment: As stated above, there is only cursory mention of elk feedgrounds in the RMP. In Alternative 1, the "No Action" alternative which is merely the perpetuation of the existing 1988 Pinedale RMP, the Draft RMP intends to maintain "continued use of the areas as elk feedgrounds." (2-39) However, as pointed out above, the BLM has never conducted an adequate analysis of the disease impacts resulting from feedgrounds, nor have they conducted an analysis of a reasonable range of alternatives to elk feedgrounds. Therefore, perpetuating feedgrounds under this scenario, Alt 1, is not in accordance with the BLM's legal directives.

Alternative 2 in the RMP contains the provision that, "Elk feedgrounds would be eliminated on public lands." (2-71), yet does not offer an adequate analysis of the impacts. This Alternative 2 also contains some "poison pills" which renders it unacceptable to the public and also likely unable to be fully and legally implemented by the BLM. Some components in Alternative 2 that render it unacceptable are allowing nearly 1.2 million acres to be available for mineral entry, (2-56); minimizing protections for sage grouse, (2-71, 72); minimizing protections for big game winter range and birthing areas, (2-72); and minimizing protections for areas nominated for ACEC and other Special Management Areas (SMA's), (2-73). While it is interesting that the BLM lists in simplistic terms a change from status quo (i.e., feedgrounds would be "eliminated"), the BLM describes such a change in such negative terms and only in an alternative that is impossible to implement in its entirety. While ending the elk feedground paradigm has many benefits, the BLM- by attaching so many unacceptable components within Alt 2- is apparently weighing down Alt 2 to ensure that nothing of the kind occurs.

However, Alternative 3 contains components which may enable the BLM to move forward towards balanced uses on lands within its jurisdiction. Alternative 3 designates some new SMA's (2-106, 107), offers some protections against leasing and development of oil and gas, and suggests some improvement in sage grouse and big game protections. However, Alternative 3, while opening the door to some measures of improvement over the 1988 RMP, does not go far enough to balancing uses in the Pinedale Resource Office area. We will collaborate with other groups to offer other specifics on improving Alternative 3 in comments submitted elsewhere.

In these comments GYC recommends that the BLM not, "provide for the continued use of the areas as elk feedgrounds," (2-100), but that they carefully and completely analyze disease and other impacts from feedgrounds and analyze a full range of alternatives which would at the very least, "reduce the dependence of elk on feedgrounds by improving habitat quality on native winter ranges," (Ibid). The BLM also needs to adequately and completely analyze alternatives to maintaining elk feedgrounds, including alternatives which carefully phase out the feedgrounds while protecting private property and livestock owners and sustaining a vibrant big game hunting industry.

Response: Chapter 4 contains the analysis of the impacts of the feedgrounds. This EIS provides the NEPA analysis of the feedgrounds. Analysis of the impacts of continuing or eliminating the feedgrounds has been increased in the final EIS.

Comment: In the BLM's Preferred Alternative 4, they once again incorporate an elk feedground strategy to "ensure the continued viability of the elk feedgrounds." (2-143) Yet this alternative also states that it intends to, "Maintain functioning big game habitats and migration corridors that allow free movement and use of habitats." (Ibid) The above two statements appear to be contradictory. Elk feedgrounds are by their very nature not "functioning big game habitat" since they are artificial in intent and practice. Functioning big game habitat, particularly winter ranges, is habitat which offers the elk forage during times of reduced abundance and nourishment, and winter range also offers elk security and escape cover and thermal relief to deal with predators and severe cold. Winter range habitat also allows the elk to disperse in densities that do not exacerbate disease transmissions. Elk feedgrounds do not allow "free movement" of elk since, again, by intent and practice they inhibit the ability of elk to freely range as in presettlement times or as in virtually all other jurisdictions in North America today. And, finally, elk feedgrounds most definitely act as impediments to elk migration corridors to known ancestral winter ranges which are currently within the BLM's jurisdiction in Sublette, Lincoln, and Sweetwater counties. The BLM needs to inform itself and the public on the characteristics of elk feedgrounds, the impacts, and reasonable alternatives. An elk feedground EIS would be an appropriate opportunity

Response: BLM recognizes that the elk feedgrounds are not an ideal situation. The RMP team considered at length whether or not it would be possible to eliminate the feedgrounds on public lands, and how to include such an action in the draft EIS. Alternative 2 considers eliminating the feedgrounds. BLM cannot bring about the end of the feedground system, because only 6 of the 22 feedgrounds are on BLM-administered public lands. Additional discussion of the impacts of both maintaining and eliminating the elk feedgrounds has been added to the final EIS.

Comment: Elk feedgrounds have been directly linked with brucellosis outbreaks in Wyoming cattle. As a result of feedground elk infecting cattle with brucellosis in Sublette County in late 2003, Wyoming's Governor Freudenthal convened a Brucellosis Coordination Team (BCT) in 2004. The BCT made public a report in January 2005 that recommended constructing large capture and testing facilities at some elk feedgrounds in Sublette County, Wyoming, and capturing, testing, and sending to slaughter adult female elk that were seropositive for exposure to Brucella abortus. The WGFD has operated a capture, test, and shipping facility on USFS lands at one elk feedground in Sublette County, and has stated that it intends to place similar facilities for elk at other feedgrounds in the area, including possibly elk feedgrounds on

BLM jurisdiction. The BLM may not authorize such facilities without conducting an adequate EIS in accordance with the National Environmental Policy Act (NEPA) and other laws.

Response: Analysis of the impacts of continuing or eliminating the feedgrounds has been increased in the final EIS.

Comment: While this DEIS does not meet the standards of a hard look required by the NEPA for analysis of significant federal actions such as the permitting and operations of elk feedgrounds, there are some cursory mentions of elk feedgrounds in the text of the DEIS. "(Impacts under Alternative 1): Maintaining six elk feedgrounds on (BLM) public lands in the planning area would continue the separation of elk and livestock on winter feed lines and limit the destruction of private hay by elk, to the extent that success is currently being achieved. Keeping elk and cattle separated would help to prevent the spread of brucellosis between the species, although concentrating elk on the feedgrounds serves to encourage spread of the disease among the elk." (4-41) The DEIS does hint in the above that elk feedgrounds do not prevent elk cattle commingling. The BLM undoubtedly needs to conduct an analysis of alternatives to elk feedgrounds which would better accomplish prevention of commingling, such as fencing of private lands winter livestock feedlines. The BLM needs to analyze if this method is more effective and more cost efficient at preventing commingling than maintaining elk feedgrounds.

"(Impacts under Alternative 2): Elimination of elk feedgrounds located on BLM-administered public lands (six elk feedgrounds) would result in more elk wintering out on sagebrush ridges and other native winter ranges. Because of the increase of livestock grazing AUM's under this alternative, there would be less forage available in elk crucial winter habitats. Winter survival and reproductive rates among elk could be reduced, potentially resulting in reductions in elk populations. It is likely that many elk would resort to feeding on private haystacks and to commingling with livestock on feed lines. The risk of brucellosis transmission between the species would thereby be in- creased." (4-42) The BLM needs to analyze the amounts of residual forage being available to wintering big game. As with the BLM summer grazing allotments near Bench Corral feedground, the BLM needs to place production transects on all livestock grazing allotments on big game winter ranges to be read annually at the end of the grazing season to calculate residual forage available to wintering big game. And the BLM also needs to assess what impacts oil and gas development has on wintering big game, including influences such as direct habitat loss from wellpads and other facilities, and diminished use of winter ranges due to avoidance by big game of industrial facilities.

The preceding quote from the DEIS, 4-42, is likely incorrect saying that free ranging elk would incur diminished reproductive rates. Quite the opposite is likely to occur: elk would experience increased reproduction when elk feedgrounds are phased out since brucellosis among elk suppresses birth rates and free-ranging elk are virtually free of brucellosis (see below and DEIS 4-200). This information, combined with analyses of snow pack distribution and snow characteristics (such as depth and crusting) will better inform the BLM on impacts and alternatives to elk feedgrounds. "In areas adjacent to elk feedgrounds, the elimination of elk feedgrounds (under Alternative 2) would reduce hunting opportunities and user benefits." 4-104 The BLM does not cite any data on which to base the impacts of phasing out elk feedgrounds on hunting opportunities and other unspecified "user benefits". In an adequate analysis, the BLM must study other cases where elk feedgrounds have been phased out and bountiful elk hunting opportunities persist. Some of these cases are offered in a report, Brucellosis Solution for Elk and Cattle in Wyoming at http://greateryellowstone.org/pdf/brucellosis-solution.pdf. See more discussion about the opportunities for phasing out elk feedgrounds, past and present, in the Pinedale Field Office area below.

Response: BLM recognizes that the elk feedgrounds are not an ideal situation. The RMP team considered at length whether or not it would be possible to eliminate the feedgrounds on public lands, and how to include such an action in the draft EIS. Alternative 2 considers eliminating the feedgrounds. BLM cannot

bring about the end of the feedground system, because only 6 of the 22 feedgrounds are on BLM-administered public lands. Additional discussion of the impacts of both maintaining and eliminating the elk feedgrounds has been added to the final EIS.

Comment: "(Under Alternative 2) (t)here would be no management emphasis for maintaining big game crucial winter habitat or protecting parturition ranges. This could cause substantial degradation and force big game to relocate to other habitat areas. Elk feedgrounds would be eliminated on public lands and would be available for oil and gas leasing. This would likely increase pressure on the feedgrounds on State lands, increase pressure on private lands (haystacks), increase pressure on the native winter range on the Wyoming Range, and increase elk-human interactions (e.g., vehicle collisions) and could lead to a die-off the first year from starvation. By eliminating the feedgrounds, the elk would also not herd together throughout the winter, potentially decreasing the brucellosis transmission rates." (4-200) Contrary to what is indicated in the above section excerpted from the DEIS, the BLM may not abandon its responsibilities under NEPA which guides important national policies for environmental protection, including, in this instance, protection of big game winter range and birthing areas.

Response: Analysis of the impacts of continuing or eliminating the feedgrounds has been increased in the final EIS.

Comment: It seems disingenuous for BLM to include a discussion (DEIS 4-200 above), however brief, about "eliminating" elk feedgrounds in a section of the DEIS which is attached to an attempt to offer worst case scenarios resulting from management that is contrary to their legal obligations. The BLM cannot predicate a realistic cause and effects disclosure of phasing out elk feedgrounds on an outcome of its own failure to prevent degradation of native big game winter ranges. A more realistic- and legal-analysis of impacts of phasing out elk feedgrounds would include a well researched, comprehensive, hard look at the environmental consequences of the BLM's actions.

There is widespread agreement among wildlife professionals that elk feedgrounds foster ideal conditions for massive disease infections among the elk. The BLM must consider, prior to allowing elk feedgrounds to continue on its jurisdiction, the serious implications of elk feeding on the maintenance of existing diseases such as brucellosis, and diseases not yet in the Upper Green River Basin such as bovine TB and Chronic Wasting Disease (CWD). The BLM must also consider the effects of the brucellosis vaccination program on elk and the environment, and analyze a range of alternatives to vaccinations.

The BLM appears to be allowing elk feeding by the WGFD without the necessary paperwork. The BLM apparently allows the WGFD to feed elk on BLM lands without valid permits, and without the analysis that would require NEPA analysis. The BLM cannot ignore its obligations under NEPA by merely ignoring its own permitting requirements and regulations. Until the BLM completes a lawful analysis for elk feedgrounds, there can be no valid elk feeding operations conducted on BLM jurisdiction. The same applies to any elk capture, testing, and shipping to slaughter facilities- and associated fences- and operations considered to be placed and operated on BLM lands. Elk feedgrounds and, possibly, capture and testing facilities are not, and may not be, isolated circumstances. Such operations are significant under NEPA; indeed the conditions needed to implement the test and capture process would likely exacerbate the crowding of elk which are the very conditions that cause elk to infect other elk with diseases. And, still, many of the effects of capture and testing of elk are highly uncertain, and a NEPA analysis is required. It is only through adequate analyses and full inclusion of the public in the process that the BLM can make informed decisions and the public, too, can offer informed input.

Response: Analysis of the impacts of continuing or eliminating the feedgrounds has been increased in the final EIS.

Comment: Some of the necessary elements of an analysis of the impacts of elk feedgrounds- and capture and testing facilities- on BLM lands, are a full range of reasonable alternatives. Included in those alternatives must be carefully constructed and analyzed feedground phaseout projects. We incorporate into these comments the entire report alluded to above, Brucellosis Solution for elk and cattle in Wyoming, available on the GYC website at: http://greateryellowstone.org/pdf/brucellosis-solution.pdf

We attach this report in its entirety to these comments. In the report there are brief descriptions that can serve as templates for feedground phase out projects in the Upper Green River Basin. The BLM may be wise to collaborate with the USFS because some elk feedgrounds in this area are on USFS jurisdiction. Also included in this report are brief descriptions of elk feedgrounds that have been successfully phased out in the past. The BLM can use these case studies to inform their analyses, including the economics associated with significant cost savings by phasing out artificial feeding and vaccination of elk. One of the most important components of feedground phaseout projects will likely be the prevention of commingling between elk and livestock on livestock winter feedlines. The BLM, WGFD, USFS and other stakeholders can greatly help move such efforts forward by assisting in constructing stackyards for hay, and elk proof fencing where needed to prevent commingling, and also assisting the WGFD in implementing Hunter Management Areas in order to harvest elk. There are indeed many available tools to successfully phase out elk feedgrounds; all these need to be included in a comprehensive analysis.

Response: BLM recognizes that the elk feedgrounds are not an idea situation. The RMP team considered at length whether or not it would be possible to eliminate the feedgrounds on public lands, and how to include such an action in the draft EIS. Alternative 2 considers eliminating the feedgrounds. BLM cannot bring about the end of the feedground system, because only 6 of the 22 feedgrounds are on BLM-administered public lands. Additional discussion of the impacts of both maintaining and eliminating the elk feedgrounds has been added to the final EIS.

Comment: In order for the BLM to move forward in its new Resource Management Plan, and to facilitate management of healthy elk and healthy habitat, it must conduct appropriate analyses on elk feedgrounds and associated facilities, vaccination of elk, and capture, testing, and shipping to slaughter facilities for elk.

Response: BLM does not conduct vaccination, capture, testing, or shipping of elk and is not qualified to conduct this analysis.

Comment: PAGE: 2-20 SECTION: 2.4.4 RECOMMENDED CHANGE: DELETE [Large Block NSO Areas would be managed for protection of wildlife habitats through offering oil and gas leases with NSO stipulations.](strikeout) EXPLANATION: The large block NSO areas do not conform to criteria for NSO, e.g. steep slopes, erosive soils, or other resource values that make surface use unsuitable. Instead, NSO is being used as a de facto withdrawal. Esdras K. Hartley 88 IBLA 437, 441 (1981) (although as a general rule a stipulation should not be so restrictive as to preclude any right of enjoyment and a lease should not be issued under such circumstances). BLM precedent does not support NSO on this scale, especially since the areas are not for T&E species but rather to protect already for very plentiful big game. When BLM issues leases in elk habitat with surface use elsewhere, the rationale for NSO for similar elk habitat here fails.

Response: The Pinedale RMP planning area contains relatively little elk habitat. Rather, the NSO areas are intended to protect habitats for mule deer, pronghorn, and greater sage-grouse. The NSO areas were presented as a way to protect some wildlife habitats while extensive developments in the Jonah and Anticline areas continue and while allowing for some amount of oil and gas leasing. The areas unavailable for oil and gas leasing and available with NSO stipulations have been revised in the final EIS.

Comment: PAGE:2-143 SECTION: RECOMMENDED CHANGE:Revise: In and adjacent to elk feedgrounds, maintain and improve habitat quality [and ensure the continued viability of the elk feedgrounds.](strikeout) EXPLANATION:The elk feedgrounds are per se not sustainable or viable over the long term. There is a real need to improve habitat but feed grounds are generally not allowed on federal lands. This exception needs to remain that, an exception. BLM and Forest Service are currently being sued for poor management of elk feeding grounds, including those in the Pinedale planning area. Greater Yellowstone Coalition v. Bosworth, 06 CV 37J. The plaintiffs contend that BLM has failed to do NEPA analysis or issue permits and that the MOU by itself is insufficient to authorize the feedgrounds. Regardless of the case's outcome, the lawsuit documents some of the environmental harms arising from the feedgrounds and the RMP needs to address them.

Response: The goal to ensure the continued viability of the feedgrounds is intended to keep the areas available for use as feedgrounds as long as BLM determines that this use is appropriate and to not authorize other uses that would conflict with the areas' use as feedgrounds. Additional discussion of the impacts of both retaining and eliminating the feedgrounds has been added to Chapter 4 of the final EIS.

Comment: PAGE:2-143 SECTION: RECOMMENDED CHANGE:Reevaluate merit of elk feedgrounds. EXPLANATION:As the above referenced litigation alleges, BLM never permitted and never did the required NEPA analysis for the elk feedgrounds. Aside from the issue of brucellosis, the elk feedgrounds have significant adverse environmental impacts that are entirely ignored in the FEIS. These areas fail to meet Wyoming Healthy Rangeland Standards and BLM cannot lawfully continue them without addressing the causal effect between elk and failure to meet Standards. The history of Bench Corral is illustrative. The original purpose of the feed grounds was to mitigate elk depredation during winter months and to maintain quality rangelands. The elk feedground was moved to federal land, but elk continue to trespass, attract wolves that cause depredation of livestock on adjacent fee lands. Now there is documented damage to summer range due to elk numbers. The RMP ignores the fact that most of the elk winter habitat is on fee lands and elk numbers remain quite high on fee ground. The FEIS fails to consider the merit of each feed ground and the continuing need for the feed grounds. The FEIS omits the significant adverse environmental effects.

Response: The draft EIS evaluates the merit of the feedgrounds through considering in the alternatives both retaining and eliminating them.

Comment: PAGE:2-146 SECTION: RECOMMENDED CHANGE:Delete: [b. Surface occupancy would be prohibited on elk feedgrounds except authorized activities to maintain feedground facilities and manage wintering elk.](strikeout) EXPLANATION:For existing leases, which is the case for intensively developed areas, BLM cannot deny surface use. This actually amounts to a condition that would entitle lessees to seek a conservation suspension of the obligation to make lease and royalty payments since it denies surface use for 5½ months out of each year. Unwarranted based on science. Elk numbers are at an all time high, and exceed capacity, hence the need for feedgrounds. Where feed grounds involve private land, it is an unlawful restriction on private land rights.

Response: As prominently stated on pages 1-1 and 1-9, this RMP will not and cannot dictate management of private surface and private minerals. The elk feedground NSO has been recommended by WGFD and is a stipulation in the mineral leases which is legally binding and does not constitute a taking, when the rest of the leasehold can be developed.

Comment: PAGE:2-146 SECTION: RECOMMENDED CHANGE:[c. No unauthorized human presence would be permitted on elk feedgrounds from November 15 through April 30. Where the feedground location is split estate (private surface ownership and federal minerals), this restriction would be limited to BLM-permitted mineral activities.](strikeout) EXPLANATION:BLM cannot control surface use and it

is subject to a separate agreement to which BLM is not a party. Opinion of the Solicitor, Legal Responsibilities of BLM for Oil and Gas Leasing and Operations on Split Estate Lands (April 1988) (concluding that BLM ownership of mineral estate does not permit limits on privately-owned surface). BLM cannot limit surface access when the data do not support a determination of significantly adverse impacts.

Response: BLM has authority to manage how leases of BLM-administered minerals are developed. This management is conducted in cooperation with the surface landowner.

Comment: PAGE:2-146 SECTION: RECOMMENDED CHANGE: d. In close coordination with the Sublette County Conservation District and Sublette County, BLM would work with the WGFD and affected parties to improve habitat quality in areas surrounding feedgrounds. EXPLANATION:Local governments are the entities with land use jurisdiction and any solution needs to include them. Otherwise, it is a top down status quo outcome with continuing resource damage.

Response: Local governments do not have management jurisdiction over BLM-administered public lands. As an affected party, local governments could be involved in habitat improvement activities.

Comment: PAGE: 2-147, RECOMMENDED CHANGE:e. [No unauthorized human presence would be permitted on elk feedgrounds from November 15 through April 30. Where the feedground location is split estate (private surface ownership and federal minerals), this restriction would not apply. be limited to BLM-permitted mineral activities.] (strikeout) EXPLANATION:Ownership of mineral estate does not convey right to limit use of the surface. If lessee has surface use agreement with landowner, BLM has no right to impose terms and conditions on that surface use agreement. Additionally, the human presence issue is not supported by sound scientific data. The largest stressor on wintering big game is predators but the RMP fails to recognize and support predator control. This restriction is thus arbitrary and capricious.

Response: BLM has authority to manage how leases of BLM-administered minerals are developed. This management is conducted in cooperation with the surface landowner.

Comment: PAGE:2-148, RECOMMENDED CHANGE: [d. No unauthorized human presence would be permitted on elk feedgrounds from November 15 through April 30. Where the feedground location is split estate (private surface ownership and federal minerals), this restriction would not apply. be limited to BLM-permitted mineral activities.] (strikeout) EXPLANATION: See Comment #171.

Response: BLM has authority to manage how leases of BLM-administered minerals are developed. This management is conducted in cooperation with the surface landowner.

Comment: PAGE: 3-118, SECTION: 3.17.1, RECOMMENDED CHANGE: Revise Winter feedgrounds were incorporated into the planning area during the late 1940s and early 1950s to contain and provide supplemental food for elk that were damaging private haystacks during the winter. These feedgrounds reduced elk depredation of rancher's haystacks in traditionally used areas. In recent years, however, wolves and other predators have dispersed elk onto private land, where they are again utilizing private land grazing in addition to the feedgorunds. The WGFD, through an MOU with the BLM, administers 10 winter feedgrounds (Map 3-17).

Response: More discussion of elk feedgrounds has been added to Chapter 3 in the final EIS.

Comment: PAGE: 4-97, SECTION: 4.9.1, RECOMMENDED CHANGE: EXPLAIN BASIS FOR ELK INCREASES The number of hunters will fluctuate with the size of the herds and other indirect factors, but because of less interest by younger generations, the number of hunters will decrease.

EXPLANATION: Assuming hunters are expected to decrease, BLM cannot continue to justify additional big game animals, when habitat capacity is already exceeded.

Response: BLM does not control herd objective numbers, this is regulated by WGFD.

Prairie Dog, Black-footed Ferret, Pygmy Rabbit, Beaver

Comment: The BLM has not clearly defined what is meant by the management objective requiring activities in or near white-tailed prairie dogs to be avoided. See RMP DEIS, pg. 2-149. Additional information should be provided in the Final EIS and particularly information regarding the criterion BLM will utilize to determine whether activities should be avoided.

Response: Surface-disturbing activities that destroy prairie dogs, burrows, or parts of the prairie dog town will be avoided.

Comment: There is currently no effective method to control the spread of plague in prairie dog colonies. Because prairie dogs in the Pinedale planning area are already stressed by endemic or epidemic levels of sylvatic plague, stronger conservation measures are needed to prevent impacts from activities that can in fact be controlled.

Response: There is no evidence that the colonies within the planning area are suffering from epidemic levels of sylvatic plague; however, actions to conserve prairie dog towns can be found on page 2-149.

Comment: Currently, the most recent comprehensive data on prairie dog distribution is from the 1980s; new colony surveys are needed to determine where conservation efforts should be focused and which colony sites require restoration efforts. Forrest et al. (1985) admonished, “All prairie dog colonies should be accurately and consistently mapped” (p. 28). Martin and Schroeder (1979) noted that aerial photography failed to identify many active colonies; these researchers recommended winter photography after snowfall as providing the best visibility of prairie dog colonies. The new RMP should require surveys to determine the spatial extent as well as periodic sampling protocols to index population trends within the major colonies.

Response: Currently, colonies have been mapped on the ground every year where known colonies exist. Efforts to locate towns outside of these areas are currently underway. Our protocols will require mapping of the extent of these towns every 3 years to document changes.

Comment: The black-footed ferret was once found throughout portions of Wyoming. Today, Wyoming’s only reintroduced populations reside in the Shirley Basin and near Arlington. The DEIS does not disclose whether black-footed ferrets have been documented within the Pinedale Field or if this is part of their historical range. According to Oakleaf et al. (1992), “The precarious status of black-footed ferrets is a direct result of habitat fragmentation through prairie dog (Cynomys spp.) eradication in the North American midwestern prairies” (p. i). Thus, ferret viability is closely tied to the population status of its prey species, prairie dogs.

Response: Please see A18-5, where this information can be found.

Comment: Based on minimum viable population estimates for ferrets, viable ferret populations require prairie dog colonies of at least 3000 hectares, with a 4000-6000 hectare size being a more optimal minimum (Forrest et al. 1985). These researchers recommended that only towns with burrow densities greater than 10/ha be considered “colonies” for the purpose of reintroduction, and that intercolony distances should not exceed 20 km to facilitate ferret interchange. The DEIS does not disclose whether

there may be sites matching these criteria within the Pinedale planning area, but if such sites exist they would be of primary conservation concern and therefore should be protected under the RMP.

Response: Pages A18-5 through A18-8 discuss white-tailed prairie dog complex size suitable for black-footed ferret reintroduction. Specific locations have not been disclosed because they primarily occur within intensively developed fields that will have ongoing development for the next 30 years.

Comment: In April 2003 The Committee for the High Desert, American Lands Alliance, Biodiversity Conservation Alliance, The Center for Native Ecosystems, and the Oregon Natural Desert Association, petitioned for listing of the pygmy rabbit under the Endangered Species Act (ESA). Due to drastic declines of its historic range, the pygmy rabbit has occupied habitat in Wyoming which is crucially important to survival and success of the species. This habitat is threatened by the oil and gas boom in the planning area.

The best habitat areas for the BLM Wyoming Sensitive (BWS) pygmy rabbit occurs both on and adjacent to the Jonah Field. The ability of habitats in the planning area to support pygmy rabbits likely would decrease due to continued habitat disturbance, habitat fragmentation, and direct mortality. Yet the BLM has failed to incorporate appropriate protection measures into its DEIS to protect the species and its habitat. The pygmy rabbit is highly sensitive to habitat fragmentation.

In addition, recreational hunter harvest of small game and shooting of prairie dogs and other small non-game mammals are anticipated to increase as a result of increased access to the planning area due to increased roads. The increased mortality experienced by small mammal populations also would have a cumulative impact on the predator species that depend upon them for prey. We urge BLM to take these impacts into consideration in the FEIS in order to provide adequate protections.

Response: Please see page 2-149 concerning actions protecting pygmy rabbits and their burrowing complexes. In addition, BLM has been conducting pygmy rabbit surveys throughout the planning area and has found more extensive presence beyond the areas mentioned by the commenter. BLM recognizes the pygmy rabbit as a sensitive species and intends to apply adequate protections throughout its range.

Comment: a. Page 2-47 states “traditional multiple use management, and accommodating all approved uses to the extent possible” as the management direction for Minimally Developed Areas. The granting of exceptions to seasonal restrictions for exploration should continue to be available as a tool when appropriate for accomplishing the stated goal. Currently, the BLM considers exception requests and grants them when the exception is justified by the specific situation, such as the species of concern is not using the area or an activity is in process and will be completed in a few days. The current practice of granting exceptions on either end of the stipulation period, especially on the front end, for a very limited period of time causes little or no stress to the target species when properly applied. c. 3. White-tailed prairie dogs: this section provides protection of WTPD towns greater than 12.5 acres in size. Appendix 18 provides protection of towns greater than 200 acres and states that towns greater than 5000 acres are needed for Black-footed ferret re-introduction. We question the justification for protecting towns less than 200 acres in size. It has been demonstrated repeatedly that WTPD use oil and gas field disturbance features (pipeline corridors, well sites, etc.) as town expansion or colonizing vehicles. It has not been demonstrated that these activities threaten the species. Large Block NSO d. 3. See comment above regarding WTPD. Unavailable Areas c. 3. WTPD: The requirement to install anti-raptor perching devises is not found in this section. Objective 7 This discussion would benefit from the introduction of the definition of the acronyms CAS and CRCT.

Response: The use of exceptions waivers and modifications is still considered a management tool and can be found in Appendix 8. Currently, there have not been any studies done on the effects of energy

developments on prairie dog towns in the planning area; prairie dogs have anecdotally been observed in reclaimed habitats where there has not been current activity for several years. However, the burrow density appears to have decreased since the beginning of the development. In addition, white and black-tailed prairie dogs are sensitive species for BLM, which is why there are provisions to protect towns of less than 12 acres, This is an issue that is separate from the protection requirements for black-footed ferrets, a species listed under the ESA. The acronyms, CAS and CRCT, are spelled out at first instance in Chapter 2. Both acronyms are also included in the List of Acronyms in the draft EIS.

Comment: PAGE: 2-149, SECTION: WTPD, RECOMMENDED CHANGE: • Prairie dog poisoning would be prohibited in all WTPD towns and complexes except for demonstrated human health and safety needs or for other demonstrated emergency reasons or where towns are within 1 mile of private land or state leased land. EXPLANATION: BLM needs to allow poisoning close to private land, otherwise prairie dogs will be an intractable nuisance.

Response: The prairie dog is a sensitive species for BLM because of disease, poisoning, and prairie dog shooting. The prairie dog has been proposed for listing under the ESA. BLM cannot accept this change.

Comment: PAGE:2-150, RECOMMENDED CHANGE:• Prairie dog poisoning would be prohibited in all WTPD towns and complexes except for demonstrated human health and safety needs or for other demonstrated emergency reasons or where towns are within ½ mile of private land or state leased land.

Response: Location of a prairie dog town within ½-mile of state or private land does not constitute a health emergency.

Comment: Beavers are architects of stream ecosystem function. Ohmart (1996) asserted that beavers are a keystone species in small-order streams, creating habitats used by many other species. Beaver dams also are arbiters of fundamental hydrologic change, creating ponds, raising the water table, reducing stream velocities during flood events, and reducing the suspended solids in a stream (Parker et al. 1985). The restoration of beavers to their native habitats has many benefits for aquatic ecosystems. Apple (1985) reported that the restoration of beavers resulted in dissipation of streamflow energies and raising of water tables along Sage Creek in the Rawlins Field Office. In this study, the combination of beaver reintroduction and rest from grazing resulted in a 20% increase in avian species richness. We recommend BLM commit to efforts in the RMP to reintroduce beaver to streams where it once occurred and is now gone.

Response: BLM will work with WGFD on projects to restore hydrologic function to watersheds.

Fish, Fisheries, and Riparian

Comment: PAGE: 4-183 SECTION: 4.17.3 RECOMMENDED CHANGE: REVISE Fisheries are directly affected by the condition of riparian areas. [Surface disturbing activities, such as ROWs for linear actions (e.g., pipelines, roads, and utilities) and construction of well pads and other facilities, could adversely affect watershed resources, riparian areas, and fisheries. Road construction in the vicinity of streams could adversely impact fish habitats by altering the hydrology and the associated riparian zone, causing erosion, loss of aquatic and riparian vegetation, and increased sedimentation.](STRIKEOUT) EXPLANATION: Impact untrue since RMP precludes or limits construction in wetlands and riparian areas. The term “vicinity of streams” is too vague. To affect streams and thus fisheries the soil must reach the stream. Not all surface disturbing activities are close enough to affect streams.

Response: These types of impacts have been documented on many occasions. It is true that RMP stipulations are put in place to try and limit these impacts, but they still “could” occur, as the sentence reads. The point is to make this clear and to not only provide for management actions in the RMP, but to

further address these impacts at the site-specific stage of implementation. Minor changes have been made in the text of the final EIS.

Comment: PAGE: 4-184 SECTION: 4.17.1 RECOMMENDED CHANGE: REVISE to correct inaccuracies and exaggeration. The impacts of [livestock](STRIKEOUT) overuse [grazing](STRIKEOUT) by livestock wildlife and wild horses [management](STRIKEOUT) on stream processes and fish habitats include the loss of stabilizing riparian vegetation, which can lead to stream instability and an associated loss of habitat complexity; the loss of shading vegetation, which can lead to elevated stream temperatures; increased sediment delivery; and loss of stream channel complexity provided by fluvial processes and woody debris. The degree of impact would depend on [livestock](STRIKEOUT) grazing intensity, site characteristics, and species habitat requirements (Armour et al. 1991, White 1996, Rinne 1999). EXPLANATION: Management does not harm stream process. Grazing impacts are grazing impacts without regard to species. Harm comes from overgrazing not all grazing.

Response: The information in the draft EIS was obtained from the references provided and is referring to livestock grazing, not wildlife and wild horses. The commenter has previously pointed out that there are no wild horses in the planning area. Wild horses and wildlife have been known to overgraze areas, but not to this degree in the planning area. It has been documented for livestock grazing in the PFO. The text has been modified in the final EIS.

Comment: This plan is foolish on many fronts. Firstly, drilling gas wells on this scale in this area can only degrade the down river fish and wildlife habitat and quality.

Response: Mitigations for impacts to down river fish may be found in Appendix 3.

Comment: Chapter 2 Page 143 Commentor WGFD Wildlife and Habitat Management. Objective 1 Action - Recommend that no CRC conservation population watershed be included in the Intensively Developed Areas.

Response: BLM is working with WGFD fish biologists to obtain this information; any updates will be included in the record of decision. BLM does not have authority to prohibit development of existing valid oil and gas leases.

Comment: Also on page 4-186, last partial paragraph, it states that “Mineral development would likely deplete water from the Colorado River system. Water depletion can affect fisheries locally and downstream from the planning area.” Geologically speaking this is likely impossible as the gas reservoirs being produced are confined (i.e. under pressure) and at great depth, both factors make them unconnected to the Colorado River system. The continuation of this paragraph on pg 4-187 states “depletions may affect, and are likely to adversely affect, Colorado River sensitive species.” This is not possible. The first full paragraph on the same page states “Based on the depth of the targeted coal formation (1,200 to 5,000 feet) and high pressures in most reservoirs, it is unlike that a connection to the surface waters would exist.” This same logic applies to the discussion above. This is further supported by the statement found in the last paragraph on pg 4-188 which states “Groundwater and surface water interaction typically occurs in shallow aquifers; increased depths reduce the likelihood of impacts from groundwater pumping.”

Response: The conversations between USFWS and BLM on their consultation responsibilities under the ESA have stated that unless BLM or operators are willing to prove through hydrologic studies that these waters are not connected to the Colorado River system, there is no way to prove they are not.

Comment: Colorado River Cutthroat Trout: Colorado River cutthroat trout (CRCT) are the only native trout to Wyoming's Green River drainage. Formerly found west of the Continental Divide, in Colorado, southern Wyoming, eastern Utah, and extreme northwestern New Mexico and northeastern Arizona, the Colorado River cutthroat trout occupies less than five percent of its historic range, primarily in isolated, small headwater streams. This severe range reduction was primarily caused by the stocking and spread of non-native trout, livestock grazing, water diversion, logging, roads and mining. As a result the species has been petitioned for listing under the Endangered Species Act.

Throughout the range of CRCT, livestock grazing is occurring in and adjacent to streams harboring 66% of remaining pure populations and is known to be negatively affecting the habitat of 34% of these populations. In large part because of non-native trout, but also habitat degradation, the Colorado River cutthroat trout is now found in exceedingly small and isolated streams. As a result, most populations consist of far less than 200 reproducing individuals, which is below minimum numbers to preserve genetic integrity and population viability. This problem is exacerbated by the isolation of populations, precluding genetic interchange among populations. Populations in small streams are also highly subject to extirpation caused by stochastic disturbances, such as drought, fire, landslides, or flood. Once populations are lost to these factors, there is little chance habitat will be recolonized naturally because of the isolation of most current populations.

Additionally, whirling disease has been identified in some of the planning area streams. Cutthroat trout populations at most risk from whirling disease are those in streams with a high level of fine sediment and relatively warm temperatures that provide suitable habitat for Tubifex tubifex, one of the hosts needed to complete the life cycle of the *Myxobolus cerebralis* parasite. The BLM has failed to document how continual loss of riparian vegetation that regulates temperatures and continued bank trampling that inputs sediment into streams will affect the ability of whirling disease to spread and what effect the disease will have on very important native trout populations. The FEIS should consider an alternative that would remove domestic livestock grazing from streams known to support CRCT.

Response: BLM believes that the alternatives in the current final EIS provide a broad range actions sufficient for analysis and that total removal of livestock from all CRCT streams would not be needed. Removal of livestock from portions of CRCT streams is always a management option through the use of exclosures. BLM and other agencies have already signed the Conservation Agreement and Strategy for managing CRCT. BLM is committed through that document and other activity plans to not only maintain CRCT populations and habitat but expand and enhance them where possible. BLM will continue to work with WGFD, the USFS, TU, and other entities for the protection and enhancement of CRCT habitats and populations.

Comment: The term "conservation" is defined under the ESA to, mean "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary." 16 U.S.C. § 1532(3) (emphasis added). Thus, conservation goes beyond the mere avoidance of "jeopardy"; it requires agencies to develop and implement affirmative conservation programs to protect and recover listed species. The RMP DEIS indicates the BLM is not meeting these requirements for imperiled aquatic species and their ecosystems.

Response: BLM is completing regulatory requirements under the ESA for the Colorado River fishes and is working with WGFD on sensitive fishes. Please see Appendix 18.

Comment: The ESA requires BLM to use the agency's full authorities to develop a conservation program for the endangered aquatic species being imperiled by water depletions associated with management activities on BLM lands in the PRA and region-wide. I am asking the BLM to develop region-wide

conservation programs - with cooperation of the FWS and Forest Service - that use all methods and procedures necessary to help bring the endangered and threatened species in the Colorado River Basin and Columbia River Basin to the point where ESA protections are no longer necessary, as instructed by 16 U.S.C. § 1532(3). The goals of the programs should be to minimize water depletions and thereby restore the aquatic ecosystems upon which those species (and countless others) depend. The Final EIS (and any revised or supplemental draft EIS) should also include a thorough analysis of cumulative impacts associated with water depletions in the two Basins. I am also requesting that the BLM promptly initiate Section 7 consultation with the FWS concerning water depletions - and associated impacts to the listed aquatic species and their habitats - directly or indirectly resulting from activities in the PRA.

Response: BLM is completing regulatory requirements under the ESA for the Colorado River fishes and is working with WGFD on sensitive fishes. Please see Appendix 18. USFWS has a conservation program in place for these basins for implementing the recovery plan for these species.

Comment: There are some other monitoring items I believe are necessary and beneficial for the Pinedale Resource Area RMP. These include the following:

- Population status (e.g., increasing, stable, continuing to decline) of endangered and threatened aquatic species (fish, mollusks, etc.) in the Colorado River Basin and Snake River.
- Population status of native cutthroat trout (including projections of hybridization and other emerging threats such as parasites) and other Special Status Species.

Response: WGFD, USFWS, and the game and fish divisions of the other states that contain the Colorado and Snake rivers are implementing these efforts.

Comment: PAGE: 4-186 SECTION: 4.17.1 RECOMMENDED CHANGE: [Mineral development would likely deplete water from the Colorado River system. Water depletion can affect fisheries locally and downstream from the planning area. Though not calculated in this land use planning document for each alternative (amounts will be handled through site-specific environmental documents by project and proponent), depletions may affect, and are likely to adversely affect, Colorado River sensitive species.](STRIKEOUT) EXPLANATION: This sentence makes no sense. If mineral development were to deplete the Colorado River system it would set of multi-state water rights violations. Statement itself shows profound lack of understanding about geology and ground water. It assumes that produced water from drilling comes from the same recharge systems that form part of the Colorado River system. This assumption is incorrect and thus the entire paragraph needs to be deleted. The Flaming Gorge reservoir regulates flows in river system so even if there is a connection, the system itself is entirely buffered from any changes.

Response: Conversations between USFWS and BLM on their consultation responsibilities under the ESA have stated that unless BLM or operators are willing to prove through hydrologic studies that these waters are not connected to the Colorado River system, there is no way to prove they are not.

Comment: PAGE:2-151, RECOMMENDED CHANGE: Objective 7 Provide suitable habitat to ensure long-term species sustainability and functioning habitats to support the CAS for CRCT in the States of Colorado, Utah, and Wyoming. EXPLANATION: See Taylor at 3.

Response: BLM and other agencies have already signed the Conservation Agreement and Strategy for managing CRCT. BLM is committed through that document and other activity plans to not only maintain CRCT populations and habitat but expand and enhance them where possible. BLM will continue to work

with WGFD, USFS, TU, and other entities for the protection and enhancement of CRCT habitats and populations.

Comment: New or widened stream crossing (roads, pipelines, etc.) should not be allowed in waters with non-hybridized populations of native cutthroat trout. Other ground-disturbing activities should be prohibited in areas where they could result in increased sedimentation of streams containing non-hybridized populations of native cutthroat trout.

Response: It is not always reasonable to prohibit linear crossings of streams. Populations of CRCT occur in a number of streams. This action would effectively prohibit linear ROWs over a large area. The draft EIS provides for linear crossings of streams to be constructed in a way that would not be harmful to CRCT and other species and riparian systems. New management actions have been added to the proposed RMP in the final EIS to address this issue.

Comment: The DEIS states "planning decisions in the RMP will apply only to the BLM-administered public land surface and mineral estate in the planning area" [Map 1-1]. It is the Service's understanding that the area surrounding the habitat of the endangered Kendall Warm Springs dace (*Rhinichthys osculus thermalis*) is not included within the Pinedale RMP planning area. That habitat is, instead, within the planning area of the Bridger-Teton National Forest Land and Resource Management Plan. Although the BLMin Wyoming may assist the U. S. Forest Service in leasing federal mineral estate within the Bridger-Teton National Forest, those areas fall under a separate Federal Land Use Plan and activities there will not undergo setion 7 consultation under the Act as part of the Bureau's Pinedale RMP section 7 consultation. However, the Service expects that the Bureau if planning to analyze and consult on its potential impacts to the Kendall Warm Springs dace under the Bridger-Teton National Forest Plan as part of the Bureau's programmatic BAs and BOs.

Response: If BLM is part of a federal action at Kendall Warm Springs, BLM would consult with USFWS on any action affecting the Kendall Warm Springs Dace.

Comment: Since it is science-based facts that have determined that the Colorado River Cutthroat trout now occupies 14% of its former range, it should be a high priority for the BLM to consider protecting as much of its native range as possible. This can be done by addressing the ACEC proposals and special management areas below as well as strictly enforcing development and production impacts through monitoring and establishing protocols for resolving impacts.

Response: BLM is working with WGFD on mapping the areas of native range. Many of the ACEC designations are to protect these habitats.

Comment: Chapter 2 Page 104 Commentor WGFD "no stream activities from June 1 through Aug 15 would be allowed". This wording is confusing and should be reworded. The way it is worded states that the only time they could do stream channel work is between June 1- August 15th. We recommend changing the language to the following: "To protect spawning CRC, redds and fry, instream disturbing activities would be prohibited between June 1 and August 15th."

Response: This action has been edited for clarity in the final EIS.

Comment: The 500 foot buffer from riparian zones has disappeared all but Alternative 1 in this document. Industry is given explicit directions on how to except or waive wildlife seasonal restrictions. The NSO stipulation can be lifted if industry shows the need to get their product.. Best management practices are described, but only applied if deemed "practicable".

Response: Alternative 1 describes the 500' restriction on page 2-44 under "Surface Disturbance Restriction"; Alternative 2 does not describe this as a restriction; Alternative 3 describes the 500' restriction on pages 2-97 and 2-98 in the Watershed and Water Quality section; and in Alternative 4 on pages 2-140 and 2-141 it is also in the Watershed and Water Quality section. It is also in the Recreation section of Alternative 3 on page 2-85; the Wildland Fire and Fuels Management section of Alternative 3 on page 2-99; and the Wildland Fire and Fuels Management section of Alternative 4 on page 2-142. Table 2-31 has been edited for agreement with the text.

Wild Horses

Comment: PAGE: 3-113, RECOMMENDED CHANGE: Insert 3.18 WILD HORSES Wild horses were removed from the Pinedale RMPPA in the early 1990s (Powell 2002), as specified in the 1988 RMP. The two herd management areas, Desert Herd and LaBarge Herd, still exist but are not managed for wild horses at present. The removal of the wild horse herds has resulted in decreased conflicts for forage and water. A small wild horse group eluded capture in the 1990s and remains in the Desert Herd management area, mainly in the South Desert Allotment. Currently, the herd number is low (around 12), and conflicts with the resource use in that area are minimal. However, in accordance with the consent decree with the State of Wyoming, all of the wild horses will be removed in accordance with the schedule. EXPLANATION: Chapter 3 omits any discussion of wild horses although they are readily visible from Highway 191. The recommended section comes from the MSA 3-93 with changes made to reflect the consent decree between BLM and the State of Wyoming.

Response: The final EIS has been updated to include this information.

Comment: PAGE: 4-161, SECTION: 4.13.7, RECOMMENDED CHANGE: REVISE BLM will immediately remove all wild horses per consent decree between State of Wyoming and BLM. EXPLANATION: BLM must remove wild horses and this would significantly contribute to vegetation vigor. Unless and until, the EIS must address current impacts of failure to manage wild horses and comply with consent decree.

Response: Please see page 2-12 where this action appears.

Comment: PAGE: G-25 CHANGE: WILD HORSE HERD MANAGEMENT AREA EXPLANATION: Per 43 C.F.R. § 4710.3-1.

Response: This definition has been added.

Comment: PAGE: 2-12 SECTION: 2.3.12 RECOMMENDED CHANGE: REVISE These wild horse HAs (Map 2-5) would not be utilized by wild horses and [but](strikeout) would not be retained. EXPLANATION: Herd areas need not be retained if horses are removed, as they must be under the Consent Decree. Herd Area - means the geographic area identified as having been used by a herd as its habitat in 1971. Wild Horse Act requires protection of herd management areas.

Response: Based on the 1971 Act and congressional authority, a herd area is always retained whether there is a horse there or not. An identified herd area does not lose any of its status/authority/recognition once horses are removed due to such things as habitat loss, insufficient habitat (forage, water, acreage, etc.), or landownership patterns. BLM specifically manages herd management areas for horses. BLM control their numbers, the habitat, etc. If a herd management area is currently managed for horses and BLM determines that it should no longer be managed for horses due to one of the items/reasons mentioned earlier, BLM accomplished the change through a land use planning amendment or in new land use plan. BLM indicates that the area will retain its herd area status and then remove the horses. It is now a herd area not a herd management area. A herd area can be upgraded to a herd management area for

management of horses should conditions change and allow for the management of horses. The change would also be effected through a land use planning process.

Big Game, Migration Routes

Comment: The seasonal migrations of pronghorn that pass through this valley are unparalleled and represent a piece of American natural history that has largely been lost. The pronghorn migration through the Upper Green is estimated to be one of the longest overland migration routes in the world, and has persisted even as up to 75% of other migration routes in the area have been lost to human-induced landscape change (Berger 2003 & 2004) including energy extraction activities. Under FLPMA, the BLM has obligations to act for the preservation of wildlife and events of scientific and historical importance. Please keep in mind these obligations as you move forward with the RMP for the Upper Green.

Response: Migration routes have been compromised in the areas containing established natural gas development as well as in residential developments. Protection will be afforded in the Unavailable Areas in addition to the ROW exclusion and avoidance areas found on Map 2-32 where many of these routes come off the Wind River and Wyoming ranges. Outside these areas, migration routes and bottlenecks would be protected through avoidance, redesign of projects, seasonal restrictions, or other appropriate means.

Comment: As the BLM considers a management plan for the Upper Green River Valley remember that this is a very important wildlife migration corridor. It is necessary to minimize the impact on the land and wildlife, strengthen seasonal drilling restrictions and to withdraw further critical areas from new leasing or development.

Response: Protection will be afforded in the Unavailable Areas in addition to the ROW exclusion and avoidance areas found on Map 2-32. Outside these areas, migration routes and bottlenecks would be protected through avoidance, redesign of projects, seasonal restrictions, or other appropriate means.

Comment: Migration corridors are essential to sustaining the health and future of wildlife.

Response: Migration routes have been compromised in the areas containing established natural gas development as well as in residential developments. Protection will be afforded in the Unavailable Areas in addition to the ROW exclusion and avoidance areas found on Map 2-32 where many of these routes come off the Wind River and Wyoming ranges. Outside these areas, migration routes and bottlenecks would be protected through avoidance, redesign of projects, seasonal restrictions, or other appropriate means.

Comment: By this fence on the southern boarder we will be destroying a part of the migration route. How much more damage can we afford and still have life?

Response: All fences on BLM lands are required to comply with BLM Manual Handbook H-1741-1-Fencing; this manual provides fencing guidelines for wildlife.

Comment: I write to urge you to prohibit more oil& gas leasing of lands as well as oil & gas development in the environmentally sensitive areas. That area is so important to big game migration, especially the pronghorn, who have been using that corridor for over 6,000 years. It would be a shame to lose that amazing history due to our energy needs. So please take into consideration their bottleneck areas as well as their winter range (their limiting factor). As well as the other wildlife areas; sage grouse leks, moose winter range, etc.

Response: Migration routes have been compromised in the areas containing established natural gas development as well as in residential developments. Protection will be afforded in the Unavailable Areas in addition to the ROW exclusion and avoidance areas found on Map 2-32 where many of these routes come off the Wind River and Wyoming ranges. Outside these areas, migration routes and bottlenecks would be protected through avoidance, redesign of projects, seasonal restrictions, or other appropriate means. These areas are also protected under ACECs, SMAs, wilderness study areas and Wild and Scenic Rivers. Information about these protections can be found on pages 4-212 through 4-232.

Comment: I am especially concerned about wildlife migration corridors. They have been used for millenia, and disrupting them now, and so suddenly, may mean the demise of antelpe and deer. The same is true for sage grouse and their leks. Please realize that Americans care about more than money and oil. Please protect the Upper Green River.

Response: Migration routes have been compromised in the areas containing established natural gas development as well as in residential developments. Protection will be afforded in the Unavailable Areas in addition to the ROW exclusion and avoidance areas found on Map 2-32 where many of these routes come off the Wind River and Wyoming ranges. Outside these areas, migration routes and bottlenecks would be protected through avoidance, redesign of projects, seasonal restrictions, or other appropriate means. These areas are also protected under ACECs, SMAs, wilderness study areas and Wild and Scenic Rivers. Information about these protections can be found on pages 4-212 through 4-232.

Comment: I concerned about wildlife populations in the Pinedale Resource Area due to potential oil drillings. Migration routes and breeding grounds have been established and are integral to animal wellbeing. Encroachment threatens the retention of animals other than ourselves. I would like to think that for generations we can observe the herds of big game or see the leks of the grouse in the early spring mornings.

Response: Migration routes have been compromised in the areas containing established natural gas development as well as in residential developments. Protection will be afforded in the Unavailable Areas in addition to the ROW exclusion and avoidance areas found on Map 2-32 where many of these routes come off the Wind River and Wyoming Ranges. Outside these areas, migration routes and bottlenecks would be protected through avoidance, redesign of projects, seasonal restrictions, or other appropriate means. Migration routes and some of the breeding grounds are also protected under ACECs, SMAs, wilderness study areas and Wild and Scenic Rivers. Information about these protections can be found on pages 4-212 through 4-232.

Comment: A number of studies have shown that elk avoid open roads (Grover and Thompson 1986, Rowland et al. 2000). Edge and Marcum (1991) found that elk use was reduced within 1.5 km of roads,except where there was topographic cover. Gratson and Whitman (2000) found that hunter success was higher in roadless areas than in heavily roaded areas, and that closing roads increased hunter success rates. On the Black Hills, elk chose their day bedding sites to avoid tertiary roads and even horse trails (Cooper and Millspaugh 1999). Cole et al. (1997) found that reducing open road densities led to smaller elk home ranges, fewer movements, and higher survival rates. The reduction of road densities on the winter ranges as a whole and the maintenance of low road densities in important habitat areas would aid in maintaining healthy elk populations.

Response: Please see the transportation planning section, as well as the recreation section relating to OHV. The reduction of road densities will be considered if it is found to be necessary for ecosystem function.

Comment: We find the current federal and state management of our wildlife resources to be reactive, with no clear plans to maintain, improve or restore habitats so vital to the future of our wildlife populations. Accordingly, we insist that the following corrective actions be considered and implemented: 2. Big game population objectives should be based on habitat availability, not hunter desires, or state revenues through license sales. Hunting seasons should be based on habitat sustainability and not trophy hunting or outfitter economics.

Response: BLM does not have the authority to regulate the actions proposed; BLM's jurisdiction is in the realm of habitat protection. WGFD regulates population objectives and therefore hunting seasons.

Comment: The crucial wildlife ranges are inaccurate. The winter ranges are close, but not right. What is obviously absent are parturition (birthing areas). An attempt was made to identify them for elk but deer and pronghorn were apparently overlooked. Most sagebrush communities north of the Piney Cutoff are pronghom parturition areas. The mountain big sagebrush, aspen and conifer areas are deer parturition areas. Your maps are totally inaccurate.

Response: BLM receives big game seasonal habitat information from WGFD. WGFD updated the crucial winter ranges in 2006; the Department is currently remapping the parturition habitats.

Comment: Antelope and Mule Deer: Please take a look at maps 3-15 and 3-16 of the EIS regarding Pronghorn and Mule Deer seasonal use areas: Compare the EIS maps to the enclosed maps from Wyoming Fish and Game Regional office entitled "Antelope Seasonal Ranges and Migration Corridors" as of 5/7/07. One can see that the ranges and corridors extend further north and are wider than the ones used by the authors of the EIS. The BLM map neglects to include the primary migration route for antelope and mule deer. The only plan that recognizes the migration corridor is Alternative #3. Once again, it begs the question of why are BLM's maps different then the Wyoming Game and Fish's maps? Where does the BLM get its information?

Response: These changes were identified and have been updated for the final EIS. Any future changes will also be incorporated into the record of decision. Updated migration corridor maps are being developed between BLM and WGFD and the decisions will be updated to protect the corridors and bottlenecks.

Comment: At the very least, withdraw your plans to lease the New Fork and Upper Green areas. Deny leasing in the Bench Corral, Cottonwood and Ryegrass areas that are needed for big and small game. Those are vital seasonal areas for big game moving to and from summer range in the Wyoming Range and may have to constitute whatever winter range that's left for them.

Response: The areas unavailable for oil and gas leasing have been revised in the final EIS.

Comment: We are extremely concerned that actions taken under the proposed RMP may exacerbate observed declines in and impacts to both pronghorn and mule deer affecting the summering segments and their continued presence in GTNP. We firmly believe that the long-term persistence of these species in and adjacent to the park can only be assured by providing secure wintering and transitional habitats and functional movement corridors.

Recent research (Sawyer et al. 2005, 2006a, 2006b; Berger et al. 2006.) has documented declines in mule deer populations and impacts to pronghorn habitat use from gas field activities. Despite these negative trends the DEIS calls for further oil and gas development, but lacks any assurances of whether and how certain population levels of these species will be maintained throughout the development process. The

final RMP should identify quantifiable population and habitat thresholds or trigger points for pronghorn and mule deer that would signal a need for a change in management direction.

Overall, we do not believe that the preferred alternative (Alternative 4) goes far enough to ensure that populations of big game species are not further impacted. Without specific trigger points, a clear road map for how performance-based mitigation will be applied, and an understanding of the enforceability of best management practices, we are concerned that additional energy related exploration and development could result in impacts that are effectively the straws that break the camel's back, initiating an irreversible decline and eventual loss of pronghorn and mule deer from park environs. Therefore, we urge you to develop and select an alternative that: 1) maintains and enforces seasonal drilling stipulations that protect wildlife, 2) implements ACEC's, NSO and special management designations to protect crucial big game winter and transitional ranges, migration routes and migration bottlenecks and 3) requires environmentally protective measures.

Response: Further discussion on the impacts of populations outside Sublette County has been added.

Comment: 4. Affected Environment - Chapter 3. The DEIS fails to provide a comprehensive description of the status of mule deer and pronghorn populations and recent changes documented in population densities, habitat use patterns and survival that are almost certainly attributed to ongoing oil and gas field development. The Affected Environment section should describe current conditions and trends of elements in the environment. Relative to mule deer and pronghorn this should include a summary of recently documented site-specific impacts and disclosure of the conditions under which these trends have been observed (e.g. recent oil and gas development and production conducted with a relaxation of crucial winter range stipulations).

Response: Information on the status of mule deer and pronghorn populations has been added to Chapter 3 in the final EIS.

Comment: 5. Page 4 -184 and other portions of Chapter 4. The DEIS acknowledges that the primary impacts on big game species due to minerals development within the planning area would be reductions in usable wildlife habitat and disruption of migration corridors that link crucial habitats (winter range) and parturition areas. Projections suggest that reductions would be particularly severe in areas with continuous areas of surface disturbance. Fragmentation of important habitats, especially of crucial winter ranges, is an important consideration particularly because recent research by Sawyer et al. (2006) has highlighted dramatic impacts to mule deer when only 2% of winter ranges were directly impacted by energy development. These results suggest that observed impacts are likely attributable to indirect habitat impacts like fragmentation. Although habitat fragmentation is acknowledged, the DEIS does not analyze impacts in sufficient depth. The final RMP should provide a more detailed and quantitative assessment of likely fragmentation impacts under each alternative.

Response: Outside the Jonah and Anticline fields, it is not possible to predict development with enough accuracy to do a meaningful analysis of the effects of fragmentation.

Comment: 6. Page 4-185. Environmental Consequences: The magnitude of impacts to pronghorn and mule deer populations and habitats are not adequately addressed to allow the reader to discern level of impacts between alternatives. The final RMP should more thoroughly analyze impacts including likely population level impacts.

7. Page 4-209 and 4-210. Analysis of impacts under the preferred alternative suggests that "Actions in Intensively Developed Fields could push the thresholds of big game tolerance to disturbance on crucial winter ranges and parturition habitats. On the next page the following statement is made "…wildlife

habitat would generally only be protected if a mineral commodity is not present for extraction." These statements are not consistent with the objective on page 2-101 which states "Manage big game habitats to protect wildlife resource values".

Response: We cannot quantify the population impacts with enough specificity to compare them among alternatives.

Comment: Page Number & Issue:2-143: "Objective 1 Maintain sufficient undisturbed or minimally disturbed habitats to protect wildlife resource values while providing for multiple use management, including oil and gas leasing, exploration, and development." Recommendations: Add "economically practicable".

Response: BLM's mission is to manage public resources, not to maximize economic returns.

Comment: Page Number & Issue:2-146: "f. BLM permitted activities would be designed and implemented to minimize impacts in big game parturition areas from May 1 to June 30 to the extent practicable. g. Surface activities would be designed and implemented to minimize impacts in big game crucial winter ranges from November 15 to April 30 (Map 3-19) to the extent practicable." Recommendations: Add "economically practicable".

Response: BLM's mission is to manage public resources, not to maximize economic returns.

Comment: The limitations on development activities in big game habitat are unnecessary, and not supported by existing analysis. Development has, and can continue to be, conducted in big game habitat areas in such a way so as to protect wildlife resources, while still allowing domestic energy production

Response: Research conducted by Sawyer et al. (2006) on the Pinedale Anticline suggests winter habitat selection and distribution patterns of mule deer were affected by well pad development. Changes in habitat selection by mule deer appeared to be immediate (i.e., year 1 of development), and through 3 years of development, no evidence was found that suggested mule deer acclimated or habituated to well pads. Rather, mule deer had progressively higher probability of use in areas further away from well pads as development progressed.

Comment: Mule deer and elk are important game species in the Pinedale planning area. These game animals contribute importantly to the Wyoming economy, both from hunting and wildlife viewing visitors. The Pinedale planning area contains a majority of the crucial winter habitat for pronghorn, mule deer, moose, and elk populations in the Upper Green River Basin. Thus, protections to maintain the viability of these big game species are needed in the planning area, and these protections should be focused on crucial winter ranges, crucial winter yearlong ranges, severe winter relief ranges, calving areas identified by the Wyoming Game and Fish Department. This we believe has not been done. Large areas of crucial winter range will have little to no protection under the proposed alternatives. This is unacceptable.

Response: Alternative 3 and all of the areas unavailable for leasing and NSO areas aim to effectively protect big game habitats.

Comment: Loft et al. (1991) found that moderate to heavy cattle grazing pushed deer out of riparian habitats and into upland shrub communities that deer avoid when cattle are absent. These researchers noted that these habitat shifts could substantially impact deer populations, concluding that "high quality forage may be limiting on Sierra Nevada summer ranges grazed by cattle, thus contributing to suboptimal nutrition for female deer and their offspring" (p. 24). Elk avoid areas where livestock stocking rates are

high (Knowles and Campbell 1982), so standards and guidelines should be authored such that livestock are not present in calving areas during the calving season or crucial winter ranges between November 15 and April 15. But in some cases, overgrazing by cattle and horses may improve winter range for mule deer (Hubbard and Hansen 1976, Reiner and Urness 1982) and elk (Reiner and Urness 1982) through stimulating shrub productivity. In the final analysis, livestock grazing should be managed in a way that does not reduce or impair the viability of elk and mule deer populations.

Response: The standards and guidelines or an ecosystem analysis approach to assess livestock grazing is meant to assess the viability of the habitat across the landscape. If problems are found, changes in management strategy are required.

Comment: Wintering elk, deer, and pronghorn are sensitive to disturbances of all kinds. Both snowmobiles and cross-country skiers are known to cause wintering ungulates to flee (Richens and Lavigne 1978, Eckstein et al. 1979, Aune 1981, Freddy et al. 1986). Because flight response may be particularly costly to wintering ungulates (Parker et al. 1984), disturbance on winter ranges should be avoided at all costs. As a result, winter ranges should be closed to both motorized and nonmotorized entry from November through April.

Response: BLM is currently closing big game winter ranges to motorized entry.

Comment: Chapter 3 Page 116 Commentor WGFD Edits to Table 3-32: Hunt Areas 97 and 98 needs to be deleted for the Upper Green River Herd Units. The average buck:doe ratio for Sublette Deer should be 0.28:1; Wyoming Range Deer should be 0.32:1; Pinedale Elk should be 0.28:1; and Hoback Elk should be 0.16:1.

Response: Corrections have been made to Table 3-32 in the final EIS.

Comment: General comment Commentor Stroud BLM needs to have a good overall plan to protect wildlife, as well as some kind of plan (preferably a habitat management plan) to aid in the RMP effort, and to earmark areas for analysis to utilize the considerable amount of mitigation funds currently available and those to come. The current range of alternatives needs to be explored to allow for "mitigation" areas throughout the Field Office area, especially on the west side of the Field Office area. This is especially true for Bench Corral and Ryegrass, but not exclusive to them. This consideration should supplement an effort to continue to provide unleased areas to support mitigation efforts.

Response: Alternative 3 and all of the areas unavailable for leasing and NSO areas aim to effectively protect all big game habitats. Mitigation areas must be identified based on information gleaned from vegetation baseline inventories and wildlife population objectives. A habitat management plan is a site-specific effort that would come after the RMP.

Comment: The BLM lands within the planning area contain important habitat for pronghorn, mule deer, white-tailed deer and elk. Furthermore, these lands provide the majority of crucial winter habitat for mule deer and elk populations found in the Upper Green River Basin. Pinedale RMP DEIS at 3-115. The fragmentation and other damage to these habitats outlined in BLM's Preferred Alternative cannot sustain big game populations.

Response: The impact analysis reveals that population impacts may occur.

Comment: The Pinedale RMP DEIS claims that "[t]he best available information pertinent to the management decisions was used in the development of the RMP." Pinedale RMP DEIS at 4-2. We disagree. Although BLM does reference a wide-range of studies conducted on big game species and oil

and gas development, it does so only to describe potential impacts on game species. BLM does not go on to use this information to establish appropriate mitigation measures. For example, the DEIS references the Sublette Mule Deer Study, which found that mule deer experience reduced habitat effectiveness within 160 acres surrounding each well pad. Sawyer and Lindzey 2001. While recognizing this study, at the same time the BLM asserts that well spacing throughout the developed fields would be a maximum of 160-acres (5- to 10-acre spacing in the Jonah Field, 120- to 160-acre spacing in the Anticline Field and 40- to 60-acre spacing in other oil and gas developments). Pinedale RMP DEIS at 4-184 to 4-185. That would mean reduced habitat effectiveness for mule deer over all drilled fields.

Response: The impact analysis reveals that population impacts may occur.

Comment: In addition to skepticism that timing limitations alone are sufficient to conserve big game populations once energy development exceeds a certain level, their effectiveness further decreases when exceptions are granted to industry, allowing them to enter and conduct activities on these crucial lands during restricted seasons. A review of BLM's current exceptions to industry on crucial winter range showed that out of 23 requests so far for the 2006-2007 winter season, 19 have been granted (49 of 65 requested exceptions have been granted so far overall). Accessed on 03/19/07 at http://www.wy.blm.gov.pfo/wildlife/exceptions.php. Because BLM regularly grants exceptions to winter stipulations, the effectiveness of timing limitations to mitigate impacts from surface disturbing activities is unknown.

Response: This issue extends to the existing infrastructure of the producing wells (Sawyer, et al., 2006, states that mule deer do not become acclimated to any stage of development), the continued human presence conducting maintenance actions (which are not regulated by BLM), and habitat fragmentation, in addition to the way the exception process is handled. Human presence does not cease during the timing restriction due to the maintenance actions necessary for the production phase. In addition, only BLM roads are closed during the timing restrictions, BLM does not have jurisdiction over county roads that surround the fields.

Comment: Today the UGRB continues to support the largest, most diverse ungulate populations in the Rocky Mountain region. The Sublette mule deer and pronghorn populations (herd units), managed by the Wyoming Game and Fish Department (WGFD), cover the core of the UGRB. The WGFD manages these two herd units to meet numerical objectives of 32,000 and 48,000, respectively. While the areas occupied by these two herd units are fairly large in size, wintering areas available to mule deer and pronghorn in this region are often restricted and relatively small in size. Nonetheless, UGRB winter ranges support more than 10% of total mule deer and pronghorn in Wyoming. The Sublette herd unit alone supports more pronghorn than any western state, except Colorado (~70,000) and Montana (~55,000). Additionally, mule deer and pronghorn migrations within the UGRB are among the longest in North America, often reaching or exceeding distances of 100 miles.

Ungulate populations of the UGRB are valuable resources, both biologically and socially. While these populations summer over vast portions of western Wyoming, they rely on limited amounts of winter and transition range in the UGRB. Most of the winter and transition ranges occur on federal lands administered by the BLM, and must be balanced with other land uses, such as livestock grazing, recreation, and energy development. Negative impacts resulting from disturbances or habitat loss in winter or transition areas in the UGRB will not likely be localized; rather they will be evident across western Wyoming in the summer ranges these ungulate populations occupy. Of particular concern are the potential impacts to these populations from increased natural gas production and development in the UGRB. Domestic livestock grazing occurs throughout the area and detrimentally impacts habitat for these species as well as for a variety of threatened, endangered, and sensitive species across the planning area.

The Pinedale Resource Area also contains winter ranges that support an estimated 32,000 mule deer from five different mountain ranges and thousands of pronghorn, including some from as far away as Grand Teton National Park , and most of these areas are heavily utilized by domestic livestock grazing. Wyoming still has one of the strongest sage grouse populations in the world and will have a key role in deciding the fate of this magnificent species. In nearby states habitat loss and fragmentation has largely isolated populations, resulting in significant decreases in sage grouse numbers and local extinctions. Wyoming still has a mostly connected distribution, but if habitat fragmentation continues, the State's presently linked sage grouse population will begin to unravel. Maintaining large, unbroken expanses of effective sage grouse habitat throughout Wyoming thus should be a top priority for land managers.

Response: Alternative 3 and all of the areas unavailable for leasing and NSO areas aim to effectively protect seasonal habitats for all sagebrush obligate species.

Comment: PAGE: 2-4 SECTION: RECOMMENDED CHANGE: REVISE The area provides winter and transitional ranges, migration routes , [and contains migration bottlenecks](strikeout) for mule deer, pronghorn, elk, and moose; and lek, nesting, and brood rearing habitat for greater sage-grouse. CLG agrees with the decisions not to recommend the identified areas for ACEC consideration. As to Wind River Front, it is noted that the area is not in fact a migration bottleneck. The term bottleneck is inaccurate as there is continuous open space, just most of it is owned by private landowners. Significantly, the MSA did not identify any migration bottlenecks. There has not been any change in the area to justify the use of the term bottleneck. For purposes of accuracy, this discussion and the use of the term migration bottleneck should be removed from all of the RMP documents.

Response: Big game migration corridors and bottlenecks within the planning area are well documented. Most of the big game migration corridors extend beyond private land and onto state and federal lands, in some cases for hundreds of miles. Many migration corridors have been compromised, abandoned, or restricted (bottlenecked) because of development on federal and private lands.

Comment: PAGE:2-146 SECTION: RECOMMENDED CHANGE:i. Subject to existing leases, and if shown to be necessary to [To](strikeout) minimize fragmentation and human presence in winter ranges, access to big game crucial winter ranges outside producing gas fields may [would](strikeout) be limited to existing designated access routes. Exceptions would could be allowed to provide reasonable access to private or state-owned lands. EXPLANATION:The premise that elk are adversely affected by oil and gas development has been refuted in both Riley Ridge and Nitchey Gulch. BLM has no discretion to deny access to state trust lands or to private lands, especially in this situation.

Response: It is reasonable to manage oil and gas development to minimize impacts on other resources. BLM does not have authority to deny access to state or private lands and no part of the RMP attempts this. The reaction of elk to gas fields in other locations has little bearing on the impacts of intensive gas development in crucial mule deer and pronghorn winter ranges.

Comment: PAGE:2-147 SECTION: RECOMMENDED CHANGE:e. Big game migration [routes](strikeout) would be protected. EXPLANATION: There is no bottleneck as described in FEIS, because elk use private land for migration. The FEIS fails to recognize the adjacent land management that provides better migratory routes. Also not really a route. DEIs incorrectly describes migration through a bottleneck. There is in fact no bottleneck, since game animals move freely through private land, where there is the best water and forage as well.

Response: The presence of big game migration corridors and bottlenecks in the planning area is well documented. Many migration corridors have been compromised and abandoned because of development.

Comment: PAGE: 2-147, RECOMMENDED CHANGE:[h. No surface disturbing or disruptive activities would be permitted in big game crucial winter ranges from November 15 to April 30 (Map 3-19).] (strikeout) EXPLANATION: This restriction is not warranted by science. There is a significant scientific controversy regarding the premise that elk and other game animals areharmed or adversely affected by human activities. See Taylor Report on JMH (2006). As a scientifically controversial issue, the EIS must address the issues. 40 C.F.R. §1508.27(b)(4). Big game animal numbers are well above target populations and arguably exceed habitat capacity. Thus there is little merit to imposing a 6-month NSO for winter time. The DEIS must also disclose to the extent that these restrictions cannot be applied to existing leases.

Response: WGFD has documented the need for the crucial winter range timing restrictions based on years of study and records of population dynamics, which is the reason this COA exists. BLM holds the right to use new information and science to protect wildlife from undue and unnecessary degradation.

Comment: PAGE: 4-180 SECTION: 4.17.1 RECOMMENDED CHANGE: The quality and quantity of winter ranges are generally considered to be the limiting factors on increasing big game populations in the planning area. The ability of these areas to support wintering populations is a major factor in determining year-long population levels. EXPLANATION: EIS needs to disclose that game numbers are far above targets set during previous planning cycle and above historical levels. It is true that habitat is a limiting factor but habitat is always a limiting factor and population levels are at all time highs.

Response: See page 3-116. Most big game populations are below objective. The Wyoming Range mule deer herd is almost 50% below objective.

Comment: PAGE: 4-211 SECTION: 4.17.7 RECOMMENDED CHANGE: REVISE NSO restrictions and other actions would be protective of these migration corridors and elk winter ranges, provided that the existing leases within these areas do not face drainage issues. [Ultimately, if mineral development occurs in these corridors, every effort must be made to prevent further narrowing of the migration corridors or degradation of the native elk winter range.](STRIKEOUT) Impacts from development will be evaluated based on role of state and private lands, where much of the migration currently occurs. EXPLANATION: While RMP may protect corridor not accurate to describe development as crisis, since migration occurs primarily on more productive private lands which follow river.

Response: Many of the big game migration routes extend beyond private land and onto state and federal lands, in some cases for hundreds of miles. There is no evidence that migration routes begin and end on private land. In particular, mule deer and pronghorn tend to migrate through high sagebrush habitats that are typically on BLM-administered public lands.

Comment: Affected Environment: Information in this section of the DEIS does not provide an inadequate basis from which to assess potential impacts nor does it provide a baseline against which impacts can be measured. The document fails to discuss the fact that extensive areas of crucial big game habitat have already been developed and that habitat fragmention has resulted. Sawyer et al. (2006) report a 46% reduction in wintering mule deer on the mesa portion of the Pinedale Anticline associated with a 2% direct habitat disturbance during 5 years of development there. The RMP/DEIS makes no mention of this fact. Population data for pronghorn in the narrative (3-116) are from 1994-1999 and thus are outdated. Current Wyoming Game and Fish Department (WGFD) data are available and should be used. Table 3-32 provides a point estimate from 2005 for big game populations and summarized population trends but provides no data to support this summary. Because the trigger for adaptive management (Table All-1) is a downward trend in animal occupancy measured in critical habitats, the BLM must provide the baseline data that will be used to assess future trends. Adequate data would consist of animal numbers and confidence estimates for populations in the critical habitats monitored. These omissions must be corrected in order to have a scientifically valid decision-making document underlying the land use plan.

Response: Information on the status of wildlife habitats and populations has been added to Chapter 3 in the final EIS.

Comment: Affected Environment: Acres of habitats are reported in this section, but habitat condition is not presented. Page 4-192 states that "impacts would be intensified in areas where winter range habitat is in unsuitable condition," therefore knowledge of existing range is vital in assessing current conditions and evaluating impacts. Transition ranges are mentioned (3-117, 4-180) but not discussed in the document and according to Sawyer et al. (2006) mule deer and pronghorn using the Pinedale Resource Management Area spend between 5-6 months a year on transition ranges (3-117) and those authors further point out the undisputable fact that big game species require access to all needed ranges (not just crucial winter ranges) in order for populations to be maintained. Transition ranges must be identified, their condition specified and impacts to these areas analyzed. It is disconcerting that the last ecological condition inventory for the planning area is reported to have occurred in the mid-1980s (3-32). The importance of transition ranges for mule deer (Garrott et al. 1987) and pronghorn (Alldredge and Deblinger 1988) has also been emphasized in other studies.

Response: Habitat condition information has been added to Chapter 3 of the final EIS.

Comment: Freddy (1986) is incorrectly cited on page 4-185; that reference should be Freddy et al. (1986). Results from that study are not directly applicable to disturbances from energy development therefore the figure of deer response to disturbance of up to 0.29 miles underestimates the potential "ecological footprint" of energy development activities. Freddy et al. (1986) studied the impacts to wintering mule deer from people on foot and snowmobiles. Page 4-185 also states that habitat effectiveness may be compromised for 170 acres around a disturbance. This figure extremely underestimates the effective habitat losses. More recent literature indicates that deer avoid energy development activities up to 3 miles (Sawyer et al. 2006) and Sawyer et al. (2007) indicate that elk select habitats 1.7 miles from traveled roads. Rowland et al. (2000 and 2005) provides a discussion of elk distribution in relation to roads and Sawyer et al. (2007) discusses elk habitat selection the Jack Morrow Hills of Wyoming and considers the impact of roads. The message from all these scientifically credible studies is that the ecological footprint of anthropogenic actions is far greater than the mere physical footprint (Weller et al. 2002). The preliminary work of Berger et al. (2006) is providing similar evidence of the significant distances at which pronghorn avoid oil and gas disturbance. The BLM could have used current, scientific literature, their own experience and GIS capabilities to provide estimates for habitat losses and resulting population impacts associated with projected energy development thus providing an array of potential impacts that the reader/decision maker could use to evaluate more realistic consequences of energy development impacts to big game animals and their habitats.

Response: Roads and associated disturbances have been recognized as the primary agent changing elk distribution across seasons and landscapes (Rowland 2000). Habitat effectiveness for elk has been defined as the "percentage of available habitat that is usable by elk outside the hunting season" (Rowland 2000). Persistent road-mediated disturbance may lead to permanent shifts in habitat use by elk away from roads and thereby effect greater levels of herbivory in some sites (Rowland 2000). This phenomenon is already an issue in and around elk feedgrounds, which may be compounded at the feedgrounds nearest natural gas fields. Although total loss of elk habitat in relation to road construction in forested habitats is unknown, a rough estimate of 5 acres of habitat for 1 linear mile of road is typically applied (Rowland et al. 2005). In areas with higher road densities, studies have shown elk exhibit higher levels of stress and increased movement rates (Rowland et al. 2005).

Comment: Monitoring: The adaptive management and performance based mitigations suggested in the DEIS depend on monitoring which is inadequately discussed in Appendix 11. "Monitoring methods are selected and/or designed to read the indicators as schedules of the resource monitoring table (Table All-1;

p. Al 1-1).” But there are no methods depicted in this table. The table indicates that big game seasonal habitats will be monitored and “numbers during the occupancy period” will be measured. The BLM needs to specify how numbers will be monitored and, to be valid, the sampling scheme must allow for calculation of statistical confidence (see Anderson 2001 for a discussion of problems in simple trend counts). Appendix 11 indicates that most monitoring data will be collected by other federal and state agencies. The BLM needs to provide assurances that those charged with monitoring, have the budgets and personnel to conduct monitoring and they must coordinate monitoring efforts to assure appropriate data are collected at appropriate times. The RMP/DEIS provides no assurances that credible data will be collected. As I earlier discussed measuring changes numbers of big game animals with precision necessary for application in adaptive management is not a trivial task. The BLM and their proposed adaptive management strategy would be better served to monitor changes in over-winter juvenile survival for pronghorn, deer and elk populations.

Response: BLM relies on the expertise of WGFD as population managers. WGFD has the authority to manage the state’s game populations.

Comment: PAGE:2-146 SECTION: RECOMMENDED CHANGE:e. Oil and gas development activities would be designed and implemented to minimize impacts on big game during migration to the extent consistent with lease terms and practicability.

Response: It is reasonable to manage oil and gas development to minimize impacts on other resources.

Comment: PAGE:2-146 SECTION: RECOMMENDED CHANGE:f. BLM permitted activities would be designed and implemented to minimize impacts in big game parturition areas from May 1 to June 30 to the extent practicable and consistent with existing lease stipulations.

Response: It is reasonable to manage oil and gas development to minimize impacts on other resources.

Comment: PAGE:2-146 SECTION: RECOMMENDED CHANGE:g. Surface activities would be designed and implemented to minimize impacts in big game crucial winter ranges from November 15 to April 30 (Map 3-19) to the extent practicable and consistent with existing lease stipulations

Response: It is reasonable to manage oil and gas development to minimize impacts on other resources.

Comment: The RMP DEIS fails to provide adequate baseline information regarding big game from which comparisons of impacts can be made.

Response: Population data was included in Table 3-32 of the draft EIS. This data has been updated in the final EIS.

Comment: The analysis in the RMP DEIS fails to adequately consider the direct, indirect, and cumulative impacts of actions authorized by the RMP on big game populations and habitats and does not consider relevant science in these regards.

Response: The document includes this information; please see pages 4-185 and 4-256.

Comment: The RMP DEIS fails to consider any alternative that would effectively protect big game habitats.

Response: Alternative 3 and all of the areas unavailable for leasing and NSO areas are designed to protect big game habitats.

Comment: PAGE:2-146 SECTION: RECOMMENDED CHANGE:Objective 3 Maintain and enhance big game habitats to protect wildlife resource values within capacity of habitat and consistent with Wyoming Standards for Healthy Rangelands while providing for multiple use management. EXPLANATION:BLM must manage the habitat and cannot adopt or accept WGFD numbers without first determining that the numbers will not cause resource damage or exceed habitat capacity. The RMP sets up the conflict where it accepts WGFD numbers and commits to existing AUMs for livestock. If it is going to take reductions from livestock, it must disclose and justify it. Current law and rules do not allow it.

Response: BLM has not committed to basing adaptive management thresholds on population numbers because BLM does not manage populations. BLM is committed to managing habitat for all resources. Rangeland health and sustainability has always dictated AUMs and recommendations of stocking rates. This will not change.

Comment: PAGE: 4-180 SECTION: 4.17.1 RECOMMENDED CHANGE: REVISE Fish and wildlife populations would continue to be managed by the Wyoming Game and Fish Department (WGFD). BLM would continue to manage wildlife habitat. Big game habitat would be managed in coordination with WGFD herd objectives and the Strategic Habitat Plan. Where big game use or habitat management contributes to failure to meet, maintain, or make progress towards meeting Wyoming Standards for Healthy Rangelands, BLM will take steps to coordinate reductions in big game and other corrective measures. EXPLANATION: While it is correct that BLM cannot regulate big game numbers, it cannot allow state agencies to impose conditions that interfere with achieving healthy rangelands. BLM is charged to meet standards and is further prevented from forcing livestock grazing reductions when the causation is due to excess numbers of big game.

Response: BLM will not reduce stock numbers if big game grazing is depleting forage resources. In this case BLM will work with WGFD to manage wildlife to maintain forage for both resources.

Comment: PAGE: A3-9 SECTION: Wildlife RECOMMENDED CHANGE: DELETE [Approved activities in crucial wildlife habitat may negatively affect BLM's ability to support Wyoming Game and Fish herd numbers.](STRIKEOUT) EXPLANATION: WGFD numbers are not tied to habitat capacity or statutory requirements that must guide public land management. Accordingly, BLM cannot agree to adopt land management solely to meet WGFD numbers when no federal law mandates this and to do so requires ignoring other federal mandates, not the least of which is meeting and maintaining Wyoming Standards for Healthy Rangelands.

Response: The referenced statement does not imply that WGFD objectives would be the sole consideration in land management.

Comment: PAGE: 2-147,RECOMMENDED CHANGE:h. BLM permitted activities that are documented to be adverse to wildlife would be prohibited in big game parturition areas from May 1 to June 30. EXPLANATION: Too broad as written. Livestock operators would be prohibited from doing fence maintenance.

Response: The language is specific to permitted activities. No permit is required to maintain an existing fence. Newly issued permits for activities in parturition areas would carry the seasonal restriction.

Comment: PAGE: 2-148, RECOMMENDED CHANGE:f. [Big game migration routes would be protected.] (strikeout) Management actions would consider and mitigate impacts on big game movement. EXPLANATION: The action assumes facts that are untrue. Most migration occurs on private land, so the area identified as a migration route is not in fact a route.

Response: The presence of big game migration corridors and bottlenecks in the planning area is well documented. Many migration corridors have been compromised and abandoned because of development.

Comment: The DEIS acknowledges (4-210) that the fewer acres of habitat in Unavailable Areas associated with Alternative 4 "could result in more animals dispersing off BLM lands because habitat loss and increased disturbances relating to mineral extraction." Areas where animals might disperse are not identified and there is no indication that these areas are currently below carrying capacity such that could support additional animals. The disclosure (4-210) that, "wildlife habitat would generally only be protected if a mineral commodity is not present for extraction," is an honest admission that the "Unavailable" and "Large Block NSO" areas are a facade with little potential for habitat protection. The last sentence in paragraph 3 (4-210) is confusing: "Appropriate mitigation and BMPs could alleviate human-caused disturbances; however, many of the species in this resource area have minimum habitat requirements that dictate their success." This sentence needs clarification. As it currently reads I conclude that the BLM is admitting that BMPs and mitigation will likely not work. And I would further note that the work of Sawyer et al. (2006) has repeatedly emphasized the need of big game species for all habitats that they require over the course of a year.

Response: It is not possible to predict where dispersed animals might move to. There are no suitable habitat areas that are currently unoccupied that could support these dispersed animals. The impact analysis acknowledges that population reductions would be the ultimate impact of animal dispersal. As the commenter earlier pointed out, BLM is unable to provide full protection to most crucial winter ranges because of existing gas fields or valid leases in those areas. This does not mean that making areas unavailable for leasing in the future is a façade. The sentence has been edited to convey the message that, for species with very specific habitat needs, appropriate BMPs or mitigations might not be available.

Comment: The Monitoring Strategy Detailed for Big Game in the DEIS is inadequate. All action alternatives in the Pinedale RMP DEIS fail to provide crucial details on necessary monitoring and enforcement that could ensure the health of the Pinedale big game populations. The DEIS states only that "[m]ule deer, elk, antelope and sage grouse use patterns will be monitored." Pinedale RMP DEIS at 2-17. However, the plan does not go into detail about how monitoring will be conducted or how results from monitoring will be incorporated into new mitigation measures. The DEIS states that monitoring of big game seasonal habitat will be conducted by aerial and field inspections to look for downward trends in animal occupancy. Pinedale RMP DEIS Appendix 11. Sawyer et al., however, recommended that population parameters (i.e. adult female survival, overwinter fawn survival, recruitment) be monitored so that changes in survival and reproduction can be documented. Sawyer et al. 2006. The DEIS provides no justification for a determination that aerial surveys and field inspections alone can show long-term population trends.

Response: It is not possible to design specific mitigation at the RMP level, as the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation and the methods to be used must be tied to a specific proposal where specific impacts can be predicted. The action alternatives contemplate the establishment of working groups that are intended to integrate the decision, implementation, mitigation, evaluation, and response process.

Monitoring of wildlife populations and determination of population trends is the authority of the Wyoming Game and Fish Department. BLM would coordinate with WGFD in analysis of population data and development of mitigation measures. However, the EIS acknowledges that population impacts to big game may be viewed as a result of development in crucial winter ranges and other important habitats.

Comment: An additional thought: it is time to proceed with the national migration corridor. I was shocked to read that the spokesman for the BLM in Cheyenne, Steven Hall, made the comment in an

article in the Casper Star Tribune 6/15/07 "addressing the idea of a national migration corridor is outside the purview of the agency." I would like to know where the responsibility for this lies.

Response: The plan provides for protection of the pronghorn migration corridor between Trapper's Point and the USFS boundary, as well as numerous other big game migration corridors that occur in the planning area. Because formal designation of the migration corridor was not analyzed in the Draft EIS, BLM is unable to include it in the alternatives in the final EIS. However, BLM plans to continue to protect this important resource and could take action after finalization of the RMP to process an amendment that would include the migration corridor, similar to the action that the USFS took in May 2008.

Seasonal Stipulations, Wildlife Comments with Multiple Species

Comment: Page 3-116 Table 3-32 Big Game Population Status:

"Pronghorn seasonal use areas are shown on Map 3-15. The Sublette pronghorn herd unit encompasses 10,546 mi2. The majority of the planning area falls within this large area. The herd unit is managed for a postseason population objective of 48,000 pronghorn. An estimated population of 49,500 was present in 1999, with a 5-year average (1994–1999) of 43,260 (WGFD 1999). Pronghorn are predominantly associated with low, rolling terrain supporting open grassland and sagebrush communities. Summer and winter habitat is present throughout the planning area.

Current Mule Deer population of the Sublette and Wyoming Range Herds are 55,213. Population trend is stable to up and the objective is 82,000 deer.
Elk Population totals from 4 herd units is 8807 Elk. Population trend is stable or up and the objective is 7924 elk.
Moose population totals 3926. Population trend is up and the objective is 5500 animals"
Comment - All population trends are stable or up for big game animals. Clearly, no new measures are necessary to protect big game species since existing practices have proved successful.

Page 3-119 "BLM defines Sensitive Species as species that could easily become endangered or extinct in a state unless protection is granted." Comment - The greater sage-grouse is hunted in Wyoming and would be more appropriately discussed under the Game Birds section. It is illogical for this species to be both hunted and classified as a Special Status Wildlife Species. On page 3-123 under the BLM Sensitive Wildlife Species section, it is stated "Greater sage-grouse are the most numerous and widespread game bird within the planning area…" [Emphasis added] The current management model for these birds is nothing short of contradictory.

Page 3-120 Furbearers Comment - Although no longer trapped in Wyoming, the Canada lynx is a long-standing and historic example of a furbearer and should be mentioned in the Furbearer Section, even though discussed in the Special Status Wildlife Species section.

Response: The data in the table represents the population trends of the entire Herd Unit, which should not be confused with the local population effects. The impacts of the PAPA or the Jonah developments may not translate into the Herd Unit population trends immediately. Furthermore, just because a Herd Unit is stable does not mean the local population is stable. The Canada lynx is a federally listed species protected under the Endangered Species Act; it is inappropriate to discuss management of this species under the furbearing section. Despite the fact that greater sage-grouse are still hunted under WGFD regulations and are the most numerous and widespread game bird within the planning area, numerous studies and nationwide studies have documented large scale historic declines. This is why BLM has designated this species as sensitive and why the Governor of Wyoming is putting tremendous effort into managing this species.

Comment: Pygmy Rabbit: While acknowledging the pygmy rabbit is in decline throughout the West, the RMP fails to describe current populations or the habitats required by pygmy rabbits. It has not described past management actions that have resulted in this decline and offered corrective actions to restore pygmy rabbits in the Pinedale Resource Area. Welch (2004, in press) reports his research in which he walked 300 miles in pygmy rabbit habitat, covering areas where pygmy rabbits were previously reported. In 37 stands of big sagebrush in northern Utah, he found 11 pygmy rabbits, with 8 occurring in a single stand of sagebrush. Out of 11 sites previously reported as supporting pygmy rabbits, he found no signs of occupancy with only four sites now having suitable habitat.

Suitable habitat consisted of big sagebrush with ≥ 20% canopy cover and ≥ 22 inches in height. He reported on significant deterioration and loss of habitat for pygmy rabbits through conversion of sagebrush stands to agriculture and treatments designed to improve forage conditions for livestock by reducing sagebrush cover. In his literature review, he provides some additional parameters describing wintering habitat for pygmy rabbits. The research showed the areas of highest winter use were in basin big sagebrush with canopy cover of 51%, compared to areas with moderate use having 42.7% canopy and low use in 38.6% canopy. Diets consist of 99% sagebrush in winter and 51% during summer with the remainder being herbaceous vegetation.

DOI (2001) summarizes additional diet characteristics for pygmy rabbits. In particular, they were reported to rely on 39% grasses such as native Agropyron species and 10% forbs. Other characteristics described in both references include descriptions of soil conditions amenable to burrowing, such as deep soils. The RMP must research pygmy rabbit habitat requirements and map potential pygmy rabbit habitat, describe its current condition and the causes of that condition. Then, the RMP must provide numeric criteria describing desired conditions of this habitat and place it off limits to surface disturbing activities or surface occupancy and limit livestock grazing by setting conservative utilization levels, providing rest to restore grasses and forbs needed to provide the necessary herbaceous forage during spring, summer and fall, and not impose the minimal sagebrush cover guidelines it has cited for sage grouse.

Northern Goshawk: While noting that goshawk occur in undisturbed forest areas, the RMP places all timber producing areas into active production without considering goshawk or providing criteria to ensure its habitat remains structurally and functionally viable. BLM must review the relevant science for goshawk and provide sufficient criteria for forested habitats to ensure available forage for goshawk prey and habitat for goshawk such as the Forest Service research described in Reynolds et al (1992) , which is the adopted guidance for the Wasatch-Cache National Forest in its Utah Northern Goshawk Project Environmental Assessment (USDA 1999) and its Decision Notice (USDA 2001) . This guidance allows only an average of 20% utilization of herbaceous forage species, with no place receiving greater than 40% use in the entire goshawk home range which is 6,000 acres. Structural classes of trees and understory are specified so that timber harvest leaves the required amounts in each of several size classes. This guidance also stresses the importance of maintaining mycorrhizal fungi function in these home ranges. If BLM is to achieve its stated objective for maintaining goshawk populations, it must adopt criteria reflecting the habitat and forage base for goshawk and integrate those into its grazing and timber guidance.

Other Fish and Wildlife Habitat: The RMP relies on much general language as its criteria for meeting habitat objectives, but ignores its FLPMA mandate for accelerating restoration. It does this by relying on collaboration in the absence of criteria, presuming somehow that deferring to the Wyoming Standards for Rangeland Health or PFC assessments for streams will do that. Rangeland health assessments are non-quantitative and subject to great bias by selecting non-representative areas for assessment, not comparing conditions to potential or reference sites and not assessing the current condition of the site. The RMP is relying on Rangeland Health assessments as its monitoring and control of livestock grazing as well as mined land or other surface disturbed land reclamation activities. This is a flawed strategy as documented

in the Interagency Technical Reference which is used for rangeland health assessment. The document describes its intended applications and specifically states it is NOT to be used to:

- Identify the cause of resource problems
- Make grazing and other management decisions
- Monitor land or determine trend
- Independently generate national or regional assessments of rangeland health.

This is a qualitative, not quantitative approach and as such is subject to bias. Where are the ecological site inventories, the trend studies, the similarity indices needed to judge condition of the plant communities relative to reference conditions? The technical reference indicates these are needed. The RMP claims that, of the streams in the Resource Area, only 1% are Non-Functional. There is no data or analysis showing the current habitat conditions for fish and wildlife in these stream and riparian systems, nor adequate standards for restoring fish habitat including bank condition (undercut banks, eroding banks, bank trampling and others), nor instream habitats (instream cover, canopy, overhanging vegetation). This total reliance on PFC is flawed because PFC assessments do not account for fish and wildlife habitat condition. Even BLM's own technical manual states that "Trout habitat conditions would be optimum from mid-seral to late seral. The threshold for any goal is at least PFC because any rating below this would not be sustainable." (emphasis added). That manual illustrates where the PFC state is in relation to habitat for fish. The figures clearly illustrate that at PFC, fish habitat lacks needed structural attributes such as undercut banks, overhanging vegetation and canopy cover. Such habitat components as those needed for CRCT and other native fish should be the minimum standards required for management activities across the planning area.

Response: The management decisions in the draft EIS do not place timber producing areas into active production, but rather serve to manage timber stands to return them to their historic range of variability with emphasis on old growth and forest health. BLM has incorporated northern goshawk management guidelines to the extent practicable given BLM's requirement to manage multiple resources and resource uses. As further northern goshawk research is conducted, BLM will incorporate results of this research into the management of the planning area. All relevant and available literature was reviewed and considered in development of the draft EIS.

The RMP is a broad-based, land use document that makes land allocation decisions and, as such, uses qualitative approaches to analyze impacts resulting from the various alternatives. Specific decisions on management of livestock grazing and monitoring of grazing allotments will be made at the allotment management level. No RMP-level grazing management decision could be appropriate for all grazing allotments and habitat types. Stream functionality is a physical characteristic determined by site, topography, geology, and climate, not wildlife habitat needs. The Proper Functioning Condition (PFC) manual also makes clear that not all stream systems have the capability to provide trout habitat. PFC is used as a management goal because physical stability of stream systems is required as a base before other site-specific management objectives can be met. Site-specific management objectives for fish and wildlife habitat would be developed at the project level through habitat management of allotment management plans.

Comment: Powerline towers are likely to concentrate raptor nesting and perching activities, to the potential detriment of prey species. Transmission towers may be particularly attractive as nest sites for ravens, and Steenhof et al. (1993) reported that 133 pairs of ravens had colonized transmission towers on a single stretch of powerline in Idaho during its first 10 years of existence. Gilmer and Wiehe (1977) found that nest success for ferruginous hawks was slightly lower for transmission towers than other nest sites, and noted that high winds sometimes blew tower nests away. Steenhof et al. (1993) also found that transmission tower nests tended to be blown down, but found that nest success was not lower on towers

for ferruginous hawks and was significantly higher on towers for golden eagles. In North Dakota, Gilmer and Stewart (1983) found that ferruginous hawk nest success was highest for powerline towers and lowest for nests in hardwood trees. Thus, although powerlines can be designed to minimize impacts to raptors, these corridors should be sited more than 2 miles away from prairie dog colonies and sage grouse leks to prevent major impacts to these sensitive prey species.

Response: BLM has followed the recommendations of USFWS in providing stipulations for placement of facilities in or near prairie dog habitats. Similarly, BLM will comply with the WAFWA MOU to conserve the greater sage-grouse and its habitat.

Comment: We find the current federal and state management of our wildlife resources to be reactive, with no clear plans to maintain, improve or restore habitats so vital to the future of our wildlife populations. Accordingly, we insist that the following corrective actions be considered and implemented: 1. The compounding effects of drought, oil and gas leasing, development and production, the reintroduction of wolves, and the increases in. human population should be recognized, analyzed and quantified as they impact our big game, upland game and non-game species. Mitigation measures should be required and based on science, not politics.

Response: Many of these issues have been recognized and analyzed in Chapter 3, 4 and the Cumulative Impacts section. We acknowledge in the impacts analysis that there are impacts to the animals from these stresses, but we cannot determine at this time what the population impacts will be.

Comment: PAGE: CHANGE: ACTIVITIES DISRUPTIVE TO WILDLIFE - The physical presence, sounds and movements of people and their activities that are likely to cause displacement of or excessive stress to wildlife during critical life stages or during periods of severe winter weather conditions. Components of activities disruptive to wildlife may include noise, traffic, or human presence regardless of the purpose of the activity. Activities of concern are generally those that are threatening or harassing to wildlife but may be activities that are of a duration or intensity that results in individuals leaving areas of critical habitat area for less suitable habitat (i.e. birthing, nesting or winter habitat) for an extended time period or that interfere with critical life stages (i.e. noise disruption of sage-grouse breeding activities). Temporal or spatial restrictions can be placed on these activities. This definition is not intended to apply to nonthreatening and non-harassing activities such as, but not limited to, land surveys, cultural site investigations or fence maintenance activities that occur outside critical life stage periods. EXPLANATION: Definition added to replace SURFACE (HUMAN) DISRUPTIVE ACTIVITY, per R. Taylor's Report, Response to Draft Definition of Disruptive Activity as Found in the draft Rawlins Resource Management Plan (November 9, 2006). See SURFACE (HUMAN) DISRUPTIVE ACTIVITY (below)

Response: The definition is appropriate as given in the draft EIS.

Comment: The seasonal wildlife stipulations contained in Appendix 12 are somewhat confusing, because although Alternative 3 of the DEIS is touted as the conservation alternative, in several instances the protections provided in Alternative 3 are weaker than those provided in Alternative 4. For instance, elk feed grounds, sage-grouse winter habitat and other raptor nest protections are not even provided in Alternative 3. Additionally, Alternative 3 does not provide protections for mountain plover nests and burrowing owl nests in large block NSO areas, while Alternative 4 does. In no instance we could find is a seasonal stipulation in Alternative 3 more protective than the comparable stipulation in Alternative 4.

These differences between the two alternatives, however, are not the only areas of concern. We deplore the proposed lifting of seasonal wildlife stipulations from areas where oil and gas drilling will occur. For big game crucial winter range under Alternative 3 the seasonal stipulation will only apply in Intensively

Developed Areas. The implication of this is that in all other management areas there will be no seasonal wildlife stipulation for big game crucial winter range. The seasonal stipulation for sage-grouse leks is applicable only in Minimally Developed and Unavailable Areas, implying that in all other management areas (such as Intensively Developed Areas) there will be no seasonal stipulation for sage-grouse leks. We applaud Alternative 3's 3-mile buffer for sage-grouse nesting habitat, but again question why it applies only in Minimally Developed and Unavailable Areas, areas where disturbance should already be less intensive. There are other examples of these types of odd applications of seasonal wildlife stipulations, but suffice it to say that Appendix 12 must be rewritten to provide adequate and meaningful seasonal wildlife stipulations in conformance with WGFD recommendations. The WGFD recommendations should be the starting point for designing stipulations, since recent studies have unequivocally shown that even these are not preventing degradation of our wildlife populations.

Response: Appendix 12 shows seasonal wildlife stipulations. There are fewer seasonal restrictions under Alternative 3 because oil and gas leasing would be unavailable or subject to major constraints across most of the planning area. The management actions in Alternative 3 provide protections for raptors. Under Alternative 3, surface occupancy would be prohibited within 1,000 feet of active raptor nests (including burrowing owls). For big game crucial winter range, the seasonal stipulation would apply to only the Intensively Developed Area because within the other oil and gas management areas, surface occupancy would be prohibited. Seasonal restrictions do not protect wildlife habitats because the activities postponed are carried out in the next noncrucial season. When development reaches a density or other point at which animals no longer use the habitats, seasonal restrictions do not provide any value. The 3-mile buffer for sage-grouse nesting habitat cannot be applied in the Intensively Developed Area. Because of this area's density of expected development, this restriction would not be feasible.

Comment: Sound ecological protection for a landscape with its vegetation, wildlife, water and other ecological resources must be developed at the landscape scale. The Wyoming Game and Fish Department (2007) explains "A landscape approach is essential to plan and mitigate large-scale energy developments, because impacts from such developments are not limited to the actual project area". The importance and complexity of using the best available science to plan at the landscape scale has been recognized by many scientists (Szaro et al. 2005, Noss 2007). Many ecological functions such as the seasonal migrations of wildlife, connectivity required to prevent genetic isolation, and natural disturbances affecting wildlife habitat occur across broad landscapes. Consequently, decision making about the use and conservation of natural resources needs to be made at the landscape scale. The RMP should use the full set of guidelines from Wyoming Game and Fish Department (2007) as a model for identifying and assessing the impacts of oil and gas on wildlife at a landscape level.

Unfortunately, many decisions about protecting habitat and wildlife are not made at the landscape scale in the Preferred Alternative or the conservation oriented Alternative 3. Exceptions to wildlife timing stipulations, exceptions to NSO, conversions from "Large Block NSO" or "Unavailable Areas" to "Intensively Developed Field" may be made on a case-by-case basis - future situations not designed to take into account the indirect and cumulative impacts across a landscape. Management decisions about oil and gas development as it affects wildlife (and other natural resources) must be made at the landscape level looking across the entire Pinedale Resource Area and considering implications on adjacent lands as well. Indeed, the RMP revision is the ideal time to make such management decisions.

Response: The RMP provides the framework for managing the planning area at the landscape scale. It is not possible to predict all possible management scenarios in the RMP. Some decisions must be made case-by-case, following the framework provided by the RMP.

Comment: 3. We advocate a study to determine how special habitats such as blue heron rookeries, trumpeter swan nesting areas, elk and antelope migration areas will be impacted or protected from the activity.

Response: Some of these studies are currently underway.

Comment: The proposed "adaptive management" approach to managing wildlife does not work. The only way you know your performance standard has not been met is if the wildlife is gone or decreasing.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: Several wildlife studies have been conducted in the Pinedale area since 2000 and have found the population of mule deer in the Sublette Herd Unit has steadily declined between 2002 and 2005-2006 (Sawyer et. al, 2005); the Sublette Herd Unit moose post season population also has declined from 1999 to 2005 (WGFD); and, the male counts on sage grouse leks that were heavily impacted by gas wells also declined from one year prior to well development (Holloran, 2005). It is unclear from the analysis in the Draft EIS, whether the proposed resource management plan of "intensely developed", "minimally developed", "large block NSO" and "areas unavailable to leasing", will be protective enough to ensure BLM's goal of "maintaining functioning big game habitats and migration corridors that allow free movement and use of habitats." EPA recommends the Draft EIS include more information on the anticipated impacts to wildlife.

Response: The impact analysis has been updated in the final EIS.

Comment: Pages 4-181 – 189 Wildlife and Fish Habitat and Assumptions: Comment - There is a great inconsistency in assessing the value or impact of vegetation disturbances within this section of the document. On pages 4-181, 4-182, 4-183, 4-184, and 4-185, the impacts of vegetation disturbance are described as negative (fragmentation, loss of species diversity, and suitable for generalist species only). On pages 4-182, 4-189, and 4-90, however, the effects of vegetation disturbance are described as positive (habitat mosaics, increase of habitat values and species diversity, and suitable for use by early seral species). BLM's reasoning is flawed. On one hand it is stated that habitat fragmentation should be avoided; while on the other hand, it is necessary to fragment the habitat in order to create mosaics. We question the judgment that vegetative changes brought about by timber cutting and fire are positive, while comparable changes brought about by oil and gas operations are negative. Such a presentation reflects a highly selective and negative bias against oil and gas operations and a determined differential application of ecological principles.

While the reduction of sagebrush habitats is likely to have negative effects on sagebrush obligate species, such disruptions will have positive effects on wildlife species that require more open or mixed sagebrush/herbaceous habitats. Habitat modification in itself is not necessarily negative. It is a well-accepted ecological principle that alterations in habitats, including those produced by biotic succession, will make such habitats less suitable for some species while simultaneously making them more suitable for other species (Odum 1971, Smith 1974). What is overlooked in this analysis is the fact there will be beneficial effects to non-sagebrush obligates that accrue from the reduction of sagebrush habitats. Prairie dogs, ground squirrels, burrowing owls, grassland birds (including mountain plovers), and most medium to small mammal species will all benefit from the opening up of the sagebrush monoculture. Also, the prey base for raptor species is likely to be increased by opening sagebrush habitat. BLM must reconcile these different needs in a logical manner.

Page 4-185 "Disturbance may contribute to reduced reproductive rates due to reduced feeding, feeding in poor quality habitats, or feeding on rough forage (Gillin and Irwin 1985). Research conducted by Gillin and Irwin (1985) in the Bridger-Teton National Forest found seismic activity caused displacement of elk within home ranges by an average of three-quarters of a mile and into dense (greater than 70% canopy) forests with reduced forage. Displacement was observed to be rapid on spring range when calves were less than 1 month of age. Oil and gas exploration and field development in the Riley Ridge Project area was found to change elk distribution after drilling 1 well; after 3 wells were drilled, elk abandoned 6,000 acres of winter range. After drilling ceased, elk returned to the area. Further drilling activities in elk calving areas also caused elk to temporarily abandon the Lake Ridge calving area. Elk abandoned the Snider Basin calving area in 1984 and returned a year later when drilling activity left the basin. Elk have until now been able to find suitable undisturbed habitats away from human activity; however, continued development could lead to abandonment of historic ranges (in the last native winter foraging area on the Wyoming Range) (Johnson 1985). A study conducted by Hayden-Wing Associates (1990) found a similar response in the Graphite Hollow/Rock Creek Winter Range where elk moved 0.5 to 2.4 miles away from a well site."

Response: The impacts of planned vegetation treatments and industrial development are fundamentally different. Vegetation treatment projects are designed to achieve preferred outcomes and are conducted during the ideal season, with post-treatment management and no lingering human presence or continuing disturbance. Industrial development, on the other hand, is designed to provide industrial access, continuous human presence and use, and long-term, continuing disturbance. The argument set forth in this comment is comparing native ecosystem function and human created manipulations. In addition, sacrificing sagebrush obligate species with the justification that prairie species will take over is irresponsible. The beauty of a true landscape mosaic is that it is self-containing and naturally contains habitats for sagebrush obligates, grassland prairie obligates, and forest obligates, to name a few. Humans cannot create these systems better than Mother Nature, and bringing more anthropogenic features into the landscape only creates a situation of further manipulations.

Comment: The next subject, the map section of the appendixes. It seems that almost every map that's in there, but particularly the wildlife maps, include private property in the delineation of winter rangesm crucial habitats, and I think that's wrong. I don't know how the delineation was made, but it looks to me like they had to trespass to get those sort of ideas that that was with critical habitat. Just guessing, is that critical habitat across the fence is not real analysis because if they didn't go in right on the property and understand that then how can they can delineate it on a map. So I think it's wrong that private properties are included in any of the maps.

Response: The techniques WGFD employed to gain information about big game seasonal habitat use include aerial observations in addition to ground surveys.

Comment: The following objectives are necessary to propagate Sublette County wildlife populations as we have known them in the recent past. They include the following:

1. Crucial wildlife habitats should be protected through Best Management Practices:

a. Mule deer, pronghom antelope and sage grouse crucial winter ranges and,

b. Sage grouse breeding, nesting and brood rearing habitats.

Response: This is the primary reason for having areas designated unavailable for leasing, as well as No Surface Occupancy. BMPs are being employed in the intensively developed areas; however, there is still loss of crucial winter ranges and other seasonal habitats. Please see Appendix 5.

Comment: We find the current federal and state management of our wildlife resources to be reactive, with no clear plans to maintain, improve or restore habitats so vital to the future of our wildlife populations. Accordingly, we insist that the following corrective actions be considered and implemented: 6. Exceptions to seasonal closures should be based on sound science, including but not limited to:

- Habitat conditions
- Forage availability
- Limiting factors such as predators, snow depth, and temperature and wind chill.
- Animal abundance
- Historical records of animal density and extensive field checks prior to authorization.
- Habitat potential
- Presence of similar disturbances and the expected animal response.

Response: Please see Appendix 8. These factors are to be taken into consideration when evaluating whether an exception should be granted or denied.

Comment: Chapter 2 Page 162 Commentor WGFD Alternative summary table list raptor, sage grouse, and big game but does NOT list the timing restriction for Cutthroat trout protection (June 1 -August 15)

Response: The CRCT timing restrictions have been added to the summary table—Table 2-25.

Comment: I am against the leasing of our federal lands in the Bridger Teton forest for many reasons. This is crucial habitat for mule deer populations which have been declining since the proliferation of wells in and around the Riley ridge. Also current studies in the last month conducted on sage grouse show a steady decline in populations due to destruction of the sage environment. Many interested hunting and fishing groups are quick to point out the destruction that will occur if further leasing is allowed.

Response: BLM does not have the authority to make leasing decisions on Bridger-Teton National Forest lands.

Comment: The proposed prohibitions on exceptions to seasonal stipulations in minimally developed areas would deprive the BLM of the flexibility it requires. The BLM should not unreasonably limit its future management actions by prohibiting exceptions and modifications when the circumstances warrant. Further, although the BLM intends to deny exception requests in “source habitat” under this alternative, the BLM does not define or map source habitats. Without such information, EOG cannot determine how the prohibition on exceptions may impact its future operations in the Pinedale Resource Area.

Response: BLM analyzed an appropriate range of alternatives. BLM and WGFD are currently mapping these source habitats and the record of decision will be updated upon its completion and will be available for future EOG planning efforts.

Comment: This RMP presents its proposals without acknowledging the heavy development of the past decade where large and important habitats and wildlife such as mule deer and sage grouse have been negatively impacted. Nor does it acknowledge the heavy socio-economic costs and benefits of development already in place, and likely in the future. During that process many negative impacts to fish and wildlife habitats and populations have been observed that are likely to expand using the same approaches to minimal management of the development process by BLM. We support the use of science-based adaptive management to monitor development, assess impacts and provide a structured way to make adjustments to lessen impacts. This will require BLM to exercise active management of the development process to balance resource values in ways that have not been done to date in the Pinedale area.

Response: Please see environmental consequences to wildlife pages 4-180 through 4-212 and the Cumulative Impacts to Wildlife and Fish Habitat pages 4-254 through 4-256.

Comment: Make the conservation of sagebrush ecosystems a priority. This quickly disappearing ecosystem contains crucial habitat for some of the largest migratory populations of ungulates in North America and offers the best chance for survival of healthy populations of Greater Sage-Grouse and other sagebrush obligate species. Population and distribution of wildlife are declining due to habitat fragmentation and declining quality of habitat generally associated with oil and gas development (Knick et al. 2003). Given the ongoing and rapid development of new roads and infrastructure from oil and gas development, BLM is now at a critical juncture in deciding the long-term fate of sagebrush ecosystems in the West. Wildlife at a Crossroads: Energy Development in Western Wyoming (Thomson et al. 2005). highlights both the existing negative impacts on wildlife and the risk of even more damage in the Upper Green River Valley, while proposing solutions for sensibly managing oil and gas development.

Response: This point is the primary reason for having areas designated unavailable for leasing as well as No Surface Occupancy. The management of sagebrush steppe ecosystems has been reanalyzed in the fuels section for the same reason.

Comment: • For forestry issues, consider including wildlife objectives under the management objectives especially in reference to management of migration corridors, transitional habitat uses, big game parturition areas, etc. Again, thinking in terms of cumulative impacts and landscape conservation scale, forestry issues other than fire and fuel reduction should be considered.

Response: Wildlife objectives are included in the wildlife management section and apply to all habitats, including forested areas.

Comment: Environmental Consequences and Cumulative Impacts: Page 4-1 clearly states that, "the analysis of environmental consequences is focused on identifying the types of impacts anticipated to occur and estimating their potential intensity." In my opinion the DEIS fails to do this because it does not present an adequate discussion of baseline conditions in the affected environment section and does not use existing scientific literature or other research to estimate impacts. Thus the DEIS has failed to take a "hard look" at impacts to big game animals from proposed alternatives which violates the intent of NEPA. The very fact that the RMP/DEIS ignores some of the more significant findings of Sawyer et al. (2005 and 2006) from scientifically credible, site-specific studies, verifies my conclusion that the BLM has failed to take the required "hard look" at impacts that have resulted from current management and that will like result from implementation of any of the alternatives considered.

Response: These site-specific studies were discussed in Chapter 4, page 4-185; however, due to the level of impacts already incurred in the intensively developed fields, a decision was made to continue the pace of development in these areas and protect the habitats outside of these fields to prevent further impacts from occurring to these populations.

Comment: In the Pinedale Field Office, WGFD Species of Special Concern include Colorado River cutthroat trout, water vole, wolverine, river otter, harlequin duck, merlin, Artic peregrine falcon, Forester's tern, black tern, northern pygmy owl, great grey owl, boreal owl, Lewis' woodpecker, three-toed woodpecker, and golden-crowned kinglet. (There may be other such species in the planning area not included in this list.) The BLM also has selected several wildlife species for inclusion as BLM Sensitive Species: greater sage-grouse, long-earred myotis, pygmy rabbit, white-tailed prairie dog, Idaho pocket gopher, white-faced ibis, trumpeter swan, northern goshawk, ferruginous hawk, American peregrine falcon, long-billed curlew, burrowing owl, sage thrasher, loggershead shrike, Brewer's sparrow, sage sparrow, western boreal toad, and northern leopard frog. WGFD (1998) has set forth recommendations

for allowing habitat-disturbing activities and mitigation for these activities if allowed. Federal Candidate Species and Native Species Status 1 and 2 receive a mitigation category of "Vital," for which habitat directly limits populations and restoration may be impossible; habitat function must be maintained if habitat modification is allowed to occur. Big game crucial winter range, sage grouse habitats of all types, raptor nest sites, and habitats of status 1 and 2 native species are classified as "Vital." Native Species Status 3 receive a mitigation category of "High," for which WGFD recommends no net loss of habitat function through enhancement of degraded habitat when a habitat disturbing project is proposed. Big game parturition areas, riparian habitats, and habitats of status 3 nongame are considered "High Value" under the "High" reclamation classification. Furthermore, for Endangered or Threatened Species, such as the gray wolf and bald eagle, WGFD recommends exclusion of any habitat-impacting activity. For these species, "The Commission recognizes that some wildlife or wildlife habitats are so rare, complex and/or fragile that mitigation options are not available. Total exclusion of adverse impacts is all that will ensure preservation of these irreplaceable habitats" (Ibid., p. 4). We concur wholeheartedly, and point out remind BLM that FLPMA carries a legal requirement for the BLM to manage its lands in accord with state directives such as the WGFD Mitigation Policy. We have grave concerns that the revised RMP as proposed in the DEIS will not meet this legal mandate and we therefore request that the FEIS include greater and mandatory protections for wildlife and wildlife habitat in accordance with WGFD recommendations.

Response: The RMP provides for protection of sensitive and important wildlife habitats, and reclamation of disturbed habitats. BLM also has responsibilities to manage other resources and provide for lease rights and permitted uses. Management objectives to reclaim disturbances, avoid or mitigate disturbances in sensitive habitats, and meet the Wyoming Standards for Healthy Rangelands should provide for most wildlife habitat needs, over the long term and on a landscape scale.

Comment: Page: 2-149, Section: NSO, Recommended Change: Delete Large NSO and designate specific sites based on legally appropriate NSO criteria; Alternatively Withdraw area Explanation: NSO leases over the broad area are a de facto withdrawal.

Response: The Large Block NSO designation has been eliminated from the Final EIS. BLM is not effectuating a withdrawal but making a land use decision in the RMP.

Biological Assessment (BA), Threatened, Endangered (T&E), and Special Status Species (SSS)

Comment: The Bureau's draft BA states: "BLM would develop and implement performance-based objectives and operating standards that would provide the appropriate flexibility to adapt management decisions to changing and uncertain environmental conditions on the ground while ensuring appropriate mitigations. The performance-based objectives and standards, which are presented in Appendix 3, provide setbacks, consultation, guidance, and limitations on all aspects of oil and gas related activities."

The Services believes that it is unclear, from reading this text in combination with the text in the DEIS, whether BLM will or will not apply a performance-based approach to listed species stipulations. If the BLM will apply a performance-based approach to listed species, then the programmatic BAs and BOs are not applicable to this RMP and adequate "committed to" protective measures will need to be developed prior to any concurrence from the Service for the determinations made by the Bureau in their BA for the Pinedale RMP. Consulting on "flexible" stipulations for threatened and endangered species would lead to different effects determinations than what are now present in the programmatic BAs and BOs.

Response: These statements have been deleted from the BA.

Comment: The draft BA states "listed threatened and endangered species and Special Status Species management can be addressed in four primary ways". However, only three ways are listed under this statement. The Service suggests correcting this inconsistency.

Response: The BA has been changed to state "three primary ways".

Comment: The draft BA states "these protective measures will be implemented in individual species BAs for the State of Wyoming". The Service believes that this statement appears to claim that the Wyoming State Government was involved in the development of those BAs. It is our understanding that this was not the case and, therefore, the Bureau may want to clarify this statement, as appropriate. Also, the Bureau may wish to re-evaluate the use of the word "implemented" in the Bureau's statement above.

Response: The BA has been updated.

Comment: The draft BA states "if avoidance is not possible, informal consultation with the USFWS would be initiated." The Service believes that this statement may more appropriately read, "informal or formal consultation with the USFWS will be initiated for site-specific projects which may affect listed species."

Response: The BA has been updated.

Comment: Many of the conservation measures presented on pages 92-108 of the draft BA are different from those conservation measures from the programmatic BAs and BOs. The Service suggests that the Bureau review the conservation measures presented in the draft BA for the RMP to ensure that they are identical to, or more restrictive than, those agreed upon as part of the statewide programmatic BAs and BOs, as appropriate.

Response: The conservation measures have been updated in the final EIS.

Comment: Draft BA, Page 2: The Bureau's draft BA states: "BLM would develop and implement performance-based objectives and operating standards that would provide the appropriate flexibility to adapt management decisions to changing and uncertain environmental conditions on the ground while ensuring appropriate mitigations. The performance-based objectives and standards, which are presented in Appendix 3, provide setbacks, consultation, guidance, and limitations on all aspects of oil and gas related activities."

The Services believes that it is unclear, from reading this text in combination with the text in the DEIS, whether BLM will or will not apply a performance-based approach to listed species stipulations. If the BLM will apply a performance-based approach to listed species, then the programmatic BAs and BOs are not applicable to this RMP and adequate "committed to" protective measures will need to be developed prior to any concurrence from the Service for the determinations made by the Bureau in their BA for the Pinedale RMP. Consulting on "flexible" stipulations for threatened and endangered species would lead to different effects determinations than what are now present in the programmatic BAs and BOs.

Response: These statements have been deleted from the BA.

Comment: Draft BA, Page 44, Line 13: The draft BA states "these protective measures will be implemented in individual species BAs for the State of Wyoming". The Service believes that this statement appears to claim that the Wyoming State Government was involved in the development of those BAs. It is our understanding that this was not the case and, therefore, the Bureau may want to clarify this

statement, as appropriate. Also, the Bureau may wish to re-evaluate the use of the word "implemented" in the Bureau's statement above.

Response: The text refers to the statewide programmatic BAs completed for species that occur on BLM-administered public lands. The text has been revised in the BA.

Comment: 4. The Service realizes that the Bureau is currently continuing to prepare a BA which will analyze the impacts to threatened and endangered species from implementation of the Pinedale RMP revision. The Service suggests that coordination be continued between the Bureau and the Service until a final BA has been completed by the Bureau and the Service has determined that it has received all information necessary to complete a Biological Opinion (BO) pursuant to section 7 of the Act.

Response: BLM plans on continuing coordination with USFWS in the fashion stated by the commenter.

Comment: 5.) The Gray Wolf should not be granted any habitat related stipulations. The non-essential, experimental status of the wolf means that US Fish & Wildlife Service consultation is not needed on this species, and no habitat protections are warranted.

Response: Wolves designated as nonessential experimental that are not within units of the National Park or National Wildlife Refuge systems but are within the boundaries of the nonessential experimental population area are treated as proposed species for Section 7 consultation purposes. Management direction provided in 50 CFR Part 17 indicates that there are no conflicts envisioned with any current or anticipated management action by BLM or other federal agencies. The same CFR also states that management of wolves in the experimental population would not cause major changes to existing private or public land use restrictions. Land use restrictions on public lands could be used, however, to control human intrusion of den sites when fewer than six breeding pairs exist within the experimental area. Until the wolf is delisted, these conservation measures must still be implemented to comply with the ESA.

After delisting, Wyoming will be required to manage wolf population above 10 breeding pairs and 100 wolves in mid-winter, including maintaining some wolf breeding pairs in suitable habitat in northwestern Wyoming outside the National Parks. These areas may include BLM lands, which would still be subjected to the management guidance included in the RMP. BLM will refer to WGFD on how to manage gray wolf denning locations under the WGFD Wyoming Gray Wolf Management Plan.

Comment: 6. Some conservation measures and effects determinations included in the draft BA were not consistent with the Bureau's Statewide Programmatic Species-Specific section 7 consultations (programmatic BAs and BOs) or Appendix 18 of the DEIS. The Service encourages the Bureau to review the programmatic BAs and BOs and revise the draft BA and Appendix 18 of the DEIS, if appropriate.

Response: BLM will update this information in the final BA for the RMP.

Comment: The Bureau's draft BA states "BLM PFO and contractor wildlife biologists, in coordination with the USFWS biologist, conducted an analysis regarding the effects of the DEIS preferred altemative on listed species." This "in depth coordination approach" between the USFWS and BLM PFO and contractor wildlife biologists has not yet occurred for the analysis of effects for the DEIS preferred alternative for the Pinedale RMP. The Service suggests deleting or modifying this text, as appropriate.

Response: This text has been deleted from the document.

Comment: We hereby request that the final environmental impact statement be revised to eliminate much of the discussion of protection for gray wolves. Although federal rules promulgated when wolves were

reintroduced into Yellowstone National Park as a non-essential experimental population promised that no federal land use restrictions would be needed outside the national parks to protect wolves, the draft Pinedale Resource Management Plan environmental impact statement seems to reneg on that commitment.

The EIS calls for wolf conservation measures, including: "No project actions are to be located within 330 feet of den sites between April 1 and June 30. Areas within 0.8 kilometers (0.5 miles) of a den site are recommended for protection from disturbance." But the wolf reintroduction rule (which is still in effect) was specific in stating: "When six or more breeding pairs are established in an experimental population area, no land-use restrictions may be employed outside of national parks or national wildlife refuges, unless wolf populations fail to maintain positive growth rates toward population recovery levels for two consecutive years. If such a situation arose, state and tribal agencies would identify, recommend, and implement corrective management actions within one year, possibly including appropriate land-use restrictions to promote growth of the wolf population." But federal wildlife officials report that the wolf population continues to grow beyond recovery goals.

Protection of wolf denning and rendezvous sites was debated years ago, with the U.S. Fish and Wildlife Service rejecting calls to implement more land use restrictions to protect wolves. The agency stated in its rulemaking: "Wolves are adaptable to a wide variety of human activities, except for deliberate killing. Experiences in North America indicate that human disturbance, even around active den sites, is not a significant factor affecting wolf survival or population growth. The rule protects active wolf dens during the earliest stages of wolf recovery, if necessary. Killing wolves is illegal except for a very few limited exceptions. The rule allows flexibility to reconsider land use restrictions if wolf populations do not grow toward recovery levels. Wolves in Montana have not needed land-use restrictions and, at this time, land-use restrictions do not appear necessary for wolf populations to recover in Idaho or Wyoming."

In fact, the EIS for wolf reintroduction acknowledged that high density livestock grazing and wolves are incompatible. The current US Fish and Wildlife wolf delisting proposal would remove all protections for grey wolves on all BLM lands within the Pinedale RMP Area. Because the US Fish and Wildlife Service and the State of Wyoming do not currently support the protection of wolves on any BLM lands in Sublette County, this RMP proposal to provide protection to wolves places the BLM at odds with all other relevant wildlife management agencies. This conflict will produce no good result. Please withdraw all references to protections for wolves in the Pinedale RMP.

Response: Wolves designated as nonessential experimental that are not within units of the National Park or National Wildlife Refuge systems but are within the boundaries of the nonessential experimental population area are treated as proposed species for Section 7 consultation purposes. Management direction provided in 50 CFR Part 17 indicates that there are no conflicts envisioned with any current or anticipated management action by BLM or other federal agencies. The same CFR also states that management of wolves in the experimental population would not cause major changes to existing private or public land use restrictions. Land use restrictions on public lands could be used, however, to control human intrusion of den sites when fewer than six breeding pairs exist within the experimental area. Until the wolf is delisted, these conservation measures must still be implemented to comply with the ESA.

After delisting, Wyoming will be required to manage wolf population above 10 breeding pairs and 100 wolves in mid-winter, including maintaining some wolf breeding pairs in suitable habitat in northwestern Wyoming outside the National Parks. These areas may include BLM lands, which would still be subjected to the management guidance included in the RMP. BLM will refer to WGFD on how to manage gray wolf denning locations under the WGFD Wyoming Gray Wolf Management Plan.

Comment: Appendix 9 of the RMP DEIS acknowledges there are a number of aquatic species in the PRA classified as "Special Status Species." These include the four endangered Colorado River fish species discussed previously, the Kendall Warm Springs dace, three species of native cutthroat trout, two chub species, two sucker species, and three amphibians. Several Special Status plant species (hoary willow) and bird species (e.g., yellow-billed cuckoo) are also associated with surface waters in the PRA. Unfortunately, the DEIS does not explain what it means to be classified as a "Special Status Species." According to BLM Manual 6840.01: "The purpose of this Manual Section is to provide policy and guidance, consistent with appropriate laws, for the conservation of special status species of plants and animals, and the ecosystems upon which they depend. These are species which are proposed for listing, officially listed as threatened or endangered, or are candidates for listing as threatened or endangered under the provisions of the Endangered Species Act (ESA); those listed by a State in a category such as threatened or endangered implying potential endangerment or extinction; and those designated by each State Director as sensitive. Conservation in this section and pursuant to the ESA means the use of all methods and procedures which are necessary to improve the status of federally listed species and their habitats to a point where the provisions of the ESA are no longer necessary. Conservation of special status species means the use of all methods and procedures which are necessary to improve the condition of special status species and their habitats to a point where their special status recognition is no longer warranted."

(Emphasis added.) The RMP DEIS does not present any meaningful population data that could be used to gauge the significance of impacts to these species. This is contrary to BLM Manual 6840.04.F.1 (instructing BLM Field Office Managers to "conduct and maintain cur-rent inventories for special status species on public lands"). Chapter 4 of the DEIS states "Special Status Species inventories would be required for surface disturbing projects in known or suspected Special Status Species habitat." DEIS at 4-51. However, the proposed RMP direction does not contain a binding, enforceable standard requiring such inventories to be con-ducted at any time. Without current, reliable data on species' populations, there is no way to estimate potential impacts on these populations from activities contemplated under the new RMP. There is a need to assess the impacts to these vulnerable species cumulatively, not just at the project level. The DEIS does not do this.

Response: The Kendall Warm Springs Dace occurs only on USFS lands at Kendall Warm Springs and is not found on BLM-administered lands. Information on Special Status Species management has been added to Chapter 2 of the final EIS. In most cases no population data are available for these species. BLM used the best available data in formulating the alternatives and impact analyses in the draft EIS and final EIS.

Comment: PAGE: SECTION: RECOMMENDED CHANGE: INSERT Upon delisting, management of habitat for the grizzly bear and gray wolf will be without special conditions. EXPLANATION: RMP provisions for T&E species should not apply upon delisting.

Response: Wolves designated as nonessential experimental that are not within units of the National Park or National Wildlife Refuge systems but are within the boundaries of the non-essential experimental population area are treated as proposed species for Section 7 consultation purposes. Management direction provided in 50 CFR Part 17 indicates that there are no conflicts envisioned with any current or anticipated management action by BLM or other federal agencies. The same CFR also states that management of wolves in the experimental population would not cause major changes to existing private or public land use restrictions. Land use restrictions on public lands could be used, however, to control human intrusion of den sites when fewer than six breeding pairs exist within the experimental area. Until the wolf is delisted, these conservation measures must still be implemented to comply with the ESA.

After delisting, Wyoming will be required to manage wolf population above 10 breeding pairs and 100 wolves in mid-winter, including maintaining some wolf breeding pairs in suitable habitat in northwestern Wyoming outside the National Parks. These areas may include BLM lands, which would still be subjected to the management guidance included in the RMP. BLM will refer to WGFD on how to manage gray wolf denning locations under the WGFD Wyoming Gray Wolf Management Plan. After delisting, grizzly bears are protected as a BLM sensitive species under BLM Manual 6840-Special Status Species Management. In addition, the ESA requires that USFWS, in cooperation with the states, monitor the species for a minimum of 5 years to assess each species' ability to sustain itself without the ESA's protective measures. If, within the designated monitoring period, threats to the species change or unforeseen events change the stability of the population, then the species may be relisted or the monitoring period extended (http://www.fws.gov/endangered/recovery/delisting.pdf).

Comment: Although accurate at the time it was released, the Final EIS for the Pinedale RMP should be updated to reflect the fact that the United States Fish and Wildlife Service (USFWS) issued a final rule designating the Greater Yellowstone Area Population of Grizzly Bears as a Distinct Population Segment (DPS) and removed the Yellowstone Grizzly Bear DPS from the Federal List of Threatened and Endangered Species. 72 Fed. Reg. 14866 (March 29, 2007) (to be codified at 50 C.F.R. §§ 17.40(b), 17.84(1)).

Response: This information has been updated; however, grizzly bears are still considered BLM sensitive and will be managed accordingly.

Comment: The western populations of the yellow-billed cuckoo have been classified as Threatened under the ESA, and Hunter et al. (1987) classified the yellow-billed cuckoo as a partial riparian obligate. According to Laymon and Halterman (1987), the yellow-billed cuckoo is native to willow/cottonwood woodlands less than 1300 m in elevation, larger than 10 hectares in extent, and wider than 100m. Yellow-billed cuckoos use willows for nesting but cottonwoods for feeding (Ibid.). The Wyoming Natural Diversity Database has records of yellow-billed cuckoo within the Pinedale Field Office boundary. The new RMP should include provisions to monitor cottonwood gallery woodlands for yellow-billed cuckoo, and to manage these woodlands for retention and recolonization of this bird.

Response: The yellow-billed cuckoo is actually a candidate species under the ESA. Efforts to locate new nesting pairs within the planning area are underway; the populations of cuckoos mentioned were actually observed in the Seedskadee NWR. There are many protection efforts for these habitat types throughout this document. Please see page 2-140.

Comment: The White-Tailed Prairie Dog (Cynomys leucurus), Pygmy Rabbit (Brachylagus idahoensis), and the Greater Sage-Grouse (Centrocercus urophasianus) are identified in Appendix 9, Table A9-1 as Threatened, Endangered, Proposed, or Candidate Species within the Pinedale Planning Area. As none of these species have been listed by the United States Fish and Wildlife Service ("FWS") as a threatened, endangered, or candidate species, all three species should be removed from Table A9-1 and placed on Table A9-3, which is the list of BLM Wyoming Sensitive Species. Leaving these species on Table A9-1 may create unnecessary confusion regarding their status under the Endangered Species Act.

The FWS issued a Notice of 90-day Petition Finding determining that the White-Tailed Prairie Dog (Cynomys leucurus) should not be listed as an endangered or threatened species on November 9, 2004. See 69 Fed. Reg. 64889 (Nov. 9, 2004). Similarly, the FWS issued a Notice of 90-day Petition Finding regarding the Pygmy Rabbit (Brachylagus idahoensis) on May 20, 2005, that indicated that there was not sufficient scientific or commercial information to determine that listing the Pygmy Rabbit (Brachylagus idahoensis) was warranted. See 70 Fed. Reg. 29253 (May 20, 2005). The FWS also issued a 12-Month Finding for Petitions to List the Greater Sage-Grouse (Centrocercus urophasianus) on January 12, 2005.

The FWS determined that listing the sage grouse was not warranted, primarily of the extensive efforts undertaken to maintain sage grouse populations by states, federal agencies, and local citizens. See 70 Fed. Reg. 2244 (January 12, 2005). Finally, not one of the species noted above was identified in the FWS's most recent Review of Native Species that are Candidates or Proposed for Listing as Endangered or Threatened as a candidate or proposed species. See 71 Fed. Reg. 53756 (Sept. 12, 2006). The BLM must correct Table A9-1.

Response: The inaccuracy of the tables is noted and has been corrected.

Comment: As a BLM Sensitive Species, annual monitoring efforts should be directed at burrowing owls to gain an index of population trend. Haug and Didiuk (1993) reported that 57% of burrowing owls responded to recorded calls in their study, and that the "tall and white" stance adopted in response to alls made detection easier. These researchers recommended a series of three surveys at 5-7 day intervals during the nesting season to monitor population trends. These monitoring protocols should be established as requirements under the new RMP.

Response: BLM is developing standardized monitoring protocols throughout the planning area.

Comment: 3. The DEIS states that exception requests to stipulations or operating standards may be approved by the Bureau if the implementation of "such a stipulation or operating standard is (1) technically not feasible, (2) economically prohibitive, or (3) an environmentally preferable alternative is available". It is the Service's understanding that exception requests will not be granted for stipulations or operating standards designed to protect threatened and endangered species, unless the Bureau consults with the Service and reinitiates consultation over the RMP, if appropriate. The Service suggests that the Bureau clarify this point throughout the document.

Response: The Service is correct. Clarifying text has been added to the final EIS.

Comment: The DEIS states "oil and gas exploration activities would be managed through performance-based stipulations and mitigations provided in Appendix 3." It is unclear from this statement if conservation measures for threatened and endangered species would be "performance-based." If so, the Service is concerned that this approach could render the Bureau's programmatic BAs and the BOs non-applicable to the Pinedale RMP. The Service suggests that the Bureau clarify that stipulations for threatened or endangered species are still "prescriptive" in nature under alternative 4 and not "performance-based" if the Bureau wishes the programmatic BAs and BOs to apply.

Response: BLM intends to implement the conservation measures developed in the programmatic BAs and the biological opinions (BOs) for all alternatives.

Comment: PAGE: G-23 CHANGE: TAKING – Under the Endangered Species Act, a taking is an unlawful action that results in the take of any endangered or threatened species of fish or wildlife. The ESA permits the taking of an endangered or threatened species otherwise prohibited by if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. EXPLANATION: Definition needs to be added to give context to the foregoing term "take." 16 U.S.C. §§ 1538(1)(B), 1539(1)(B).

Response: BLM believes that defining the term "take" appropriately addresses this issue and it is not necessary to define "taking" as it is not addressed in the RMP.

Comment: White and Thurow (1985) recommended quarter-mile nest buffers during years of prey abundance, but noted that sensitivity to disturbance increased when prey were scarce, and recommended

that nest buffers be "considerably larger" during years of prey scarcity. Although Olendorff (1993) recommended buffer zones of only %2 mile for ferruginous hawk nests, he recommended much larger buffers during periods of prey scarcity. Because it is impractical to move roads away from nest sites when prey bases decline, the appropriate way to ensure the persistence of ferruginous hawks at traditional nesting sites is to use large buffers within which ground-disturbing activities are prohibited. Cerovski et al. (2001) reviewed the issue of appropriate nest buffers and recommended a 1-mile buffer, kept free from human disturbance. Thus, under this Alternative, 1-mile buffers prohibiting surface disturbance should apply to ferruginous hawk nest sites as well as all other raptor nest sites.

Response: BLM has taken information from USFWS on raptor nesting spatial buffers — for threatened and endangered species buffers are 1.0 mile; recommended spatial buffers for other diurnal raptors are 0.5 miles (Romin and Muck 2002), which is why BLM has 0.5 and 1.0 mile spatial buffers.

Comment: In addition to indicator species, there are a number of species on the BLM Sensitive Species List, the WGFD Species Watch List, watch lists of globally imperiled and locally rare species tracked by the Wyoming Natural Diversity Database, and federally listed species under the protection of the Endangered Species Act, all of which merit special conservation concern and attention. These species are of special concern because they are currently rare, are experiencing significant declines in overall population or distribution, or both. Some are at risk for global extinction. The revised RMP must include standards that guarantee the viability, and if needed, the recovery of these species. The DEIS has no such standards and no plan for recovery of any sensitive species should that become necessary. BLM through the proposed RMP revision, would allow during the life of the new plan vastly increased impacts to sensitive wildlife species in the planning area, without having any criteria for establishing what amount or what type of habitat is needed to sustain healthy populations of sensitive wildlife species. Nor does BLM have any plan for where displaced species can disperse or whether there is adequate habitat in the planning area to absorb these species. BLM's approach in the RMP DEIS is reactive rather than proactive, and this is a huge shortcoming in a planning document that purports to map out the direction for management of the planning area for the next 15 years.

Response: The purpose of the unavailable and NSO areas is to provide undisturbed habitats for displaces species. The Jonah Interagency Office is also tasked with providing mitigation for wildlife impacted by the Jonah development.

Comment: Nor does the DEIS demonstrate authorized and contemplated activities would ensure special status species objectives are being met. See BLM Manual 6840.04.F.5. The DEIS does state (page 4-255) that "Special Status Species, under the ESA and Wyoming BLM sensitive species guidance, would be protected on federal lands by site-specific mitigation, including exclusion or avoidance of all surface disturbing activities; however, protection of non-federally listed species on private and state lands may not occur, resulting in potentially significant impacts on these species." Again, there is no explicit, binding standard in the proposed RMP management direction that would require BLM comply with this pledge.

Response: The RMP will not authorize any on-the-ground activity. Rather, it allocates uses that could be allowed in certain areas, lays out limitations on those uses, and provides objectives to be met in permitting uses. The RMP provides many actions designed to protect Special Status Species, given the types of development expected.

Comment: Equally troubling, nowhere in the DEIS or proposed RMP language could I find any discussion of recovery plans or population objectives to conserve Special Status Species in the Pinedale Resource Area. These are required by BLM Manual 6840.04.F.2. These plans and objectives should be developed before or in conjunction with the new RMP. If recovery plans were developed afterwards, the

BLM may find that the RMP would need to be substantially modified to account for the needs of these species.

Response: When recovery plans for Special Status Species are developed, they will be updated in the final decision.

Comment: In short, the DEIS does not demonstrate that the new RMP would use "all methods and procedures to improve the condition" of these species. Thus, the BLM is apparently ignoring its own Special Status Species management requirements. Please gather the necessary data on populations and develop conservation plans and population objectives, in accordance with BLM Manual 6840. The final decision on the new RMP should reflect the agency's directives to improve the condition of Special Status Species and their habitats. In particular, given the precarious status of native cutthroat trout and other aquatic species listed with Special Status (e.g., boreal toad), all efforts should be made to identify and completely avoid their habitats.

Response: BLM is currently gathering location/habitat data on many Special Status Species and management strategies will be updated in the record of decision. In particular, WGFD has been identifying aquatic species listed with Special Status. BLM will update the record of decision upon the completion of these efforts.

Comment: PAGE: A18-21 SECTION: Gray Wolf RECOMMENDED CHANGE: These provisions shall not apply if the gray wolf is delisted. EXPLANATION: Wyoming plan would then apply so these restrictions should be dropped.

Response: Wolves designated as nonessential experimental that are not within units of the National Park or National Wildlife Refuge systems but are within the boundaries of the nonessential experimental population area are treated as proposed species for Section 7 consultation purposes. Management direction provided in 50 CFR Part 17 indicates that there are no conflicts envisioned with any current or anticipated management action by BLM or other federal agencies. The same CFR also states that management of wolves in the experimental population would not cause major changes to existing private or public land use restrictions. Land use restrictions on public lands could be used, however, to control human intrusion of den sites when fewer than six breeding pairs exist within the experimental area. Until the wolf is delisted, these conservation measures must still be implemented to comply with the ESA.

After delisting, Wyoming will be required to manage wolf population above 10 breeding pairs and 100 wolves in mid-winter, including maintaining some wolf breeding pairs in suitable habitat in northwestern Wyoming outside the National Parks. These areas may include BLM lands, which would still be subjected to the management guidance included in the RMP. BLM will refer to WGFD on how to manage gray wolf denning locations under the WGFD Wyoming Gray Wolf Management Plan.

Comment: The BLM should clarify the language Appendix 8, pg. A8-2, regarding the need to engage in Section 7 Consultations in two respects. First, the BLM should clarify that Section 7 Consultation is only required if listed species are present in the area. Second, in the event the BLM waives seasonal stipulations as part of a project-level NEPA document, the BLM should engage in Section 7 Consultation as part of the normal NEPA process obviating the need to engage in consultation on a yearly basis as it pertains to exception request.

Response: This language is meant to inform the reader that any COAs that are instigated to protect species listed under the ESA are not subject to the exceptions, waivers, and modification process. If changes in the terms and conditions of the Biological Opinion are necessary, the BLM must reinitiate

consultation with USFWS. The language regarding when Section 7 consultation is required is stated in Volume 1, page 2-12 of the draft EIS.

Comment: This comment is from page 33. BLM must include in its environmental analysis population trends and viability criteria for all species, and particularly for sensitive species of concern. It has failed to do so and this violates NEPA and FLPMA. If BLM doesn't have this data, it cannot possibly ensure species viability and take the required actions to prevent activities which could lead to listing of a species. We request that BLM conduct the necessary analysis required of it.

Response: BLM provided population data to the extent that it was available.

Oil and Gas, Transportation and OHV, Monitoring and Mitigation

Comment: This proposal calls for an increase of 4,400 more wells which are almost ten times more than the current amount. With the ramped up drilling and removal of year around stipulations the wildlife would be greatly impacted. Not only would the native ground species such as sage grouse be impacted but also the big game animals which this part of Wyoming is noted for. Already recent studies show a correlation between mule deer population decline and increased gas and oil activity.

Response: The draft EIS provides an appropriate discussion of the potential impacts on wildlife and other resources from development of these leases. The Preferred Alternative attempts to provide balanced management on a landscape scale, with certain areas unavailable for leasing and development.

Comment: Oil and gas development has been shown through scientific research to be the primary cause of significant declines in big game and sage grouse populations both inside and near oil and gas fields that have not experienced the dense development that is planned for the Pinedale Resource Area. I am opposed to any removal or relaxation of seasonal drilling restrictions for big game and I oppose any plan that doesn't require a buffer around sage grouse leks. These proposals counter the recommendations of researchers and show a disregard for wildlife welfare in an area that has already been highly negatively impacted. Instead BLM should be requiring things such as directional drilling, development in phases/a slower pace, and multiple wells per well site to reduce damage. The proposed extensive increase of wells makes a farce of any proposed wildlife protection--how can the area be anything but an industrial zone?

Response: These recommendations have been included in Appendix 3.

Comment: FINALLY, ALTHOUGH THE BLM PROPOSES TO LIMIT DEVELOPMENT IN SOME AREAS, THERE ARE TOO MANY LOOPHOLES in the plan that could allow intensive development on key wildlife habitat and minimize wildlife protections.

Response: Additional language specifying how the oil and gas management areas would work, and how they could be changed over time, has been provided in the final EIS; the Large Block NSO Areas and Unavailable Areas have been revised.

Comment: I can see in the DEIS that you have considered many diverse environments, and a large total land area, to construct this plan. However, I am distressed at the similarity between the total area of land planned for mineral (oil/gas) development in alternative 2 and that in alternative 4. Obviously, alternative 3 is purposed to conserve wildlife habitat and 2 is meant to maximize oil/gas land usage. Alternative #4 would appear then to be the compromise - but the number of acres devoted to oil/gas is hardly less in #4 than in #2! How can this be a compromise? How can alternative #4 really be protecting the wildlife much more than alternative #2 is? For this reason, I can't support alternative #4. I deeply value wildlife habitat, and belive that America must do more to conserve what wild resources it has left. The Upper Green Valley Consortium has some good ideas towards more balanced management, such as cluster and

directional drilling, and stricter regulations on energy companies to decrease the total impact they have on the land. Please consider more land- and wildlife-conserving measures such as these. Nothing bad will happen to the gas if it takes a little longer to get it out. The wildlife, however, may not do as well if we don't manage it correctly right now.

Response: These recommendations have been included in Appendix 3. The areas available for oil and gas leasing have been revised in the final EIS.

Comment: 2. It should be considered that the surrounding areas are undergoing major oil and gas development. The possibility of disruption of a rich wildlife habitat in this area, in combination with major developments in the surrounding area, is a concern. All of this, all at once, cannot be beneficial.

Response: Please refer to the Cumulative Impacts for Wildlife and Fish Habitat on pages 4-254 through 4-257, which address the issues of development.

Comment: Data from Western EcoSystems Technology (sponsored by the oil and gas industry, incidentally) showed a 46-percent decline in mule deer on the Pinedale Anticline over the preceding four years as a result of oil and gas development (see Hall Sawyer, et al., Western EcoSystems Technology [WEST] 2005: PAPA study). Also in 2005, Matt J. Holloran, a University of Wyoming doctoral candidate, presented his PhD dissertation ("Greater sage-grouse (*Centrocercus urophasianus*) population response to natural gas field development in western Wyoming," University of Wyoming, Laramie, Wyoming, 211 pp.) Holloran's scholarly scientific study of the same area found that sage grouse are disturbed by both drilling and post-drilling development activity, and if current population trends continue, sage grouse populations within the Pinedale Anticline and Jonah Fields will disappear within 19 years. Tripling the number of gas wells over the next 10 or so years would simply exacerbate the problems, bringing on the projected disaster more quickly

Response: Please see environmental consequences to wildlife pages 4-180 through 4-212.

Comment: I consider the EIS to be inadequate in its assessment of the increased drilling which will be permitted in the Pinedale area in the following categories: It does not preserve critical areas adjacent to wilderness and wilderness study areas.

Response: Please refer to Map 2-9, Oil and Gas Management Areas Alternative 4. The areas available for oil and gas leasing have been revised in the final EIS.

Comment: In summary, protection for big game crucial ranges ostensibly afforded in the alternatives presented in the DEIS may be compromised at anytime that recoverable gas and oil reserves are discovered. Because of the extensive energy development that has already occurred in the planning area and predicted future development, the DEIS must consider an alternative that actually protects crucial big game ranges from development until such time as alternative habitats are either identified or made available by reclamation of disturbed areas. It is my professional opinion that scientifically based means exist to develop an alternative that allows for energy resource extraction while reducing impacts to big game animals and their habitats. A more conservation oriented alternative would incorporate some of the good ideas in Alternative 3 of the RMP/DEIS but would assure protection of crucial wildlife habitats and likely result in a reduced pace of energy development. Thus the BLM has an obligation under NEPA and FLPMA to consider and present such an alternative.

Response: Text clarifying how the oil and gas management areas work and the conditions required for conversion to allow surface occupancy or leasing has been added to the final EIS.

Comment: Finally, although the BLM proposes to limit development in some areas, there are too many loopholes in the plan that could allow intensive development on key wildlife habitat and minimize wildlife protections.

Response: Further discussion of how the oil and gas management areas work and the conditions required for conversion to allow leasing or development in Unavailable Areas or NSO areas has been added to the final EIS.

Comment: Wildlife mitigation measures are not based on available scientific data and provide so many exceptions and loopholes that their ability to offset the adverse impacts of energy development is both unknown and unlikely. Similarly, the monitoring and mitigation measures relied upon in the DEIS are too vague to meet the requirements of NEPA and inadequate to identify and prevent unacceptable impacts to wildlife resources.

Response: More explanation of how the oil and gas management areas would function has been added to the final EIS. It is not possible to design specific mitigation at the RMP level, as the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted.

Comment: Recommendation 4: The BLM must work at a landscape scale to assess the affected environment, evaluate alternatives and set management prescriptions. The BLM should compile wildlife habitat data and related ecological value data to assess needs and impacts across a landscape that not only includes the entire Pinedale RA but extends significantly beyond it. The agency should further produce mandatory management prescriptions including areas of no oil and gas development and areas of highly restricted development based on wildlife impacts research similar to those outlined below. These new management prescriptions should set the landscape on a trajectory to protect the most important wildlife habitat areas. In the short-term, unleased lands will be protected in these areas and in the long-term (as leases expire and production is completed) these areas will be restored, unfragmented and connected across the broader landscape.

Response: BLM is currently collecting fine scaled habitat data to assess the seasonal habitat functionality. This information will be used for mitigation projects, habitat improvement projects, and project planning. In addition, the Wyoming Landscape Conservation Initiative was created to look at habitat management across landscape covering multiple jurisdictions.

Comment: Item: Page 2-143, Section 2.5.5, Wildlife and Fish Habitat Management "Unavailable Areas would be managed for protection of wildlife habitats through indefinite postponement of the availability of lands for oil and gas leasing." Comment - Further, opportunities for offsite mitigation is not referenced. Techniques exist that use science based methodologies to identify areas of offsite mitigation to offset impacts for larger scale oil and gas development. This option should be incorporated as a tool in assessing options in managing larger scale oil and gas development. Comment: - Indefinite postponement of leasing is an unacceptable management approach and is inconsistent with the provisions of BLM national energy policy (chapter 1, page 15) which states that public lands shall remain open and available for mineral exploration and development unless withdrawal or other administrative actions are clearly justified in the national interest.

Response: Offsite mitigation is provided for in Section 2.3.16. It is in the public interest to protect surface resources other than oil and gas.

Comment: PAGE: 2-13 SECTION: 2.3.16 RECOMMENDED CHANGE: REVISE An example of an instance where compensatory [compensation](strikeout) or offsite mitigation could be utilized would be

oil and gas field developments where the project proponent has exhausted opportunities for mitigation onsite and wildlife habitat impacts cannot be satisfactorily mitigated through onsite measures. Compensatory [Compensation](strikeout) mitigation would be used as a tool to address loss of habitat effectiveness when reclamation, best management practices (BMP), and onsite mitigation measures are not adequate to mitigate the impacts of proposed actions. EXPLANATION: The section needs to be revised to conform to IM 2005-69. Replace "compensation mitigation" with "compensatory mitigation."

Response: The word has been replaced as per IM 2005-69.

Comment: We find the current federal and state management of our wildlife resources to be reactive, with no clear plans to maintain, improve or restore habitats so vital to the future of our wildlife populations. Accordingly, we insist that the following corrective actions be considered and implemented: 4. While we support removing certain areas from oil and gas and locatable mineral leasing, we cannot condone committing areas to full industrial uses. All BLM lands should be managed to support healthy wildlife habitat.

Response: BLM does not have the authority to prohibit development of existing valid oil and gas leases.

Comment: The new RFD should reflect the wildlife in the area are in either increasing in population or are stable.

Response: Updated wildlife population numbers are included in the final EIS.

Comment: The removal of vast areas of land from future oil and gas development and potential restrictions on existing leases Alternative 3 also significantly restricts the amount of domestic energy available to the nation. If enacted, Alternative 3 would deprive the nation of 3,322 billion cubic feet (BCF) of natural gas and 27,000,000 barrels of oils compared to Alternative 2. 1 BCF of natural gas is the average annual amount used by 13,700 Wyoming households. See Energy information Administration (2002 use rates). The loss of 3,322 BCF represents an enormous loss of potential domestic energy and associated revenue. The adoption of Alternative 3 would also cause the loss of 2,282 jobs and the loss of 2.3 billion dollars in mineral tax revenue. The BLM cannot adopt an alternative that would devastate economic development, reduce domestic energy supplies, and devastate the local tax base.

Response: BLM analyzed an appropriate range of alternatives.

Comment: Chapter 2 Page 99-100 Commentor WGFD Add the following Management Goal "Wildlife habitat management would be oriented toward the maintenance of fish and wildlife habitats to support populations at WGFD planning objective levels."

Response: With the amount of development potential within existing valid oil and gas leases, it may not be possible to maintain populations at WGFD objectives.

Comment: Recommendation 1: The Environmental Consequences portion of the Draft RMP needs to include a more thorough review of the current literature on the direct indirect and cumulative impacts of roads and oil and gas development on wildlife, including the research and findings discussed below. Such literature should not just be mentioned, but be used to craft the management alternatives, including protective management based on the effects of roads and oil and gas development on individual species as detailed below. The selected alternative should, based on the best available science, sustain and protect wildlife resources in the Pinedale Resource Area. Further, the RMP should commit BLM to taking into account important developments in scientific literature and provide for adjustments to protective management based on new information.

Response: Transportation plans are being developed at the EIS level. In addition, a road closure plan was developed and submitted in the *Federal Register*, Vol. 72, No. 10, Wednesday, January 17, 2007, Notices. Department of the Interior Bureau of Land Management [WY–100–1110–PI] Notice of Seasonal Closure of Public Lands to Motorized Vehicle Use AGENCY: Bureau of Land Management, Interior. ACTION: Notice of seasonal closure of certain public lands located in Sublette County, Wyoming, to all types of motor vehicle use and/or human presence.

Comment: A review of the scientific literature is critically important. We are concerned that the review in the Draft RMP is incomplete and misses important literature and consequently significant findings of biologists that. study wildlife impacts from roads and oil and gas development. This is of great concern given the intensive development expected - 3,946 to 5,924 well pads and 36,903 to 51,798 acres of direct disturbance. The indirect and cumulative impacts must also be evaluated thoroughly and quantitatively for each alternative.

Substantially more information on the impact of roads and oil and gas related infrastructure on wildlife is available. These impacts are widely recognized in the scientific community as having a range of direct, indirect and cumulative effects on habitats and wildlife (Trombulak and Frissell 2000, Wyoming Game and Fish Department 2004, Wisdom 2004). Effects range from direct removal of habitat to long-term displacement of species from preferred habitat. The indirect and cumulative effects are hardest to measure, but are increasingly studied through analysis of habitat fragmentation.

Response: The impact analysis has been updated in the final EIS.

Comment: The DEIS Fails to Provide the Requisite "Hard Look" at the Potential Environmental Impacts of the Action Alternatives on Wildlife NEPA requires all federal agencies take a "hard look" at the potential environmental impacts of their proposed actions and disseminate the conclusions of this analysis to the public. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989). Through this process, an agency must prepare a "coherent and comprehensive up-front environmental analysis to ensure informed decision making to the end that 'the agency will not act on incomplete information, only to regret its decision after it is too late to correct.' Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1216 (9th Cir. 1998) (quoting Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 371 (1989)). The DEIS for the Pinedale planning area must provide that hard look before BLM leaps to adopt a land use plan that will place significant public resources at risk. It fails to do so.

For example, impacts on wildlife species are likely to vary depending on how much of the planning area is designated as "Intensively Developed Fields," "Minimally Developed Fields," "Large Block NSO Areas," and "Unavailable Areas. Under Alternatives 2, 3, and 4, in "Minimally Developed Areas" and "Large Block NSO Areas" (for Alternative 4), "[w]hen exploration of an oil or gas reservoir reaches a down-hole well density of one well every 160 acres, the area would become an "Intensively Developed Field." In other words, there are no real assurances that "Intensively Developed Fields" will not eventually overtake a majority of the planning area, providing little, if any, protections for wildlife. Additionally, in "Unavailable Areas" under Alternative 3 and "Large Block NSO Areas" and "Unavailable Areas" under Alternative 4, the NSO or unavailable designation could be lifted and specific areas could be leased if development on adjacent state or private mineral estate is determined to be draining federal oil and/or gas. Pinedale RMP DEIS at 2-48 and 2-49. Again, the LEIS fails to assess the level of impacts on wildlife species if these designations are lifted.

Response: The impact analysis is adequate. The language for conversion, and the areas available for oil and gas leasing, have been modified in the final EIS.

Comment: Examples of direct, indirect and cumulative impacts of roads on wildlife and their habitats identified in the biological literature include (Trombulak and Frissell 2000, New Mexico Department of Game and Fish 2005).

- Fragmentation of connected habitats including the loss of core habitat areas and habitat connectivity for wildlife movements and dispersal
- Adverse genetic effects such as reducing genetic diversity by isolating populations
- Increased potential for extirpation of localized populations or extinction of narrowly distributed species from catastrophic events
- Modifications of animal behavior through reductions in habitat use due to human activity and interference with wildlife functions such as courtship, nesting, and migration
- Disruption of the physical environment in many ways including direct removal of habitat due to route construction, reduction of cover and habitat security, increasing dust and erosion
- Alteration of the chemical environment through vehicle emissions and herbicides
- Changes in habitat composition by direct loss of vegetation from road construction and changes in microclimates in road edge habitats potentially resulting in changes in type and quality of food base and reduction in habitat cover
- Spread of exotic species that may lead to competition with preferred forage species
- Degradation of aquatic habitats through alteration of stream banks and increased sediment loads
- Changes to flows of energy and nutrients such as changes in temperatures in microclimates created at road edges
- Increased alteration and use of habitats by humans through activities including increased unethical hunting practices and increased dispersion of recreation impacts, particularly by off-road vehicles due to a proliferation of roads
- Mortality from construction of roads
- Mortality from collisions with vehicles

Response: The impact analysis has been updated in the final EIS.

Comment: The Preferred Management Alternative Fails to Preserve Multiple Use and Sustained Yield of Resources on the Public Lands. Perhaps the most glaring defect in BLM's preferred Resource Management Plan for public lands in the Pinedale Resource Area is that, in many ways, it is not a plan at all. In the absence of boundaries that constrain where and how much of the Pinedale Resource Area will become designated as "Intensively Developed Fields," BLM has, in essence, delegated much of its planning authority to the oil and gas industry.

Contrary to the inferences in the draft document, nothing in the Energy Policy and Conservation Act Reauthorization of 2000 of the Energy Policy Act of 2005 has established energy extraction as the dominant use on the public lands. However, for the Pinedale planning area, it is clear that BLM intends for oil and gas development to become the dominant use. This sentiment is underscored when BLM states that "[w]ildlife habitat would generally only be protected if a mineral commodity is not present for extraction" Pinedale RMP DEIS at 4-210. BLM also states, "[b]ecause of the large amount of oil and gas

reserves and existing leases in the planning area, loss of important habitat could occur throughout the planning area, depending on the economic feasibility of development and fluctuations in market price." Pinedale RMP DEIS at 4-184. FLPMA does not surrender the conservation of wildlife and wildlife habitat contingent on the presence of mineral commodities or on the economics of oil and gas.

Response: The Preferred Alternative provides for multiple uses on a planning area scale. The language for conversion, and the areas available for oil and gas leasing, have been modified in the final EIS.

Comment: As documented by the comprehensive literature reviews cited above and the additional conclusions reached by state agencies in their respective reports, the existence of motorized routes can result in habitat fragmentation and, depending on the use of the route, have impacts extending well into surrounding habitats. Such fragmentation from transportation networks is immediate, leads to reductions in habitat effectiveness and can lead to a range of risks to the survival of wildlife. Sound science must be used to evaluate impacts from motorized travel routes, including those from energy development before adopting an oil and gas development plan.

Response: Please see revisions to the impact analysis in the final EIS. Transportation plans are being developed at the EIS level. In addition, a road closure plan was developed and submitted in the *Federal Register*, Vol. 72, No. 10, Wednesday, January 17, 2007, Notices. Department of the Interior Bureau of Land Management [WY–100–1110–PI] Notice of Seasonal Closure of Public Lands to Motorized Vehicle Use AGENCY: Bureau of Land Management, Interior. ACTION: Notice of seasonal closure of certain public lands located in Sublette County, Wyoming, to all types of motor vehicle use and/or human presence.

Comment: the revised RMP should call for staged development in which some blocks of lands are open to leasing and some are temporarily withdrawn from leasing and development until a later time.18 In areas where other uses may be put at risk by oil and gas activities, the revised RMP should require a cautious approach to development with monitoring adequate to ensure that predicted impacts to environmental resources have not been exceeded and that mitigation measures are sufficient. Utilizing more directionally drilled wells would decrease the amount of land fragmentation and surface disturbance by allowing multiple wells to be drilled from a single pad.19 Less well pads would also lessen traffic, thereby decreasing noise and air pollution.

Response: These recommendations may be found in Appendix 5.

Comment: The Wyoming Game and Fish Department prepared a report containing comprehensive guidelines for wildlife protection in areas of energy development, based on a literature review of the effects of roads, other infrastructure, and activities associated with energy development on Wyoming's sagebrush and grassland habitats and wildlife species (Wyoming Game and Fish Department 2004). This report and its updated version (currently available in draft form, Wyoming Game and Fish Department 2007a) is designed specifically to provide guidance to the BLM and USFS on protecting wildlife from oil and gas development. Because a substantial portion of the impact of oil and gas development comes from its relatively dense road network, much of the literature cited in the report documents the impacts of roads on wildlife. The report acknowledges the threat to wildlife from fragmentation, identifying fragmentation and diminishing quality of sagebrush ecosystems as "principal reasons why populations and distributions of associated wildlife are declining." (p. 2). The report demonstrates the likelihood of habitat fragmentation from roads and other disturbances associated with energy development, and emphasizes the range of damage to habitat that occurs from such development: "Most adverse effects of oil and gas development can be divided into 7 categories: 1) direct loss of habitat; 2) physiological stress to wildlife; 3) disturbance and displacement of wildlife; 4) habitat fragmentation and isolation; 5) alteration of environmental functions and processes (e.g., stream hydrology, water quantity/quality); 6) introduction of

competitive and predatory organisms; and 7) secondary effects created by work force assimilation and growth of service industries. The direct loss or alteration of habitat is always a concern, however oil and gas developments are typically configured as point (well pads) and linear (roads, pipelines) disturbances scattered throughout broader areas. The collective area of disturbance may encompass just 5-10% of the land. However, the influence of each well pad, road, and facility extends to surrounding habitats where the proximity of disturbance causes stress and avoidance by wildlife." (WGD 2007, p 8-9).

Response: The impact analysis has been updated in the final EIS.

Comment: The report provides further details about how oil and gas development causes habitat fragmentation: "As densities of wells, roads, and facilities increase, habitats within and near well fields become progressively less effective until most animals no longer use these areas. Although vegetation and other natural features may remain physically unaltered, wildlife make proportionately less use of areas near oil and gas facilities. Animals that remain within the affected zones are subjected to increased physiological stress. This avoidance and stress response impairs habitat function by reducing the capability of wildlife to use the habitat effectively. In addition, physical or psychological barriers lead to fragmentation of habitats further limiting the availability of effective habitat. An area of intensive activity or construction becomes a barrier when animals can't or won't cross it to access otherwise suitable habitat. These impacts are especially problematic when they occur within limiting habitat components such as crucial winter ranges and reproductive habitats." (WGFI) 2007, p. 9)

Response: Additional discussion of the impacts of fragmentation has been added to the final EIS.

Comment: The Wyoming Game and Fish Department report further notes that wildlife will not simply move to adjacent habitat when disturbed by oil and gas development as is often assumed: "This presumption contradicts a fundamental axiom of population ecology and wildlife management that has been known and reconfirmed since the time of Aldo Leopold - populations of organisms increase to fill vacant, suitable habitat and are then regulated by the essential component of their habitat that is in least supply (Leopold 1933, Edwards and Fowle 1955, Smith 1966:355, Odum 1971:183). For example, availability and quality of crucial winter ranges at lower elevations generally limit productivity, recruitment and abundance of migratory big game populations in mountainous environments. Complexes of suitable breeding and brood-rearing habitats are thought to limit populations of sage grouse. In any given environment, existing populations of wildlife occupy the habitats that are suitable. Conversely, the areas that are not suitable for one reason or another are not used. When activities associated with energy development displace animals from otherwise suitable habitats, the animals are forced to utilize marginal habitats or they relocate to unaffected habitats where the population density and competition increase. Consequences of such displacement and competition are lower survival, lower reproductive success, lower recruitment, and lower carrying capacity leading ultimately to reduced populations." (WGFD 2007, p. 11).

Response: The impact analysis has been updated in the final EIS.

Comment: RECOMMENDATION 1: The Environmental Consequences portion of the Draft RMP needs to include a more thorough review of the current literature on the direct indirect and cumulative impacts of roads and oil and gas development on wildlife, including the research and findings discussed above. Such literature should not just be mentioned, but be used to craft the management alternatives, including protective management based on the effects of roads and oil and gas development on individual species as detailed above. The selected 'alternative should, based on best available science, sustain and protect wildlife resources in the Pinedale Resource Area. Further, the RMP should commit BLM to taking into account important developments in scientific literature and provide for adjustments to protective management based on new information.

Response: The impact analysis has been updated in the final EIS.

Comment: The data that we have previously provided and highlighted shows not only that there is a substantial, established body of literature supporting the need to address habitat fragmentation from routes and oil and gas development, but also that the level of fragmentation in the preferred alternative will result in unacceptably high impacts on wildlife habitat for the species that the agencies are required to protect under FLPMA, NEPA, and the BLM's National Sage-Grouse Habitat Conservation Strategy. The agency should utilize this data both to evaluate potential impacts of proposed oil and gas development (and other travel planning) and to design an acceptable travel network and pattern of development, which provides sufficient core areas and suitable route densities to protect wildlife habitat.

Response: The impact analysis has been updated in the final EIS. Transportation planning will be conducted after the completion of the RMP; transportation planning is also conducted at the field development stage. Please see page 2-135 and Appendix 17.

Comment: Language through portions of chapter 2 and 4 implies that areas of "Large Block NSO" in the Preferred Alternative and "Unavailable Areas" (shown in Maps 2-8 and 2-9) would not be developed for oil and gas. Yet, other places reveal that all "minimally developed areas", "large block NSO areas" and "unavailable areas" can be converted into "Intensively Developed Fields" if federal minerals are drained by a range of circumstances including: adjacent state or private mineral estate drains federal mineral resources, "an appropriate level of environmental analysis is completed" (level of analysis not defined) or impacts to wildlife and other resources "would be adequately mitigated" (mitigation not defined). Except for WSA's or other areas where laws prevent leasing. Most critical wildlife habitat is left with no assurance of protection. (Draft RMP, p. 2-47 to 2-49 [alt 2-4] and 2-121 to 2-122 [preferred alt]). Conversion of "Large Block NSO" to an "Intensively Developed Field" could be "determined on a case-by-case basis" and be determined based on "surface resources present in the area, the subsurface geology and development methods required and the professional judgment of geologists and reservoir engineers" (Draft RMP, p. 2-48).

Additionally, under the Preferred Alternative "Minimally Developed Areas" "could convert to 'Intensively Developed Fields' when bottom-hole well density exceeds 1 well per 160 acres. Conversion could require preparation of a field development EA, EIS or Supplemental EIS" (Draft RMP, p. 2-121). (emphasis added) All of these statements suggest that most lands, including the "Large Block NSO" in the Preferred Alternative and the "Unavailable Area" in the conservation oriented Alternative 3 - all the lands ostensibly zoned for wildlife and ecological protection - are open for conversion to "Intensively Developed Fields". This loop hole in the oil and gas management area designations must be closed. IF the conversion from "Unavailable Area" to "Intensively Developed Field" were NOT allowed in the RMP, then Alternative 3 would a substantial improvement over the Preferred Alternative. The "Unavailable Area" management areas for Alternative 3 shown in Map 2-8 (Draft RMP) could provide refugia demonstrated to be needed in section 2 of these comments and would be an good starting point to discuss and evaluate an appropriate management alternative.

Response: Further discussion of how the oil and gas management areas work and the conditions required for conversion to allow leasing or development in Unavailable Areas or NSO areas has been added to the final EIS.

Comment: RECOMMENDATION 3: Larger management areas with no surface occupancy from oil and gas must be set up in the course of this RMP process to protect wildlife. Areas must include winter, crucial winter, transitional, migratory and parturition habitats for ungulates and winter, breeding, nesting and rearing habitats for sage-grouse. No exceptions should be granted within these areas. No conversions should be allowed to other oil and gas management areas without a full supplemental EIS.

Response: The unavailable areas have been updated and expanded in the final EIS. Exceptions would be analyzed according to Appendix 8. BLM does not have the authority to prohibit development on existing valid leases.

Comment: First, ecological values should be mapped out across the full resource area. Maps showing the many overlapping ecological values should be prepared and, used to identify specific areas to be protected for their wildlife values and corridors connecting these patches with each other and with transitional habitats or migratory corridors where needed (e.g. for ungulates migrating to summer range). The Upper Green River Valley Coalition produced and provided the BLM with maps illustrating the overlapping crucial habitat areas and fully endorses the BLM using these in crafting stronger management prescriptions for wildlife protection. After the important habitat areas have been defined, the practical realities of the distribution of land ownership, split estate minerals and existing leasing constraints should be considered. The plan should set up long-term (beyond the 15-20 year life of this plan) wildlife management zones based on habitat needs for the species included in these comments. The management prescriptions in these zones may vary by leasing status and split estate status. All wildlife zones should have management prescriptions based on wildlife needs and in the long-term move toward a more protective status. Examples for the wildlife management zones should include areas of no development and areas of restricted development. Management prescriptions should be similar to the following for all lands with federal minerals whether or not the BLM has surface management authority:

- federal minerals not leased
- No new leases in critical habitats.
- Where leasing is allowed, new leases must have minimum habitat core area and maximum area of direct disturbance based on wildlife research and follow phased and cluster development. BLM can help ensure this by setting surface density limits in the lease.
- federal minerals leased, not held by production
- When leases expire don’t re-lease lands in critical habitats.
- Insure full and timely restoration of developed lands before any new leasing occurs.
- Where leasing is allowed, new leases must have minimum habitat core area and maximum area of direct disturbance based on wildlife research and follow phased and cluster development.
- federal minerals leased, and held by production
- Current oil and gas production continues
- After production is complete, do not re-lease lands in critical habitats

The term “critical habitats” used in the bullets above should include but not be limited to winter, crucial winter, transitional, migratory and parturition habitats for ungulates and winter, breeding, nesting and rearing habitats for sage-grouse. Clearly defined wildlife management zones with prescriptions such as those listed above could set a trajectory for management of the lands for the next century, not just the next 20 years. This plan needs to look at how it will set the stage for sustaining the landscape and its resources beyond current leasing - beyond the life of this RMP.

Response*:* BLM is currently collecting fine scaled habitat data to assess the seasonal habitat use across landscapes. This information will be used for mitigation projects, habitat improvement projects, and project planning to maintain functional habitats across the landscapes. The Wyoming Landscape

Conservation Initiative was created to look at habitat management across landscapes covering multiple jurisdictions.

Comment: 5. Alternatives are not balanced among the many resources and uses of the Pinedale Resource Area and are biased toward oil and gas extraction. The Draft RMP does not provide a balanced range of alternatives that gives sufficient consideration to the long-term protection of habitat and wildlife. On the contrary, all the alternatives appear to allow for full field or intense development in the Jonah and Pinedale Anticline fields. The greater Big Piney-LaBarge Area is at least initially protected from the most intense level of development in Alternative 3. However, with the exception of very small land units including ACEC's, SRMAs, big game migration bottle neck, WSRs Historic trails sensitive Cultural sites and locations for special status plants, all lands can be converted to an area of intense development (see explanation under number 3 above). There is no alternative that provide sufficient sage steppe wildlife habitat with protection over the life of the plan. No alternative attempts to require phased or cluster development to protect other uses and resources, particularly for habitat and wildlife.

Response: BLM does not have the authority to prohibit development on existing valid leases. The alternatives provide for conservation of wildlife habitats and a balance of uses on a landscape scale, while providing for the legal rights of oil and gas leaseholders.

Comment: RECOMMENDATION 5: The management alternatives presented in the Draft RMP are not balanced and should be changed to remove the bias toward oil and gas extraction. Given the substantial negative impacts already affecting and likely to continue affecting wildlife and sage steppe habitat the final alternative must, at a minimum, ensure more protection of natural resources. With BLM having already leased over 70% of the resource area and permitted several large gas fields -including new infill expansions, more compromise is inappropriate. Instead, a more conservative and restrictive approach is needed. The Pinedale RMP should be amended to incorporate a system for clustered and phased development allowing for added protection for habitat and wildlife by geographically clustering development and phasing production and restoration over a longer period of time.

Response: BLM does not have the authority to prohibit development on existing valid leases. It is not possible to cluster development until exploration has determined the extent and characteristic of the resource.

Comment: Additional challenges TU sees if Alternative 4 is selected include the relaxing of wildlife protections regardless of the level of habitat importance to the species survival, deferring the monitoring and mitigation plans to an unknown time period, allowing development on No Surface Occupancy areas, and the entire discussion of Intensively Developed Fields to Minimal Intensity Development (levels of environmental protection). This last scenario has many loopholes scattered through its reasoning and allows minimally intensive developed areas to accelerate quite easily to become an Intensively Developed Field with very little science entering the rationale.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. The discussion of how the oil and gas management areas work and the requirements for conversion to an Intensively Developed Field has been expanded in the final EIS for clarity.

Comment: In reference to the discussion in Minerals Management that off-site gas drilling mitigation would occur on highly intensively developed fields, how is this application considered a conservation consideration? What are some of the problems associated with a drainage issue and specifically what types of impacts are associated with this? Plans that call for "adequate mitigation will be pursued" are not

enough. Off-site mitigation for habitat protection serves to offer wildlife and fisheries conservation alternatives; off-site mitigation for additional gas drilling opens up a whole new level for management actions on the surface resource.

Response: The concern of drainage only occurs if a natural gas seam formation is continuous across leases, i.e., from private minerals to federal minerals. If the private minerals entity drills a well that has a continuous seam across a federal lease, that entity could conceivably remove all of the gas and not be subject to federal royalties that would otherwise go into the federal treasury. The federal government cannot require offsite mitigation and, for the reason stated in your comments, offsite mitigation should be a last resort method.

Comment: Alternative 3 should not have intensively developed areas in sage grouse leks areas or in critical winter range for big game. Management of big game habitats to protect wildlife resource values is a strong objective and should have benchmarks for measuring success or failure.

Response: The Intensively Developed Area for Alternative 3 is in existing producing natural gas fields that have well spacing between 5 and 80 acres.

Comment: The consideration of paced or phased development should be seriously undertaken. By undertaking such an action, a better scientific understanding of potential impacts of gas and oil development on fisheries, watersheds and wildlife can be scientifically evaluated. This can then assist resource managers within all agencies in making informed decisions that promote sustainable development, adequately predict potential impacts and avoid, decrease or mitigate threats to our natural resources.

Response: BLM does not have the authority to prohibit development of existing valid leases. The designation of areas unavailable for leasing or available only with NSO stipulations is a form of phased development.

Comment: It cannot be emphasized enough the importance of incorporating cumulative and landscape or basin level evaluations to properly identify both ongoing and potential future development activities and associated impacts to wildlife, waters, fisheries, air, economics, communities, etc.

Response: Please see pages. 4-233 to 4-259.

Comment: Item: Page 2-143, Section 2.5.5, Wildlife and Fish Habitat Management "Approximately 175,750 acres in Intensively Developed Fields would be available for intensive fluid mineral leasing, exploration, development, and production; approximately 672,470 acres designated as Minimally Developed Areas would be available for restricted fluid mineral leasing, exploration, development, and production; about 205,100 acres would be designated as Large Block NSO Areas; and 156,900 acres would be designated as Unavailable Areas for leasing, exploration, development, and production" "The planning area would be divided into three distinct, noncontiguous, wildlife management zones for the purpose of oil and gas activities" Comment - While the above discussion clarifies that the management zones are intended to protect wildlife from oil and gas and specific mitigation guidelines and operating standards for each resource are presented in Appendix 3 and apply to each of the management areas. Overall, it is not clear how oil and gas development on existing leases will differ for these management areas. It is also unclear how operations on future leases will differ between the intensively and minimally developed areas.

Response: Information on existing leases in the oil and gas management areas has been added in the final EIS. More discussion on how the Intensively Developed and Minimally Developed Areas would work is

also provided. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: Paragraph 2, on pg 4-187, states "Surface disturbing activities associated with well pad construction would increase sediment delivers to stream and standing water systems, which would interfere with fish life stages." The impacts analysis fails to acknowledge the USEPA and WDEQ/WQD regulations that require all surface disturbing activities greater than 1 acre to prepare and implement storm water pollution prevention plans specifically to keep this potential impact from occurring. Paragraph 3 discusses evaporation ponds and the potential for waterfowl and shorebirds mortality as a result of being attracted to these facilities. It further states "This can be mitigated by making these areas less attractive to these birds." The WOGCC rules require operating companies to implement mitigation to preclude birds from coming in contact with the materials held in these ponds.

Response: The EPA and WDEQ regulations help to minimize negative impacts but do not entirely eliminate the potential for impacts to occur. Disturbances of less than 1 acre are not covered by the Storm Water Pollution Prevention Plan (SWPPP) regulations yet still have impacts. The draft EIS is appropriate.

Comment: The restrictions on development attributable to wildlife objectives under Alternative 3 are unnecessarily restrictive. In both Intensively Developed Fields and Minimally Developed Areas the BLM would unreasonably restrict development. For example, limiting vehicle use to existing roads and trails within even intensively developed fields is unreasonable and unnecessary, particularly if portions of those fields are currently undeveloped. Requiring NSO Stipulations within three miles of sage grouse leks is similarly unnecessary and conflicts with current BLM state-wide policy. Although the BLM intends to limit activities within sage-grouse winter concentration areas, the BLM has not mapped or identified such areas.

By limiting wellpad densities to only one well per 640-acre section, the BLM would significantly reduce oil and gas development across the planning area. Limitations on the economic and technical feasibility of directional drilling would effectively eliminate oil and gas development in large areas of the Pinedale Resource Area. The limitations on development activities in big game habitat are unnecessary, and not supported by existing analysis. Development has, and can continue to be, conducted in big game habitat areas in such a way so as to protect wildlife resources, while still allowing domestic energy production. The proposed prohibitions on exceptions to seasonal stipulations minimally developed areas would deprive the BLM of the flexibility it requires. Although the BLM intends to deny exception requests in "source habitat" the BLM does not define or mop source habitats.

Response: It is reasonable to analyze an alternative that would increase restrictions on oil and gas development. This designation is applied to prevent cross-country vehicle use during the sage-grouse nesting and brood-rearing season. The statement on page 2-70 intends to protect important sage-grouse habitats to the extent possible when developing access roads to new wells. Alternative 3 is the conservation alternative; all of the wildlife objectives were based on published scientific research conducted within the planning area. If this alternative were removed from this analysis, BLM would be violating NEPA and FLPMA. According to the following peer-reviewed scientific literature, the current restrictions are not adequate: Holloran, M. J., and S.H. Anderson, 2005, Spatial Distribution of Greater Sage-Grouse Nests in Relatively Contiguous Sagebrush Habitats, The Condor 107:742–752; Holloran, M.J., B.J. Heath, A.G. Lyon, S.J. Slater, J.L. Kuipers, S.H. Anderson, 2005, Greater sage-grouse nesting habitat selection and success in Wyoming, Journal of Wildlife Management 69(2): 638-649; Doherty, K. E., D. E. Naugle, B. L. Walker, and J. M. Graham. in press, Greater sage-grouse winter habitat selection and energy development, Journal of Wildlife Management. Research conducted by Sawyer et al. 2006 on the Pinedale Anticline suggests winter habitat selection and distribution patterns of mule deer were affected by well pad development. Changes in habitat selection by mule deer appeared to be immediate

(i.e., year 1 of development), and through 3 years of development no evidence was found that suggested mule deer acclimated or habituated to well pads. Rather, mule deer had progressively higher probability of use in areas further away from well pads as development progressed.

Comment: The adverse effects of routes on wildlife have been well documented in several extensive literature reviews (Trombulak and Frissell 2000, Gucinski et al. 2001, Gaines et al. 2003, Wyoming Game and Fish Department 2004, New Mexico Department of Game and Fish 2005, Confluence Consulting 2005). The hundreds of scientific papers in these literature reviews illustrate the preponderance of evidence that routes ranging from narrow dirt tracks to paved roads can and do have adverse affects on wildlife. This volume of science simply cannot be ignored in a major land management planning effort such as this RMP.

Response: The impact analysis has been updated in the final EIS.

Comment: The BLM's management of Intensively Developed Fields and Minimally Developed Areas must be revised under Alternative 4. The BLM lacks the authority to impose mitigation measures on oil and gas leases that are not technically or economically feasible. See Conner V. Burford, 84 F.2d 1441, 1449-50 (9th Cir. 1988); 43 C.F.R. § 3101.1-2 (2006) (BLM can impose only "reasonable mitigation measures . . . to minimize adverse impacts . . . to the extent consistent with lease rights granted"). There is no indication or analysis in the RMP DEIS whether many of the proposed objectives are technologically and economically feasible. For example, BLM's requirement to minimize noise generating activity could be construed as requiring the imposition of significant mitigation measures, regardless of their feasibility.

Response: Page 2-8 states that oil and gas lease rights would be honored. This would apply to all alternatives. It is reasonable to require mitigation of activities that impact surface resources.

Comment: BLM provides us with no implementation plan to explain to the public how on-site mitigation and other programs will be carried out. With this implementation plan should first be a habitat assessment. Without a comprehensive overall inventory of habitat on Pinedale BLM lands, there can no comparison of existing baseline with proposed mitigation, enhancement, and reclamation projects. Project specific, habitat assessments constitute a piecemeal approach, when what is needed is on holistic approach. An overall assessment should include a comprehensive wildlife inventory, monitoring and protection plan for all wildlife species present in the field office area, an air quality monitoring and protection plan, a reclamation plan, a water shed quality and quantity monitoring protection plan for both surface and ground waters, and a hazardous materials management plan.

Response: BLM, WGFD, and several federal agencies are conducting projects and inventories to gain this information so that it may be applied to management scenarios, mitigation projects, etc.

Comment: The draft plan that you have released contains a preferred Alternative No. 4 which does not adequately ensure the protection of our air, our wildlife, and our quality of life. In particular, your preferred Alternative No. 4 does not set aside enough habitat free from oil and gas development. It allows for development for as much as 70 percent of the one point two million acre resource area, and for thousands and thousands of more gas wells and associated industrial facilities. Such a development scenario will not sustain our herds of pronghorn, or mule deer, or the sage grouse.

Response: BLM does not have the authority to prohibit development of existing, valid oil and gas leases. The areas that would be available for leasing have been reconsidered in the final EIS; please see the minerals management section of the Proposed Plan (Alternative 4 in the final EIS).

Comment: PAGE: 2-120, RECOMMENDED CHANGE: d. BMPs would be applied to mitigate impacts on sensitive habitats and other resources (Appendix 5) where appropriate and necessary [to the extent possible and practicable.] (strikeout) EXPLANATION: The standard is not found in Gold Book and RMP cannot supercede national policy. The condition is undefined and thus very confusing. There is no definition of sensitive habitat. Nor is there a definition of "other resources." So this ¶ as written would require mitigation for anything else without giving the public any idea of what was to be mitigated or the rationale.

Response: This objective was based on sensitive species habitat mitigation that is defined in BLM Manual 6840.

Comment: PAGE:2-143 SECTION: RECOMMENDED CHANGE:Delete: [a. The planning area would be divided into three distinct, noncontiguous, wildlife management zones for the purpose of oil and gas activities (Map 2-9) as follows: • Intensively Developed Areas (Map 2-9) would be managed for intensive oil and gas activities while protecting habitats and minimizing direct, indirect, and cumulative impacts on the extent practicable.](strikeout) [• Minimally Developed Areas (Map 2-9) would be managed for protection of important values during oil and gas exploration but would provide opportunity for intensive oil and gas development. Should a discovery (development) be made and proceed to development, these lands would be moved to Intensively Developed Field status and would be subject to mitigation to minimize direct, indirect, and cumulative impacts of such activities.](strikeout) [• Large Block NSO Areas (Map 2-9) would be managed for protection of wildlife habitats through allowing oil and gas leasing with NSO stipulations.](strikeout) [• Unavailable Areas (Map 2-9) would be managed for protection of wildlife habitats through indefinite postponement of the availability of lands for oil and gas leasing.](strikeout) EXPLANATION:Oil and gas development is not based solely or primarily on wildlife habitat needs. Nor is there any evidence that the planning areas described correlate to the objective.

Response: It is reasonable to consider making certain areas unavailable for oil and gas leasing and listing wildlife habitat management needs as part of the rationale for this action.

Comment: PAGE: 2-147, RECOMMENDED CHANGE: [Large Block NSO Areas a. Fluid mineral leasing would be allowed within the Large Block NSO Areas, provided the entire lease area was encumbered by a NSO stipulation.] (strikeout) EXPLANATION:The large block NSO does not conform to accepted criteria for NSO, such as documenting the need to deny surface use due to slope, geological hazards, erosive soils, or designation of critical habitat. See Comment #26. As the DEIS makes clear, the NSO areas are intended to provide big game habitat, even though big game exceed or meet target populations that by themselves exceed habitat capacity by a significant extent. As implemented, it is in fact a withdrawal and should be designated as such. BLM must also look at interference with state trust land leases and other private rights. Finally, EPCA implementation direction requires BLM to more specifically document the basis for concluding that this is the least restrictive mitigation to be imposed.

Response: The Large Block NSO Areas have been removed from the final EIS.

Comment: PAGE: 2-148, RECOMMENDED CHANGE: i. Consistent with existing oil and gas lease terms, no [No] (strikeout) surface disturbing [or disruptive activities] (strikeout)would be permitted in big game crucial winter ranges from November 15 to April 30 (Map 3-19). EXPLANATION: See Comment #173.

Response: BLM holds the right to use new information and science to protect wildlife from undue and unnecessary degradation.

Comment: We oppose the idea that crucial habitats can be replaced through off-site mitigation. All mitigation should be applied on-site. We recognize the failure of the Pinedale Anticline Working Group (PAWL) to effectively mitigate wildlife habitat and population losses created by the oil and gas industry.

Response: Onsite mitigation is preferred to ensure the continued presence of wildlife in their primary habitats. BLM cannot require an entity to implement offsite mitigation. Offsite mitigation should only be viewed as a last resort method. It is generally not possible to replace habitats with offsite mitigation; however, in some instances offsite habitats in less than optimum condition can be enhanced to increase their carrying capacity.

Comment: Overall, the RMP must assure continued landscape-level function for fish and wildlife. This will require a Field Office-wide planning approach that considers both the current energy development scenario and the leases that allow further development, as well as future leasing and development potential. Energy development must be planned in such a way to allow continued persistence of well-distributed native wildlife habitat and wildlife populations throughout the term of the RMP. This will require phasing of development and the disturbances associated with it, both in space and in time, so that wildlife will have the habitat and area needed to persist in the Field Office area. Then, as energy development declines in the long term and reclamation becomes mature, wildlife can once again re-populate and re-distribute throughout their native habitats. This will allow the associated recreation that supports Wyoming's second-leading industry of recreation/tourism to again provide its optimum benefits to the state.

Response: These recommendations can be found in Appendix 5, Fluid Mineral Best Management Practices, Reducing Impacts to Big Game Crucial Winter Range, Reducing Impacts to Sage-Grouse Habitat, and Reducing Impacts to Wildlife Habitat.

Comment: Three of the four alternatives under consideration would allow rapid expansion of natural gas drilling in the region. I'm worried that this would cause irreversible damage to the area's quality of life, air quality and ability to support abundant wildlife - the very things that make the Upper Green a great place to live and visit. The air over the Upper Green has already been visibly affected by industrial pollution from existing gas rigs. Researchers have noticed significant declines in the mule deer herds and sage grouse populations that winter in the Upper Green. Tripling the number of gas wells over the next 10-15 years would simply make the problems worse.

Response: All the alternatives would allow expansion of natural gas drilling in the region. BLM does not have the authority to prohibit development of existing, valid oil and gas leases. The draft EIS provides an appropriate discussion of the potential impacts on wildlife and other resources from development of these leases. The Preferred Alternative attempts to provide balanced management on a landscape scale, with certain areas unavailable for leasing and development.

Comment: In closing, we believe that the BLM's Preferred Alternative #4 is not sufficient to protect wildlife habitat in the project area, nor does it provide a balance between industry aims and natural resource values. This is clearly evident in Chapter 4, Environmental Consequences (p. 4-210), which states that under Alternative 4, the BLM Preferred Alternative, "...wildlife habitat would generally only be protected if a mineral commodity is not present for extraction."

Response: The Preferred Alternative provides for multiple uses on a planning area scale.

Comment: Chapter 2 Page 14 Commentor WGFD Appendix 11, Resource Monitoring Table, should include thresholds based on wildlife population trends identified by WGFD.

Response: Table A11-1 provides a guide for monitoring activities. Based on monitoring results, BLM will implement appropriate actions on a case-by-case basis. Generally, BLM decisions would be based on habitat conditions and not necessarily population trend data.

Comment: Changes in vegetation "quality" should be monitored at 3-5 year intervals at a statistically valid sampling rate along permanent 0.6-mile belt transects. Measurements desired include live sagebrush canopy cover, sagebrush height, and ground cover of native grasses and forbs. (This should also include measurement of residual grass height.) Modeling of the potential effects of environmental events such as drought (measured by the Palmer Drought Index) and severe winters (length of period of snow cover, depth of snow, temperature) should also be pursued.

Response: Currently, there is an effort to standardize vegetation monitoring data collection efforts. These suggestions should be brought to the committee involved in that effort for consideration.

Comment: Replicated studies with treatments and controls have not been conducted because of the difficulty in finding study areas of sufficient size, control of all treatments, and the reluctance of agencies and private interests to make available dedicated resources (including money and land). Management studies should be immediately implemented that focus on possible predation impacts as affected by fragmentation and livestock grazing impacts (Connelly et al. 2000). At a minimum, the Pinedale RMP DEIS should recognize the importance of habitat quality and the potential effects of enhanced predation caused by existing and planned treatments which negatively affect habitat quality of the sagebrush steppe.

Response: The effects of past treatments in terms of habitat structure and wildlife use are currently being studied. This information will be used in defining the course of future mitigation efforts on a landscape scale.

Comment: Second, we know that development may have irreversible impacts on both. I propose that the BLM enforce a no-net-loss policy on wildlife and that the gas industry fund positions within the WY game and fish department to insure this.

Response: This suggestion is not possible given BLM's multiple use mandate and BLM's purview related to wildlife management. BLM is not responsible for managing wildlife numbers, but rather manages wildlife habitat.

Comment: This million acre landscape managed under this RMP must provide future direction for protecting wildlife. The total new wells will equal 8,383 (7,136 federal and 1,247 non-federal). Approximately two-thirds of the projected wells would occur in the Jonah and Pinedale Anticline fields. Clustering is a sacrifice zone where wildlife cannot thrive, they may hurry through or try to co-exist but the stress on the biological health will be demonstrated by low doe-calf, hen/chick ratios, weakened individuals and diminished herds/flocks. The Pinedale RA must find a scientifically based balance to provide places where wildlife can be secured within these so called sacrifice zones. WWA encourages the use of site-specific studies and current scientific literature to back up a brave new management plan with emphasis on wildlife protection.

Response: The Unavailable Areas and NSO Areas are meant to provide secured habitats outside the Intensively Developed Fields. Current studies have shown that the existing development has exceeded the tolerance threshold for many species. The intent is to make areas unavailable for development to provide suitable habitats to sustain existing and displaced populations.

Comment: Mitigation: The majority of mitigation for impacts to big game animals suggested in this document relies on restriction of anthropogenic activities during critical periods of the year. Based upon

the BLM's track record of not upholding timing limitations in critical habitats I fail to see any scientific basis for the claims of the efficacy of this mitigation. For example, on the Pinedale Anticline, more than 80% of requests for exemptions from timing limitations were granted (USDI BLM 2007). Furthermore, timing limitations do not protect habitat because disturbance may occur at other times of the year and limitations only apply during the development phase. Activity is not restricted during the production phase. The BLM should provide assurances that timing limitations for crucial big game habitats will be enforced and they should define exactly what is meant by development and production phases and what mitigation will be applied during these phases. Mitigation of all significant impacts occurring during all phases of development will be required if big game populations are to be maintained at desired levels.

Response: BLM cannot specify mitigation requirements at the RMP level because there are no development proposals for the entire planning area submitted. However, BLM can suggest types of mitigation that may be appropriate for different types of proposals. Seasonal restrictions do not protect wildlife habitats because the activities postponed are carried out in the next noncrucial season. When development reaches a density or other point where animals no longer use the habitats, seasonal restrictions do not provide any value.

Comment: Adaptive management is suggested as a form of mitigation. Essentially the BLM would implement "performance-based objectives and operating standards" that would provide flexibility to adapt decisions to changing and uncertain environmental conditions while assuring appropriate mitigation (page iv). Albeit adaptive management does allow flexibility, it is a planned program that relies on quick response to changing conditions suggested from analysis of accurate monitoring data. For big game animals this approach, as described in the DEIS, has at least three problems. First, as I will discuss below, monitoring suggested in the DEIS is inadequate. Secondly, there are no assurances of quick responses for habitat disturbances in an arid region where energy development is the chief perturbation. As Baker (2006) points out, recovery of sagebrush habitats is a slow process taking as long as 50 to 100 years. Thus, once habitats are lost, there is no quick way in which to replace them. Lastly, there is often a lag in population response time from an impact to a measured change in the population. This is problematic because a cause/effect relationship can be difficult to establish and, as discussed above, it takes so long to re-establish functional habitats. In short, it may be too late to remedy the situation once an impact has been measured. Additionally, the trigger suggested in the DEIS (a downward trend in animal numbers) is likely not sensitive enough to measure a population impact in time to initiate some remedial action. Thus, as portrayed in this document the adaptive management strategies suggested to facilitate mitigation will not work.

Although there is a trigger suggested for adaptive management, a downward trend in big game populations on critical ranges, there are no actions depicted in response to the trigger being tripped. A change in the population trend is not the most sensitive trigger that could be applied. Changes in over-winter juvenile survival would be a better trigger that could be measured fairly precisely at a reasonable cost (White et al. 1987, Bartmann et al. 1992). The BLM should specify a more sensitive trigger for adaptive management to mitigate impacts to big game animals and indicate specifically what actions would be taken in response to the trigger being tripped.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Comment: The best way to mitigate impacts to big game animals from actions proposed in the DEIS would be to establish ACECs or some sort of special management areas strictly for the purpose of protecting crucial big game ranges (which might also include habitat for other wildlife species) with appropriate limitations on development and provisions to protect habitat. The BLM must provide a realistic consideration of mitigation of impacts to big game animals and their habitats indicating what

sorts of actions will be taken to mitigate impacts and assure the public that adequate habitat is available to support populations albeit these populations may be at a reduced level.

Response: Mitigation can be applied effectively without establishing an ACEC. Effective mitigation should be practices throughout the planning area and not be limited though the use of ACECs and SMAs.

Comment: To be effective, mitigation measures like "making evaporation ponds for condensate water unattractive and or less accessible to waterfowl" (which are dying in their waters), need to be amended to say something like "levels of salt in evaporation pits will be reduced and limited through desalination processes, monitored monthly by an independent contractor, at the expense of the Operator, to maintain non-lethal concentrations of salinity for soil, groundwater and waterfowl safety, and fine wire mesh coverings will completely cover such pits to ensure wildlife and livestock accessibility is not possible." Not once in the mitigation guidelines did I see a clear and binding plan of accountability which Operators must follow to ensure the safety and well being of the environment it will be degrading.

Response: This information has also been provided by USFWS, and the proper techniques will be implemented to ensure the MBTA will be adhered to. The final EIS has been updated to specify covering of pits and other sources of contaminated or harmful materials.

Comment: Evaluate the impact of roads on wildlife as part of an adaptive management process. Resource management plan revisions must assess these impacts and devise ways to mitigate them.

Response: These goals and actions can be found on pages 2-101 through 2-105.

Comment: The following objectives are necessary to propagate Sublette County wildlife populations as we have known them in the recent past. They include: 2. Crucial habitats should be protected during oil and gas production as well as during exploration and development stages.

Response: BMPs are being employed in the Intensively Developed Areas and the Minimally Developed Areas to protect crucial and other seasonal habitats. Please note that the term "Minimally Developed Areas" has been changed to "Traditional Leasing Areas" in the final EIS.

Comment: PAGE: 4-188 SECTION: 4.17.1 RECOMMENDED CHANGE: REVISE In general, OHV management decisions that result in increased human presence may [would](STRIKEOUT) have a moderate, localized impact on wildlife [and fisheries. Impacts would include increased displacement of wildlife, increased stress during critical time periods, and degradation of habitats. OHV use can alter the seasonal use patterns of many wildlife species. The use of snow vehicles on winter range could lead to excessive wildlife disturbance, causing additional stress, more rapid depletion of fat (energy) reserves, and in extreme cases, death.](STRIKEOUT: New roads created from extensive use of OHVs could result in access to areas that normally do not contain human presence; habitat degradation through vegetation loss; [access for predator species,](STRIKEOUT) creating competition for species, such as Canada lynx; and soil compaction, may cause [causing](STRIKEOUT) accelerated erosion or preventing water infiltration. These impacts are localized to trails and may increase where OHV use is concentrated into two relatively small open areas. EXPLANATION: If BMPs in place, no impact on fisheries. RMP does not call for OHV across streams or rivers. Given high numbers of game animals and high demand for OHV recreation, no evidence supports this statement. Snow vehicles only cause stress if someone is chasing the animal and nothing in RMP calls for snowmobilers to chase wildlife. Predators do not need "access."

Response: BMPs cannot be applied to OHV use, which is not a permitted activity; that is, anyone can operate an OHV without a permit from BLM. BLM is required to analyze impacts that can be reasonably

expected to occur from OHV use, which would be allowed in much of the planning area. Many existing roads cross streams and riparian areas. Different animals respond to vehicles in different ways; it is reasonable to reveal that OHV use, including snowmobile use, would cause stress to big game animals in the vicinity of the use. Phillips and Alldredge (2000) and Shively et al. (2005) demonstrated a 30% reduction in elk calf recruitment as a result of an activity as benign as simulated recreational hiking imposed during the calving season. Freddy et al. (1986) studied the impacts to wintering mule deer from people on foot and snowmobiles. Rowland et al. (2000 and 2005) provides a discussion of elk distribution in relation to roads, and Sawyer et al. (2007) discusses elk habitat selection in the Jack Morrow Hills of Wyoming and considers the impact of roads.

Comment: Pg 4-188, paragraphs 3, 4 and 5 discuss the impacts of OHV management decisions on wildlife. This discussion should include an acknowledgement of the transportation planning and road use restrictions placed on oil and gas development activities in an effort to reduce the impacts of transportation systems on wildlife. The impacts described would still apply to recreational use of OHV.

Response: Transportation plans are developed at the EIS level; they are a tool that could have tremendous mitigation potential if used to the fullest extent possible. However, as seen with large developments such as the Jonah and Anticline fields, transportation pre-planning can only go so far. When the development potential is determined, road and pipeline corridors are dictated by where they are needed.

Comment: Implement road closure plans using the best available science to protect wildlife habitat needs. Include the latest species specific habitat needs for core area, disturbance effect zones around roads and well pads, and maximum route densities where available.

Response: Transportation plans are being developed at the EIS level. In addition, a road closure plan was developed and submitted in the *Federal Register*, Vol. 72, No. 10, Wednesday, January 17, 2007, Notices. Department of the Interior Bureau of Land Management [WY–100–1110–PI] Notice of Seasonal Closure of Public Lands to Motorized Vehicle Use. Agency: Bureau of Land Management, Interior. Action: Notice of seasonal closure of certain public lands located in Sublette County, Wyoming, to all types of motor vehicle use and/or human presence.

Special Management Areas (SMAs)

General Comment Responses:

Comments:

- As a United States citizen, I'm frustrated by continual attacks on land that was supposedly set aside for the sole purpose of protecting our natural heritage. Since this land is part of a National Park, I'm not sure why it's being subjected to this kind of proposal in the first place. National Parks help make America what it is -- please stop your assault on them.
- Please stay away from our National Parks. They are a treasure. Previous generations had the foresight to save them for us. Let's be thoughtful and save them for our future generations. Let's stop being greedy. We don't have the moral right to destroy the remaining beautiful places of our nation, just to satisfy our energy hunger. Don't drill; conserve!

Response: The Pinedale RMP will not allocate any uses in the National Parks. No National Parks are located within the planning area. BLM does not have the authority to manage the Pinedale planning area as part of the National Park system.

Comments:

- Pursuant to Alternative 3, the entire Trapper's Point migration bottleneck is designated an area Unavailable for future leasing. Even under Alternative 4 most of it is designated as Unavailable for future leasing and the remainder is designated a Large Block NSO area. Maps 2-8, 2-9, 2-26, 2-33. The ACEC is limited to the areas designated Unavailable ender either alternative; the Large Block NSO areas are not deemed suitable for ACEC designation pursuant to Alternative 4. Id. However, this differential treatment does not comport with the management goals established for these areas. The management emphasis in both the Unavailable areas given ACEC designation and the Large Block NSO area not afforded ACEC designation is to "provid[e] contiguous wildlife habitat, wildlife refuge areas and migration routes . . . ." 2-47, 2-49. Given there is no difference in management emphasis in these areas there can be no rational basis for designating the Unavailable Areas an ACEC while not designating the Large Block NSO areas an ACEC. Furthermore, the entire area meets the relevance and importance criteria. A4-3. Given this, the entire Trapper's Point migration bottleneck should be designated an ACEC regardless of what alternative is selected as the RMP. The BLM recognizes this entire area is "a major funnel, or bottleneck, for mule deer and pronghorn in their winter migrations to and from winter range" and the area is threatened with constriction due to development, and contains very significant archeological sites. 3-136. Thus, maximum protection is required.
- In addition to these three relatively large potential protected areas, a number of other areas would receive protection pursuant to Alternative 3, including the Upper Green River ACEC, New Fork Potholes ACEC, CCC Ponds ACEC, Boulder Lake Special Recreation Management Area, the Scab Creek Special Recreation Management Area, Green River and New Fork River Special Recreation Management Area, Beaver Creek ACEC, and the Rock Creek ACEC. These areas receive considerably less protection pursuant to Alternative 4, and/or much smaller areas are protected. All of these areas should be afforded the protections provided by Alternative 3. The Upper Green River ACEC (Special Recreation Management Area under Alternative 4) is located in an area that would be Unavailable for oil and gas leasing pursuant to Alternative 3 and in a Large Block NSO Area under Alternative 4. As noted several times above, given that the management objectives for Unavailable and Large Block NSO areas are exactly the same, the fact

this area is in a Large Block NSO Area under the provisions of Alternative 4 provides no justification for the lesser protection. The Upper Green River area is remote, stunning and of great recreational value. 3-54. The CCC Ponds and the New Fork Potholes are also located in areas that are devoted to environmental protection (Unavailable under Alternative 3 and Large Block NSO under Alternative 4). The CCC Ponds are recognized by the BLM as "a local recreation haven." 3-137. The New Fork Potholes are recognized as a "unique subsection of the Wind River Front" due to the large number of glacial potholes, which attract abundant waterfowl and provide habitat for many other species of wildlife. 3-136. The New Fork Potholes area meets both the relevance and importance criteria for designation as an ACEC. A4-2. "The values in this area need special emphasis to be effectively managed." Id. The Rock Creek ACEC is important for the protection of quality habitat for the Colorado River Cutthroat Trout and crucial winter range for elk, and the Beaver Creek ACEC serves similar crucial functions. 3-135. Both of these areas meet the relevance and importance criteria for designation as an ACEC. For these reasons all of these areas should receive the greater protections afforded by Alternative 3.

- Likewise the entire Wind River Front should be given special management protection. Pursuant to Alternative 3, the entire Wind River Front is designated an Unavailable Area, and BLM's corresponding designation of the entire Wind River Front as a special Management Area reflects this management emphasis. Maps 2-8, 2-26. In contrast, pursuant to Alternative 4 the northern half of the Wind River Front that is eliminated from special Management Area designation is assigned to a Large Block NSO Area. Maps 2-9, 2-33. Yet as noted above, the management emphasis in Large Block NSO Areas is exactly the same as the management emphasis in Unavailable Areas, so it is arbitrary to provide differing special area management designations in areas that are supposed to have the same management emphasis, one oriented toward environmental protection. 2-47, 2-49. This is especially true given that under the direction provided by the Pinedale Anticline EIS the entire, Wind River Front is afforded special protection. The BLM has provided no rationale, and thus acted arbitrarily, by specifying different management direction for the northern and southern half of this area when the stated management goal for the entire area is the same: the protection of environmental values, 2-47, 2-49, particularly since the entire area has been afforded special protection for some time now. In fact, the BLM recognizes this entire area contains "world-class" geological features, contains streams with Wild and Scenic Rivers values, important semi-primitive recreation opportunities, and "encompasses migration corridors for big game and for crucial winter ranges for moose, elk, and mule deer. It also supplies wintering and breeding habitats for sage grouse." 3-136. See also Maps 2-28,2-36, 3-16, 3-17, 3-18, and 3-19.

  The Upper Green River Valley Coalition's slide presentation provides considerable additional evidence as to why the entire Wind River Front should be given special Management Area designation. The entire area is a highly important, and well documented, migration corridor. CD slides 8, 9, 26, and 27. Wetlands and riparian areas occur throughout the Wind River Front. CD slide 28. It is a very important aquifer recharge area. CD slide 29. Much of it has steep slopes making surface disturbance inappropriate. CD slide 30. The area has extremely high vertebrate species richness. CD slide 34. Clearly the existing management direction that the entire Wind River Front should not be available for leasing should be maintained, and this area should be deemed Unavailable for leasing, and all of it should be afforded special protection.

  Finally, we would note that the BLM determined this entire area met both the relevance and importance criteria for designation as an ACEC. A4-4. Having made that determination, the BLM was required to designate this entire area an ACEC. The basis for this claim will be elaborated on below. Instead, however, the BLM simply asserted with no supporting analysis whatsoever that "[i]t was determined that management actions other than ACEC designation are more appropriate

to protect the values." Id. This bald assertion does not justify the BLM's refusal to designate this area as an ACEC.

Response: BLM analyzed a reasonable range of alternatives regarding establishing ACECs) protecting special areas.

Comments:

- PAGE:2-153, RECOMMENDED CHANGE: Delete all existing and proposed ACECs. EXPLANATION: Due to the failure to address need for protection none of the proposed ACECs or existing ACECs qualify.
- The Miller Mountain Management Area should receive the increased protection that would be afforded pursuant to Alternative 3-particularly designation as an area unavailable for oil and gas leasing-for the following reasons:
- A significant portion of the area, particularly the western portion, is not currently leased, giving the BLM an unusual opportunity to protect an area from the impacts of potential oil and gas development without having to deal with the issues that are created after an area is leased. Map 1-3. And as noted above, this could present opportunities for meaningful and effective off-site mitigation due to development elsewhere.
- There is also little existing oil and gas development in the area. Map 3-5, CD slide 35. The area has only a low potential for oil and gas development. Map 4-1.
- As recognized on page 3-136 of the RIvIP DEIS the area has numerous significant environmental values, including remoteness, a high quality visual environment that is an extension of the Lake Mountain Wilderness Study Area, crucial elk habitats, Canada lynx habitat, high value as a popular hunting area, potential Colorado River Cutthroat Trout habitat, significant riparian and stream habitats, and a rich cultural history, including historic Fort Hill.
- The area is intended to be a right-of-way exclusion area pursuant to both Alternatives 3 and 4, which may be difficult to accomplish if the area does not receive the full protection afforded by Alternative 3. Maps 2-24 and 2-32.
- The area contains a significant array of varying plant communities. Map 3-11.
- The entire area is mule deer winter/yearlong range. Map 3-16.
- As noted, the area contains extensive areas of crucial elk ranges. Maps 3-17, 3-19, and 3-20.

For these reasons, the Miller Mountain area should receive the enhanced protection afforded by Alternative 3. We would note, however, that the BLM simply asserts that the area did not meet the ACEC importance criteria. A4-2. Absent some explanation as to how this determination was made-and an opportunity for the public to comment on this determination-there is no rational basis presented in the RMP DEIS for not designating this area an ACEC. We ask that such an explanation and opportunity for public comment be provided, and that absent such the area be designated an ACEC.

Response: The ACEC relevance and importance reviews are available on the RMP website at http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf. BLM analyzed a reasonable range of alternatives regarding establishing ACECs and protecting special areas.

Comments:

- We recognize that the BLM's ACEC designation will not be used for all critical and relevant areas in the Field Office area. In order for areas that do have high value for fish and wildlife to be managed with those values appropriately recognized, we recommend that a SRMA (or other appropriate) designation be used instead. The specific areas we recommend for designation are outlined in the attached Comment Form. This would provide additional protection and help offset the uncertainties of being able to assure habitat functions in the Oil and Gas Management Areas.
- Chapter 2 Page 154 Commentor WGFD In addition to the 4,960 acres designated as the Rock Creek ACEC, we recommend an additional 20,030 acres be designated as the Rock Creek SRMA. This would allow specific management measures for the benefit of wildlife to be included in the RMP. Chapter 2 Page 154-155 Commentor WGFD In addition to the 3590 acres designated as the Beaver Creek ACEC, we recommend an additional 3590 acres be designated as the Beaver Creek SRMA. This would allow specific management measures for the benefit of wildlife to be included in the RMP. Chapter 2 Page 155 Commentor WGFD In addition to the 4160 acres designated as the Trapper's Point ACES, we recommend an additional 4160 acres be designated as the Trapper's Point SRMA. This would allow specific management measures for the benefit of wildlife to be included in the RMP. Chapter 2 Page 164 Commentor WGFD For Alternative 4, in addition to the 1040 acres designated as CCC Pond SRMA, we recommending adding an additional 4,490 acres. This would allow specific management measures for the benefit of wildlife to be included in the RMP. Chapter 2 Page 164 Commentor WGFD For Alternative 4, we recommend adding 12,270 acres that will be designated as the Upper Green River SRMA. This would allow specific management measures for the benefit of wildlife to be included in the RMP.

Response: It is not necessary to establish SRMAs, which are recreation-focused, to conduct specific management for the benefit of wildlife.

Unique Comments:

Comments on Document/Comments on Analysis/Suggested Changes

Comment: The flaws of the Pinedale RMP and Preferred Alternative 4 are vast. When I look at the ACECs proposed but not considered (p. 2-4), I am confused with just what IS considered to meet the 'importance criteria'. The Mesa encompassing the largest remaining populations and most intact habitat for sage grouse in the Western U.S.; La Barge Elk winter Range, proposed as a "control for the study of the spread of disease on elk feed-grounds," when brucellosis is on of the top threats to the livestock industry: Muddy Creek as "crucial winter range for one of two elk herds wintering on native winter range," when the elk feeding program is under such scrutiny; and the Wind River Front providing winter and transitional ranges, migration bottlenecks and migration routes that are "some of the largest and longest in the world," all missed the cut. None of these areas meet the "importance criteria" as having "more than locally significant qualities which give it special worth, consequence. meaning, distinctiveness and cause for concern" or as having "qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened or vulnerable to adverse change." How ignorant is the public presumed to be to believe this double-speak? The dismissal of these ACECs are in DIRECT conflict with the criteria standards which are meant to define them. Given the relatively small area which they comprise, and the importance of these lands, I believe that all nine ACECs should be implemented and then adhered to for comprehensive exclusion from future development. not merely cast aside to be reevaluated later, at the BLM's discretion.

Response: ACEC status of itself is just a label and would not provide any protection to wildlife migration corridors. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve desired results. This protection can be implemented without creating these large ACECs. Management of wildlife habitats was conducted in the planning area as a cohesive whole, not limited to ACEC areas.

Comment: 2. Page 3-135 & 3-136: The process used to identify and evaluate potential new ACEC's is confusing. On pages 3-135 &136 two existing ACEC's are identified. These are followed by a list of six other areas with unique resources which appear to be candidate ACEC's or other special management areas. However, not all six of these areas are specifically addressed and evaluated in Appendix 4, so it is unclear if they meet the designation criteria. In addition, several other areas not listed in Chapter 3 are evaluated in Appendix 4. Please clarify how areas were selected for evaluation as ACEC's or SMA's.

Response: The language describing the ACEC process has been clarified in the final EIS. Five of the six proposed ACECs found in Chapter 3 are indeed included in Appendix 4 (Table A4-1). The proposed ACEC covering CCC Ponds was mistakenly omitted from Appendix 4. This ACEC has been included in the appendix in the final EIS. Other areas in Appendix 4 are discussed in Section 2.2.2. As stated on page A4-4, further information on each of the area's qualifications under the relevance and importance criteria is available at the Pinedale Field Office and on the project website at www.blm.gov/rmp/wy/pinedale.

Comment: 3. Page 3-135 and Appendix 4. By definition, ACEC's "contain one or more resources that require special management and protection for maintaining the value of the resource and the area". Their designation and special management is necessary to protect and prevent irreparable damage to important historic, cultural, and scenic values; for protecting fish or wildlife resources or other natural systems or processes. To be eligible for designation as an ACEC, an area must meet the relevance and importance criteria described in 43 Code of Federal Regulations (CFR) §1610.7-2 and BLM Manual 1613. Appendix 4 summarizes the results of ACEC evaluations. Three areas (Ross Butte, White-tailed Prairie Dog, and Wind River Front) that meet both the relevance and importance criteria are then not recommended for inclusion as ACEC's. What is the rationale for why these three areas are better suited to other management?

Response: For areas that meet the relevance and importance criteria for establishment as ACECs, BLM is required to consider the ACEC proposal in at least one alternative of the EIS, but is not required to establish the ACECs if management of the special resources present can be accomplished without ACEC status. ACEC status of itself is just a label and would not provide any protection to resources. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve desired results. This protection can be implemented without creating these large ACECs. See the management prescriptions for the Ross Butte and Wind River Front areas on page 2-156 (draft EIS) and prairie dog habitats on page 2-149 (draft EIS).

Comment: Map 2-33 Comment - Shows the Wind River Front Management Area as extending all the way to Highway 191, thereby removing whole townships from any sort of development activities. Even though there appears to be some areas of private and leased mineral ownership in this area (Map 1-3), BLM should consider revising the boundary of the MA to open more lands for development. This could be done in such a manner so that the unique features of the Wind River Front, as described on page 3-136, would be preserved.

Response: The Wind River Front Management Area covers this area in order to protect important sagebrush habitats for sage-grouse lekking, nesting, and brood rearing and to protect important mule deer and pronghorn migration and seasonal habitats. Potential for oil and gas development in this area is low,

and undisturbed, landscape-scale sagebrush habitats are needed in areas other than the Jonah and Anticline gas fields to provide habitats for sagebrush-dependent wildlife species.

Comment: the BLM's own analysis demonstrates that the "expanded" Beaver Creek ACEC does not meet the importance criteria. See RDMP DEIS, Appd. 4, pg. A4-2. As such, the BLM cannot expand the Beaver Creek ACEC and certainly should not impose NSO stipulations on any new leases within the area.

Response: All proposed ACECs must be addressed in the EIS. The Beaver Creek expansion area ACEC was not considered in detail in the draft EIS and not included in any of the alternatives because it did not meet the ACEC relevance and importance criteria. It is reasonable to evaluate the impacts of NSO stipulations on new leases in the existing Beaver Creek ACEC. NSO stipulations would not apply to the area under the Preferred Alternative.

Comment: Chapter 2 Page 154 Commentor WGFD Alternative 4. Objective 2 Action b. Include with NSO stipulations.

Response: The Beaver Creek ACEC is fully leased for oil and gas and has been developed. It is not possible to add NSO restrictions at this point.

Comment: Chapter 2 Page 154 Commentor WGFD Alternative 4. Objective 2 Action f. Change percent slope to 15%.

Response: The soils in the Beaver Creek area are not highly erosive to the extent that a restriction of activities to areas of less than 15% slope is necessary.

Comment: PAGE: 2-21 SECTION: 2.4.4 RECOMMENDED CHANGE: Reassess merit of retaining Beaver Creek and Rock Creek ACECs. EXPLANATION: RMP fails to reassess the merit of retaining Rock Creek and Beaver Creek in ACEC Report. BLM planning handbook, H-1601-1, Appendix C, p. 18 requires this.

Response: The draft EIS analyzes eliminating the Rock Creek and Beaver Creek ACECs in Alternative 2, which can be compared to the analysis included in the other alternatives to make the determination of whether to retain these ACECs.

Comment: Alternative 3 creates far too many Areas of Critical Environmental Concern ("ACECs") and other special management areas, including several ACEC which the BLM itself has determined do not meet the required relevance and importance criteria. See 43 C.F.R. § 1610.7-2 (2006). For example, the BLM's own analysis demonstrates that the Ross Butte Area should not be managed as an ACEC. See RDMP DEIS, Appd. 4, pg. A4-3. As such, the BLM should not designate the Ross Butte ACEC and certainly should not designate the area unavailable for oil and gas leasing.

Response: No area that did not meet the relevance and importance criteria was included for analysis as an ACEC in any alternative. The Ross Butte area met the relevance and importance criteria for ACEC and is considered in Alternative 3; however, it would not be managed as an ACEC under the Preferred Alternative. The ACEC relevance and importance reviews are available on the RMP website at http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf. BLM analyzed a reasonable range of alternatives regarding ACEC establishment and protections of special areas.

Comment: PAGE:2-154, SECTION:Rock Creek ACEC, RECOMMENDED CHANGE: DELETE [Objective 1 Provide suitable habitat within the Rock Creek ACEC to ensure long-term species

sustainability and functioning habitats and support the CAS for CRCT in the States of Colorado, Utah, and Wyoming. Ensure crucial elk winter ranges are available for use by wintering elk.] (strikeout) EXPLANATION: Delete due to lack of evidence of need. BLM fails to identify existing land uses that threaten the CAS for CRCT. Similarly, given all of the other terms and conditions on elk winter range BLM cannot prove that existing land uses threaten elk range. There is no mineral development that threatens either habitat. Area simply does not qualify.

Response: BLM analyzed a reasonable range of alternatives regarding ACEC establishment and protections of special areas. The ACEC relevance and importance reviews are available on the RMP website: http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf. The ACEC Evaluation Report covers the reasonableness of maintaining the Rock Creek ACEC.

Comment: PAGE:2-160 TO 163, SECTION: Table 2-25, RECOMMENDED CHANGE: Revise to reflect above comments and necessary revisions or deletions.

Response: This table has been updated in the final EIS.

Comment: PAGE:2-191 to 2-203, SECTION: Table 2-34, RECOMMENDED CHANGE: Revise to reflect above comments and necessary revisions or deletions.

Response: This table has been updated in the final EIS.

Comment: PAGE: 3-102, SECTION: 3.12.3, RECOMMENDED CHANGE: Delete or better document and move to special management areas EXPLANATION: BLM planning manual does not call for "sensitive areas." Any such discussion should be deleted or moved to special management areas

Response: The text is appropriate as presented in Chapter 3 of the draft EIS.

Comment: PAGE: 3-135, SECTION: 3.18.1, EXPLANATION: Discussion of existing ACECs confirms conclusion that BLM never showed that protection of unique resources was necessary.

Response: Chapter 3 contains a discussion of the current status of the planning area. As such, only current ACECs are discussed in this section.

Comment: PAGE: 3-135, SECTION: 3.18.2, RECOMMENDED CHANGE: Delete Ross Butte Ecosystem EXPLANATION: Area is incorrectly described as roadless. There are a number of roads in the area, in large part due to the development in the area.

Response: The area is described as "virtually roadless". There are few roads and they are bad. The area is not currently developed.

Comment: PAGE: 3-136, SECTION: 3.18.2, RECOMMENDED CHANGE: Revise for accuracy: Miller Mountain. This [ecosystem] (strikeout) is a [remote roadless] (strikeout) landscape consisting of steep foothills with a combination of sagebrush, aspen, and conifer vegetation types. This area is adjacent to [an extension] (strikeout) of the Lake Mountain WSA viewshed and contains VRM Class II inventory values. It is identified as elk parturition and crucial winter range, contains lynx analysis units, and is widely used for big game hunting. It also contains potential CRCT habitat in Miller and Coal Creeks. Numerous small perennial streams and [sensitive] (strikeout) riparian habitats occur throughout the area. The area offers recreational opportunities for semiprimitive motorized activities. Miller Mountain is rich in cultural history and includes an ancient pictograph site, historic Ft. Hill, and more recent stone sheepherder cairns that signified range boundaries. EXPLANATION: The significant mix of private and state land precludes

the description of ecosystem. The area is not roadless, because there are roads to each of the private land parcels and the roads are also widely used by recreationists, especially hunters. Riparian areas are not any more "sensitive" than other riparian areas in the planning area. Area is almost entirely leased and cannot be managed for VRM Class II notwithstanding initial inventory. Management must be VRM Class III to meet BLM Handbook and IBLA decisions. See Comment #50. Fort Hill is located on private land? Sheepherder cairns often mistaken for modern day camp sites.

Response: Ecosystems can be described regardless of their ownership. There are very few roads. The description in the final EIS has been changed to say "largely roadless". The riparian areas in the Miller Mountain area are more sensitive than in many other portions of the planning area because of their dependence on vegetation for physical stability of the system. Oil and gas leases cover less than half the area and do not negate the possibility of special management. The presence of oil and gas leases does not eliminate the option of management with VRM Class II objectives. Fort Hill is entirely on BLM-administered public lands in section 12, T25N, R115W and section 7, T25N, R114W. Because this area is on the "sheep side" of Deadline Ridge, and because the Slate Creek sheep trail traversed part of the area, it is known that much historic sheep grazing occurred. The authenticity of the sheepherder cairns has been verified.

Comment: PAGE: 4-161, SECTION: 4.13.7, RECOMMENDED CHANGE: REVISE The Miller Mountain Management Area would put limitations on [general surface disturbance] (STRIKEOUT) and travel, [which would limit development of range improvements in this area and protect vegetation from disturbance associated with vehicle use.] (STRIKEOUT) EXPLANATION: Limiting range improvements is not sound management.

Response: BLM disagrees with the suggested text change. This section is an analysis of the impacts of the alternative, not a statement of what the actions and limitations are. It reveals that an impact of limitations on surface disturbance could be limiting the ability to construct range improvement projects.

Comment: PAGE: 4-161, SECTION: 4.13.7, RECOMMENDED CHANGE: REVISE These SMA management actions would reduce surface disturbance and serve to maintain and protect vegetation resources within these areas. Limits on management such as vegetation treatment and range projects will reduce protection of vegetation.

Response: BLM disagrees that limits on surface-disturbing activities in these areas would reduce protection of vegetation. In fact, limitations on range improvements and other surface-disturbing activities in some areas would protect vegetation resources. Improvements would not be prohibited in these areas, but would be required to conform to the management objectives of the SD/MA.

Comment: PAGE: 4-212 SECTION: 4.18.1 RECOMMENDED CHANGE: DELETE [Although areas considered or proposed for withdrawal would require approval by Congress, this analysis assumes the area would be approved and withdrawn.](STRIKEOUT) EXPLANATION: Statement inaccurate.

Response: In order to analyze the impact of the proposal, BLM made the assumption that proposed withdrawals would be processed and withdrawn. It would make no sense, and would provide no basis for comparison of alternatives, to assume that proposed withdrawals would not be completed.

Comment: PAGE: G-14 CHANGE: NATIONAL WILD AND SCENIC RIVERS (W&SR) – A system of [nationally](STRIKEOUT) congressionally designated rivers with watersheds or shorelines essentially primitive and waters unpolluted. EXPLANATION: The national wild and scenic rivers system is comprised of rivers designated by Congress; 16 U.S.C.§ 1273(a); or nominated by the state legislature and approved by the Secretary.

Response: This change has been made in the final EIS.

Comment: PAGE: G-22 CHANGE: SPECIAL AREA DESIGNATIONS - A title conferred on a specific area through [a variety of mechanisms, especially](STRIKEOUT) the land use planning process. EXPLANATION: Special area designations may only be identified through the land use planning process. BLM Land-Use Planning Handbook H-1601-1, Appendices C and F.

Response: This change has been made in the final EIS.

Comment: PAGE: G-25 CHANGE: WILDERNESS AREA. A congressionally designated area defined by the Wilderness Act of 1964, 16 U.S.C. § 1131(a), as [of](STRIKEOUT) undeveloped federal land retaining its primeval character. . . EXPLANATION: Definition needs to refer to the statutory origin of the term wilderness area.. In addition, the inclusion of the definition in the glossary is surplusage given that BLM does not manage any wilderness areas in Wyoming.

Response: This change has been made in the final EIS. Because many commenters assume that there is wilderness in the planning area, it is appropriate to include this definition for clarity.

Comment: PAGE: G-25 CHANGE: WILDERNESS STUDY AREA (WSA) – Areas designated under Section 603 of FLPMA and evaluated by Congress [under study](STRIKEOUT) for possible inclusion as a Wilderness Area in the National Wilderness Preservation System. EXPLANATION: The definition is insufficient and needs to link WSA designations with the FLPMA Sec. 603 wilderness review, 43 U.S.C. § 1782.

Response: This change has been made in the final EIS.

Comment: PAGE: SECTION: 4.18.3 Beaver Creek RECOMMENDED CHANGE: EXPLANATION: See Comment Ch. 2-201. Not allowed to do fuel treatments in VRM Class I. Previous ACEC designation did not preclude geophysical exploration. Parturition habitat for elk not significant at national level to qualify area for ACEC.

Response: Fuel treatments can be conducted in VRM Class I areas. Special management for areas retained in the RMP revision is not limited to management actions included in the 1988 RMP ROD. Resources need to be significant regionally, not nationally. The resources in concert in this area meet the relevance and importance criteria. The ACEC relevance and importance reviews are available on the RMP website at:
http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf.
BLM analyzed a reasonable range of alternatives regarding ACEC establishment and protections of special areas.

Comment: Page:2-156, Section: Wind River Front, Recommended Change: DELETE [Objective 7 Maintain and improve wildlife habitats; big game migration corridors and bottlenecks; scenic quality; and recreation values and uses in the Wind River Front area.] (strikeout). Explanation: Wind River Front area needs to be withdrawn for the U.S. Air Force in accordance with FLPMA. Any withdrawal needs to address the extent of private land in the area. As proposed, it does not follow appropriate procedures. If the area is needed for defense purposes, it must be withdrawn. Comment #89. The boundaries should be defensible and not include private land and thus effect inverse condemnation.

Scope of area arbitrary given the private land and interests in land affected. Propose to allow geophysical exploration when no leasing allowed, which is inconsistent. Wildlife corridors are primarily on private

land, so classification cannot apply to private land. Management restrictions inversely condemn existing leases and private minerals.

Response: BLM is not effectuating a withdrawal but making a land use decision in the RMP. BLM decisions do not apply to lands that the BLM does not administer. Maps in the Final EIS have been updated to illustrate the area more clearly with respect to land ownership. Wildlife movement corridors are well documents and cross private, state, and BLM-administered lands.

Comment: Page: 3-136, Section: 3.18.2, Recommended Change: Wind River Front. The 244,067 acre land area identified for the Wind River Front consists of about 50% private land and state school sections. This landscape was formed by Pleistocene glacial events that formed world-class geologic features, including terminal and lateral moraines and potholes. Unique to this landscape are huge boulders randomly scattered across a backdrop of rolling sagebrush foothills. Several streams intersect this area with Wild and Scenic River (WSR) values, including three that meet the criteria for inclusion as WSR segments (see related section below). Semiprimitive motorized and nonmotorized recreation opportunities include hunting, rock climbing, wilderness trailheads, sightseeing, antler hunting, hiking, mountain biking, and fishing. The Wind River Front, which lies in the foreground of the Bridger Wilderness and its Class I airshed, encompasses migration corridors for big game and for crucial winter ranges for moose, elk, and mule deer. It also supplies wintering and breeding habitats for sage-grouse. The area also represents the homes of ranchers and their grazing allotments. Explanation: At least half of the land within the purported boundary is private surface and school sections. BLM has no jurisdiction and it must grant access to allow landowners to enjoy their land rights, thus greatly limiting BLM authority to impose restrictive management. The WSRA study failed to follow BLM Handbook criteria and thus any conclusions regarding alleged WSRA values are fatally flawed. See Comment #199. An RMP cannot be an order establishing, modifying, or revoking a withdrawal. Rather, a withdrawal requires action in accord with 43 U.S.C. § 1714. Resource Associates of Alaska, 114 IBLA 216, 219(1990). This is precisely why BLM followed FLPMA's withdrawal procedures in proposing to modify the 55 acres of public land originally withdrawn near Boulder, Wyoming for the purpose a weather station which appears to be Detachment 489. In the Federal Register notice, 1 BLM proposed changing the purpose of the withdrawal to a seismological site and proposed continuing the existing withdrawals for an additional 5-year period. 51 Fed. Reg. 1859 (1986). 2 The withdrawals were made by Public Land Order Nos. 3389 (29 Fed. Reg.6323), 3775 (30 Fed. Reg. 10193 (1965), and 4576 (34 Fed. Reg. 1141 (1969) and closed the lands to surface entry and mining, and 52 acres were also closed to mineral leasing. Id. No final action may have been taken because according to BLM in the draft Pinedale RMP, the detachment was closed in 1986 due to funding issues. In establishing the proposed buffer, therefore, BLM must abide by the same procedures. This includes determining the existing and potential demand for the land and its resources, an inventory of the site's natural resource values, impacts on the land users, an investigation of suitable alternative sites, and a report on the existence of mineral deposits. A withdrawal also requires public notice and hearing, and consultation with state and local governments. 43 U.S.C. §§ 1714(c)(1)-(12), (h); 43 C.F.R. Parts 2300, 2310.

Response: See page 1-9 of the DEIS: "The planning decisions in the RMP will apply only to the BLM-administered public land surface and mineral estate in the planning area, including BLM-administered minerals that underlie nonfederal lands (split estate)." Nowhere in the DEIS does BLM attempt to make management decisions for lands it does not manage. These issues are addressed in the suitability analysis of the Wild and Scenic Rivers Review Report completed in 2002 and referenced in Appendix 24. The report is available at www.blm.gov/rmp/wy/pinedale/. The suitability analysis was completed, based on the 13 determination factors contained in BLM-M-8351 Section .33. BLM would provide reasonable access to all private lands. BLM is not effectuating a withdrawal but making a land use decision in the RMP

Yellowstone and Surrounding Area

Comment: I spent some of the best time of my life working in Yellowstone NP and if I had anything to do with it NOTHING would change from then...and people would have to be tested for appropriate level of concern for the environment before they were allowed IN!

Response: The Pinedale RMP will not allocate any uses in the National Parks. No National Parks are located within the planning area.

Comment: Please reconsider this raping of the land for a relatively meager amount of natural resources. If you can do this to Yellowstone, the cornerstone of the National Park System, then, I suppose, you will feel that you have license to exploit other National Parks.

Response: The Pinedale RMP will not allocate any uses in the National Parks. No National Parks are located within the planning area.

Comment: It is important to keep our remaining wildlife habitats a priority for future generations. Yellowstone National Park is a park that I am proud of and this Nation should be proud of. I don't want this pristine National Park ruined. Please find an alternative.

Response: The Pinedale RMP will not allocate any uses in the National Parks. No National Parks are located within the planning area.

Comment: I am concerned for the Yellowstone Wilderness and its wild life.

Response: There are no wilderness areas designated by Congress within the Pinedale BLM planning area. In the two small existing wilderness study areas, no oil and gas leasing or drilling would be permitted.

Comment: Please be much more cautious in your approach to opening wilderness to such pollution. THere are very few places where the sky is clean. Please don't let Yellowstone lose its clean sky and environment.

Response: No wilderness areas are present in the planning area. There are two small wilderness study areas. No decisions opening these areas to any surface disturbing uses are considered in the EIS.

Comment: There should be consideration of possible adverse effects on the wilderness experience in surrounding areas. This project is close to Grand Teton National Park and the Bridger-Teton Wilderness.

Response: Consideration of impacts to surrounding areas is included in the Cumulative Impacts analysis in Section 4.19.

Protection of Lands, Areas of Critical Environmental Concern (ACECs)

Comment: We do not need more oil and gas wells in this region. Just because this is beneficial to the leaders of our country does not make it beneficial to the citizens and voters. It is imperative to protect the wilderness not only for recreation and wildlife, but also for 1] future generations to enjoy; 2] create a better environment for more healthy living; 3] cleaner air and water; 4] preserving trees to generate more oxygen; 5] the trees and ground cover also maintain the rainfall and thus water supply for the area.

Response: There are no wilderness areas designated by Congress within the Pinedale BLM planning area. In the two small existing wilderness study areas, no oil and gas leasing or drilling would be permitted.

Comment: I am terribly concerned that we will never be able to recover what we destroy if serious management steps are not carried out. Animal depletion in that area is already evident from the current drilling, if careful consideration and planning is not met the decline will continue. Please safe what we have left, I understand we need fuel but these beautiful places should not suffer for our lack of consideration for when they are gone we will surely be sorry.

Response: BLM is using the best available wildlife population and habitat monitoring data. It is true that some declines in wildlife populations could occur due to other land uses. Mitigations and best management practices included in the RMP are intended to maintain viable wildlife populations.

Comment: Although I well understand the need for gas drilling to satisfy some of our energy needs, we must also be mindful that lands like the Upper Green Rivery Valley have been set aside as public trust and must be protected as part of that trust.

Response: BLM-administered lands in the Pinedale planning area, except for two small wilderness study areas, have not been permanently set aside from any use by any past decisions. The revised RMP EIS considers making some portions of the planning area unavailable for some uses, such as oil and gas leasing.

Comment: Future generations will benefit much more from this areas preservation than its destruction.

Response: The RMP EIS considers all impacts and benefits that would result from both consumption uses and preservation.

Comment: support the use of gas as a cleaner burning, domestically produced fuel. !0,000 well in the wilderness is too many. Don't quibble about legal status of land, the land IS Wilderness which we need for clean water and stable wild life populations.

Response: No wilderness areas are present in the planning area. There are two small wilderness study areas. No decisions opening these areas to any surface disturbing uses are considered in the EIS.

Comment: "Alternative 3", with modifications is a much more sustainable option. The BLM needs to protect all nine areas proposed for ACEC designation, as well as maintain and strengthen seasonal drilling stipulations, tighten exemptions to stipulations and set thresholds for wildlife impacts that would restrict development.

Response: To the extent that these decisions are within the scope of the RMP, they are covered in the alternatives (for example, larger buffers for sage-grouse nesting).

Comment: While the draft plan recognizes the crucial role that the Upper Green River Valley plays in providing habitat for the area's outstanding wildlife and protects land around Trapper's Point as an Area of Critical Environmental Concern (ACEC), it stops short of fully protecting the abundant wildlife and clean air that make the area so extraordinary. The BLM needs to go further and ensure protection of all nine areas proposed for ACEC designation. Furthermore the BLM should strengthen seasonal drilling stipulations, tighten exemptions to stipulations, and set high thresholds for minimal wildlife impacts that would restrict development.

Response: To the extent that these decisions are within the scope of the RMP, they are covered in the alternatives (for example, larger buffers for sage-grouse nesting).

Comment: We also want BLM to protect the two WSAs (Lake Mountain and Scab Creek) and prohibit any ORV travel within them.

Response: All alternatives in the EIS acknowledge continuation of the WSAs, which BLM does not have the power to eliminate. Two alternatives, including the Preferred Alternative, would close the WSAs to all OHV use.

Comment: Alternative 3 creates far too many Areas of Critical Environmental Concern ("ACECs") and other special management areas, including several ACEC which the BLM itself has determined do not meet the required relevance and importance criteria. See 43 C.F.R. § 1610.7-2 (2006). For example, the BLM's own analysis demonstrates that the "expanded" Beaver Creek ACEC does not meet the importance criteria. See RDMP DEIS, Appd. 4, pg. A4-2. The BLM has also not adequately justified or analyzed the significant size of the special recreation management areas proposed under Alternative 3. APC owns leasehold acreage (private and federal) that could be impacted by the BLM's proposed management in these areas. The BLM must explain how a special recreation management designation would impact operations on existing leases.

Response: Each ACEC considered in the alternatives did meet the relevance and importance criteria. Those ACECs proposed that did not meet the relevance and importance criteria, such as the Beaver Creek expansion area, are not considered in detail in the EIS (draft EIS page 2-4). Regardless of establishment of ACECs, BLM does not have the authority to prohibit development of existing, valid leases.

Comment: I therefore strongly oppose this Alternative and support instead Alternative 3 with the following revision included in its final form: All nine ACECs shall be included for special management and shall be permanently off-limits to energy development to ensure preservation of the quality of 1ife and integrity of resources, other than natural gas, which grace this region.

Response: BLM cannot make areas currently leased for oil and gas development (such as portions of the Beaver Creek, Ross Butte, White-tailed Prairie Dog, and Wind River Front areas) "permanently off-limits to energy development". Leaseholders have rights BLM is legally bound to honor.

Comment: This draft does not provide adequate environmental protection for any part of the Green River Basin. In particular it overlooks its own studies of 40 years in the upper Green River Potholes area. It does not take into consideration the reasons for placing the previous moratorium on minerals leasing on the north western Wind River Mountain front.

Response: The draft EIS fully considers protection of the Green River Potholes area and the larger Wind River Front. Two out of the four alternatives considered, including the Preferred Alternative, would make the area described unavailable for oil and gas leasing.

Comment: The entire Wind-River/Wyoming-Range Mountains fronts and foothills areas including the Upper Green River and its major drainage areas, between Bridger-Teton National Forest boundaries, should be redesignated "unavailable area" "Class I VRM Area", "ACEC", "Sensitive Area" etc. Whichever or all-applicable that provides stringent protection from industrial leasing activity/development of minerals/hydrocarbons and related mining/drilling/etc.; from at least East Fork River drainages E-SE of Pinedale/Boulder and E of Hiway-191, to N-NW of Pinedale/Cora, and E-W-N of Hiway-189 to at least Cottonwood Creek; retaining these areas' previous/current/future characters as historical/cultural, people-oriented agricultural/recreational/scenic public posterity uses, without industrialization. A "No-Surface Occupancy" and/or "Seasonal Restrictions limitations" designation may not be sufficient protection.

Response: The areas proposed would be unavailable for leasing or would be encumbered by NSO restrictions in Alternative 3. The areas available and unavailable for oil and gas leasing have been revised in the final EIS. BLM presented a reasonable range of alternatives in areas available, restricted, and not available for oil and gas leasing and development.

Comment: The Upper Green ACEC should be expanded to include at least 5 miles on either side of the Green River starting near the Town of Cora. This area has the highest significance environmentally, culturally, historically, biologically, and is at the core of character of the Pinedale Planning Area.

Response: BLM has considered your suggestion and has prepared a review of the relevance and importance criteria for this area. The area did not meet the criteria. This alternative has been added to the Alternatives Considered but Eliminated from Detailed Analysis for ACECs not proposed.

Comment: Another area shown in the Upper Green River Valley Coalition slide presentation that was not fully considered in the RMP DEIS is the Fontenelle Elk Winter Range Area. Much of the Fontenelle Area would be designated as Unavailable for future leasing pursuant to Alternative 3, which is commendable. Compare CD Slide 33 with Map 2-8. Pursuant to Alternative 4, however, most of this area would be given the minimal protection of a Minimally Developed Area. Compare CD slide 33 with Map 2-9. There are a number of reasons this entire area should be protected from any future leasing, including leasing subject to an NSO stipulation:

- Considerable portions of this area are not currently leased, meaning the BLM has a rare opportunity to protect an area from leasing and the resource management difficulties that leasing creates. Map 1-3. This also presents an opportunity to facilitate meaningful and effective off-site mitigation due to development in other areas.
- There is little in the way of existing oil and gas development in the area. Map 3-5; CD slide 35. Most the area only has a low development potential. Map 4-1.
- Significant portions of this area would be designated a Class II Visual Resource Management class pursuant to Alternative 3, and this is largely true pursuant to Alternative 4 as well. Maps 2-22 and 2-30. Not leasing in this area will make it more viable to achieve this management direction.
- Much of this area is a right-of-way avoidance area under both Alternatives 3 and 4. Maps 2-24 and 2-32. Not leasing in this area will make it more viable to achieve this management direction.
- There are sensitive cultural sites in this area and under Alternative 3 a significant area would be recognized as an important component of the Sublette Cut-off of the Oregon Trail. Maps 2-25 and 2-34. There are also significant historic sites in the area including Names Hill and Seedskeedee/Fontenelle. Map 3-1.
- There are large areas of pronghorn crucial winter range in this area. Map3-15.
- A significant portion of the area is crucial mule deer winter range. Maps 3-16, 3-19.
- Almost the entire area is crucial elk winter range.
- Much of the area has at least two and in some areas three overlapping crucial ranges, some the greatest concentrations of overlapping crucial ranges in the Pinedale Field Office. CD slide 17.

Given this remarkable concentration of biological and cultural values, all of the Fontenelle Area should be designated as Unavailable for future leasing. The loopholes currently present in the provisions applicable

to Alternative 3, particularly allowance for conversion to an Intensively Developed Field, should be eliminated. And, BLM should exert its retained rights on existing leasing by taking actions that include but are not limited to requiring phased development, directional drilling, and full compliance with wildlife protective stipulations, as discussed above.

Response: Additional discussion of the different oil and gas management areas, how they would work, how areas could be converted from one type of area to another, and exceptions have been added to the final EIS.

Comment: The Upper Green River ACEC of 12,270 acres should be established and unavailable to oil and gas leasing. This crucial area contains the headwaters of the Upper Green River should not be left vulnerable to oil and gas leasing.

Response: This is considered in Alternative 3. The areas available for oil and gas leasing have been revised in the final EIS.

Comment: BLM seems to have declined to designate these areas as ACECs because it feels alternative management is sufficient for these highly relevant and important fragile resources. This does not amount to "giving priority" to designating ACECs. These areas clearly meet the importance and relevance requirements of the criteria and should be designated as ACECs and afforded protection. BLM seems to assert that the language in 43 U.S.C. § 1702(a) about special management being "required" can absolve it from designating ACECs when it can find some other way to protect these lands. But such a view is not accurate. BLM can always find other ways to protect areas besides designating them as ACECs through its general multiple use authority, but such an effort thwarts the will of Congress to give "priority" to designating ACECs not other special management areas, which are often purely of BLM's own creation with no defined management requirements.

Furthermore, any time an area is "developed" or is "used" or where "no development" must be ensured, ACEC designation is "required" because these circumstances create a need for "special management attention" so as to protect any recognized important resource values. 43 U.S.C. § 1702(a). That is, ACECs are not to be designated only when required for protection of the resources, but rather the requirement to designate attaches when development or use will occur in an area that meets the relevance and significance criteria, or if use will occur in an area that meets the criteria when no development must be ensured to protect the resources. BLM recognizes that nearly all of the ACECs at issue here are likely to be "developed" or "used" to some degree and that some of them are areas where "no development" must be ensured, and thus the special management attention of an ACEC designation is required. These lands require special management attention to protect and prevent irreparable damage to the resources in these areas that BLM recognizes are important and relevant. The BLM recognized in the table presented in Appendix 4 in the RMP DEIS that many of the ACECs considered met BLM's relevance and importance criteria. These areas should be designated ACECs regardless of which alternative is chosen for the RMP.

Response: For areas that meet the ACEC relevance and importance criteria, BLM is required to analyze designation of the ACEC in at least one alternative of the EIS. BLM is not required to establish as an ACEC every area that meets the relevance and importance criteria. Protections for all areas that meet the relevance and importance criteria, and for some areas that meet only one criterion, are included in the Preferred Alternative.

Comment: We would like to see confirmed non-waiveable special management area designations where existing non-developed oil and gas leases will be allowed to expire, be traded, or sold, and permanently retired from leasing.

Response: The alternatives present analysis of a number of areas that could be made unavailable for leasing. Undeveloped oil and gas leases are always subject to expiration, unless included in a unit. The preferred alternative has been revised in the final EIS to allow for exchange of undeveloped leases in areas unavailable for new leasing.

Comment: I am requesting that BLM incorporate the following additional direction into the new RMP and into each of the alternatives evaluated in the EIS. Areas of Critical Environmental Concern Appendix 4 in the DEIS lists PRA lands that were considered for ACEC designation. Many of these areas are of environmental concern due to water issues. I concur that the New Fork Potholes area should be designated an ACEC. The existing Beaver Creek and Rock Creek ACECs both provide habitats for the Colorado River cutthroat trout and should continue to be managed as ACECs under the new RMP. However, BLM claims the proposed expansions of these the ACECs - to protect additional CRCT habitat did not meet the "importance" criteria for ACEC designation. Therefore, BLM is not proposing to expand either ACEC. Native cutthroat trout - particularly the CRCT - are in serious trouble throughout their range due to hybridization, competition with non-native trout, and habitat degradation. Any remaining relatively pure stocks of native trout are therefore of considerable importance. BLM should expand the Beaver Creek and Rock Creek ACECs to protect the additional CRCT habitats.

For the same reasons, the BLM should designate as ACECs the North Cottonwood Creek watershed, South Cottonwood Creek watershed, South Beaver watershed, and portions of the Wyoming Range Front that provide habitat for native trout. None of these areas were pro-posed for ACEC status for the new RMP because the BLM asserted they do not meet the "importance" criteria. Again, protection of native trout is critically important for conserving these species and to avoid the need for federal listing under the ESA.

Response: ACEC status of itself is just a label and would not provide any protection to fish habitats. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve the desired result. This protection can be implemented without creating additional ACECs. Management of wildlife habitats was conducted in the planning area as a cohesive whole, not limited to ACEC areas. The alternatives, including the Preferred Alternative, include objectives and actions to maintain suitable Colorado River cutthroat trout (CRCT) habitats. The ACEC relevance and importance reviews are available on the RMP website at http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf. BLM analyzed a reasonable range of alternatives regarding ACEC establishment and protections of special areas.

Comment: "Crucial Watersheds," highly sensitive watersheds and other "Areas of Hydrologic Concern" - including Soap Holes Basin and the Tiptop Watershed (see figure 6) - should also be evaluated for ACEC designation. The DEIS does not do this for any alternatives. Areas that have existing or past human uses are still eligible for ACEC designation, and this management designation does not necessarily preclude future uses, provided they will protect the watershed values.

Response: Your proposal to consider these areas for ACEC status has been addressed. The ACEC relevance and importance reviews are available on the RMP website at:
http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf.

Comment: The DEIS also fails to consider lands for ACEC that are critically important for domestic water supplies. This includes potable ground waters and recharge areas. The eastern flanks and northwest end of Mesa and the lands around Boulder Lake should be considered for ACEC designation for ground and surface water protection. Other areas identified as critical water-sheds and recharge areas for the towns of Big Piney/Marbleton and La Barge should also be considered for ACEC designation.

Response: Your proposal to consider these areas for ACEC status has been addressed. The ACEC relevance and importance reviews are available on the RMP website at http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf.

Comment: Another surprising omission from the ACEC candidate list is the Upper Green River corridor. This is a designated Class 1 "Outstanding" surface water and one of the top trout fisheries in the State. It is critically important to wildlife and to many residents for recreation, irrigation water, and employment (e.g., fishing guides). Roughly 10 miles of this river corridor flows through BLM lands from north of Cora to Warren Bridge. This segment should be designated an ACEC. Under Alternative 4, this segment would be managed as a Special Recreation Management Area (SRMA), which would be a less desirable designation.

Response: The Upper Green River corridor, to the extent that it is managed by BLM, is included as an ACEC in Alternative 3. No significant difference in impacts to the area was determined in Chapter 4.

Wild and Scenic Rivers (WSR)

Comment: BLM's proposed RMP (Alternative 4) would recommend four river segments in the PRA for inclusion in the National Wild & Scenic River System: the Upper Green, East Fork, Scab Creek, and Silver Creek. I support these recommendations and feel they are well deserved; special management of these areas will also protect high quality surface water resources. I believe the corridors should be expanded, however. As is evident from Map 2-29 of the DEIS, three of the W&S corridors BLM has proposed are relatively small and will not necessarily protect the wild, scenic or recreational qualities of these segments.31 For East Fork, Scab Creek and Silver Creek, BLM appears to have limited the recommended segments to the first encounter of state or private lands as the rivers flow out of the Wind River Mountains. The agency has the discretion to recommend W&S status for longer segments that cross through state lands.

Response: BLM has proposed for WSR status those segments that passed through both the eligibility and suitability screenings for potential for inclusion in the WSR system. Segments downstream were not found to be eligible and/or suitable for inclusion in the WSR system. The WSR report completed for the segments is available at http://www.blm.gov/rmp/wy/pinedale/documents_WSR.html.

Comment: PAGE:2-157 to 2-158, SECTION: East Fork & Green River units, RECOMMENDED CHANGE: Objective 9 Conduct a study in accordance with BLM guidance of potentially eligible and suitable segments for designation as wild, scenic or recreation rivers. EXPLANATION: 8351 - Wild and Scenic Rivers - Policy and Program Direction for Identification, Evaluation, and Management sets forth the factors that BLM must consider in a WSRA study. BLM does not have the discretion to pick and chose which of the factors it will consider. The WSRA report done by outside contractors did not allow the manual and thus BLM needs to start anew and separate the report from the RMP FEIS. This is important because the WSRA report entirely omitted existing water rights and impacts of proposed management on such rights. The local governments understand from other BLM offices there was a mistaken understanding that classification would not affect existing water rights. This is disproved by the same Handbook which expressly prohibits any structures or rights of- way associated with the exercise of water rights. In short, if one cannot divert water, one cannot use the water right. Failure to follow WSRA study guidelines is a fatal flaw for the RMP. BLM also does not have the discretion not to follow agency manual and handbooks. Robert Glenn, 124 IBLA 104, 108 (1992); Ellis Ferguson, 69 IBLA 352 n.2 (1983).

Response: These issues are addressed in the suitability analysis of the Wild and Scenic Rivers Report completed in 2003 and referenced in Appendix 24. The report is available at

http://www.blm.gov/rmp/wy/pinedale/documents_WSR.html. The suitability analysis was completed based on the 13 determination factors contained in BLM-M-8351 Section 33.

Comment: 3.) Wild and Scenic river designation or management to preserve those attributes has too many negative affects to agriculture, including: threatening state water law and excluding livestock grazing in the designated zone. The RMP should designate no streams for Wild and Scenic River management.

Response: Wild and Scenic River designation would not remove water rights, because BLM does not have this authority. No closures to livestock grazing in the Wild and Scenic Rivers are contemplated in the EIS.

Comment:PAGE: 3-137, SECTION: 3.18.3, RECOMMENDED CHANGE: Delete and Replace as Follows: 3.18.3 Wild and Scenic Rivers The Wild and Scenic Rivers Act of 1968 (WSRA) was passed to protect free-flowing rivers or river segments and their related outstandingly remarkable values (e.g., scenic, recreational, geologic, fish and wildlife, historic, cultural). The WSRA establishes three WSR classifications: Wild, Scenic, and Recreational. The BLM is required to evaluate all rivers located on land under its administration to determine whether the rivers are eligible and suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS). BLM will conduct a review of free-flowing waterways in the planning area within 5 years from the signing of the Record of Decision. [BLM has conducted a review of all BLM-administered public lands along waterways in the planning area for their eligibility and suitability for inclusion in the NWSRS (Appendix 24). The findings of the review have been used in this RMP revision.] (STRIKEOUT) EXPLANATION: The WSRA Report prepared for the RMP does not conform to BLM Manual Direction. BLM must follow its own direction. The Manual DM 8351 directs BLM to either include inventory and suitability as part of the RMP or if not done, then to do it separately. Because the WSRA report entirely omitted categorization of existing water rights and their impacts on river segments, the support (or lack thereof) of state and local governments, and the congressional delegation, the report is flawed. DM 8351.43B. See Comments # 32,199.

Response: These issues are addressed in the suitability analysis of the Wild and Scenic Rivers Report completed in 2003 and referenced in Appendix 24. The report is available at:
http://www.blm.gov/rmp/wy/pinedale/documents_WSR.html. The suitability analysis was completed based on the 13 determination factors contained in BLM-M-8351 Section 33.

Comment: PAGE: 4.36, SECTION: 4.5.7, RECOMMENDED CHANGE: The Green River WSR Unit would be an exclusion [avoidance] (STRIKEOUT) area for ROWs; in other words, a ROW could go through this ACEC but only with intensive management in the form of mitigation and stipulations placed on the grant. EXPLANATION: BLM manual classifies this as exclusion since any structures are prohibited. If recommended for scenic then cannot build. More importantly, WSRA study fatally flawed and must be severed from RMP. See Comment Ch. 2-#32.

Response: As structures are not prohibited in this area but require mitigation, it would be an avoidance area. Structures can be built on a WSR segment classified “scenic”.

Comment: PAGE: 4-76, SECTION: 4.7.1, RECOMMENDED CHANGE: DELETE [Under this alternative, the Wind River Front MA (201,240 acres) would include the East Fork River WSR (1,130 acres), the Silver Creek WSR (860 acres), and the Scab Creek WSR (1,350 acres). The MA, including the listed WSRs, would be unavailable for fluid mineral leasing. Impacts and management of existing leases would be the same as those described for the MA under Alternative 3. (Note: There are no existing leases in the WSRs.) The development potential for CBNG and non-CBNG in the MA varies from low to no potential(Tables 2-32 and 2-33).] (STRIKEOUT) EXPLANATION: See Comments ##Ch 2-30 (WSRA

study deficient and flawed); Ch. 2- #9 (must withdraw under §204 of FLPMA); see also Comments April 2006 and memorandum.

Response: This paragraph is not related to the WSRA study and should be retained. These impacts result from the proposed WSR segments being contained within the Scab Creek Wilderness Study Area.

Comment: PAGE: 4-76, SECTION: 4.7.1, RECOMMENDED CHANGE: DELETE [The Green River WSR (7,100 acres) would be available for leasing with an NSO stipulation. The WSR would be closed to geophysical operations unless any impact from such operations could be adequately mitigated. The impacts on mineral development from the NSO designation would be the same as previously described for NSO areas. The WSR contains existing oil and gas leases. Management of these leases would be the same as previously described for existing leases in areas with proposed NSO designations or unavailable for leasing designations.] (STRIKEOUT) EXPLANATION: WSRA study insufficient, Comment Ch.2-#30. Withdrawal necessary. Ch. 2-#9.

Response: These issues are addressed in the suitability analysis of the Wild and Scenic Rivers Report completed in 2003 and referenced in Appendix 24. The report is available at http://www.blm.gov/rmp/wy/pinedale/documents_WSR.html. The suitability analysis was completed based on the 13 determination factors contained in BLM-M-8351 Section 33.

Comment: PAGE: 2-154, SECTION: WSRA, RECOMMENDED CHANGE: Delete WSRA section, EXPLANATION: RMP and related report do not conform to BLM Handbook on WSRA 8351 - Wild and Scenic Rivers - Policy and Program Direction for Identification, Evaluation, and Management. The report fails to identify valid existing water rights and impacts on the exercise of the water rights. BLM direction prohibits structures within ¼ mile of the water body, and structures are the only feasible means of exercising water rights. In addition, the report fails to address local and state government support or lack thereof, congressional support, and existing landownership. These are not discretionary items and the failure of the contractor to comply with BLM direction precludes inclusion of the WSRA process in the RMP. Instead, BLM must postpone WSRA study until a proper analysis is done.

Response: These issues are addressed in the suitability analysis of the Wild and Scenic Rivers Report completed in 2003 and referenced in Appendix 24. The report is available at http://www.blm.gov/rmp/wy/pinedale/documents_WSR.html. The suitability analysis was completed based on the 13 determination factors contained in BLM-M-8351, Section 33.

Comment: Based on the BLM's definition for areas to be designated as ACEC's each area has to go through a series of criteria evaluation where their relevance and importance as a resource is defined and attributed through a series of numerical attributions.

However, it is with concern that TU and WWF observe that many of these proposed ACEC's have been turned down from designation using subjective reasoning rather than thoughtful scientific and technical management analysis. Some areas proposed for ACEC designation in the DEIS contained sensitive and vulnerable species and even had an importance and relevance criteria designation, but were turned down because BLM determined that management actions should apply to the area as a whole and not to a special area (see *Evaluation Report)*. This logic tends to fail the test since the Pinedale BLM office has done little to manage the resource area as a whole but rather manages it now just for oil and gas drilling. Under this management-of-the-whole strategy for these special areas it almost guarantees that the current and future energy development pace and associated impacts will destroy the special and unique values of these areas.

The BLM should be implementing much more of a forward thinking process that involves looking at cumulative and landscape conservation planning techniques for assigning ACEC designation to these areas. As more and more development encroaches on wildlife and fisheries habitat, the importance of these special areas will increase. BLM should reconsider their ACEC recommendations and assign ACEC status to all of the proposed areas plus consider the designation of additional ACEC's. This is the right thing to do and can go a long way toward ensuring that there will be available intact habitat in the future.

The Wyoming Game and Fish Department (WGFD) is the state's authority for guiding and enforcing the statutes regarding wildlife management on lands in Wyoming. As the owner of a significant percent of federal lands in Wyoming containing the habitat that wildlife depend on, the BLM is charged with assisting the WGFD in meeting and accomplishing their goals. Indeed, one of the main goals of the Federal Land and Policy Management Act (FLPMA) that directs the BLM is to "preserve and protect certain public lands in their natural condition" and provide "food and habitat for fish and wildlife". The Pinedale BLM must recognize the crucial role they play in the future of wildlife and natural resources in this state.

Response: BLM analyzed a reasonable range of alternatives regarding ACEC establishment and protection of special areas. Consideration of impacts to surrounding areas is included in the Cumulative Impacts Analysis in Section 4.19.

Each ACEC considered in the alternatives did meet the relevance and importance criteria. Those ACECs proposed that did not meet the relevance and importance criteria, like the Beaver Creek expansion area, are not considered in detail in the EIS (draft EIS page 2-4). Regardless of establishment of ACECs, BLM does not have the authority to prohibit development of existing, valid leases.

ACEC status of itself is just a label and would not provide protection of wildlife migration corridors. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve protection. This protection can be implemented without creating these large ACECs. Management of wildlife habitats was conducted in the planning area as a cohesive whole, not limited to ACEC areas.

For areas that meet the ACEC relevance and importance criteria, BLM is required to analyze designation of the ACEC in at least one alternative of the EIS. BLM is not required to establish as an ACEC every area that meets the relevance and importance criteria. Protection for all areas that meet the relevance and importance criteria, and for some areas that meet only one criterion, are included in the Preferred Alternative.

Comment: Rock Creek ACEC: TU and WWF support the ACEC designation for the Rock Creek ACEC as it is defined in Alternative 3 in the DEIS. This existing ACEC area has been recognized by the BLM as having both relevance and importance criteria for scenic, fisheries and wildlife values. Alternative 3 remains more specific in protection definitions and does not decrease the acreage amount as it has been done in Alternative 4. The value as crucial aquatic habitat for pure conservation populations of Colorado River cutthroat trout (CRCT) is vital to the continued survival of this trout species. The CRCT is considered a Wyoming sensitive species, has special status under the WGFD's management for conservation species, and the CRCT populations within this ACEC have been used as brood stock for other reintroduction efforts within the Pinedale resource planning area and the state. This ACEC also contains important mule deer, moose and elk migration corridors, moose and elk parturition areas, and crucial winter range for moose and one of two elk herds in the area that continue to winter on native range (WGFD). The protection of visual resources through a Class I VRM management designation should be a significant consideration since the recent ozone contamination issues that are plaguing the Pinedale area will only increase with the proposed increase in more than 4,000 natural gas wells.

Response: Thank you for your comment. The acreage removed from the ACEC in Alternative 4 is not part of the Rock Creek watershed and would not impact the CRCT population.

Comment: Beaver Creek ACEC: TU and WWF support the ACEC designation for the Beaver Creek ACEC as it is defined in Alternative 3 in the DEIS. Meeting the relevance and importance criteria for fisheries and wildlife values, CRCT conservation populations and elk parturition areas have the two primary values identified. Yet according to WGFD, this area also supports mule deer and moose crucial ranges, moose migration corridors, moose parturition areas and sage grouse leks. We support the expansion recommendation described in the DEIS (p.2-107) under Alternative 3 from the original 3,548 acres (*Evaluation Report*) to the proposed 10,160 acres. However, the value of this area as a unique and special habitat presence and its popularity for hunting and fishing should ensure that the ACEC designation include restrictions to geophysical activities to foot traffic only and limit the oil and gas leasing to existing valid rights with no further availability to future leasing. This would help ensure the future stability of those sensitive and potentially threatened wildlife and fisheries species and help prevent them from being federally listed.

Response: The Beaver Creek ACEC area, including the expansion area considered in Alternative 3, is fully leased for oil and gas development. The area includes several producing wells, and there is no indication that the leases will expire in the foreseeable future. The area contains existing maintained roads for access to existing wells. It is reasonable to allow use of these roads in conducting geophysical exploration and other activities. BLM feels that conservation of CRCT habitat should occur over its entire range, not in restricted areas with ACEC designations.

Comment: New Fork Potholes ACEC (proposed): The unique qualities of the New Fork Potholes has been recognized by the BLM from a scenic, fisheries and wildlife, and geologic aspect and we are eager to support this area as an ACEC designation. Alternative 3 provides significant protection measures in its management actions and would help support the special qualities and features of this area.

Response: The management actions included in the proposed plan are the same as those proposed for Alternative 3 for the New Fork Potholes proposed ACEC.

Comment: Trapper's Point ACEC (proposed): This world class migration area for mule deer and pronghorn antelope should be protected with the measures outlined in Alternative 3, which includes an increase from the original acreage amount of 3,988 (*Evaluation Report)* to 9,540 acres (DEIS 2-108). However, the timing restrictions in Alternative 3 (Action f-2-108) should actually be changed from the January 15th date to November 15, as this makes biological sense in protecting crucial winter range. Alternative 4 uses the November 15th timing restriction. Both TU and WWF do not support the Alternative 4 preferred alternative since it decreases the acreage size to 4,160 acres.

Response: BLM recognizes the value of the Cora Butte area as a staging area for animals preparing to move south through the Trapper's Point migration bottleneck. In the final EIS, although it would not be included in the Trapper's Point ACEC, the Cora Butte area would be unavailable for oil and gas leasing. The area is currently unleased. BLM feels that the protections provided in the proposed plan are appropriate for protecting the area and providing for continued use of the bottleneck by big game species.

Comment: White-tailed Prairie Dog ACEC (proposed): The BLM should reconsider establishing this ACEC under Alternative 4 since the agency acknowledges the white-tailed prairie dogs' sensitive nature and its precarious population status (reduced from as much as 90% of its former range) (*Evaluation Report*). Under Appendix 4 in the DEIS, the BLM's analysis places high values to the relevance and importance criteria. Without the protections offered in Alternative 3, the potential for loss of this species' habitat remains high. Though Alternative 3 offers some specific language for management, consideration

should be given to providing stronger and more specific management actions other than just offering "intensive management" actions where oil and gas leasing will occur.

Response: BLM is unable to stipulate more specific actions for protection of prairie dog habitats, because many of the locations have not yet been determined. It is the intention of BLM to protect the habitats of white-tailed prairie dogs. The management actions included in the proposed plan for protection of the habitats are similar to those for the ACEC in Alternative 3, with the exception of land acquisitions. Surveys for presence of prairie dogs are required by USFWS. BLM believes that the management actions for protection of white-tailed prairie dog habitats as included in Alternative 4 are appropriate.

Comment: Upper Green River ACEC (proposed): The importance of the Upper Green River ACEC for wildlife, fisheries, recreation, and scenic values plus its valued hunting and angling activities makes this a high value ACEC. And while it's not even included in the Appendix 4 evaluation table (A4-2) of the DEIS, it receives a strong evaluation with specific management actions in the DEIS discussion under Alternative 3 (DEIS 2-108). The analysis conducted for this area to be considered an ACEC met all of BLM's relevance and importance criteria in the *Evaluation Report* yet for some unknown reason, the BLM chose not to consider it under its preferred alternative 4. This subjective and inconsistent analysis of these ACEC designations is alarming and confusing.

Equally important but not acknowledged by the BLM in any of their analysis is the presence of Colorado River cutthroat trout in the Green River and tributaries located within the boundaries of this proposed ACEC (WGFD; USFS). Core conservation populations of CRCT are known to exist in these waters and protection actions to maintain these populations should be enacted under the DEIS alternatives.

Response: Table A4-1 has been corrected to include a summary of the Upper Green River ACEC analysis. For areas that meet the relevance and importance screening, BLM is required to consider ACEC designation in at least one alternative of the EIS; however, BLM is not required to propose designation of the ACEC in the preferred alternative. The Upper Green River area would be managed as a Special Recreation Management Area in the proposed plan. The area would be unavailable for oil and gas leasing, would have restrictions on surface disturbing activities, and vehicle use would be limited to designated roads. In addition, recreation use would be managed to preserve and coordinate with the recognized natural values of the area. BLM feels this is an appropriate approach to management of the many values in the Upper Green River area.

Comment: CCC Ponds ACEC(proposed): The importance of the CCC Ponds for providing migration corridors for mule deer is recognized in the BLM's *Evaluation Report* but the Report lacks the recognition that this area provides for moose and elk migration corridors. Nor does BLM recognize the important crucial winter range for elk and moose and parturition areas for elk and moose (WGFD). These quality habitat conditions are now being threatened by all types of development and increased recreation use, placing these areas in an even more vulnerable status. Due to its location and direction of prevailing winds, this area is susceptible to the heavy ozone impacts now occurring in the Pinedale area. This area should have full ACEC designation as described in Alternative 3 of the DEIS.

Response: ACEC designation would not provide the protections discussed. Because of the recreation values, the CCC Ponds area would be managed as a Special Recreation Management Area in the proposed plan. BLM recognizes the important values present in the CCC Ponds area. Because of these values, the area would be unavailable for oil and gas leasing. It would also be closed to land sales and locatable mineral entry (a withdrawal would be pursued). Ozone impacts are addressed in the Pinedale RMP and in the Anticline final SEIS and should become less prevalent over the next few years. Crucial winter range information is obtained from the WGFD. The only crucial range present in the area of the

CCC Ponds is crucial winter range for mule deer. If wildlife habitat information is updated by the WGFD, BLM maps would also be updated.

Comment: Ross Butte ACEC (proposed): No mention of important wildlife or fisheries values are made in the BLM's ACEC analysis but according to the WGFD this area contains crucial pronghorn antelope and mule deer habitat, sage grouse leks, and important migration corridors for pronghorn. Ross Butte also overlooks the Green River which provides important fisheries values in the area but has not been mentioned in the evaluation.

Response: The Ross Butte area does include crucial winter range for both mule deer and pronghorn. No sage-grouse leks have been documented in the area; however, there is some evidence that sage-grouse use this area in the winter. For these reasons, and to protect the resources cited in the comment, BLM proposes the Ross Butte Management Area. In the proposed plan, the Ross Butte area would be unavailable for oil and gas leasing, development of communication sites would be limited to the existing site on Ross Butte, and OHV use would be limited to designated roads. Seasonal restrictions would also apply in crucial winter range areas. These actions would protect the important values present in the Ross Butte area.

Comment: Consideration to the impact to sportsmen and outfitters and guides should be evaluated when trying to determine whether special areas should be put aside for the future of wildlife and its habitat. Equally important are the high fishing values these areas contain in terms of sports fisheries. With respect to both fishing and hunting activities, these areas have more than locally significant qualities and affect both local businesses and statewide economics. These factors should be a consideration when evaluating these areas' importance values.

The BLM has determined that the above discussed areas met their importance and relevance criteria in order to be included as ACEC designation, both through the ACEC Evaluation Report and in the DEIS and Appendix 4. While the analysis substantiates the reasoning for inclusion to an ACEC they do not discuss the reasoning or analysis for rejecting or decreasing an acreage amount of an ACEC. By limiting size amounts through acreage reductions in most of the Alternative 4 selections, it potentially increases the loss of habitat by allowing energy development into these areas. Based on the current management actions and monitoring being done on the Jonah and the Pinedale Anticline, the BLM does not provide much credibility or assurances to the public that these proposed ACEC's will receive special management attention if they do not get selected for an ACEC designation. TU and WWF therefore emphasize the support of ACEC designation for all six proposed ACEC's and the new existing ACEC's as they are presented in Alternative 3 in the DEIS.

Response: ACEC designation would not provide the protections discussed. For areas that meet the relevance and importance screening, BLM is required to consider ACEC designation in at least one alternative of the EIS; however, BLM is not required to propose designation of the ACEC in the preferred alternative. BLM has determined through the planning process that the important values found in these areas can be appropriately protected and managed without applying the ACEC designation. It is the management actions and stipulations applied in the plan, not the ACEC label, that provide for protection of the important resources present.

Comment: TU and WWF feel that there were numerous proposed ACEC's that should have received ACEC designation based on their unique and special wildlife, fisheries, recreation and scenic values. These areas were either dismissed with no reasoning other than they did not meet the criteria or they met the criteria but were consequently dismissed as an ACEC option. The BLM needs to provide more detailed analysis as to why these areas, many of which not only contain wildlife and fishery values but contain very important habitat values, were dismissed.

Beaver Creek Expansion proposal, Miller Mountain proposal, Muddy Creek proposal, North Cottonwood Creek proposal, Rock Creek Expansion proposal, LaBarge Elk Winter Range, South Beaver Watershed proposal, South Cottonwood Creek proposal, The Mesa proposal, Wind River Front proposal and the Wyoming Range Front proposal were all areas that were evaluated both in the ACEC *Evaluation Report* and in Appendix 4 of the DEIS. Many of these areas passed the relevance criteria test with many values but were determined not to have importance and thus weren't recommended. TU and WWF would ask that the BLM define what "importance" is, since it seems to vary among each ACEC designation.

Response: For the purpose of ACEC proposal evaluation, the importance criteria include the following:

- Has more than locally significant qualities, which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource.
- Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.
- Has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA.
- Has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare.
- Poses a significant threat to human life and safety or to property.

BLM attempted to focus ACEC designations on those areas that stood out as being especially rare or fragile. The Trapper's Point and New Fork Potholes ACEC proposals fit into that category.

Comment: The Beaver Creek Expansion and the Rock Creek Expansion proposals contain important core conservation populations of CRCT, crucial big game habitat and migration corridors, and valuable recreation, hunting and angling opportunities. They failed the importance value criteria although from a biological basis, they should not have. Both these expansion areas have qualities or circumstances that make them fragile or sensitive and vulnerable to adverse change with CRCT populations, elk parturition areas, mule deer, moose and elk crucial habitat and migration corridors, and sage grouse leks (WGFD). Studies have shown that oil and gas development are impacting wildlife habitat and recent ozone and water contamination issues brought about by oil and gas development are only going to increase with the proposed development scenario (EPA letter, 2008; BLM DEIS RMP).

For the proposed North Cottonwood Creek and South Cottonwood Creek ACEC's, TU and WWF request that the BLM reevaluate the wildlife and habitat qualities of this area. WGFD recognizes important and crucial big game habitat for mule deer, moose and elk. They also have identified parturition areas for moose and elk in these areas, plus important migration corridors for mule deer, pronghorn, moose and elk. Observations of sage grouse leks and brooding areas are also known to have occurred in these areas. These open spaces offer some of the last of vast undisturbed areas and should be given a more thorough analysis for ACEC designation.

The remaining proposed areas that were rejected for ACEC designation (LaBarge Elk Winter Range, South Beaver Watershed proposal, South Cottonwood Creek proposal, The Mesa proposal, Wind River Front proposal and the Wyoming Range Front proposal) all have significant and numerous values as illustrated by the BLM's *Evaluation Report*. It is difficult to understand why some areas which have all the attributes that the above six have are considered worthy of ACEC designation yet these are not.

Most of the waterbodies within these six proposed areas have important conservation populations of CRCT; indeed, some have genetically pure populations which is quite important in light of the fact that CRCT have been eliminated from 90% of its historic range (*Evaluation Report*; WGFD). The potential for contamination of the streams and rivers that contain CRCT in these areas remain high should energy development be allowed. Benzene contamination in oil and gas industrial water wells have been identified in 88 of 230 wells in the Pinedale Anticline area (EPA letter 2008; BLM DEIS) and despite testing, the source of contamination is still unknown (BLM 2008). By offering protection measures on these important wildlife and fisheries habitat areas and working toward developing more intensive management action plans for areas that are being developed, it is possible to maintain available quality habitat within the Pinedale BLM region.

Both TU and WWF respectfully request that the above six proposed ACEC areas be reconsidered for ACEC designation. Protection in various forms need to be enacted now and not once an area has been severely impacted or destroyed. Maintaining connectivity, landscape attributes, off-site mitigation areas and wildlife corridors help keep many wildlife and fish species off the endangered species list. The lack of substantial data analysis in rejecting these areas for ACEC designation is unacceptable to TU and WWF and the BLM needs to look at more aggressive approaches to conserving these diminishing wildlife habitats within the Pinedale Resource Area.

Response: Changes in the proposed plan regarding areas available for oil and gas leasing should address some of these concerns. It continues to be the feeling of BLM that, for instance, historic and potential CRCT habitats are spread throughout the planning area, and that these habitats should all be managed for the health of CRCT; management should not be limited to specific ACEC areas.

Comment: There are several unique areas within the Pinedale BLM Resource boundaries that offer the BLM an opportunity to provide protection measures while not impacting oil and gas leasing rights. The Ryegrass Area, Bench Corral (which includes South and North Cottonwood proposed ACEC's previously mentioned), and Fontenelle Elk Winter Range all have important wildlife and fisheries values, high recreation values, and have not been leased entirely out by oil and gas. This would provide an opportunity for the BLM to apply protection measures with minimal complications.

We would also recommend that these areas be off limits to any future leasing and this would serve to coincide with the Western Governor's Association's Oil and Gas Recommendations of November 2007, the Wyoming Landscape Conservation Initiative and the many stakeholders that seek to support actions which limit leasing and help wildlife and fisheries. All three areas also offer native crucial winter range for elk and by placing protection from development on these areas, the potential for decreasing incidents of brucellosis outbreaks would benefit producers, the state of Wyoming and wildlife.

Response: Changes in the areas available for oil and gas leasing in the proposed plan are responsive to these concerns.

Comment: With all that is being planned for the Pinedale area as well as other oil and gas projects throughout this state, it is imperative to be thinking ahead of this development and begin setting aside some areas that offer uncontaminated habitat, free of the heavy impacts from trucks, pipelines, compressor stations, noise, air emissions, and contaminated waters.

Response: Changes in the final SEIS, which was released to the public on June 27, 2008, address the EU-3 rating. Establishment of ACECs would not correct issues with ozone, visibility, and groundwater that are related to gas development in the Anticline and Jonah fields.

Comment: The proposed Wind River Front ACEC meets the "relevance criteria" for scenic and recreational values, fish and wildlife habitat values, and geologic values and "importance criteria" for fish and wildlife habitat values. However, the BLM has proposed for Special Management Area (SMA) designation for this area. The expanding level of energy development throughout the Upper Green River Basin threatens our ability to maintain current big game population objectives in future years. Management of wildlife populations in the Upper Green River Basin will require large contiguous areas of habitat set aside with management assurances from an ACEC designation. ACECs are the principal statutory tool by which the BLM can assure important surface resources are responsibly managed and sustained.

Designation of the Wind River Front as an SMA, as currently proposed, would weaken the needed wildlife management emphasis for that area. An SMA designation is not defined by statute or regulation and may not have sufficient standing in future BLM planning and management actions. The ACEC provision will afford the strongest mandate to responsibly and effectively manage important wildlife resources affected by oil and gas development. If the Wind River Front becomes an SMA, the BLM will need to provide strong assurances that an SMA designation will receive meaningful consideration in planning, leasing, and permitting decisions.

Response: ACEC designation would provide no special restrictions or set asides in the Wind River Front area. BLM recognizes the resource values present in this area. Management actions in the proposed plan of the final EIS provide for the area to be unavailable for oil and gas leasing. Restrictions would also be placed on geophysical exploration, location of centralized compression or other industrial facilities, and other surface disturbing activities. It is the management actions and restrictions placed on an area, not its label, that provide the management direction and protection of resources.

Comment: In the Final EIS for the Pinedale Resource Area—Resource Management Plan (RMP), the Wind River Front is included in the proposed "unavailable management zone" for oil and gas leasing, but there are no assurances that the area could not be converted to a "traditional oil and gas zone" or "intensively developed oil and gas zone". This area contains vital big game migration corridor and critically important sage-grouse habitats (leks, nesting and brood rearing, and wintering).

Response: As specified in the EIS, an RMP amendment, including additional NEPA analysis, would be required to effect this conversion.

Comment: Although the DRMP refers to maintaining the validity of pre-existing authorizations and lease rights, there are statements in the DRMP which indicate that new restrictions can be added as Conditions of Approval (COAs) to pre-existing authorizations, and that there may even be a *"disallowing of activities"* under existing property rights in some cases (p. 4-229). As stated in the Operators' original comments on the DRMP (Comment letter dated June 15, 2007 at p. 3), a definitive statement regarding the validity of existing lease-hold rights and prior authorizations and that those will neither be infringed nor compromised needs be included in the description of all alternatives and carried forth in the Final RMP (FRMP).

Response: BLM does not have authority to alter the terms of existing oil and gas leases. Text on page 2-10 of the final EIS (2-9 of the draft EIS), in the Actions Common to All Alternatives, makes this clear. However, BLM has authority to apply COAs at the APD or site-specific approval stage to provide needed protection of surface resources.

Comment: Operators' prior concern with the lack of detail of the maps and charts is underscored by the new ACECs in this Supplemental. The lack of detail in these maps and charts makes it impossible to determine the extent of the restricted areas and potential impacts in order to allow for an effective analysis

of the alternatives. Operators again request that BLM provide more meaningful detail on the maps for all alternatives, and particularly on the Special Management Area maps. The maps do not capture the differences between the differently managed fields within the Alternatives and the varying restrictions.

Response: The supplemental NOA does not contain any new information that was not included in the draft EIS. It includes only information that was not included in the original NOA for the draft EIS. The maps provided are appropriate for analysis of the alternatives at the planning area scale. Detailed map information is available at the Pinedale BLM office for use in comparing proposals to specific leases.

Comment: Operators are concerned with the large number of acres that will be severely restricted or closed to energy development and other multiple uses. According to the Reasonably Foreseeable Development (RFD) document, nearly 60% of acres identified as Very High, High or Moderate hydrocarbon potential have stringent restrictions (i.e. No leasing, No Surface Occupancy (NSO) or Controlled Surface Use (CSU)) under Alternative 3. Under Alternative 4, over 35% of the potential hydrocarbon acres are encumbered by major restrictions. If seasonal limitations are included, nearly 75% of the moderate to very high hydrocarbon potential acres are restricted under Alternative 4, the BLM's preferred alternative. [See attached chart]. The ACECs and other special management areas contribute substantially to this loss of hydrocarbon potential. The DRMP does not adequately address the amount of resources that will be potentially unrecoverable under each category nor does it fully disclose all the management actions which will limit oil and gas development. Operators request that the BLM quantify the magnitude of the lost energy reserves caused by the restrictions.

Response: BLM has authority to impose reasonable restrictions on oil and gas development that are necessary to protect or mitigate impacts on surface resources. The resources that would not be recovered under each alternative are addressed in the Minerals Impact Analysis sections of Chapter 4.

Comment: BLM provides weak and therefore inadequate justification for proposing the additional ACECs and should provide adequate justification if it intends to go forward with these ACECs in the FRMP. These resource values already receive special management emphasis under existing regulations and policies (e.g., cultural resource protections, temporal and spatial protections for wildlife, soils and erosion guidelines, required wildlife presence surveys, etc.) and an ACEC designation is superfluous and unnecessary. It is inappropriate to apply several layers of redundant protections which result in excessive and cumulative restrictions. If the restrictions are retained in the FRMP, Operators request that the BLM quantify the magnitude of the lost energy reserves caused by the restrictions.

Response: Justification for the ACECs proposed in the EIS are found in Appendix 4 and in the separate Evaluation of Relevance and Importance Criteria for Existing and Proposed Areas of Critical Environmental Concern, found on the project website at http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf.

Also, the analysis of impacts on these areas under alternatives where special designation is not considered provides additional rationale. The potential quantity of oil and gas that could be recovered during the analysis period under each alternative is presented in Chapter 4. Reserves not produced during the planning analysis period are not "lost," but would remain in place for potential future production.

Comment: ***Ross Butte Ecosystem***. This area is designated as an ACEC in Alternative 3 and a MA in Alternative 4. The restrictions are similar under both.

Please disclose justification for creating this ACEC and in particular how it meets the "*importance*" criteria which require that it have **"substantial significance and values" and "qualities of more than**

local significance and special worth, consequence, meaning, distinctiveness or cause for concern." (CFR 43 1610.7-2(a)(2))

Response: The rare plants found on these sites are very susceptible to surface disturbance and difficult or impossible to reclaim or revegetate.

Comment: Forty-four percent (44%) of the Ross Butte ACEC is under existing leases (p. 4-225). Please disclose how BLM will manage activities within these existing leases under the proposed restrictions, which include:

- NSO and CSU to limit surface disturbance
- Communication towers prohibited or restricted to existing sites only
- ROW avoidance

Response: NSO stipulations cannot be added to leases that do not include them. However, CSU stipulations, including operating standards and mitigation measures, could be applied at the APD stage. An existing communication site is located on Ross Butte. ROWs in avoidance areas would be handled as described in the Lands and Realty section of Chapter 2, Proposed Plan.

Comment: Please clarify the statement "*…closing the area to the operation of public land laws…*" in Table 2-34 (p. 2-201). Provide specific details on the implications of this statement as well as the statutory authority for suspending or waiving public land laws via a DRMP.

Response: Closing the area to the operation of the public land laws means that the lands would not be available for disposal or sale and would also not be available for exploration or production of locatable minerals (gold, silver, etc.)

Comment: Explain why it is necessary to apply an NSO restriction on new leases in the area and why existing and customary protections provided for cultural resources, sensitive soils and plant species under existing regulations are insufficient.

Response: The soils and plant communities in the Ross Butte area are such that reclamation would be extremely limited or unsuccessful. The NSO restriction as presented in the draft EIS has been removed. The area would be unavailable for new oil and gas leasing in the proposed plan of the final EIS.

Comment: Please quantify the magnitude of the lost energy resource as a result of the restrictions applied under Alternative 3 and Alternative 4.

Response: Quantification specifically for the Ross Butte area is not possible. However, Alternative 4 would provide, for the planning area as a whole, 56 fewer wells over the analysis period of the plan. However, these wells would be expected to produce a total of 64 BCF more natural gas than under Alternative 1.

Comment: White Tailed Prairie Dog (WTPD). The February 2008 Supplement to the Notice of Availability states that the "WTPD ACEC would not have a specific area but would involve a number of townships where WTPD habitat is found in future surveys." Operators request that BLM define in the FRMP the specific areas for the WTPD and disclose the impacts associated with those areas as required in the National Environmental Policy Act (NEPA).

Response: It is not possible to define the specific areas that might be covered by the ACEC in Alternative 3, because surveys for prairie dog towns have not been completed.

Comment: Please disclose the justification for creating this ACEC and in particular how it meets the "importance" criteria stated above. Please provide citation for statement that *"[t]he white-tailed prairie dog has been eliminated from as much as 90% of its former range"* (Evaluation of Relevance and Importance Criteria for Existing and Proposed Areas of Critical Environmental Concern, p. 8).

Response: The white-tailed prairie dog ACEC was determined by the Washington, D.C. office of BLM to meet the relevance and importance criteria for establishment of an ACEC. Therefore, BLM is required to consider the proposal in at least one alternative of the EIS.

Comment: Provide scientific, peer reviewed justification for restrictions under Alternative 4 and explain why protections provided under existing regulations or under Wyoming State Statutes which not only govern the management of wildlife in the state but also reserves primacy over wildlife to the State of Wyoming provide insufficient management and protection.

Response: Wyoming statutes governing wildlife populations do not address the habitats that those populations depend on for their existence. BLM's responsibility in the equation is maintenance of wildlife habitats on the lands it administers. The protections applied are adapted from scientific research and other information and were developed in coordination with the Wyoming Game and Fish Department and other cooperating agencies.

Comment: The DRMP indicates that the ACEC would be designated as shown on Map 2-26 but states that "[b]ecause complete surveys of prairie dog town locations are not available, the ACEC would include a list of townships where prairie dog towns might be located" (p. 2-108). Map 2-26 indicates that 11 townships would be included in the initial ACEC designation. Please define all areas potentially affected by this ACEC; quantify the number of potential acres; and disclose the manner in which BLM will determine how and when areas will be included and/or added to the designated MA.

Response: It is not possible to define the areas or to quantify acreage without complete surveys for prairie dog towns.

Comment: Clarify the statement *"[s]urveys for WTPD presence would be required prior to authorizing any activities"* (February 2008 NOA). Will surveys be required throughout the entire DRMP area prior to authorizing activity?

Response: Surveys would be required in areas likely to contain prairie dog habitats; generally, townships as identified on Map 2-26.

Comment: The DRMP states that the ACEC would *be "[a]vailable for oil and gas leasing with intensive management of surface disturbing activities"* (p. 2-109). Please disclose how BLM proposes to manage specific and defined lease stipulations under an ACEC area that can be continuously changing

Response: After survey of the proposed project area for presence and size of prairie dog towns, the ACEC area would be refined and COAs would be applied as appropriate. It would not be possible to attach stipulations to new leases until survey data is available.

Comment: Disclose the *"potential black-footed ferret introduction sites"* which would be protected (p. 4-223). Define what criteria must be met to propose a black-footed ferret (BFF) introduction in an existing oil and gas area and re-affirm that any BFF introduction will be under the "Non-essential Experimental Population" protocol of the United States Fish and Wildlife Service (USFWS).

Response: No specific sites for ferret introduction have been proposed. However, it is likely that a proposal would be considered in the future, as recovery efforts for the black-footed ferret proceed. Establishment of a "Non-essential Experimental Population" would be the authority of USFWS, not BLM.

Comment: Quantify the amount of oil and gas reserves that will be potentially affected by this ACEC, including reserves in future additions to the area.

Response: Quantification specifically for the Ross Butte area is not possible. However, Alternative 4 would provide, for the planning area as a whole, 56 fewer wells over the analysis period of the plan. However, these wells would be expected to produce a total of 64 BCF more natural gas than under Alternative 1.

Comment: Green and New Fork River Corridors. The DRMP establishes the Green and New Fork Rivers SRMA (Summary p. iv and vi), yet provides very little detail on how the area would be managed.

Map 2-26, Special Management Areas under Alternative 3, indicates the SRMA would have what appears to be a one-mile buffer on each side of the Green River and New Fork River. Please justify the resource sought to be protected by this one-mile buffer and why protections provided under existing regulations are insufficient.

Response: The SRMA would be established to protect recreation access and values. It was determined that protection of a one-mile area on each side of the rivers is not necessary. An area of one-quarter mile on each side of the rivers, on BLM-administered public lands only, is proposed in the proposed plan in the final EIS. Existing regulations do not specifically provide for enhanced recreation facilities, access, and protection of riparian resources that would be accomplished under the SRMA designation.

Comment: Map 2-33 (Alternative 4) indicates what appears to be a one-quarter mile buffer on each side of the Green and New Fork Rivers within this SRMA, and states that this area would be available for mineral leasing but with an NSO restriction. Please justify the DRMP statement that the NSO will mean *"potential offsite development* ***on existing leases*** *unless it precludes a leaseholder/operator's grant right to explore, develop, and produce the fluid mineral resource"* (p. 4-71). Cite BLM authority to impose NSO on existing leases. Explain what would be necessary to establish that the NSO results in "preclusion."

Response: BLM would encourage operators of existing valid leases to locate wells and other facilities outside the NSO area. However, if that is not possible or feasible, BLM would not have the authority to preclude development of an existing valid oil and gas lease.

Comment: Because SRMAs are designated ROW avoidance areas (Table 2-27, p. 2-165), please provide detail on how BLM would manage ROWs associated with existing leases and other authorizations.

Response: ROWs in avoidance areas would be handled as described in the Lands and Realty section of Chapter 2, Proposed Plan.

Comment: Please disclose the specific restrictions on oil and gas development under this SRMA.

Response: COAs and other restrictions would be determined on a site- and project-specific basis as appropriate and needed to protect the resources of the SRMA.

Comment: Please quantify the magnitude of the lost energy resource as a result of the restrictions applied under Alternative 3 and Alternative 4.

Response: Quantification specifically for the Ross Butte area is not possible. However, Alternative 4 would provide, for the planning area as a whole, 56 fewer wells over the analysis period of the plan. However, these wells would be expected to produce a total of 64 BCF more natural gas than under Alternative 1.

Comment: First, the Federal Land Policy and Management Act (FLPMA) is explicit that in the development and revision of an RMP the BLM is to give "priority" to the "designation" of ACECs. 43 U.S.C. § 1712(c)(3). We believe the BLM must faithfully ensure compliance with this command. It must give priority to designating ACECs; it cannot just "consider" them or "analyze" them. And in our view "priority" means what it means: "[p]recedence, especially established in order of importance or urgency." THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 1395 (4'" ed. 2000). As the Supreme Court has stated, "[i]t is, of course, a basic canon of statutory construction that we will not interpret a congressional statute in such a manner as to effectively nullify an entire section. See. e.g. Duncan, 533 U.S., at 174, 121 S.C!. 2120 ("[A] statute ought, upon the whole, 10 be so construed that, if it can be prevented, no clause. sentence, or word shall be superfluous, void, or insignificant" (citations omitted))." Dodd v. U.S., 545 U.S. 353, *370* (2005). Thus, the BLM should ensure it gives "priority" to "designating" ACECs in the Pinedale RMP.

Response: Consideration and analysis of proposed, potential ACECs is the first step in the process. BLM considered and analyzed all proposed ACECs. Areas that met the relevance and importance criteria, and that clearly required additional, special management to protect the resources present, have been proposed for ACEC designation in the EIS.

Comment: Second, in our view, if an area meets the BLM's relevance and importance criteria. it must be designated an ACEC-this is giving priority to ACEC designation as directed by FLPMA. BLM cannot designate the area as some other form of special management area, this is not giving priority to the designation of ACECs, it is giving priority to something else. Moreover, the BLM can always find alternative ways to provide protection for an area through the exercise of its general multiple use management authority, but this is not giving priority to ACEC designation as explicitly directed by Congress in FLPMA. Similarly, if an area meets the relevance and importance requirements for an ACEC, the entire area must be designated an ACEC. If the BLM's analysis of relevance and importance was based on the entire area of the potential ACEC the entire area must be designated an ACEC, unless at a minimum the BLM demonstrates that those relevance and importance characteristics will not be harmed or diminished by decreasing the size of the ACEC.

Response: For areas that meet the relevance and importance criteria, BLM is required to analyze designation of an ACEC in at least one alternative. BLM is not required to establish an ACEC if it can be shown that the resources in question can be managed without ACEC status.

Comment: Last, throughout the Draft Environmental Impact Statement for the Pinedale Field Office RMP Revision (DEIS), Alternative 3 provided for both more protective management of potential ACECs and for protection of the full area of ACECs. and for that reason the provisions in Alternative 3 should be adopted in preference to those in Alternative 4 (BLM's Preferred Alternative) because they better meet the requirement to both give priority to the designation of ACECs and give priority to their "protection," as mandated by FLPMA.

Response: Alternative 3 is intended to provide more protective management of resources. Through the analysis of impacts for Alternatives 3 and 4, BLM has determined that the management actions included

in Alternative 4 provide appropriate protection for the areas and resources identified in the ACEC proposals.

Comment: *1. Upper Green River* should be designated an ACEC. This would be done under Alternative 3 but not Alternative 4. Under Alternative 4, the area would be designated a Special Recreation Management Area (SRMA). DEIS at2~ 127 to -130. This SRMA would be considerably smaller than the ACEC designated under Alternative 3. Compare Maps 2-26 with Map 2-33. As noted above, nowhere has BLM provided any analysis showing that the relevance and importance values of this area would be protected with this smaller area. Perhaps more importantly, the SRMA would be solely devoted to catering to the recreational activities of people; there is no provision for protecting or addressing the other significant relevance and importance criteria found in this area, such as wildlife migration routes. See DEIS at 2-127 to -130. Having determined that the wildlife herds in this area are some of the largest and the migration routes some of the longest in the entire United States, the BLM cannot avoid making special provision to protect these wildlife values.

Response: The Upper Green River area would be managed as a Special Recreation Management Area in the proposed plan. The area would be unavailable for oil and gas leasing and would have restrictions on surface disturbing activities, and vehicle use would be limited to designated roads. In addition, recreation use would be managed to preserve and coordinate with the recognized natural values of the area. BLM feels this is an appropriate approach to management of the many values in the Upper Green River area.

Comment: *Ross Butte.* Despite these incredible values and clearly very sensitive resources that "may be difficult or impossible" to reclaim. rather than designating the area an ACEC the BLM proposes to designate it a "management area" under Alternative 4. The conclusion offered to support this downgrade is that "[i]t was determined that management actions other than ACEC designation are more appropriate to protect values." DEIS Appendix 4 at A4-3. This is nothing but an unsubstantiated assertion. Where and when was this "determined"? Was the public allowed to participate in that determination as part of the NEPA process? How exactly is alternative management "more appropriate to protect values"? Where was that determination made or documented? Was it subject to public scrutiny under NEPA? Given the clearly great environmental values of this area the BLM must designate it an ACEC, and certainly if it does not it must provide a very careful explanation why this is not being done and why it is appropriate. That is current~ lacking; all that is provided is a naked assertion that alternative management is ~". "appropriate" despite the clear command of FLMPA to give priority to ACEC designation.

Response: For areas that meet the relevance and importance criteria for establishment as ACECs, BLM is required to consider the ACEC proposal in at least one alternative of the EIS but is not required to establish the ACECs if management of the special resources present can be accomplished without ACEC status. ACEC status of itself is just a label and would not provide protection of resources. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve protection. This protection can be implemented without creating these large ACECs. See the management prescriptions for the Ross Butte and Wind River Front areas on page 2-156 (draft EIS) and prairie dog habitats on page 2-149 (draft EIS).

Comment: *Ross Butte.* Under Alternative 3, where the area would be designated an ACEC, surface occupancy would be prohibited on erosive soils and in sensitive plant species habitats, and surface disturbance on slopes greater than ten percent would be prohibited. DEIS at 2-109. In contrast, under Alternative 4, where the area would be designated a "management area," development would still be allowed subject only to conditions of approval on existing oil and gas leases to "mitigate" impacts on soils and sensitive plant species habitats. Id. at 2-156. Yet as noted, BLM already knows that surface disturbance will be "difficult or impossible to reclaim or revegetate," making any claims of mitigation speculative at best. Furthermore, under Alternative 4 versus Alternative 3, the BLM would still allow oil

and gas leasing in this area (albeit subject to no surface occupancy) and would designate a substantial part of the area only Visual Resource Management (VRM) Category III, rather than VRM Category II as under Alternative 3. These limitations on the proposed management make it impossible to see how the BLM could have rationally determined "management area" designation would be "more appropriate to protect values" than ACEC designation. How do conditions of approval which by BLM's own admission may not be capable of mitigating impacts ensure that "vegetation unique in the Wyoming desert" and "a unique, rare cushion plant community not commonly found in other areas" will be protected? Clearly this area should be designated an ACEC, as provided for under Alternative 3.

Response: For areas that meet the relevance and importance criteria for establishment as ACECs, BLM is required to consider the ACEC proposal in at least one alternative of the EIS but is not required to establish the ACECs if management of the special resources present can be accomplished without ACEC status. ACEC status of itself is just a label and would not provide protection of resources. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve protection. This protection can be implemented without creating these large ACECs. See the management prescriptions for the Ross Butte and Wind River Front areas on page 2-156 (draft EIS) and prairie dog habitats on page 2-149 (draft EIS).

Areas that did not meet the relevance and importance criteria were not included for analysis as ACECs in any alternative. The Ross Butte area met the relevance and importance criteria for ACEC and is considered in Alternative 3 but would not be managed as an ACEC under the Preferred Alternative. The ACEC relevance and importance reviews are available on the RMP website at http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf. BLM analyzed a reasonable range of alternatives regarding ACEC establishment and protections of special areas.

Comment: …under Alternative 4. as an SRMA, the CCC Ponds would only be managed with recreational issues in mind. DEIS at 2-132 to - I34. It would not be managed to protect the recognized importance for migrating big game animals. In contrast. under Alternative 3. the area would be managed in a way that would protect big game migrating through the area as well as recreational values. Given the recognized significance of these herds and this migration route to the United States as a whole. we feel management must proceed as provided for under Alternative 3. The area should be unavailable for oil and gas leasing. and "projects [should] be evaluated on a case-by-case basis and designed to maintain the integrity of big game migration routes." DEIS at 2-110. Anything less is inappropriate given the recognized relevance and importance criteria which relate to these values. Moreover, the full 5,530 acres must be designated as an ACEC, as provided for under Alternative 3, rather than the unreasonably limited 1,040 acres that would be designated an SRMA under Alternative 4. Again, the BLM has nowhere provided any analysis showing that ~ protection of less than the full extent of the CCC Ponds could allow for protection of the recognized relevance and importance values.

Response: The language describing the ACEC process has been clarified in the final EIS. Five of the six proposed ACECs found in Chapter 3 are indeed included in Appendix 4 (Table A4-1). The CCC Ponds proposed ACEC was mistakenly omitted from Appendix 4. This ACEC has been included in the appendix in the final EIS. Other areas in Appendix 4 are discussed in Section 2.2.2. As stated on page A4-4, further information on each of the area's qualifications under the relevance and importance criteria is available at the Pinedale Field Office and on the project website at www.blm.gov/rmp/wy/pinedale.

Migration bottlenecks are naturally occurring and are created by topography, not necessarily by fences. The CCC Ponds area is a documented bottleneck on the mule deer migration route along the base of the Wind River Mountains.

Comment: *Wind River Front.* As discussed above, having found the area meets the relevance and importance criteria, the BLM is not at liberty to not designate this area an ACEC. In addition, having offered no explanation as to how a smaller area would fully protect the recognized relevance and importance values, the BLM is also not at liberty to designate a smaller area for protection under Alternative 4 than would be designated under Alternative 3. In particular, the BLM must ensure full protection for the big game migrations that pass through the area twice each year, which "are some of the largest anywhere in the world." And as will be discussed in more detail below, this area is heavily used by sage grouse, which demands full protection. Given this magnitude of significance the BLM must protect this entire area as an ACEC, and provide protection otherwise as provided under Alternative 3.

Response: Under Alternatives 3 and 4 the federal lands and mineral estates under BLM's jurisdiction along the Wind River Front would be unavailable for leasing. The entire Jonah Field and the vast majority of the area within the boundary of the Pinedale Anticline EIS (July 2000) are currently leased and the leaseholders/operators have valid existing rights to develop and produce those leases. See the final EIS for management of the unleased lands within the PAPA EIS boundary. The decision record for Questar Year-round Drilling EA provides for a certain level of drilling within the mule deer crucial winter range within the PAPA EIS area.

Comment: *White Tailed Prairie Dog ACEC.* Having determined that "[a]ll remaining habitat areas are significant for the preservation of the species" Evaluation Report at 8 (emphasis added), the BLM is not at liberty to not afford the recognized white-tailed prairie dog colonies in the Pinedale Field Office special management protection as an ACEC.

Response: Protections for white-tailed prairie dog habitats are found in the Wildlife section of Alternative 4 (pages 2-149 and 2-150 of the draft EIS).

BLM cannot make areas currently leased for oil and gas development (such as portions of the Beaver Creek, Ross Butte, White-tailed Prairie Dog, and Wind River Front areas) "permanently off-limits to energy development." Leaseholders have rights that BLM is legally bound to honor.

For areas that meet the relevance and importance criteria for establishment as ACECs, BLM is required to consider the ACEC proposal in at least one alternative of the EIS but is not required to establish the ACECs if management of the special resources present can be accomplished without ACEC status. ACEC status of itself is just a label and would not provide protection of resources. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve protection. This protection can be implemented without creating these large ACECs. See the management prescriptions for the Ross Butte and Wind River Front areas on page 2-156 (draft EIS) and prairie dog habitats on page 2-149 (draft EIS).

Comment: *White Tailed Prairie Dog ACEC.* At a minimum, under its Special Status Species Manual the BLM is required to take proactive management steps for the conservation of this species and under the terms of the Manual, conservation with respect to special status species means taking steps "such that there is no longer any ... need for continued listing as a special status species." BLM Manual §§ 6840.06.C, Glossary of Terms (emphasis added). We are aware that BLM often requires surveys of prairie dog colonies for black-footed ferrets, and in the highly unlikely event that evidence of a ferret was found strong protective measures would be put in place, but seeking to protect the black-footed ferret is not BLM's obligation here; it must seek to protect the white-tailed prairie dog so as to remove it from its sensitive species list, as required by the Special Status Species Manual Clearly the way to do that is to designate the White-Tailed Prairie Dog ACEC, or at a minimum some other special management area (see below). Protective measures that are likely needed include limitations on above-ground structures

(including power lines) within a specified distance of prairie dog colonies or towns, and limitations on disturbing towns or colonies. See DEIS at 2-109 for other needed protective measures.

Response: Alternative 4 provides management of white-tailed prairie dog habitats under the Wildlife Habitat Management section of Chapter 2. These management actions are essentially the same as those provided in the ACEC under Alternative 3, with the exception of acquisition of lands. Surveys for prairie dog presence would be required as a special status species.

Comment: *White Tailed Prairie Dog ACEC.* …failing to designate this ACEC is counter to both the Statewide Biological Opinion on black-footed ferret management and also to the recommendations of the Wyoming Game and Fish Department as reflected in the Conservation Assessment.

Response: Alternative 4 provides management of white-tailed prairie dog habitats under the Wildlife Habitat Management section of Chapter 2. These management actions are essentially the same as those provided in the ACEC under Alternative 3, with the exception of acquisition of lands. Surveys for prairie dog presence would be required as a special status species.

Comment: *White Tailed Prairie Dog ACEC.* The white-tailed prairie dog of course is also a BLM sensitive species which means that special management obligations attach, as discussed above. Designation of this ACEC is important because "[t]he white-tailed prairie dog has been eliminated from as much as 90% of its former range." Evaluation Report at 8. In addition "[ill1l remaining habitat areas are significant for the preservation of the species." Id. (emphasis added).

Response: Alternative 4 provides management of white-tailed prairie dog habitats under the Wildlife Habitat Management section of Chapter 2. These management actions are essentially the same as those provided in the ACEC under Alternative 3, with the exception of acquisition of lands. Surveys for prairie dog presence would be required as a special status species.

Comment: *White Tailed Prairie Dog ACEC.* The DEIS presents conflicting information about the location and status of white- tailed prairie dog colonies in the Pinedale Field Office. The BLM makes no attempt to estimate how large this ACEC would be, and only provides locality generalized to Township and Range because it claims that it has only incomplete information. At the same time, the DEIS contains a map of known colonies and calculations of areas with oil and gas potential within the potential ACEC. DEIS at Map 3-21, 2-179, 2-187. The OEIS also states, "[m]ost of the known occurrences of the white-tailed prairie dog occur within the Jonah and Anticline Fields" and [m]ost of the known occurrences of white-tailed prairie dog towns exist in the Intensively Developed Fields" DEIS at 4-192, 4-205. In contrast, all of the other Field Offices in Wyoming where white-tailed prairie dog ACECs have been evaluated identified specific areas based on the best available information on white-tailed prairie dog locations. It is especially puzzling why the Pinedale Field Office would only include Townships and Ranges where white-tailed prairie dog colonies may be found since we believe that prairie dog mapping is more current, detailed, and extensive in this Field Office than many others. Our understanding is that prairie dog mapping associated with the Pinedale Anticline and Jonah Field approvals was relatively thorough, and that there has been at least some ongoing monitoring in these areas. Regardless, RMP revision should be a time to fill any remaining data gaps so that the BLM may make an informed decision about land use allocations. The BLM cannot claim incomplete data as a means to avoid identifying areas where this species currently exists, which in some cases may be where oil and gas development is occurring. Potential impacts to oil and gas development possibilities are not a persuasive reason to not designate this ACEC. Consequently, the White-Tailed Prairie Dog ACEC should be designated as provided for under Alternative 3.

Response: It is not possible to define the areas or to quantify acreage without complete surveys for prairie dog towns.

Comment: It is our view that the BLM's conclusion that the Rock Creek Expansion, Beaver Creek Expansion, North Cottonwood Creek, South Cottonwood Creek, and South Beaver Watershed potential ACECs do not meet importance criteria is not well founded. In all of these cases the BLM determined that the areas met the relevance criteria (because the area provides habitat for Colorado River Cutthroat Trout (CRCT) but did not meet the importance criteria.

Response: BLM analyzed a reasonable range of alternatives regarding ACEC establishment and protections of special areas.

The ACEC relevance and importance reviews are available on the RMP website at http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf. BLM analyzed a reasonable range of alternatives regarding ACEC establishment and protection of special areas. Water is the purview of the state. The recent discovery of the contaminated wells is an example of the monitoring system working.

Comment: Rock Creek Expansion, Beaver Creek Expansion, North Cottonwood Creek, South Cottonwood Creek, and South Beaver Watershed potential ACECs. …if lack of genetic purity is advanced as a reason for not deeming these populations important, some consideration of the degree of purity should be provided. Arc these populations 99% pure, 95% pure, 75% pure, or only 50% pure? Considering this question seems highly relevant to any claim these populations arc not as "important" to the conservation of CRCT as the Beaver Creek and Rock Creek populations. The Conservation Agreement and Strategy for Colorado River Cutthroat Trout (Oncorhynchus clarki pleurilicus) recognizes genetic purity ratings of B, B+, A-, and A, and ratings at these levels meet the intent of the policy for the conservation of the subspecies, populations with these ratings "are defined as conservation populations" and these populations are "important for conservation of the subspecies." See CRCT Conservation Agreement at 8,12,14. Absolute genetic purity would not seem to be a prerequisite for important conservation value to attach to a population of this subspecies.

Response: Changes in the proposed plan regarding areas available for oil and gas leasing should address some of these concerns. It continues to be the feeling of BLM that, for instance, historic and potential CRCT habitats are spread throughout the planning area, and that these habitats should all be managed for the health of CRCT; management should not be limited to specific ACEC areas. Management actions can be applied without an ACEC label.

Comment: Rock Creek Expansion, Beaver Creek Expansion, North Cottonwood Creek, South Cottonwood Creek, and South Beaver Watershed potential ACECs. Similarly, as justification for not pursuing ACEC designation of these areas the ~ -J BLM stated "li]t was determined that CRCT habitat management actions should apply .10,: the planning area as a whole, rather than to only special management areas." DEIS N Appendix 4 at A4-2 and -3. This conclusory assertion seems unjustified. There is no clear rationale provided as to why the special management actions that will apply to the Beaver Creek and Rock Creek ACECs for the protection of CRCT should not also apply to other areas where this species is located, or why that is somehow difficult or .. impossible. See DEIS at 2-154 and -155 (presenting the management actions that will apply in the Rock Creek and Beaver Creek ACECs). If streams containing CRCT arc "irreplaceable," Evaluation Report at 3, the elimination of individual populations "narrows the gene pool," ill", and streams still providing CRCT habitat and viable populations are "crucial to the health of the species and in preventing its listing under the ESA," id. at 4, it seems difficult to rationally justify not providing special management attention to these streams. Or said differently, if the general actions that will apply to the planning area as a whole are all that is required to

protect CRCT, it would seem there would be no need to provide any special protections in the Rock Creek and Beaver Creek ACECs, either, yet BLM has concluded otherwise for these areas. This differing approach needs to be carefully explained if it is to be maintained.

Response: Changes in the proposed plan regarding areas available for oil and gas leasing should address some of these concerns. It continues to be the feeling of BLM that, for instance, historic and potential CRCT habitats are spread throughout the planning area, and that these habitats should all be managed for the health of CRCT; management should not be limited to specific ACEC areas. Management actions can be applied without an ACEC label.

Comment: *Miller Mountain, Wyoming Range Front, and la Barge Elk Winter Range.* Unfortunately, these areas were not deemed to meet any of the importance criteria, which is likely why they were not recommended for ACEC designation. The BLM determined that these areas did not have more than locally significant qualities, did not have particularly fragile or sensitive resources, or were not in need of protection tti; satisfy national priority concerns or the mandates of FLPMA. Evaluation Report at 1920, 22-23, 26-27. We disagree with this assessment and ask the BLM to reconsider it. At a minimum, where CRCT and sage grouse occur there is a national priority concern for their protection. We will not belabor the obviousness of this issue with respect to the sage grouse with its pending potential listing under the ESA and a host of federal and state management responses underway to protect the bird, but we would note that as BLM sensitive species, both the sage grouse and CRCT have special status and recognition under the BLM Special Status Species Manual provisions-that is, there is a national priority concern with these species due to their designation by the BLM as Special Status Species. And as noted above, in other potential ACECs where the CRCT exists the BLM has recognized that «[t]hose streams still providing habitat and viable populations are crucial to the health of the species and in preventing its listing under the ESA." Evaluation Report at 3, 4. We believe there is clearly a national priority concern with these species, which at a minimum implicates the Miller Mountain and Wyoming Range Front. See Evaluation Report at 22, 26 (noting CRCT and sage-grouse exist in these areas). Thus, these areas have importance value.

Response: BLM analyzed a reasonable range of alternatives regarding ACEC establishment and protections of special areas.

The ACEC relevance and importance reviews are available on the RMP website at http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf. BLM analyzed a reasonable range of alternatives regarding ACEC establishment and protection of special areas. Ecosystems can be described regardless of their ownership. There are very few roads. The description in the final EIS has been changed to say “largely roadless.” The riparian areas in the Miller Mountain area are more sensitive than in many other portions of the planning area because of their dependence on vegetation for physical stability of the system. Oil and gas leases cover less than half the area and do not negate the possibility of special management. The presence of oil and gas leases does not eliminate the option of management with VRM Class II objectives. Fort Hill is entirely on BLM-administered public lands in Section 12, T25N, R115W and Section 7, T25N, R114W. Because this area is on the “sheep side” of Deadline Ridge, and because the Slate Creek sheep trail traversed part of the area, it is known that much historic sheep grazing occurred. The authenticity of the sheepherder cairns has been verified.

Comment: *Miller Mountain, Wyoming Range Front, and la Barge Elk Winter Range*. in addition, crucial big game winter range exists in the Miller Mountain and Wyoming Range areas, Evaluation Report at 22, 26. Official state of Wyoming policy is that big game crucial habitat is "vita]" and that vital habitat "directly limits" a wildlife community and impacts to these habitats "could result in a significant local or landscape level decline in species distribution, abundance, or productivity, and restoration or replacement is difficult and may not be possible, or may be possible only in the very long term." Exhibit 2. Under

FLPMA the BLM is obligated to ensure that BLM RMPs are "consistent" to the "maximum extent" with State policy such as this. 43 U.S.C. § l712(cX9). In addition, "State authority regarding fish and resident wildlife remains the comprehensive backdrop applicable" to wildlife management and the BLM must "assist the States in accomplishing their fish and wildlife resource plans." 43 C.F.R. §§ 24. I(a), 24.4(i)(2). Because this is a Department of Interior rule of national scope, this is a national policy. It is apparent that the mandates of FLPMA obligate the BLM to seek to implement State policy, meaning that at a minimum the Miller Mountain and Wyoming Range Front should be deemed to have important values because of the presence of state recognized and protected vital crucial winter range, making them suitable for designation as ACECs. Moreover, because the Miller Mountain area provides habitat for "one of only two populations of elk in the Pinedale Field Office that winter on native range," Evaluation Report at 22, it is apparent that this area has more than locally significant qualities and/or has especially rare or irreplaceable resources. We would note too that this same situation likely also applies to the La Barge Elk Winter Range because it and the Miller Mountain area overlap to a very considerable degree. See Evaluation Report at 18, 21. It seems unlikely that elk in the Miller Mountain area are not dependent on feedlots ~ while the elk in the La Barge Elk Winter Range are.

Response: Ecosystems can be described regardless of their ownership. There are very few roads. The description in the final EIS has been changed to say “largely roadless.” The riparian areas in the Miller Mountain area are more sensitive than in many other portions of the planning area because of their dependence on vegetation for physical stability of the system. Oil and gas leases cover less than half the area and do not negate the possibility of special management. The presence of oil and gas leases does not eliminate the option of management with VRM Class II objectives. Fort Hill is entirely on BLM-administered public lands in Section 12, T25N, R115W and Section 7, T25N, R114W. Because this area is on the “sheep side” of Deadline Ridge, and because the Slate Creek sheep trail traversed part of the area, it is known that much historic sheep grazing occurred. The authenticity of the sheepherder cairns has been verified.

Comment: *The Mesa and Muddy Creek.* As discussed above, and as will be discussed in even more detail below, we feel that an area containing significant sage grouse habitat, as The Mesa does, clearly meets the importance criterion due to the national priority concern regarding this species, as recognized in the BLM Sensitive Species Manual and elsewhere, particularly since "[w]estern Wyoming contains the largest remaining populations and most intact habitat for sage grouse in the West." Id. at 20. Furthermore, this area is recognized by the BLM as being crucial winter range for mule deer, raising again the need to comply with State policy in this regard and the FLPMA mandate that BLM do so. Moreover, this area is part of the world class pronghorn migration corridor beginning in Grand Teton National Park; as recognized elsewhere in the Evaluation Report, "[t]he big game migrations that pass through the Mesa area twice a year are some of the largest anywhere in the world. As many as 100,000 big game animals pass through this area during twice annual migrations." Evaluation Report at 6.3 We would also note that the Western Governor's association has adopted a policy calling for the preservation of key wildlife migration corridors and crucial wildlife habitats, so clearly there is more than local concern for protecting these resources and they have become a national (or at least west wide) priority. Exhibit 3. Given these values this area has importance.

Response: ACEC status of itself is just a label and would not provide protection of wildlife migration corridors. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve protection. This protection can be implemented without creating these large ACECs. Management of wildlife habitats was conducted in the planning area as a cohesive whole, not limited to ACEC areas.

Comment: *The Mesa and Muddy Creek.* Similarly, we do not believe the conclusion that the Muddy Creek area does not have either relevance or importance values can be sustained. The area has "a high

density of archeological sites" and it includes crucial winter range for "one of only two populations of elk in the Pinedale area that winter on native range." Evaluation Report a1 23. Given the level of importance attached to crucial winter ranges by the State of Wyoming, BLM's corresponding obligations under FLPMA and Department of Interior€ regulations regarding primacy in wildlife management, and the desire to preserve crucial wildlife habitats that is the policy or the Western Governor's Association, we feel it is clear this area has both relevance and importance.

Response: ACEC designation would not provide the protections discussed. Management actions presented on a larger scale in the final EIS would provide more appropriate protection for important habitats.

Comment: *The Mesa and Muddy Creek.* And BLM's claim that elk in this area can just "have access to the Bench Corral elk feedground" and thus "are not dependent on this winter range" is outrageous. 9 Evaluation Report at 23. We are breathless and almost unable to respond after reading that statement. If nothing else, it is totally at odds with the State of Wyoming's policy which recognizes native crucial winter range as "vital." Exhibit 2. It is also totally at odds with the policy of Western Governors which seeks to preserve crucial wildlife habitats. Exhibit 3. Moreover the policy of the United States of America as declared by is that "the public lands be managed in a manner ... that will provide food and habitat for fish and wildlife ...." 43 U.S.C. § 1701(a)(8). There is no suggestion here that Congress contemplated feedlots as a fungible substitute for crucial native ranges that can support wintering wildlife. And BLM recognizes as a relevance criteria the presence of a "natural process or system," making it clear that native ranges capable of supporting wildlife have values that feedlots do not have. The BLM should excise this outrageous statement from the Pinedale RMP and make its relevance and importance determinations for Muddy Creek accordingly.

Response: BLM is not advocating the continuance of feedgrounds with this statement, merely stating the situation as it is. While the elk feedgrounds exist, and while fences and development obstruct elk access to historic winter ranges in the Little Colorado desert and other areas, it is difficult to argue the vital importance of crucial elk winter ranges in the Pinedale planning area.

Comment: However, as we stated in our DEIS comments, because the management direction in the Trapper’s Point area would "provid[e] for contiguous wildlife habitat, wildlife refuge areas, and migration routes," and the area is "a major funnel, or bottleneck, for mule deer and pronghorn in their winter migrations to and from winter range" and the area is threatened with constriction due to development and contains very significant archeological sites, maximum protection of this area is warranted. DEIS Comments at 2224 (quoting DEIS at 2-47, 2-49, and 3~J 36). Moreover, as we also pointed out, the BLM recognizes the New fork Potholes as a "unique subsection of the Wind River Front" due to the presence of the glacial potholes which are of value to wildlife and that "[t]he values in this area need special emphasis to be effectively managed." DEIS Comments at 26 (citing DEIS at 3-136, A4-2). Given these values and the other attributes recognized in the Evaluation Report, it is our view the management prescriptions that would be applied under Alternative 3 to these areas should be adopted in preference to those provided for in Alternative 4. There are at least two reasons we adopt this view. First, at least with regard to Rock Creek, Beaver Creek, and Trapper's Point, the ACEC designated under Alternative 3 would be considerably larger than that designated under Alternative 4. As discussed above, BLM's determinations of relevance and importance values were based on consideration of the entire potential areas of these ACECs, not subdivisions of them, so BLM is not at liberty to reduce the size of these ACECs because there is no guarantee that the recognized relevance and importance values that serve as the basis for creating the ACEC will be preserved if a smaller area is designated.

Response: The Beaver Creek ACEC is being maintained at its current size, not reduced. Trapper's Point is being established new, not reduced. Rock Creek ACEC is being slightly reduced to the actual size of the watershed.

Comment: (Rock Creek, Beaver Creek, and Trapper's Point) At a minimum, the BLM must carefully consider whether the relevance and importance values would be maintained if a smaller area were designated, and we are unaware of any such analysis in the DEIS.

Response: This analysis is presented in the impact analyses for the proposed areas in Chapter 4.

Comment: Furthermore, at least with respect to Beaver Creek, the area would receive lesser protection under Alternative 4 than it would under Alternative 3. Beaver Creek would not be subject to no surface occupancy oil and gas leases under Alternative 4 as it would be under Alternative 3. OEIS at 2-107, ~154. Under Alternative 3 the area would be managed as VRM Class II while under Alternative 4 it would be VRM Class III and IV . Id. at 2-1 07, -155. We believe the BLM should adopt the protective provisions of Alternative 3 for application to the Beaver Creek ACEC in order to assure the recognized relevance and importance values are protected. We believe the BLM has an obligation 10 do this under the terms of the Special Status Species Manual and the CRCT Conservation Agreement discussed above.

Response: The Beaver Creek ACEC area, including the expansion area considered in Alternative 3, is fully leased for oil and gas development. The area includes several producing wells. There is no indication that the leases would expire in the foreseeable future. The area contains existing maintained roads for access to existing wells. It is reasonable to allow use of these roads in conducting geophysical exploration and other activities. BLM feels that conservation of CRCT habitat should occur over its entire range, not in restricted areas with ACEC designations.

Comment: *Extension of the Trapper's Point ACEC Farther North-Cora Butte.* While we appreciate that the BLM apparently intends to designate the Trapper's Point ACEC so as to protect migrating mule deer and pronghorn (although we feel it should be larger than proposed under Alternative 4), we feel that recognition of this migration route should be extended farther to the north. In particular we feel the Cora Butte Mule Deer and Pronghorn Transition Range (CBTR) should also be recognized and protected. In 2003 and 2004, many groups party to these comments submitted three documents to the BLM as part of the scoping process for this RMP revision. One of those documents was entitled "Critical Condition: Areas of Critical Environmental Concern (ACECS) for Big Game in the Upper Green River Valley, Wyoming" (Critical Condition Report). Another was a report prepared by Western Ecosystems Technology, Inc. (WEST) entitled "An Evaluation of the 1988 BLM Pinedale Resource Management Plan, 2000 BLM Pinedale Anticline Final EIS and Recommendations for the Current Revision of the Pinedale Resource Management Plan" (WEST Report). And the third was entitled "A Responsible Energy Development Alternative for Consideration in the ~ Bureau of Land Management Pinedale Resource Area Resource Management Plan g Revision" (RED Report). We adopt and incorporate those comments by this reference into these comments.

We ask that the BLM determine whether the C8TR meets the relevance and importance criteria, and if it does to designate this area an ACEC. We would note that extending the protection of this migration corridor as far to the north as possible would help compliment current Forest Service efforts to protect this migration corridor on Forest Service lands. See http://www.fs.fed.uslr4/btnf7projectsl 2008/pronghomllcner.pdf (presenting Forest Service announcement of effort to revise the Bridger-Teton National Forest Plan to protect the pronghorn migration route). It would also help ensure continuity with protection of the Upper Green River and CCC Ponds proposed ACECs, which have great valued for migrating big game, as well as migration corridors along the Wind River Front (sec discussions of these areas above).

Response: For areas that meet the relevance and importance criteria for establishment as ACECs, BLM is required to consider the ACEC proposal in at least one alternative of the EIS but is not required to establish the ACECs if management of the special resources present can be accomplished without ACEC status. ACEC status of itself is just a label and would not provide protection of resources. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve protection. This protection can be implemented without creating these large ACECs. See the management prescriptions for the Ross Butte and Wind River Front areas on page 2-156 (draft EIS) and prairie dog habitats on page 2-149 (draft EIS).

Comment: Finally, the BLM should also recognize the potential economic significance of ACEC designation. As things stand currently, we do not believe the BLM has adequately recognized the potential benefits to local economies that could result from ACEC designation or the potential costs of permitting oil and gas development to occur at the expense of the special values in these areas. Attached as Exhibit 6 to the DEIS Comments were the comments of economists Michele Haefele and Joe Kerkvleit. We ask the BLM to consider those comments as it determines the economic benefits that could now from ACEC designation.

Response: BLM recognizes the importance of the mostly nonmarket economic values present in the areas evaluated for ACEC designation. However potential economic value is not part of the relevance and importance criteria assessed. BLM considered and analyzed all proposed ACECs. Areas that met the relevance and importance criteria, and that clearly required additional, special management to protect the resources present, have been proposed for ACEC designation in the EIS.

Comment: *The Ryegrass Area.* it is our view this~ area meets the relevance and importance criteria and should be designated an ACEC. ask the BLM to consider it for designation as an ACEC. Furthermore, this area includes the Muddy Creek proposed ACEC. Consequently our comments above regarding this area apply here as well, and we think this just emphasizes the importance of designating this area an ACEC. The value of this area includes crucial winter range for "one of only two populations of elk in the Pinedale area that winter on native range." Evaluation Report at 23. We feel there is little doubt this area meets the relevance and importance criteria for ACEC designation. There are significant historical resources, wildlife resources, and natural processes or systems (such as big game crucial winter ranges and animals meeting the challenges of that season, elk feeding on native rangeland instead of at feedlots, sage· grouse leks, and overlapping crucial ranges for several species). Thus it is relevant. It is important because the presence of sage-grouse breeding habitat makes it sensitive and fragile, and because there are national priority concerns or mandates of FLPMA to protect crucial ranges, as reflected in Department of Interior regulations regarding state primacy in wildlife management, Wyoming's policy regarding "vital" crucial winter ranges (Exhibit 2), the policies of the Western Governors' Association regarding protection of crucial habitats (Exhibit 3), and the command of FLPMA for BLM to recognize and abide by these slate policies to the extent possible, 43 U.S.C. § 1712(e)(9). Thus, we believe this area meets both the relevance and importance criteria.

Response: The Trapper’s Point area is unavailable for leasing, as outlined in Alternative 4 of the draft EIS. In addition, in the final EIS, the Ryegrass and Bench Corral (Cottonwood) areas would be unavailable for leasing.

For areas that meet the relevance and importance criteria for establishment as ACECs, BLM is required to consider the ACEC proposal in at least one alternative of the EIS but is not required to establish the ACECs if management of the special resources present can be accomplished without ACEC status. ACEC status of itself is just a label and would not provide protection of resources. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve protection. This protection can be implemented without creating these large ACECs. See the management prescriptions for the Ross

Butte and Wind River Front areas on page 2-156 (draft EIS) and prairie dog habitats on page 2-149 (draft EIS).

Comment: *The Ryegrass Area.* To protect these important values we feel this area should be designated as unavailable for future oil and gas leasing. In addition, management should focus on the maximum exercise of BLM retained rights in areas that have been leased.

Response: The Ryegrass area would be unavailable for oil and gas leasing in the proposed plan in the final EIS.

Comment: *The Cottonwood Area.* We feel there is little doubt this area meets the relevance and importance criteria for ACEC designation. There are wildlife resources, and natural processes or systems (such as big game crucial winter ranges and animals meeting the challenges of that season, parturition and calving areas, sage-grouse leks). And increasingly the presence of large areas of undisturbed sagebrush is a "natural system" of great significance. Thus the Cottonwood Area is relevant. It is important because the presence of sage-grouse breeding habitat makes it sensitive and fragile, and because there are national priority concerns or mandates of FLPMA to protect crucial ranges, as reflected in Department of Interior regulations regarding state primacy in wildlife management, Wyoming's policy regarding "vital" crucial winter ranges (Exhibit 2), the policies of the Western Governors' Association regarding protection of crucial habitats (Exhibit 3), and the command of FLPMA for BLM to recognize and abide by these state policies to the extent possible, 43 U.S.C. § I712(c)(9). Thus, we believe this area meets both the relevance and importance criteria. To protect these important values we feel this area should be designated as unavailable for future oil and gas leasing. In addition, management should focus on the maximum exercise of BLM' retained rights in areas that have been leased.

Response: The Trapper’s Point area is unavailable for leasing, as outlined in Alternative 4 of the draft EIS. In addition, in the final EIS, the Ryegrass and Bench Corral (Cottonwood) areas would be unavailable for leasing.

For areas that meet the relevance and importance criteria for establishment as ACECs, BLM is required to consider the ACEC proposal in at least one alternative of the EIS but is not required to establish the ACECs if management of the special resources present can be accomplished without ACEC status. ACEC status of itself is just a label and would not provide protection of resources. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve protection. This protection can be implemented without creating these large ACECs. See the management prescriptions for the Ross Butte and Wind River Front areas on page 2-156 (draft EIS) and prairie dog habitats on page 2-149 (draft EIS).

Comment: *Fontenelle Elk Winter Range.* This area provides winter and transitional ranges for elk, mule deer, pronghorn, elk and moose, virtually the entire panoply of western Wyoming's remarkable big game endowment. Evaluation Report at 19. That is a remarkable degree of "co-occurrence" that the BLM should recognize and protect. CRCT also occupy at least some of the area, and the crucial elk winter ranges provide forage for "one of only two populations of elk in the Pinedale Field Office area that winter on native range." rd. at 22. Again, these additional values emphasize the validity of designating the Fontenelle Elk Winter Range an ACEC. There are historical or cultural resources, wildlife resources, and natural processes or systems (such as big game crucial winter ranges and animals meeting the challenges of that season, sage-grouse leks, and big game using native ranges rather than feedlots). Thus the Fontenelle Elk Winter Range is relevant. It is important because the presence of sage-grouse breeding habitat makes it sensitive and fragile, as does the presence of CRCT in some areas. It is also a national priority concern or there are mandates of FLPMA that must be fulfilled because of the presence of crucial ranges, as reflected in Department of Interior regulations regarding state primacy in wildlife management,

Wyoming's policy regarding "vital" crucial winter ranges (Exhibit 2), the policies of the Western Governors' Association regarding protection of crucial habitats (Exhibit 3), and the command of FLPMA for BLM to recognize and abide by these Slate policies to the extent possible, 43 U.S.C. § 1712(c)(9). Given these values we believe the Fontenelle Elk Winter Range should be designated an ACEC with management direction that the area be unavailable for future oil and gas leasing. And where there are existing oil and gas leases, the BLM should exert its substantial retained rights to the maximum extent possible to ensure protection of these resources, as discussed in detail on pages 10-19 of our DEIS Comments. Protection for the CRCT must be assured, and special protection should be focused on areas of big game "co-occurrence."

Response: Additional language specifying how the oil and gas management areas would work, and how they could be changed over time, has been provided in the final EIS. Limiting the pace of development by disallowing new fields until existing fields are complete denies lease holders the enjoyment of their oil and gas lease rights. Seasonal stipulations protect wildlife individuals, not habitats. In areas where habitats are compromised by dense drilling or other activities, seasonal stipulations provide diminishing benefits as wildlife abandon the habitats. Oil and gas leasing is a discretionary decision. Withdrawal is not required to make areas unavailable for leasing. The EIS evaluates all the areas suggested for unavailability for oil and gas leasing. The use of clean technologies and environmentally protective practices is included in the EIS as best management practices and would be implemented wherever practical.

Comment: *The Lander Trail.* the BLM has in place the Oregon/Mormon Pioneer National Historic Trails Management Plan, and ..the overall goal of BLM management is to manage the Oregon/Mormon Pioneer Trails in a manner to protect the quality of the cultural, natural, and historic values, and to protect certain trail corridors in their natural condition so as to provide for outdoor recreation and public use." Given these obligations it seems clear to us that the Lander Trail segments in the Pinedale Field Office should be considered for ACEC designation. And we think there is little doubt this area meets the relevance and importance criteria for ACEC designation. There is no doubt it is a significant historic resource of national significance. It is important because it clearly has more than local significance. The remaining traces of the trail are also especially fragile, sensitive, irreplaceable, and vulnerable to adverse change. Moreover, the BLM's proposed management actions fall far short of what would be provided under Alternative 3, which would designate VRM Class II within three miles of the trail, make areas within one mile of the trail unavailable for oil and gas leasing, and prohibit surface occupancy within one mile of the trail. DEIS at 2-76 to -77. We feel that if the BLM considered the Lander Trail for ACEC designation and made the accompanying relevance and importance determinations it might well extend these greater protections to the Lander Trail. We certainly believe these greater protections are warranted due to the BLM's responsibilities under FLPMA, the National Trails System Act of 1968, the National Historic Preservation Act, the MOU (Exhibit 4), and the Oregon/Mormon Pioneer National Historic Trails Management Plan. Finally, we also note that that the BLM has designated ACECs for the protection of National Historic Trails elsewhere in Wyoming. For example, the Rock Springs Field Office has designated the South Pass Historic Landscape ACEC for the protection of the values of the National Historic Trails and other historic resources in this area. So there is certainly precedent for BLM recognizing the need to consider historic trails for ACEC designation.

Response:. You are correct. The Shell/Ultra Lander Trail PA is found in the recently published draft SEIS for the Anticline. This PA is published as an appendix to the SEIS and has been referenced in the final EIS. Overall, we are trying to incorporate National Historic Trail setting management in this RMP in a more holistic manner. See also the comments received by the National Park Service, the Oregon California Trails Association, and the Wyoming SHPO for National Historic Trails recommendations.

You are correct. The Lander Trail from Buckskin Crossing to U.S. Highway 191 and the Sublette Cutoff might qualify as rural historic landscapes. BLM will pursue these locales; the other locales you mention do not appear to possess cultural resource values that lend themselves to Rural Historic Landscape designation.

ACEC designation for the 4,000 acres of the Trapper's Point area is a good start. BLM has been encouraged to consider National Historic landmark status for this area and feels there is merit in this recommendation as well. Also, the Lander Trail from Buckskin Crossing to U.S. Highway 191 might qualify. BLM will pursue these locales; however, the other locales you mention do not appear to possess cultural resource values that lend themselves to Rural Historic Landscape designation.

The following text has been added to the Cultural Resource Management section under Actions Common to All Alternatives (draft EIS page 2-6): "Management of the Lander Trail and trail setting within the boundaries of the Pinedale Anticline Project Area would be consistent with the Lander Trail Programmatic Agreement."

Comment: *Greater Sage-Grouse ACEC(s).* With that in mind, we propose that at a minimum all 75th percentile peak male lek population areas be designated a Greater Sage-Grouse ACEC(s). Exhibit 5 at Figures I, 3, and 4. This could be done with minimal affect on oil and gas development areas, and significant portions of these areas are not leased at this time. The BLM should fully consider the maps in Exhibit 6 as well as those in Exhibit 5 as it moves toward recognition of a Greater Sage-Grouse ACEC. At a minimum this ACEC would meet the relevance ... criteria for fish and wildlife resources and natural processes or systems. The sage-grow is of course being considered for listing under the ESA and is a BLM sensitive species,.._ Activities at leks-a unique and interesting natural process-and the leks themselves ~ essential to maintaining this species and the core areas shown in Exhibits 5 and 6 are based on lek attendance. Likewise, designation of the a Greater Sage-Grouse ACEC would have more than local significance, and would protect a resource that is clearly fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened or vulnerable to adverse change. Protection of the sage-grouse and important sage-grouse habitat is also recognized as being needed to satisfy national priorities or being needed to carry out the mandates of FLPMA. Thus, this ACEC would meet the importance criterion. The sage grouse is clearly of region wide and even national concern; its protection is far more than a local concern. That it is recognized as a BLM sensitive species and is being considered (again) for ESA listing tells us we are dealing with a rare and sensitive resource. Wyoming is widely recognized as the core of sage-grouse occurrence nationally, and as noted above the Upper Green River Valley is the most significant area for sage-grouse occurrence in the state. The Upper Green River Valley is the best of the best for sage grouse conservation purposes. And that the bird is subject to vast amounts of attention and concern from every wildlife agency in the West and even nationally when the Fish and Wildlife Service and BLM are considered tells us protection of this bird is demanded as a national priority. It is important. Consequently, we believe this proposed ACEC clearly meets the relevance and importance criteria, and thus should be designated in the Pinedale RMP. Core areas must be recognized and protected, no surface occupancy areas must be of sufficient size (scale), oil and gas development must be done in a phased manner, timing stipulations must be improved, and well pad densities must be limited. Id. Core areas that are not currently subject to lease should not be leased, and in leased areas the BLM should exert its retained rights the maximum extent possible, as discussed above. If the Governor releases needed conservation measures for sage-grouse conservation, as expected, those should be full considered. See Exhibit 6. Recently, the Governor has indicated his view on some needed conservation measures. Exhibit 8.

Response: ACEC status of itself is just a label and would not provide protection of wildlife migration corridors. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve protection. This protection can be implemented without creating these large ACECs.

Management of wildlife habitats was conducted in the planning area as a cohesive whole, not limited to ACEC areas.

The Wind River Front Management Area covers this area to protect important sagebrush habitats for sage-grouse lekking, nesting, and brood rearing; and important mule deer and pronghorn migration and seasonal habitats. Potential for oil and gas development in this area is low, and undisturbed, landscape-scale sagebrush habitats are needed in areas other than the Jonah and Anticline gas fields to provide habitats for sagebrush-dependent wildlife species.

Comment: Pinedale Anticline Project Area Aquifer ACEC. The numerous aquifers underlying the Pinedale Anticline Project Area constitute a significant groundwater resource at risk from oil and gas development activities. Special management attention is needed to ensure protection of this important and irreplaceable resource. Consequently, we believe the aquifers underlying the Pinedale Anticline Project Area should be designated an ACEC. Following is a point-by-point consideration of how this area meets the BLM's relevance and importance criteria:

Relevance:

I) Significant historic. cultural or scenic value: NA

2) Fish and wildlife resources: NA

3) Natural processes: Meets criterion. The groundwater resource is a significant natural process or system. See. Exhibit 9 at 10, 4 ("EPA believes it is important to sustain and protect quality drinking water supplies in time of increased demand for water and especially in times of drought." "The Wyoming State Engineer has identified 4000 points of use within the PAPA."). "Groundwater resources are important in the PAPA, with wells supplying domestic and stock water to rural residences in areas far from perennial streams. Groundwater also partially supplies drilling water to the Operators." Revised Daft Supplemental Environmental Impact Statement for the Pinedale Anticline Project (hereinafter, Revised Draft SEIS) at 3-80.

4) Natural hazards: NA

Importance

1) Has more than locally significant qualities: Meets criterion. Produced water discharges to the Colorado River system and contamination creates a "cause for concern, especially compared with any similar resource" that is not threatened by oil and gas drilling and resultant contamination. "The PAPA is in the upper Colorado River Basin, for which special regulation has been enacted to control and mitigate river water salinity, in order to fulfill treaty obligations with Mexico.

The CRBSCF identified rapidly expanding energy development in the Upper Colorado River Basin as a high-priority issue. This is because it has the potential of an adverse effect on achieving the adopted numeric salinity standards, which would violate the water-quality salinity- based standards and endanger downstream water users, and potentially affect the United States' agreement with Mexico." Revised Draft SEIS at 3-86.

2) Has fragile, sensitive. or vulnerable qualities. Meets criterion. Circumstances created by oil and gas development pose significant threat to "irreplaceable" groundwater resources which, as shown by monitoring studies, arc "vulnerable adverse change." Other threats include aquifer drawdown and disposal of produced water. "Disposal of water is an issue that has recently developed in the planning area. Large

amounts of water can be generated from conventional or CBNG wells as is discussed more thoroughly in Section 3.7. This water can be saline and/or sodic. Salts that arc mobilized in the Green River portion of the planning area, which constitutes the majority of the land surface, eventually into the Colorado River. Salinity levels in the Colorado River are a regional, national, and international issue. Injection of produced waters into geologic formations is a potential avenue of disposal." See DEIS at 3-112. "Natural gas exploration and production has required water for drilling, in the quantity of approximately 20,000 bbl per gas well. Most of this drilling water has been obtained from water supply wells installed in the Wasatch Formation aquifer ranging from 200 lo 1,000 feet in depth. Water for drilling is also obtained from recycled produced water. Some groundwater is used for dust control. The quantity of water used varies widely between Operators, with estimates for 2006 ranging from 10,000 to 20,000 barrels per day (bbl/day)." See Revised Draft SEIS at 3-83.

3) National priority concern or mandate. Meets criterion. Protection of water quality and quantity in the Colorado River Basin is an issue of national concern and subject to many national mandates, such as those of the Colorado River Basin Salinity Control Act. See Revised Draft SEIS at 3-86.

4) Concerns about safety and public welfare. Meets criterion. As indicated by the EPA rating letter, and language in the Revised Draft SEIS, there is increasing evidence of public health and safety issues related to this groundwater resource, particularly due to benzene contamination that is being detected. Exhibit 9; Revised Draft SEIS at 3-85 to 3-84, 4-100 to 4-10 I. ACEC designation would raise public awareness about this problem, and help focus appropriate management action on solutions.

5) Human life, safety, or property threats. Meets criterion. Contamination of groundwater used for domestic purposes including drinking water poses a significant threat to human life and safety; contamination of groundwater used for other purposes such as stock watering and industrial use is a threat to property, possibly including water right". "The monitoring data suggest that current drilling and production activities on the PAPA have contributed to contamination of an aquifer used as a drinking water source. Existing benzene contamination exceeding the Drinking Water Standard (maximum concentration level or MCL) in two wells was attributed to oil and gas exploration activities in the Revised Draft SEIS. Further, benzene and other hydrocarbons have been detected in 88 of the approximately 230 water supply wells monitored.••• Based upon the ~ extent of contamination of these two wells completed in an aquifer used as a source of drinking water and benzene contamination in approximately one third the other wells monitored, EPA is concerned about the significance of existing and potential future impacts associated with activities in the PAPA. EPA believes that such impacts are environmentally unsatisfactory." Exhibit 9 at 4. "The Revised Draft SEIS provides mitigation measures intended to reduce impacts to groundwater. These measures, however, were not identified as necessary nor were they evaluated as to their effectiveness in any of the alternatives. As the source of the widespread contamination remains unclear, it is difficult to identify and implement appropriate and effective mitigation measures to protect valued groundwater supplies. EPA recommends that where impacts have occurred or may reasonably be expected to occur to groundwater sources as a result of oil and gas production, including but not limited to hydraulic fracturing practices, an effective and enforceable mitigation plan should be developed. The mitigation plan could specifically include plans for replacement of quality water to water users if necessary. Exhibit 9 at 4.

Response: Water is the purview of the State of Wyoming. Total depletions are more appropriately addressed at the field level document rather than the RMP.

The nearest existing federal oil and gas lease to the Green River Ranches areas is located on the west side of the Green River about three-quarters of a mile west of the Warren Bridge Campground. Under Alternatives 3 and 4, the federal land and mineral estate in the Green River Ranches area would be unavailable for oil and gas leasing or new leases would be unavailable for surface occupancy. The

specifics of drilling operations would be addressed through project-level or site-specific NEPA analysis. BLM does require operators to use fresh water drilling techniques to drill through all known fresh water aquifers encountered. BLM also requires the operators to set surface casing through the fresh water zones and then cement the backside of the surface casing from the total depth of the casing back to surface to seal the encountered aquifers for the well bore.

Comment: At a minimum a "White-Tailed Prairie Dog Wildlife Management Area," "Wyoming Range Front Management Area," and "LaBarge Elk Winter Range Management Area" should be created, for example. Furthermore, several of the areas we discussed above that were not even considered for ACEC designation should be recognized as demanding at least some form of special management. These are the Ryegrass, Cottonwood, Fontenelle Elk Winter Range, Lander Trail, Greater Sage-Grouse Core Areas, and Pinedale Anticline Aquifer areas. These areas also clearly demand special management recognition in our view. In addition, in all cases we feel that the entirety of these areas should be designated for special management, not subsets of them (as is often done under Alternative 4 in comparison to the provisions under Alternative 3). We feel that if the BLM designates a special management area it should ensure that the entirety of the special values sought to be protected are in fact protected, and it should only eliminate portions of these areas from protection if it documents that they are not needed to fully protect the special values that are present.

Response: ACEC status of itself is just a label and would not provide protection of wildlife migration corridors. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve protection. This protection can be implemented without creating these large ACECs. Management of wildlife habitats was conducted in the planning area as a cohesive whole, not limited to ACEC areas.

Comment: The BLM is planning to allow 7,136 wells to be drilled under its preferred alternative, which could greatly exacerbate existing ozone problems. DEIS Appendix 10 at A10-2. And the recent Revised Draft SEIS for the Pinedale Anticline project predicts ozone levels will exceed the new NAAQS. Revised Draft EIS at 4-77 (showing ozone levels will reach 76.5 ppb). Furthermore, FLPMA requires BLM RMPs to "provide for compliance" with the Clean Air Act and other pollution control law. 43 U.S.C. § 1712(c)(8). Given that the Pinedale Anticline SEIS is predicting violations of the ozone NAAQS and very high ozone levels are already being monitored, the BLM clearly must put in place mitigation as a requirement of this RMP if it is to meet its obligation to "provide for compliance" with the Clean Air Act.

Response: Air quality monitoring data were updated in the final EIS as they were available.

BLM will continue to comply with all air quality laws, rules, and regulations. While ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time is inconclusive.

It is important to note that current concentrations of criteria pollutants are in compliance with the WAAQS and NAAQS (with the exception of ozone). Therefore an increase in the concentration of a particular pollutant is not necessarily a significant impact. Provided that concentrations remain in compliance with the standards, significant impacts would not occur.

BLM does not have the authority to prohibit development of valid existing oil and gas leases. Regulation of air emissions resulting from drilling is the responsibility of WDEQ.

Comment: On February 14, 2008, the EPA issued its letter assessing and rating the Revised Draft SEIS for the Pinedale Anticline Project. Exhibit 9. In that letter the EPA gave the Revised Draft SEIS its lowest possible rating, an EU-3, environmentally unsatisfactory with inadequate information. The EPA raised

three principal concerns: ozone issues, impacts on visibility in Class I areas, and groundwater impacts, particularly from benzene contamination. As the BLM revises the Pinedale RMP, we believe these issues are just as relevant to the RMP as to the Pinedale Anticline EIS. Widespread benzene contamination of water wells is a concern of Field Office-wide significance. It is our understanding contamination of wells is also being detected in the Jonah field. Impacts on Class I areas, particularly the Bridger Wilderness Area, are an issue of national interest, given the command of the Clean Air Act that the national goal is "the prevention of any future, and the remedying of any existing, impairment of visibility" in Class I § areas. 42 U.S.C. § 7491(a)(I). And the ozone levels being seen in the Pinedale area of great public concern, and a threat to public health. Consequently the RMP should fully address these issues.

Response: BLM will continue to require proponents to demonstrate that potential impacts on air quality from the proposed project are below applicable significance criteria or levels of concern.

Although ambient air quality conditions and air quality-related values may appear to be worsening, monitored data at the present time is inconclusive.

The WDEQ has the regulatory responsibility and authority to enforce air quality regulations in Wyoming. BLM has the land management authority and responsibility to adopt desired future conditions, such as significance criteria and levels of concern. BLM will continue to support air quality monitoring and analysis. BLM will continue to require proponents to demonstrate that potential impacts to air quality from the proposed project are below applicable significance criteria or levels of concern.

Comment: Largely due to the high ozone levels being seen, but for other reasons as well (such as water well contamination), citizens of Pinedale have demanded that the BLM conduct a comprehensive Health Impacts Assessment (HIA) of impacts resulting from the massive oil and gas development occurring in the area. Exhibit 11. While this call for an HIA was specifically directed at the Pinedale Anticline SEIS, we believe the concerns expressed have Field Office-wide significance. Consequently, we ask the BLM to take note of this request and ensure that it is complied with, either as part of the Pinedale Anticline SEIS or as part of the Pinedale RMP revision. As noted in the letter, it is critical that the I-IIA be comprehensive, and the protocol developed by the World Health Organization and the Centers for Disease Control should be adhered to. These concerns have also been expressed in a separate letter sent to the BLM and other agencies that was signed by many groups that are party to these comments. Exhibit 12.

Response: This comment is not relevant to the ACEC NOA. The HIA is being completed as part of the Pinedale Anticline SEIS.

Comment: On January 10, 2001 Executive Order (EO) 13186 was issued. Exhibit 13. It directs agencies to ensure compliance with the Migratory Bird Treaty Act, and other 30 relevant law. Among other things it directs agencies to enter into a MOU with the U.S. Fish and Wildlife Service that will ensure the agency will "restore and enhance the habitat of migratory birds ... ," "prevent or abate pollution or detrimental alteration of the environment for the benefit of migratory birds," and "design migratory bird habitat and population conservation principles, measures, and practices into agency plans and planning processes ...." BLM has apparently never entered into the required MOU, so on December 18, 2007 it issued an Instruction Memorandum (1M 2008·050) as a stopgap measure. Exhibit 14. This 1M provides guidance on compliance with the Executive Order. We request that the BLM ensure full compliance with both the EO and the 1M in the Pinedale RMP. At a minimum, the RMP EIS should address, and provide appropriate mitigation for the Bird Species or Conservation Concern and the Game Birds Below Desired Condition presented in the attachments to the 1M, if those species occur in the Pinedale Field Office (many do). We specifically request that the BLM adopt stipulations that protect these migratory birds that can be attached to oil and gas leases or other land use authorizations. We do not think that protection of

these species, or compliance with the EO, can be assured with just general provisions made in the RMP EIS; specific, enforceable requirements must be made part of all oil and gas leases and other land use authorizations, and the RMP should so provide. Currently the DEIS provides very little consideration of migratory bird species subject to the EO. The very general discussions that appear on OEIS pages 4-181 to 192 and 4-208 to -211 are essentially silent as to virtually all migratory bird species. And as to the provisions of the preferred alternative that apply to wildlife, it is not clear that ~ most of these would apply to the migratory species subject to the EO. See DEIS at 2-143 to -153. At a minimum these provisions should be made specifically applicable to all :E; migratory species covered by the EO, and specific measures that help ensure the ~ provisions of the EO are complied with and implemented should be added to these provisions.

Response: BLM intends to protect raptors to the fullest extent of our management authority in all four of the designated areas to prevent a violation under the Migratory Bird Treaty Act. The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale.

Appendix 18 of the draft EIS is based on recommendations from the USFWS, which administers the Migratory Bird Treaty Act. In addition, page 9 of Appendix 18 states that power lines should be constructed to the standards identified by APLIC 1996.

Comment: The DEIS did not provide a quantitative analysis of air quality impacts, rather it only provided a qualitative analysis. DEIS at 4-5 to -8, 4-237 to -240, Appendix 19. In essence all that was presented was an inventory of likely future increases in emissions of criteria air pollutants. It is anticipated that emissions of air pollutants will increase from approximately 38,000 to 120,000. DEIS at 1'-24 (Figure 4_1).8 • The BLM provided 110 units with these data presented in Figure 4·1, just raw numbers. We assume these data are in pounds per year, but they could be Ions per year. This "analysis" is insufficient to meet the requirements of NEPA. An environmental impact statement (EIS) must consider the environmental impacts of a federal action, it must consider the effects of the action. A consideration of the environmental effects of an action requires a consideration of both the direct and indirect effects. 40 C.F.R. § 1508.8. Here the BLM has provided no such analysis, it has presented an inventory of the likely increase in pollutants but it has made no attempt to consider the direct effects that "are caused by the action and occur at the same time and place" nor has it made any attempt to consider indirect effects "that are caused by the action and are later in time or farther removed in distance." Id. All that BLM does is state that the amount of pollutants will increase from approximately 38,000 to 120,000. DEIS al F-24 (Figure 4- I)' 9 Again, the BLM did not present any units with these data, so it is not possible to know whether this is an increase from 40,000 pounds of pollutants per year to 120,000 pounds, or if these data arc perhaps in tons per year. This is not the "detailed statement" on the "environmental impact of the proposed action" or the "adverse environmental effects which cannot be avoided should the proposal be implemented" that NEPA requires. 42 U.S.C. §§ 4332(2)(C)(i)-(ii). It is nothing more than an inventory of emissions with no concrete conclusions whatsoever regarding potential impacts of the emissions. This is a violation of NEPA. The BLM is required to "consider every significant aspect of the environmental impact of a proposed action.", Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 98 S.Ct. I 197, 1216 (1978). As recognized by the courts, An agency may not avoid an obligation to analyze in an EIS environmental consequences that foreseeably arise from an RMP merely by saying that the consequences are unclear or will be analyzed later when an [environmental assessment] is prepared for a site-specific program proposed pursuant to the RMP. "[T]he purpose of an [EIS] is to evaluate the possibilities in light of current *and contemplated* plans and to produce an informed estimate of the environmental consequences .... Drafting an [EIS] necessarily involves some degree of forecasting." Kern v. United States Bureau of Land Management, 284 F.3d 1062, 1072 (9'" Cir. 2002) (underlines added).

Response: NEPA requires the use of best available information. Existing information was used and this was disclosed in the analysis. Having this information may more adequately inform the reader but is unlikely to result in a change to or addition of an alternative.

Tables A19-6, A19-7, and A19-8 in the draft EIS Appendix 19 quantify potential emissions from BLM activities in the Pinedale RMP planning area for each alternative and year. Potential impacts are described by including as an example the cumulative impacts from the Jonah and Pinedale SEIS analyses.

The range of alternatives was based on surface disturbance and magnitude of oil and gas development rather than on emissions or air quality. Because infill of the Jonah and Anticline fields would continue under all alternatives, differences in emissions between the alternatives are small. The emission factors used do indeed apply to the Pinedale area and altitude.

The RMP does not analyze any specific proposal or authorize any drilling activity. The RMP is an allocation document that establishes allowable uses over the Pinedale planning area. BLM can estimate the approximate impacts of a predicted number of wells, which the impact analysis in Chapter 4 does. NEPA does not require a quantitative study. The Air Resources Team (air staff from WDEQ, EPA, USFS, NPS, and BLM) worked collaboratively with BLM on the analysis methodology.

Oil and Gas

Comment: PAGE: 3-136, SECTION: 3.18.2, RECOMMENDED CHANGE: Revise for accuracy New Fork Potholes. This unique subsection of the Wind River Front which consists of private land and scattered parcels of public land contains nearly 100 glacial potholes, which are depressions formed by huge blocks of ice stranded in a field of glacial outwash materials. Upon melting, these blocks left depressions in the landscape, which today remain in the form of small lakes. Abundant waterfowl make use of the ecosystem for nesting and brood rearing and as a stopover point in their migrations. Reintroduction efforts for the trumpeter swan have been attempted in the past. Riparian vegetation surrounds the potholes, providing habitat for various wildlife, including neotropical birds, elk, deer, and moose. A portion of the region serves as crucial elk winter range. The area is accessible for semiprimitive motorized recreational activities. EXPLANATION: Most of the area is already under lease; cannot show harm to resources, since many if not most are located on private land as well.

Response: The text presents an accurate description of the area. The presence of an oil and gas lease does not negate the values of the area. BLM has no authority to protect resources on private lands, but could protect public resources in this area where private lands are being rapidly subdivided and developed.

Comment: We support mandatory use of new science-based technologies for restoration, clustering industrialization, directional drilling and other ways to minimize impacts in developed fields. Those alone will not sustain wildlife, landscapes, air and water or our way of life. We need and demand more and better planning before projects are developed to weigh and balance other important resource values against the payoff from more drilling. Some measure of development prerogative must be foregone by a slower pace, phased development and permanent withdrawal of important areas from development if BLM is to truly manage for multiple uses in the Pinedale RMP area. The use of more ACEC descriptions would be appropriate to protect areas of known importance.

Response: These technologies are included as best management practices in the Preferred Alternative and would be implemented whenever practical. Making areas unavailable for leasing and development is considered in the EIS, including in the Preferred Alternative. Pace and phasing of development is outside the scope of the RMP, but would be somewhat affected by restrictions placed on surface-disturbing and other activities.

Comment: Page 2-156 Wind River Front Management Area Objective (7)(d): "The Management Area would be unavailable for oil and gas leasing." Comment - The creation of this SMA establishes a "buffer" around other special designations on the Wind River Front and ignored valid existing lease rights. The protection area is unjustified and excessive. We recommend removing the "buffer" and keeping the area available for oil and gas leasing with controlled surface use (CSU) stipulations to "maintain and improve wildlife habitats; big game migration corridors and bottlenecks; scenic quality; and recreation values and uses…"

Response: Creation of the Wind River Front Management Area cannot negate existing lease rights. See page 2-8 in the draft EIS, actions common to all alternatives: "Existing oil and gas or other mineral lease rights would be honored". Areas unavailable for leasing are intended to provide undeveloped wildlife habitats in the planning area during the intensive development of the Pinedale Anticline, Jonah, and other existing fields or new discoveries on existing or new leases.

Comment: PAGE: 2-228 SECTION: Wind R Front RECOMMENDED CHANGE: EXPLANATION: Comment Ch. 2-#67, 207. Much of area private land or private minerals BLM cannot deny access to private mineral estate. Comment Ch. 2-#53. Question change from 10 miles to 6 miles, since local governments understand that is based on land already under lease rather than objective determination of a distance that does not interfere with listening array. Moreover arrays have been in place for several decades and only now require a 6 mile buffer. VRM Class II will limit or preclude logging

Response: See page 1-9 of the draft EIS: "The planning decisions in the RMP will apply only to BLM-administered public land surface and mineral estate in the planning area, including BLM-administered minerals that underlie nonfederal lands (split estate)". VRM Class II objectives could impact logging operations but would not preclude them. This discussion has been added to the impact analysis for Alternatives 3 and 4.

Geology

Comment: A major point is that the basic surficial geology is glacial till over bedrock formations such as the Lance and Green river formations. The porosity of glacial till allows for subsurface vertical and horizontal movement. Dr. Dennis Dahms of Iowa State University has published numerous articles on the surficial geology of the Pinedale and Wind River Area. He sent me his opinion via email (see attachment 3) regarding the potential for contamination in water courses associated with the potholes area proposed for ACEC status. The same general conditions exist throughout most of the surficial geology in the PRM area and the same types of affect on water quality would occur on a broader scale than just the potholes region. The topology from the Wind Rivers extends west beyond Highway 191 with similar terrain to the potholes area, which is recognized as deserving special management status.

Response: Under Alternatives 3 and 4, area encompassed by the proposed New Fork Potholes ACEC would be unavailable for leasing or new leases would be unavailable for surface occupancy. There are some existing leases in this area where an operator/leaseholder has a valid and existing right to develop and produce the leases. Development of wells in this area would be subject to project-level and/or site-specific NEPA analysis and would be subject to the requirements listed in Appendix 2 (page A2-2) of the draft EIS. Also due to the proliferation of surface water areas, BLM would very likely require the use of a closed-loop system (no reserve pits) and would potentially require drilling cuttings be removed to an approved offsite disposal facility. Fresh water drilling would be required through all fresh water zones, and the surface casing would be cemented through all fresh water zones back to the ground surface. The BLM Pinedale Field Office requires that operators use closed-loop drilling systems rather than reserve pits when ground water occurs within 50 feet of the ground surface.

Comment: PAGE:2-156, SECTION: Ross Butte Area, RECOMMENDED CHANGE: REVISE Objective 6 Maintain sensitive plant communities and control soil erosion in the Ross Butte area. Actions a. The Ross Butte Management Area (35,670 acres) would be designated (Map 2-33; Table 2-30, p. 2-169). EXPLANATION: Boundaries need to be focused on actual plant community areas. Soil erosion is controlled throughout the planning area.

Response: Soils in the Ross Butte area are particularly fragile, and sensitive plant communities occur throughout the area. Special management of these resources is reasonable.

Comment: PAGE: 3-102, SECTION: 3.12.3, RECOMMENDED CHANGE: Revise or drop Ross Butte EXPLANATION: Ross Butte discussion is inaccurate. The soil types do not support the plants listed. Most of the area is private land and yet RMP omits this significant fact. Rationale does not justify description of this area as significant. Maps do not disclose Alternative 1. Finally the cited report is not part of the documents provided to the public or the cooperators.

Response: The Ross Butte area proposed for management consists of BLM-administered public lands. Because the plants have been documented in the area, it can be deduced that the soils support them.

Comment: PAGE: 2-225 SECTION: Ross Butte RECOMMENDED CHANGE: EXPLANATION: Comment Ch. 2-#205 Plants and soils are not unique to area Along river, most of land is privately owned Commercial stands of timber which would be at risk since management will interfere with need to address diseases and pests Boundaries much larger than buttes to be protected Unclear objective since BLM must allow maintenance of existing communication towers and related roads

Response: The Ross Butte Management Area does not include any private lands or areas immediately adjacent to the Green River. There is no commercial timber in the Ross Butte Management Area. The boundary of the Ross Butte Management Area is drawn to optimize management of all the sensitive resources of the area, including cultural and archeological resources and landscapes, sensitive plant communities, paleontological resources, open space, dispersed recreation, and unstable soils. The objective does not preclude maintenance of existing sites.

Wildlife, Special Status Species (SSS)

Comment: Alternative 3 would designate a White-Tailed Prairie Dog ACEC while Alternative 4 would not provide any special management oriented toward this BLM sensitive species. The protections afforded by Alternative 3 should be adopted by the BLM regardless of what Alternative is ultimately selected as the RMP. The BLM recognizes that this ACEC meets the relevance and importance criteria for ACEC designation. A4-3. As will be discussed below, having made this determination, the BLM is required to designate the White-Tailed Prairie Dog ACEC. It should be pointed out that the areas where white-tailed prairie dog habitat exists extend considerably to the west and southwest of areas currently known to have white-tailed prairie dog towns. Compare Map 2-26 with Map 3-21. Thus, it is likely that significant white-tailed prairie dog colonies will be found in these areas. One potential significance of this is that this ACEC does not necessarily create potential conflicts with the oil and gas development occurring in the Pinedale Anticline field; or at least there is not necessarily complete overlap between any efforts to protect prairie dogs through this ACEC designation and oil and gas development. Moreover, as noted above, even with the designation of this ACEC (and other protected areas), Alternative 3 would nevertheless lead to the production of over 87 percent as much natural gas as Alternative 4, so obviously the designation of this ACEC would not lead to significant impacts on oil and gas production. Potential impacts on oil and gas development are not a reason to forgo protection of white-tailed prairie dog habitat through an ACEC. Furthermore, given that substantial white-tailed prairie dog habitat is found well west of the Pinedale Anticline field, it is apparent this ACEC could be formed in areas that have not been as heavily leased as many areas (Map 1-3), in areas where there is not substantial current oil and gas field

development (Map 3-5), and in areas with low to moderate oil and gas development potential (Map 4-1). In short, this ACEC could be formed without necessarily creating a great deal of conflict with oil and gas development.

It must also be reiterated again that the white-tailed prairie dog is a BLM sensitive species. For this reason the BLM must ensure that it complies with provisions in the BLM Special Status Species Management Manual 6840. Pursuant to the Special Status Species Manual, BLM must afford sensitive species the same protections afforded candidate species, at a minimum. Candidate species must be provided management strategies necessary to meet specific habitat and population management objectives and the BLM must ensure all management actions are consistent with those objectives. BLM Manual § 6840.06.C.2.b-c. Designating the White-Tailed Prairie Dog ACEC would help ensure these obligations are met, while a complete failure to protect white-tailed prairie dog habitat, as proposed in Alternative 4, clearly does not meet these obligations.

Response: Protections for white-tailed prairie dog habitats are found in the Wildlife section of Alternative 4 (pages 2-149 and 2-150 of the draft EIS).

Comment: The location of the White-Tailed Prairie Dog potential ACECs under Alternative 3, as indicated on Map 2-26, is not consistent with Map 3-21 which shows white-tailed prairie dog towns. For example, Alternative 3 would create ACEC in Township 28 North, Range 112 West when the nearest mapped white-tailed prairie dog town is almost three townships to the northeast. Similarly, Alternative 3 would create ACECs in the following townships that do not appear to contain white-tailed prairie dog colonies: Township 31 North, Range 111 West; Township 30 North, Range 111 West; Township 29 North, Range 111 West; Township 28 North, Range 111 West.

Response: The townships listed for the White-Tailed Prairie Dog ACEC include those where prairie dog habitats are likely to exist, since surveys have not been conducted over the entire planning area. These townships are likely to contain prairie dog towns that would be discovered when the areas are surveyed.

Comment: Special management areas need to include areas that protect the future of populations of fish and wildlife that are being threatened now. TU supports the ACEC designations and expansions, particularly the Beaver Creek Expansion and the Rock Creek Expansion. Protecting the Colorado River Cutthroat trout populations and associated habitats serves to assist in keeping them off any endangered species listing. Colorado River Cutthroat trout (CRCT) are highly susceptible to sedimentation on their spawning grounds. With the extraordinary increase in the number of gas wells called for by BLM, it can be expected that the associated sedimentation, erosion, water and air quality impacts will directly and indirectly impact CRCT habitat. Protecting these relatively small proposed ACEC acreages helps ensure survival of these core conservation populations.

Response: ACEC status of itself is just a label and would not provide any protection to fish habitats. Meaningful protection would have to be implemented in conjunction with the ACEC status to achieve desired results. This protection can be implemented without creating additional ACECs. Management of wildlife habitats was conducted in the planning area as a cohesive whole, not limited to ACEC areas. The alternatives, including the Preferred Alternative, include objectives and actions to maintain suitable CRCT habitats.

Comment: PAGE:2-153,SECTION: Trapper's Pt. ACEC RECOMMENDED CHANGE: [Trapper's Point ACEC Management Goal Preserve the viability of the big game migration bottleneck, cultural and historic resources, and important livestock trailing use.] (strikeout) EXPLANATION: Migration is primarily a private land as shown by comparing land status map with ACEC map. BLM cannot exercise jurisdiction over private land. Comment #153. There is no bottleneck, because game animals rely

primarily on private land. Livestock trailing is protected by stock driveways and an ACEC is not necessary nor appropriate.

Response: The big game animals in question migrate through BLM-administered public lands in the Trapper's Point area and have done so for at least 6,000 years—prior to the establishment of private lands in the area. Mule deer and pronghorn, in particular, rely on sagebrush habitats. Data from collared and studied deer and pronghorn have identified several migration bottlenecks in the planning area, of which Trapper's Point is the most famous. The migration corridor goes through private, BLM, and USFS lands if one traced the entire route from beginning to end. The issue on BLM lands is surface-disturbing and disrupting activities by humans associated with mineral development. By removing this portion of the known migration corridor from future disturbance, BLM is preventing undue and unnecessary degradation of a known wildlife use.

Comment: PAGE:2-155, SECTION: Trapper's point ACEC, RECOMMENDED CHANGE: DELETE [Objective 3 Ensure that no obstruction to the big game migration bottleneck within the Trapper's Point ACEC would occur; facilitate livestock trailing and gathering; and provide interpretation of cultural sites for the public.] (strikeout) EXPLANATION: There is no bottleneck. Big game use adjacent private land for the most part. BLM cannot show that existing land actions will destroy livestock trailing and gathering or cultural sites or the migration route, which is on private land.

Response: Scientific study has identified the migration bottleneck at Trapper's Point and the archeological record has confirmed the presence of the migration route for at least the last 6,000 years. The migration bottleneck is located on BLM-administered public lands. Animals are not migrating through adjacent private lands that have been developed for housing.

Comment: PAGE:2-155 TO 156, SECTION: Miller Mtn., RECOMMENDED CHANGE: DELETE [Objective 5 Maintain open space, natural landscapes, and crucial big game winter ranges in the Miller Mountain area.] (strikeout) EXPLANATION: The management objectives bear little relation to the rationale for Miller Mountain.

Response: Limitations on forest management activities, oil and gas leasing, OHV use, road development, surface disturbance on steep slopes, and road construction in talus areas are directly related to the objectives of maintaining open space, natural landscapes, and crucial big game winter ranges. These limitations all specifically reduce habitat disturbance and fragmentation, preserving open space and natural landscapes.

Comment: PAGE: 4-217 SECTION: 4.18.3 Trapper's Pt. RECOMMENDED CHANGE: EXPLANTION: See Comment Ch.2-# 202. Not a bottleneck; area already has fences and homes and has been major migration point. No evidence that seasonal stipulation is insufficient.

Response: The Trapper's Point migration bottleneck is well documented by both current wildlife studies and the archeological record. Seasonal stipulations do not protect habitats, they protect individuals. In this case, because the habitat is extremely limited, it needs protection in excess of seasonal restrictions.

Comment: PAGE: 4-223 SECTION: Miller Mtn. RECOMMENDED CHANGE: EXPLANATION: Boundaries do not match winter range shown on maps although said to be the need for area Mix of private and state land. Cannot impose VRM Class II given existing leases and other land uses

Response: The boundaries of the Miller Mountain Management Area are drawn to optimize open space, natural landscapes, and big game winter ranges. The boundaries also consider the oil and gas leasing

status of the area. BLM management decisions do not apply to private lands. VRM Class II objectives would not prohibit other uses.

Compliance with Laws, NEPA, Policy

Comment: The BLM recognized in the table presented in Appendix 4 in the RMP DEIS that many of the ACECs considered met BLM's relevance and importance criteria. Having recognized this, the BLM was required to designate these areas meeting the relevance and importance criteria as ACECs in order to meet its obligation to give "priority" to designating ACECs. The BLM seems to have declined to designate many of these areas as ACECs because of a belief that alternative management is sufficient for these highly relevant and important fragile resources. This is plainly wrong; one does not give priority to the creation of something (an ACEC) by not creating it or by creating something else. One gives priority to designating ACECs by doing just that when the area meets the relevance and importance criteria, as many of these areas do. Why does BLM feel it need not designate an area an ACEC when the area meets BLM's own relevance and importance criteria; how is that giving "priority" to creation and protection of ACECs, as required by the FLPMA?

The BLM seems to believe that the language in 43 U.S.C. § 1702(a) about special management being "required" can absolve it from designating ACECs (i.e., giving priority to them) when it can fmd some other way to protect these lands. But such a view is plainly wrong. BLM can always fmd other ways to protect areas besides designating them as ACECs through its general multiple use authority, but such an effort thwarts the express command of Congress to give "priority" to designating ACECs not other special management areas, many of which are often purely of BLM's own creation with no defined or certain management requirements or standards. Furthermore, any time an area is "developed" or is "used" or where "no development" must be ensured, ACEC designation is "required" because these circumstances create a need for "special management attention" so as to protect any recognized important resource values. 43 U.S.C. § 1702(a). That is, ACECs are not to be designated only when required for protection of the resources, but rather the requirement to designate attaches when development or use will occur in an area that meets the relevance and significance criteria. The requirement also attaches if use will occur in an area that meets the criteria when no development must be ensured to protect the resources. BLM recognizes that nearly all of the ACECs at issue here are likely to be "developed" or "used" to some degree. Consequently these lands require special management attention to protect and prevent irreparable damage to the resources in these areas that BLM recognizes are important and relevant. Thus, they must be designated ACECs as commanded by the FLPMA.

Response: For areas that meet the ACEC relevance and importance criteria, BLM is required to analyze designation of the ACEC in at least one alternative of the EIS. BLM is not required to establish as an ACEC every area that meets the relevance and importance criteria. Protections for all areas that meet the relevance and importance criteria, and for some areas that meet only one criterion, are included in the Preferred Alternative.

Comment: Finally, the BLM did not comply with the procedural requirements imposed in the BLM's planning regulations regarding the designation of ACECs. The BLM Planning regulations require the State Director, upon approval of a draft RMP, to publish a notice in the Federal Register identifying any potential ACECs and describing the resource use limitations that would be imposed if the ACECs were adopted. See 43 C.F.R. § 1610.7-2(b) (2006). Although the BLM's Federal Register Notice of February 16, 2007, described two potential ACECs, it does not identify the numerous other ACECs described in Alternative 3. See 72 Fed. Reg. 7670 (February 16, 2007). Because the BLM failed to comply with this requirement during the revision of the Casper RMP, the BLM was recently required to re-open comments with respect to ACECs when it issued the Final RMP/EIS for the Casper RMP. See 72 Fed. Reg. 31848 (June 8, 2007). Such procedures may confuse and taint the public participation process associated with the development of a RMP.

Response: BLM has issued an additional NOA identifying the potential ACECs and has gathered public comment. Responses to substantive comments received, and any document changes necessary, are provided in this final EIS.

Comment: PAGE: 2-153, RECOMMENDED CHANGE: The following SMAs would be reconsidered for [retention or establishment within 5 years retained, modified, or established.] (strikeout) EXPLANATION: Appendix 4 and the Pinedale ACEC report are legally deficient because they never establish the need to protect the specific resources. FLPMA defines ACEC as follows: (a) The term "areas of critical environmental concern" means areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards. Report omits any discussion of need, which by law is defined in terms of protect and prevent irreparable damage. The report only considered relevance and importance and assumed need. The BLM Planning Handbook recognizes this fundamental element, App. C, p. 18 where it states: "[ACEC] must require special management to: (1) Protect the area and prevent irreparable damage to resources or natural systems. (2) Protect life and promote safety in areas where natural hazards exist."

Response: Reconsideration of the SD/MA designation would require an RMP revision. BLM would monitor these areas to determine if management goals are being attained. If circumstances arise where the SD/MA designation is considered no longer relevant, BLM would at that time reconsider the SD/MA designation and management goals.

Comment: PAGE:2-155, RECOMMENDED CHANGE: [h. No water diversion ROWs would be permitted unless they benefit CRCT.] (strikeout) EXPLANATION: Even though Beaver Creek ACEC fails to meet the legal criteria, this action under the Beaver Creek ACEC is so clearly illegal that it merits its own comment. Denying rights-of-way to divert water is an unlawful effort to regulate state water rights and inversely condemns those water rights. It needs to deleted.

Response: Requests for ROWs of any kind can be denied based on anticipated impacts to resources at risk under the regulations. One can check past Interior Board of Land Appeals (IBLA) decisions on this issue from the Kemmerer Field Office (IBLA 93-154, Sept. 13, 1995) as an example.

Comment: PAGE: 4-213 SECTION: 4.18.3 RECOMMENDED CHANGE: REVISE In concert with BLM guidelines, the impact analysis considers management actions that "defend or guard against damage or loss" to the relevant and important values. [The management actions associated with the alternatives could either degrade or protect the relevant and important values within each ACEC and either cause or prevent irreparable damage to such values. Degradation of relevant and important values would primarily occur from surface disturbing activities, such as those associated with construction of ROWs (e.g., pipelines, transmission lines, communication lines), construction of oil and gas facilities (e.g., well pads, reserve pits, roads), and livestock range improvements. Other activities, such as vegetation manipulation and OHV recreation use, could affect relevant and important values by removing soil and vegetation and thereby creating intrusions on the landscape.](STRIKEOUT) EXPLANATION: Text correctly states that policy requires identification of threat or loss. Text is incorrect that the analysis identified specific threats. BLM Planning Handbook imposes a much higher standard. See also Comment # 195. Thus ACEC analysis and recommendations were never correctly done and must be revised entirely.

Response: The analysis identifies specific actions that would impact the proposed SMAs.

Cumulative Impacts

General Comment Responses:

Comments:

- One more thing . . . Yellowstone is the site of one of the world's largest and potentially most explosive calderas. Can you say "Volcanic eruption of cataclysmic proportions"?? As in worldwide nuclear winter? DUH. Don't do it. It's a fools' errand.
- I truly hope you also have seriously studied the impact of any symbiotic relationship between the large gas fields on the lava bed beneath the Yellowstone mesa. It would be a hard way to find out that an overreaction to a "good find" resulted in an unintended consequence of a major eruption of an overdue lava flow in the greater Yellowstone National preserve... you'd better check your facts before you grab for the gold. You're wagging our health, our lives and our quality of live for quick cash in someone else's pocket.

Response: There is no current seismic evidence to suggest the magma chamber extends under the planning area.

Unique Comments:

Comments on Document/Suggested Changes/Comments with Multiple Issues

Comment: Recent NEPA challenges and court decision have highlighted the critical aspect of cumulative effects analysis. The 9th Circuit (Great Basin Mine Watch v. Hankins 456 F. 3d 955; 9th Cir., Aug. 1, 2006) agreed with plaintiffs that cumulative impacts were inadequately considered because the cumulative impact analysis consisted of only vague and conclusory statements with no supporting data. Plaintiffs argued that the EISs merely listed other mines in the area without discussing the impacts from each one and failed altogether to address specific impacts related to nearby mines. Is this case instructive and might the same arguments be considered when thinking about cumulative socioeconomic impacts in this RMP?

Response: The cumulative impact analysis has been revised in the final EIS.

Comment: Table 4-2 Steps in Cumulative Effects Analysis Steps in cumulative effects analysis to be addressed in each component of environmental impact assessment.

1. Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.
2. Establish the geographic scope for the analysis.
3. Establish the time frame for the analysis.
4. Identify other actions affecting the resources, ecosystems, and human communities of concern.
5. Characterize the resources, ecosystems, and human communities identified in scoping in terms of their response to change and capacity to withstand stresses.
6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.

7. Define a baseline condition for the resources, ecosystems, and human communities.
8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.
9. Determine the magnitude and significance of cumulative effects.
10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.
11. Monitor the cumulative effects of the selected alternative and adapt management.

Response: The cumulative impact analysis has been revised in the final EIS.

Comment: The current NEPA documents are insufficient in their quantification of cumulative impacts. This is vividly illustrated in the air quality impacts discussion. The impacts discussion should include modeling that assessed the combined effects of existing (Jonah Field and Pinedale Anticline) development and any new development that could occur in the Pinedale Planning Area. Since no clear assumptions have been made about what level of development could occur within the Pinedale Planning Area the NEPA document fails to adequately assess the cumulative impacts of the RMP.

Response: The RMP will not authorize any activities on the ground. Thus, no air quality modeling was conducted. Air quality modeling is typically completed at the site-specific project development EIS stage, such as for the Jonah and Pinedale Anticline EISs.

Comment: MISSION STATEMENT "It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations". The above BLM Mission Statement is not being adhered to since the current development is causing declines in Deer populations, air quality, and the quality of life for those of us who enjoy the outdoors. What will future generations have? The pace of environmental destruction to this once pristine area needs more sensitive management and stewardship, not increased unmitigated development. I would like to see areas of concentrated development with reseeding and a thorough clean up before other areas are explored. While I oppose winter drilling due to disruption of wintering wildlife and the haze and inversions that diesel fumes create, if it is unavoidable, then drilling rigs and service trucks should run on clean burning natural gas instead of diesel. Careful attention to migration routes for deer and antelope should preclude development in those areas. I would also like to see more BLM and EPA inspectors hired to make sure that any environmental hazards are caught early before they can damage the aquifers, wildlife, or air quality. The efforts of Questar to use pipelines to remove condensate in order to decrease truck traffic should be commended and required by all operators. Stiff penalties for environmental spills or violation of agreed upon drilling practices should be instituted and enforced. Again, a much needed role for both BLM and EPA inspectors. As a member of the PAWG Water Task Group and as a Board Certified Emergency Physician that deals with Toxicology issues on a regular basis, I am also concerned that the BLM and gas industry do everything possible to prevent contamination to the area's water supply. The fact that the operators are required to cement the well to a depth far below the upper aquifers is comforting. However, I am still uncertain that our current testing for TPH-GRO instead of the more expensive BTEX is a prudent practice. There were lengthy discussions in our meetings about the most appropriate testing and the consensus in the group was that TPH would be adequate. I was not entirely happy with this conclusion since my research on the issue led me to a Ministry for the Environment New Zealand web site that made the following comment regarding TPH testing: "TPH methods that do not use purge-and-trap or headspace analysis (eg, the New Zealand oil industry method) will not cover benzene or n-hexane, etc., because the extraction methods can involve loss of volatiles. The limitations of the analytical method should therefore be considered when interpreting the analytical results". My biggest concern is to make sure that Benzene, a potent carcinogen linked to leukemia, does not contaminate the

drinking water of humans or livestock. The EPA in 40cfr141.32 have declared Benzene to pose a risk to humans at a level of only 0.005 parts per million. Ethyl benzene (at 0.7 ppm), Toluene (at 1 ppm), and Xylene (at 10 ppm) all pose a threat to Kidneys, Liver and the Nervous system of humans and animals. I would like to see at least a percentage of domestic wells tested for BTEX as the original BLM ROD so appropriately stated. Sincerely, Michael J. Kramer, MD, FACEP

Response: Concentrated development is being conducted in the Jonah and Pinedale Anticline gas fields under site-specific NEPA analysis and decisions. Oil and gas leaseholders have rights BLM does not have the authority to disregard. It is generally not possible to delay indefinitely development of areas where existing leases are in place. The Preferred Alternative sets aside some areas where no new leasing would be available, providing for phased development in those areas. Seasonal restrictions protect individual animals, not wildlife habitats, because the activities would be allowed to occur in the next available season. When activity reaches the point that habitats are no longer viable or animals abandon the area, seasonal restrictions are no longer useful and other mitigations must be employed. BLM does not have the authority to prohibit development of existing, valid oil and gas leases. However, the Preferred Alternative has provisions making most known migration bottlenecks unavailable for leasing and provisions avoiding other types of disturbance not related to oil and gas production. Site-specific drilling and development requirements and BMPs must be developed and applied on a site-specific basis. Water quality is the purview of the WDEQ. It is through the WDEQ that a need for additional sampling may be addressed. The water quality monitoring going on now associated with the PAPA does not check for hydrocarbons with every sampling event. Such concerns are best addressed at the field development level instead of the RMP.

Comment: My concern is based on the fact that despite the hundreds of pages of text in this draft, there are little actual number of pages in the text devoted to watershed, water quality and quantity, and implied impacts on all aspects of resource success. Serious impacts are mentioned but the probable long term impacts of each are not evaluated as to overall impact on the functioning of the resource area. For a cursory view of this problem see the following sections: Sec 1cites relevant water statues governing water quality page 1-17, Section 2.3.11on watershed and water quality management is on pg 2-11, Sec 4 environmental consequences on watershed and water quality (surface and groundwater) pg 4-166 to 4-173 all mention the high correlation of surface disturbance due to oil and gas activities and potential watershed health and water quality issues. 4.19.16Watershed and water quality (4-252) degradation of water quality can be a rapid process while recovery in resources is much slower. As stated in a previous section 4.19.14impact on vegetation under alternatives 2, 3 and 4 would reduce ability of vegetation resources to support other resource values. In addition increases in noxious weeds also reduce the land and water quality to support resources. While water quality would be monitored by the state of Wyoming, it still seems the resulting effect is degradation of water quality and quantity on all resources. 4.20irreversible and irretrievable commitments of resources (4-257) Surface disturbances would result in long-term or permanent alterations to soil, removal of vegetation cover, and fragmentation of wildlife habitat. Increased in sediment alkalinity and non-point source pollution that result from activities could result in degradation of water quality, and irretrievable loss of water utility, aquatic habitats, and aquatic-dependent species. Even with reclamation efforts on some disturbed sides may never return to pre-disturbance conditions. The result would likely result in permanent reductions in wildlife populations and impairment of water quality and vegetation communities in some areas.

4.21Unavoidable adverse impacts (4-258) include soil erosion and compaction, habitat degradation and fragmentation, and water quality impairments all of which affect vegetation and wildlife capacity of the landscape. These suppositions ought to be in large bold type for the public to see and addressed by relevant and smart professionals with evidence and supportable management plans as to how to avoid the impacts and still keep to the Mission Statement of BLM which “is to sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations.”

Response: The interactions of soil, vegetation, and water result in frequent correlations between land health and water quality. In short, healthy land equals healthy water. Water is the purview of the State of Wyoming. BLM is neither presently equipped nor authorized to intensively monitor the water resource.

Comment: Cumulative impacts are among the most difficult and complex assessment(s) required in a NEPA document, and have become a focus for court challenges (Smith 2005). We believe the DEIS is vulnerable for two reasons: (1) Social and Economic issues were not listed as a major "planning issue" (p. 1-6), and (2) The trends and cycles of energy development that has occurred periodically within the planning area did not appear in the DEIS. The DEIS states (p.4-234) that "not all issues identified for direct or indirect impact assessment in this RMP Draft EIS are analyzed for cumulative effects." This section goes on to qualify the lack of cumulative effect analysis incorrectly stating that, "cumulative effects are commonly examined at a more qualitative and less detailed level than are direct and indirect effects." Based on NEPA requirements, and standard cost benefit analysis practice (see Boardman et al. 1996), it is evident that the DEIS is inadequate in its economic analysis. Standard cost benefit analysis seeks to estimate positive and negative effects resulting from a proposed action, and in particular, the magnitude of effects. To accomplish this, effects must be identified and the relationship between effects must be disclosed (cumulative effects). This information can then be used to estimate the value of outcomes and mitigation techniques (Hahn et al. 1996). Furthermore, NEPA requires disclosure of the effects to the human environment including health and welfare, community concerns and safety.

Response: The planning issues are intended to identify areas where BLM should develop management actions to address or prevent impacts. BLM does not have the authority to address or mitigate social and economic impacts. Past energy and other developments are included in the description of the affected environment in Chapter 3. The results of past development cycles have led to the existing environment as described in that chapter. It is reasonable for impacts in an RMP to be examined at a broad level, and it does not directly authorize any on-the-ground activities. The purpose of impact analysis is to assess the social and economic consequences of implementing the various alternatives identified in the planning process (H-1601-1, BLM Land Use Planning Handbook). This is not benefit-cost analysis. In addition, an RMP is a management plan that looks at Reasonable Foreseeable Development (RFD) scenarios. Mitigation is considered as impacts occur and when BLM has authority to require mitigation.

Mitigation

Comment: I consider the EIS to be inadequate in its assessment of the increased drilling which will be permitted in the Pinedale area in the following categories: It basically ignores the effects of the massive development already underway and only speaks about potential new development without taking the whole scenario into consideration Mitigation proposals do not occur in the areas which are really being affected by drilling, road building, and increased traffic.

Response: The impact analysis in Chapter 4 considers the existing level of development in addition to projected development that could occur under each alternative. Site-specific drilling and development requirements, mitigation, and BMPs must be developed and applied on a site-specific basis, as is the case with the Jonah and Pinedale Anticline gas field EISs and decisions.

Comment: Mitigation is required by law on site. Direct and indirect impacts already documented for wildlife, scenic, and recreational values, air quality and other impacts will require mitigation adjacent to development. There should be a process built into the RMP for a transparent approach to weighing and balancing resource values lost against onsite and offsite replacement.

Response: BLM would comply with all applicable laws, including NEPA, which requires a public process to determine the impacts of proposed projects and mitigation of those impacts if possible. Site-

specific analysis and mitigation of development proposals would be conducted in site-specific NEPA analysis, such as the Jonah EIS.

Comment: Reclamation and mitigation efforts (4-254, 4-255) are posited to reduce impacts on wildlife habitat but I find no indication as to what sorts of efforts these will be, where they will occur, when they will occur and what the likelihood of success might be. Paragraph 2 on page 4-255 states the obvious that "degree of impact would depend on the timing of development activities and whether the amount of activity within each CIAA outpaces the successful reclamation and revegetation efforts in the disturbed areas." It is my professional opinion that, reclamation absolutely cannot keep pace with development as currently planned because Baker (2006) reported that it will take 50-100 years for replacement of functional sagebrush communities such as abound in the Pinedale Resource Management Area. Sagebrush communities provide vegetation crucial for winter survival of big game animals and they must be restored if big game populations are to continue to exist in the management area. The RMP/DEIS should provide and analysis of impacts in light of a realistic, scientifically supported, assessment of the likelihood that reclamation (typically to functional sagebrush communities) can keep pace with posited impacts.

Response: It is not possible to design specific mitigation at the RMP level, because the RMP will not directly authorize any on-the-ground activities. The appropriateness of onsite and offsite mitigation, and the methods to be used, must be tied to a specific proposal where specific impacts can be predicted. Because reclamation cannot replace wildlife habitat at the pace impacts take place, the document shows that big game population impacts (reductions) would result. We can predict that the development of 7,000 new wells will impact big game herds. We are unable to predict the magnitude of that impact.

Wildlife

Comment: Measuring the acres of direct disturbance to wildlife is appropriate and is estimated for the oil and gas development of the alternatives (Draft RMP, p. A 10-3). However, little quantitative assessment is made of indirect and cumulative impacts. This important part of the NEPA process is challenging for wildlife because it varies by species and must be measured spatially across a landscape. Fortunately, GIS (geographic information system) technology makes this process much easier. Basic habitat fragmentation measures of roads and oil and gas infrastructure (e.g., road density or distance to road) can be made for a broad landscape, key wildlife habitat area, or management unit. These measures, when combined with the literature discussed in the last section, allow scientists to project likely impacts of general transportation networks, oil and gas development, ORV impacts or other infrastructure development.

Examples of this application of GIS for energy development was provided to the Pinedale RMP planning team during this planning process in the form of a report Wildlife at a Crossroads: Energy Development in Western Wyoming (Thomson et al. 2005) in February of 2005 (advance copy in January) and in a presentation to the planning team in the Pinedale office in April of 2005. Results of this report demonstrated the substantial habitat fragmentation that already exists in the Pinedale RA and the impacts of development within specific wildlife habitats. These findings illustrate the impacts from intense development. Today's level of oil and gas development is higher than when this report was produced. Yet the Draft RMP makes no mention of the use of this type of analysis to describe current conditions of the landscape and wildlife impacts.

Response: Unfortunately GIS cannot predict the discovery of underground resources or the future price of gas. It is not possible to quantify impacts from fragmentation or any other activity that is not specifically being authorized, because it is not possible to accurately predict the intensity or even the location of future activities. In the case of the current developed fields, impacts are quantified in the field development EISs (for example, the Jonah and Pinedale Anticline EISs).

Comment: Results of Build-out Scenario and Wildlife Impact Analysis: The results of our habitat fragmentation analysis of the three build-out scenarios of 160, 40 and 10 acre well pad spacings are presented in Figures 2, 3 and 4. Appendix 10 lists the well spacing for the Pinedale Anticline field to be 120 to 160 acres per pad, the Jonah Field to be 10 acres per pad and the greater Big Piney-LaBarge area, Castle Creek Field and the rest of the planning area to be 40 acre spacing per pad. Using this information along with the GIS habitat layers indicating which oil and gas fields or other areas the wildlife occur in we were able to assess indirect and cumulative wildlife impacts for several species.

Sagebrush obligate birds: The sagebrush habitat should be managed to continue to support a range of sage brush obligate bird species. Inglefinger (2001) found that for lands within 328 feet (100 meters) of a road or well pad the density of sagebrush obligate birds drops by 50 percent regardless of the amount of activity on the road. Results for the different well spacings suggest that 37% of any areas with a 160 acre well pad spacing will be within 328 feet of a road, 71% of any areas with a 40 acre well pad spacing will be within 328 feet of a road, and 98% of areas developed to, at 10 acre well pad spacing will be within 328 feet of a road (Figure2). These results point to a continued decline in sagebrush obligate bird species in the Pinedale RA. They suggest that few sagebrush obligate birds will persist in the Jonah Field, the Big Piney-Labarg area, Castle Creek Field, and other areas that develop a 40 acre or lower well pad spacing. Even the Pinedale Anticline if developed to a 160 acre spacing could experience an 18% loss of sagebrush obligate bird species. These findings point to the importance of developing refugia with no surface development outside of the intensely developed fields.

Greater Sage-Grouse: Greater Sage-Grouse populations continue to decline in the Pinedale RA (Wyoming Game and Fish Department 2007b). Courtship, nesting and brood rearing habitats occur across much of the RA including the major oil and gas fields. Braun (2006) recommends no new road construction and seasonal closures of existing roads within 3.1 miles (5km) of leks and no surface occupancy within 3.4 miles (5.5km) of leks. Additionally the Colorado Department of Wildlife recommends substantial protection of landscapes within 4 miles of leks based on new field research in the southern edge of the Green River Basin. All of landscape at the three well spacings tested fall well within these three distance thresholds for lands deserving greater protection from oil and gas development (Figure 2). In fact, our report Wildlife at a Crossroads (Thomson et al. 2005) submitted in 2005 found that 98% of the BLM lands in the Pinedale RA fall within a mile of a road.

Distance to Road or Well Pad for Three Well Pad Spacings. This graph was not picked up by the scanner but is availalble on the hard copy document (page 16.) Figure 2. Cumulative distribution of distance to road values for the three hypothetical well spacings. The number of well pads within a given radius of a lek is also used to evaluate indirect effects on sage-grouse based on Holloran (2005) finding that 5 to 15 wells within a 2 mile radius caused relatively light effects. Leks with greater than 15 wells within a 2-mile radius were heavily affected. These numbers are exceeded in development areas now (Holloran 2005) and will be exceeded in substantially more of the landscape under the development suggested in Appendix 10 (Draft RFD, p A10-1).

In summary, because of the wide distribution of leks in areas of existing and projected oil and gas development under all the alternatives, substantial impacts on Greater Sage-Grouse are likely. This again argues strongly for establishing refugia (particularly for winter, breeding, nesting and rearing habitats) for sage-grouse in the areas that are not already developed. With large leased and undeveloped areas, BLM should designate in the RMP that these areas should be unavailable for new/re-leasing and should be prioritized for lease retirement via voluntary lease trades or buyouts using off site mitigation funds.

Mule deer: Mule deer winter habitat and crucial winter habitat is particularly important in and around the Pinedale Anticline and greater Big Piney-LaBarge areas. Under the 160 acre spacing build-out scenario of roads and well pads (projected pad density for the Pinedale Anticline), 91% of the landscape is within

1542 feet (470 meters) of a well pad or road - the distance that mule deer are shown to alert to human activity and are less likely to use the habitat for normal life functions (Freddy et al. 1986, Wyoming Game and Fish Department 2004). Essentially one hundred percent of the landscape is within this distance of roads and pads under the 40 acre spacing projected for the greater Big Piney-LaBarge area (Figure 2). Our study Wildlife at a Crossroads (Thomson et al. 2005) found that 77% of mule deer crucial winter range was within 1542 feet of a road. Looking at the most conservative displacement from well pad distance of 1.6 miles from Sawyer et al. (2006), we determined that all three of the build-out scenarios leave no portion of the landscape greater than 1.6 miles from a well pad (Figure 2). These results along with the field monitoring done by Sawyer et al. (2006) (discussed previously) clearly point to the reduction in habitat effectiveness and in some areas the elimination of habitat use by mule deer in developed oil and gas fields. Substantial patches of habitat are needed in and around the Pinedale Anticline and Big Piney-LaBarge areas to protect winter and crucial winter habitat to sustain these mule deer herds.

Pronghorn: The oil and gas fields overlapping most with pronghorn crucial winter range habitat are the Pinedale Anticline (120-160 acre projected spacing) and greater Big Piney-LaBarge areas (40 acre projected spacing). The ongoing Pronghorn study by Berger (2006) in the Pinedale RA identified a minimum patch threshold of 600 acres below which pronghorn significantly reduce their use of or abandon habitat. Our results for the 160 acre build-out scenario (projected pad density for the Pinedale Anticline) show that 88% of the landscape is in patches greater than 600 acres in size (Figure 3). Results for the 40 acre build-out scenario (projected pad density for the greater Big Piney-LaBarge) show that 41% of the landscape is in patches greater than 600 acres in size (Figure 3).

Additionally, we measured the area within 3,168 feet (1 kilometer) to a road - at this distance from a maintained road pronghorn are shown to exhibit avoidance (Ockenfels et al. 1994). Virtually all land in all three build-out scenarios falls within this distance of a road or well pad (Figure 2). Our 2005 study Wildlife at a Crossroads (Thomson et al. 2005) found that 92% of BLM lands and 94% of pronghorn crucial winter range in the RA fall within 3,168 feet of a road. Previous BLM planning documents (BLM 1999) indicated that negative impacts occur for pronghorn at route densities above 1 mi/mi2. Ninety-seven percent of the landscape under the 160 acre well pad spacing build-out scenario and 100% of the landscape at the 40 and 10 acre build-out scenarios have road densities over this threshold (Figure 4). Our previous report (Thomson et al. 2005) showed that 80% of BLM lands and 80% of pronghorn winter range already have road densities greater than 1 mi/rni2.

Because both of these thresholds will be exceeded across the majority of the habitat area in the Pinedale Anticline and Big Piney-LaBarge areas and the fact that pronghorn are particularly flight sensitive (Wyoming Game and Fish Department 2004), we are concerned that pronghorn could be pressured off substantial portions of their existing winter range under all of the development alternatives. Protection of undisturbed patches is needed within crucial winter habitat areas in the Pinedale Anticline and Big Piney-LaBarge, plus more extensive protection in refugia established in areas of winter and crucial winter habitat that fall outside of the oil and gas fields.

Critical Habitat Patch Size for Pronghorn This bar chart was not picked up by the scanner, but is available on the hard copy (page 18). Figure 3. Bar chart illustrating the percent of the habitat in patches greater than 600 acres in size for each of the three well spacings.

Wildlife Summary:, The results presented here illustrate that wildlife habitat including ungulate crucial winter habitats and sage-grouse breeding and rearing habit will be compromised where it overlaps with the oil and gas fields to the point of substantial reductions in use and, in some cases, abandonment. To maintain a multiple use management scenario across the Pinedale RA, there is tremendous need to provide reductions in development densities in some fields and the establishment and full protection of refugia from development outside of existing fields. This need is supported by the Draft RMP statement:

"Because of the large amount of oil and gas reserves and existing leases in the planning area, loss of important habitat could occur throughout the planning area, depending on the economic feasibility of development and fluctuations in market price." (Draft RMP, p. 4-184) Road Density for Three Well Pad Spacings This chart was not picked up by the scanner, but is available on the hard copy document (page 19) Figure 4. Cumulative distribution of road density values for the three hypothetical well spacings.

The literature discussed previously and the analysis presented here provide abundant evidence that energy development at the well pad spacings proposed will negatively affect wildlife. We also understand that the biological research on the impacts is not complete and additional field research is needed. However, gaps in scientific knowledge about the species discussed above and other resources must not stop or delay decisions to protect wildlife resources by planning for a more ecologically sustainable pattern of oil and gas development across the Pinedale Resource Area. We recommend application of the "precautionary principle" of conservation biology, which states that precautionary measures should be taken when a certain activity or inactivity threatens to harm human health or the environment, even when science has not fully established cause-and-effect relationships (Groom et al. 2006). This principle is rooted in the recognition that scientific understanding of ecosystems is complicated by numerous factors, including dynamic ecosystem processes and the various effects of human activities. Put simply, it is easier to prevent harm to biodiversity than to attempt to repair it later.

Response: It is not appropriate to assume 40-acre, or even 160-acre, well spacing throughout the rest of the planning area, where large areas would be unavailable for leasing. The RMP will not authorize any activity on the ground. Site-specific analysis of field development typically occurs at the project NEPA level, such as in the Jonah Field and Pinedale Anticline EISs.

Comment: The Draft RMP should have used GIS to conduct build-out analysis (as described above, but for the full RA) and habitat fragmentation analysis to evaluate the impacts on wildlife as recommended in our report Wildlife at a Crossroads: Energy Development in Western Wyoming. The Draft RMP does not use spatial analysis to evaluate indirect or cumulative impacts. It does not evaluate how route density, distance-to-road, or patch size varies across the landscape generally, in specific wildlife habitats or specific management units presented in the alternatives. The Draft RMP does not analyze or establish goals for habitat fragmentation thresholds. The oil and gas development (including all related infrastructure described under the preferred alternative and the conservation alternative will clearly cause substantial habitat fragmentation. Infrastructure must be evaluated using the latest science and spatial analysis and the results need to be used to craft a preferred alternative that helps protect wildlife and other resources.

Response: The RMP will not authorize any activity on the ground. Site-specific analysis of field development typically occurs at the project NEPA level, such as in the Jonah Field and Pinedale Anticline EISs.

Comment: The cumulative impact section of this DEIS provides the reader with very little specific information. Page 4-254 presents a shopping list of areas where potential impacts could arise and concludes that impacts would also reduce the capability to maintain current population objectives. This general statement needs to be expanded to provide the reader with some quantification of just what can be expected. Based on maps 2-7,8 and 9, it is clear that energy development alone will have significant impacts on big game habitats and populations in the Pinedale Resource Management Area. These impacts need to be placed in perspective with those resulting from other management activities on the management area as well as those encountered by migrating big game animals that move beyond the RMA boundaries during at some periods of the year. Here again (4-255) is the admission that big game animals will be displaced by energy development activities resulting in their needing to find alternative habitats. These alternative habitats and their capability to support increased numbers of animals are never

discussed. Animals displaced to private lands and increased use of feed grounds by elk will result in increased costs to private landowners and the Wyoming Game and Fish Department. These economic impacts and associated management problems need to be discussed in the RMP/DEIS.

Response: The RMP will not authorize any on-the-ground activities. Therefore, it is not possible to determine exactly where and what the impacts to individual wildlife species would be. We can predict that the development of 7,000 new wells will impact big game herds. BLM is unable to predict the magnitude of that impact. Big game animals will be displaced into less-suitable habitats. Alternative habitats are generally not available for these animals. BLM cannot predict the precise impact of that displacement (through overcrowding, insufficient or low-quality forage, or other impacts) on populations, or the lag time that would be required before the impact is detectable. It is not likely that oil and gas activities in known areas of production will impact numbers of elk on feedgrounds. Most impacts would be to mule deer, pronghorn, and sage-grouse populations.

Comment: Big game animals in their seasonal migrations integrate impacts across a broad array of disturbances both in and out of the Pinedale Resource Management Area. The BLM must do a more credible job in applying their knowledge of the area and existing scientific literature and studies to assess cumulative impacts resulting from implementation of any alternatives in the DEIS. Johnson et al. (2005) provide a novel approach to assessing cumulative effects from mining disturbances and the application of this approach would greatly improve evaluation of cumulative effects for the RMP/DEIS.

Response: The RMP will not authorize any on-the-ground activities. Therefore, it is not possible to determine exactly where and what the impacts to individual wildlife species would be. We can predict that the development of 7,000 new wells will impact big game herds. We are unable to predict the magnitude of that impact. Big game animals will be displaced into less-suitable habitats. We cannot predict the precise impact of that displacement on populations, or the lag time that would be required before the impact is detectable.

Comment: The cumulative effects of all human-induced practices in the sagebrush steppe on sage-grouse population health as measured by numbers of active leks, trends in numbers of males counted, and chicks per hen need to be fully evaluated and studied. The shortcomings in the Draft EIS for the Pinedale RMP should be corrected to have a scientifically defensible document which will help minimize negative impacts to sage-grouse from planned management activities.

Response: The RMP is an allocation document, determining allowable uses for the public lands rather than planned management activities. The RMP will not authorize any on-the-ground activities. Chapter 4 attempts to describe impacts that would occur due to the activities that could be allowed, but it is not possible to specifically quantify impacts when specific on-the-ground actions are not known. Specific impacts would be analyzed at the project implementation level, such as for the Jonah Field or Pinedale Anticline EISs.

Comment: 8. Page 4-254: The cumulative effects section provides very little specific impact information. The analysis could be strengthened by use of GIS analysis to graphically depict how availability of habitats have been affected over time through management actions under the current RMP and quantify how populations and habitats are likely to be impacted under each alternative in the draft RMP.

Response: Mapping of big game habitat use has not been conducted for long enough to completely explain the gradual movement of habitat use. Big game crucial winter ranges, for example, tend to change over time for a number of reasons, including plant succession, weather patterns, human activity, and migration access. It is not possible to quantify all these causes.

Oil and Gas

Comment: Finally, the BLM again incorporates a conflicting RFD Scenario for the BLM's \if cumulative impacts analysis compared to the RFD Scenarios in Table 4-2 or Appendix A10. See RMP DEIS, pgs. 4-244 - 4-247.

Response: The discrepancy in RFD predictions has been corrected in the final EIS.

Comment: Also important to developing and evaluating management alternatives are creating oil and gas development infrastructure build-out scenarios for each alternative. Readily available GIS technology can generate GIS data layers for different development scenarios guided by parameters and constraints for development provided in the RFD and the management alternatives. Please see the attached interim report prepared for the Little Snake BLM field office in Colorado: Analysis of the Little Snake RA "Sagebrush Habitat Fragmentation Proposal" from the Cooperating Agencies. This report illustrates how an oil and gas build-out scenario can be generated and used to predict indirect and cumulative impacts on wildlife. To demonstrate the value of developing build-out scenarios for different management alternatives in the Pinedale RA we completed a build-out scenario of well pads and roads for a hypothetical oil and gas field at the 160, 40 and 10 acre well pad spacings listed for the major fields in the RFD (Draft RMP, p. A10-1). We used the CommunityViz extension to the standard ArcGIS software to position well pads on the landscape. Based on Appendix 10, well pad sizes were set to 10 acres for the 160 acre spacing and 4 acres for the 40 and 10 acre spacings; and roads were assigned a width of 40 feet. Well pads were populated in a random fashion by the software until they achieved a 160 acre spacing. Roads were then digitized to connect the well pads to an initial minimal road network. Road lengths were minimized. The process was repeated to achieve an infill spacing of 40 acres and subsequently 10 acres. Software constraints were used to prevent well pads from overlapping roads or other well pads. This constraint could not be maintained and some well pad overlap exists at the 10 acre spacing. (Note this limitation in our software causes our results to underestimate the fragmentation and wildlife impacts.) Please see maps of this hypothetical oil and gas field in Figure 1.

well pad spacing: 160 acre; well pad spacing: 40 acre; well pad spacing: 10 acre

(these diagrams for the 160, 40 and 10 acre well pad spacing were not picked up by the scanner, but are available on the hard copy document).

Figure 1. Sample build-out scenarios of roads and well pads for a hypothetical landscape at well spacings identified as likely in the RFD and Appendix 10 (Draft RMP, page Al0-1). Roads are 40 feet wide and well pads are 10 acres in size at the 160 acre per pad spacing and 4 acres in size for the tighter well spacings. The total area is 16.003 acres. We used the results of these build-out scenarios matching the RFD projections for well pad density (160, 40 and 10 acre well pad spacings) to assess indirect and cumulative impacts on wildlife. We did this by measuring the habitat fragmentation metrics of route density, distance to route and patch size. We compared the results with biological studies of road and oil and gas development impacts on specific species.

Results show graphically and quantitatively what the oil and gas development will be like, allowing us to project impacts on wildlife species in different parts of the planning area. Results from looking at this hypothetical landscape can be used to assess wildlife impacts in the Pinedale Anticline Field (projected density 120 to 160 acres per pad), the greater Big Piney-LaBarge area (projected density 40 acres per pad), the Jonah Field (projected density 10 acres per pad) and other regions of the resource area that could achieve these well densities under one or more of the management alternatives (e.g. "minimally developed areas" projected spacings up to 160 acres per pad). While these results were generated as a hypothetical example, the BLM should use these techniques to do an actual build-out for the full resource area under each alternative.

Additionally, the results measured here are conservative because they include only impacts from roads and well pads but no other existing or new infrastructure such as pipelines or pumping stations. Consequently, our results will notably underestimate the true wildlife impacts.

Response: The RMP will not authorize any activity on the ground. Site-specific analysis of field development typically occurs at the project NEPA level, such as in the Jonah Field and Pinedale Anticline EISs.

Water

Comment: Impacts associated with ground water depletions - near-surface and deep aquifers - must be addressed in a cumulative sense because the problems are largely cumulative in nature. This means BLM will need to identify all past, present and reasonably foreseeable future sources of ground water depletions (industrial, agricultural and domestic), estimate the depletion quantities and determine how the overall 'loss of ground water will impact aquifers, water wells, springs and' surface water flows. This analysis must also include increased domestic ground water use from gas field employees living and working in the region. The RMP DEIS does not address ground water depletions cumulatively or otherwise.

Response: Water is the purview of the State of Wyoming. Total depletions are more appropriately addressed at the field level document rather than the RMP.

Land Issues

Comment: PAGE: 4-3, SECTION: 4.1.3, RECOMMENDED CHANGE: EIS states: The decisions proposed in the alternatives apply to public lands only. However, cumulative impact analyses may also consider decisions made for resources managed by other entities or individuals. EXPLANATION: Local Governments agree with the statement but provisions regulating surface resources based on ownership of federal minerals are inconsistent with statement and unlawful. See e.g. Comment Ch. 2-#153 citing Opinion of the Solicitor, Legal Responsibilities of BLM for Oil and Gas Leasing and Operations on Split Estate Lands (April 1988) (concluding that BLM ownership of mineral estate does not permit limits on privately-owned surface).

Response: This assumption relates to the practice of including the impacts of activities on private lands to resources on BLM-administered public lands. BLM must consider the cumulative impacts of all known or foreseeable activities, whether carried out by BLM or not. Actions carried out on private lands by private parties may affect resources that occur on BLM-administered public lands.

Air Quality

Comment: PAGE: 4.5, SECTION: 4.2.1, EXPLANATION: Local Governments note6 that seasonal closures for mineral development and construction concentrate all development activities and related emissions during the summer months. This also coincides with the fire season. The cumulative effects are significant loss in visibility and increased haze. While these air quality impacts may meet WDEQ standards because they average out over the annual time period, the RMP needs to address the fact that the area suffers significantly during the 7 months.

Response: Potential impacts from oil and gas development can only be addressed by modeling. No modeling was done for the Pinedale RMP; however, this issue is being addressed for the Pinedale supplemental EIS and extensive modeling has been and is being carried out. In addition, smoke from wildfires is exempt/excepted from the Regional Haze Rule. In the case of a large wildfire such as the one that occurred west of Pinedale this past June, impacts of emissions from drilling would be dwarfed by emissions from the fire.

Visual Resource Management (VRM)

Comment: PAGE: 4-233 SECTION: 4.19 RECOMMENDED CHANGE: General Comments EXPLANATION: This section fails to properly disclose impacts of VRM Class II on management and existing uses, such as oil and gas leases, rights-of-way and livestock grazing permits. Discussion omits disclosure of poor condition of current commercial timber stands and risk of catastrophic fire. Management actions that reduce the treatment options for these stands, including special management area designation, will only increase risk of such fire. RFD does not conform to criteria and is plainly wrong. Thus, cumulative effects relating to mineral development is equally flawed. Cumulative effects discussion regarding land available and not available, and impacts on existing leases that may not be developed poorly displayed. Social Economic analysis is flawed, especially as to limited revenue sources for local governments that must deal with impacts and restrictions that tear up county roads, leave trash and garbage and create a transient work force instead of contributing to community building.

Response: New VRM Class II designations would have no impacts on existing oil and gas leases, rights of way, or livestock grazing permits. New oil and gas leases would include the new VRM classification, which would not prohibit development of the lease. Condition of timber stands is found in Chapter 3, Section 3.4. Designation of special designations and management areas does not inherently increase the risk of fire. BLM forest and fire prevention policy would still apply in these areas. BLM finds that the RFD is appropriate and adequate.

Appendices

General Comment Responses: *No GCRs are associated with this category.*

Appendix 2

Comment: Appendix 2 purportedly presents wildlife mitigation guidelines but there is little information here to suggest just how impacts to big game animals and their habitats will be mitigated.

Response: Appendix 2 contains the mitigation stipulations and conditions of approval currently used by the PFO and would only apply to Alternative 1. It includes substantial mitigations, such as seasonal restrictions for activities in crucial and important wildlife habitats.

Comment: Appendix 2 2nd Sentence Line A2-1 Commentor WGFD Add activities associated with oil and gas development to the list.

Response: This change has been made in the final EIS.

Appendix 3

Comment: Appendix 3 also presents some generic discussion of mitigation but here again there is little detail. I fail to understand the following statement taken from Appendix 3 mitigation recommendations: "The affected habitat will be contemporaneously mitigated using mitigations from the affected resource." What does this mean? The BLM must clarify this statement as to what is meant by "mitigated using mitigations." The mitigation recommendation (A3-9): "Where habitat effects are unavoidable, effective wildlife refuge areas that contain alternate habitat should be available," is a good idea, but the document fails to identify the available of alternative habitats. My interpretation of data from Sawyer et al. (2006) suggests that little alternative habitat is available. Furthermore consideration must be given to the consequences to habitats and populations from crowding animals into smaller areas that may be of marginal quality. As discussed by Bartmann et al. (1992) crowding may have a density dependent impact of reducing animal survival and damaging resources.

Response: Vague text in Appendix 3 regarding "mitigated using mitigations" has been removed. Generally, all suitable habitats are occupied. Chapter 4 discusses the potential for population impacts as habitats are developed. Chapter 4 of the final EIS has been updated to address the impacts of crowding.

Comment: Having experienced the failure of active management of development to avoid impacts through the many exceptions and changes to the Anticline and Jonah projects, and the failure of BLM to use the advice of the Pinedale Anticline Working Group, we do not support "performance-based" management as a substitute for direct management and enforcement by BLM. It is an unproven concept in managing natural resource exploitation, which demands clear weighing and balancing of multiple uses and values. Neither BLM nor the companies have proven they can or will effectively balance development for economic gain against protection of the other resource values owned by the public. Appendix 3 is vague, inconclusive, and does not provide assurances of performance accountability in the development process.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale. Appendix 3 has been revised in the final EIS.

Comment: Appendix 3: Appendix 3 lists mitigation measures that could be applied, based on site-specific environmental analyses. It is unclear what if any mitigation measures are mandatory or under

what circumstances they will apply. It is also unclear how mitigations differ from or are complementary to best management practices. There is not sufficient guidance provided with the mitigation measures listed under the Wildlife section to know what actions will be taken, when or how their effectiveness will be evaluated. The final RMP should describe the mitigations that will be applied under each alternative.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale. Appendix 3 has been revised in the final EIS.

Comment: Page A3-1 Comment - There is a discussion about performance-based stipulations, but the term is never really defined or explained.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale. Appendix 3 has been revised in the final EIS.

Comment: V. Appendix 3 Must Be Entirely Revised Or Abandoned. Appendix 3 of the RMP DEIS seems to be intended to provide the core provisions regarding mitigation of the impacts of development, particularly oil and gas development, for Alternatives 2, 3, and 4. Many of the provisions in this appendix are so vague, discretionary and non-binding that they provide no assurance that any mitigation will actually be applied or required, nor do they provide any measure of what constitutes compliance with them or what must be achieved. If these provisions are retained in the RMP they should be reworded so that the following, at a minimum, are readily discernible:

All vague, non-binding and discretionary language should be eliminated. ("maximum extent practicable," "could be considered," "should be avoided," "minimized by any reasonable measure," "reclamation in critical wildlife habitats may be required. . . ," "as soon as practicable," etc., etc.). Such provisions entirely fail to specify what if anything will be done with respect to mitigation. Provisions may be applied, or they may not be, and no one knows. What they must achieve is almost entirely unknown. And given BLM's recent propensity in the Pinedale Field Office to use the categorical exclusions from NEPA analysis available under section 390 of the Energy Policy Act of 2005 when development is pursued on a site-specific basis, there is no guarantee whatsoever the application of these vague provisions will even be considered in the future, as BLM claims will be the case, thus absolving it of a need to engage in "prescriptive" mitigation at the RMIP level. All provisions should be specified in clear, mandatory terms so that there is clarity about what is required, when it will be required, and so on.

Clear standards for what must be achieved should be specified. In particular, ecologically functioning sagebrush habitat must be the specified goal and standard for acceptable reclamation. See expert comments of Drs. Carl Wambolt, Clait Braun, and William Alldredge (Exhibits 1, 2, and 3). Anything less (or more vague) provides no assurance that BLM lands in the Pinedale Field Office will provide anything like their current ecological values and services for literally hundreds of years. What a "seed mix proven effective for the predisturbance wildlife use" means is entirely unclear. A3-8. Does this mean ecologically functional sagebrush habitat must be reestablished or would simply planting sagebrush seeds be sufficient, regardless of whether they actually established? This uncertainty must be eliminated and clear standards and measures of success provided.

Clear and specified means for monitoring compliance with the "guidelines" must be specified. The questions of "who, what, when and where" must be answered for the provisions in Appendix 3 to have any utility whatsoever. Currently there is no such clarity. As recently demonstrated in BLM's document prepared by the Pinedale Field Office entitled "Commitments Made In Decision Documents Not Yet Achieved" (May, 2006), BLM has a poor history of complying with mitigation measures in this area, so it

is crucial that specific measures be provided for monitoring and assurance of compliance with mitigation measures.

What precisely the goal of mitigation is must be specified. For example, it is not apparent that BLM would have any clear goal regarding big game crucial winter ranges that are affected by oil and gas development. Again, in many circumstances the goal of mitigation must be to restore ecologically functioning sagebrush habitats.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale. Appendix 3 has been revised in the final EIS.

Comment: Underlying the "performance based" guidelines in Appendix 3 seems to be a philosophical view that there is a need for "adaptability" that is somehow not available with respect to "prescriptive" standards, particularly any "prescriptive" standards developed and applied at the RMP or leasing stage. There is no basis for this claim; "performance based" standards seem to primarily be a means for BLM to avoid stating clearly what must be achieved and the provisions by which a stated goal will be achieved. They contribute primarily toward making the RMP process a considerably less meaningful or useful exercise. They are mostly a mechanism to create uncertainty as to what, when, and where things will be done or actions taken. As discussed in detail above, BLM has more than sufficient retained authority when it issues an oil and gas lease to later require any number of provisions that are deemed necessary to protect the environment. This is true even if stipulations have been attached to a lease. So, for example, if as result of decisions made in the RMP BLM attaches a stipulation prohibiting drilling in big game crucial winter range from November 15 through April 30 as a requirement for issuing leases in crucial winter ranges, this does not mean it is prohibited from taking other actions in the future that may be necessary to protect big game winter range, or other environmental values. It has more than sufficient authority to later "adapt" as needed, and the attachment of the stipulation does not change this fact. The stipulation simply codifies a long-standing view (strongly endorsed by the WGFD) that such stipulations are needed at a minimum to protect big game winter ranges.

The BLM should recognize these points and ensure that the RMIP "prescribes" mitigation that is clearly needed, particularly any mitigation that is required to ensure the management direction for a particularly oil and gas management area is achieved. Fulfilling the management direction established in the RMP, particularly for Unavailable Areas and Large Block NSO Areas, and meeting other environmental protection responsibilities should be the overarching objective of mitigation, not "adaptability" per se. "Prescriptive" measures will often better ensure these overarching requirements are met if for no other reason than that by attaching them as a condition of leasing there is no question that BLM has retained rights to specify the nature of development. And, again, the BLM retains more than sufficient authority to "adapt" in the future, as conditions warrant. Furthermore, as noted above, the Mineral Leasing Act requires that "[e]ach lease shall contain provisions for the purpose of insuring the exercise of . . . care in the operation" of a lease, and BLM is required to "regulate" surface disturbing activities on a lease "in the interest of conservation of surface resources." 30 U.S.C. §§ 187, 226(g) (emphasis added). Consequently the BLM must ensure that sufficient "prescriptive" measures as are needed are attached to leases at the leasing stage so as to meet these and other obligations, and the RMP should unequivocally require such.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale. Appendix 3 has been revised in the final EIS.

Comment: Last, we would note that with respect to minerals Appendix 3 provides that "[e]ach new lease would be reviewed on its own merits to ensure the appropriate protective measures/stipulations are

applied (see Appendices 2, 5, 12, and 18).” A3-8. We believe this is a crucial provision and BLM should emphasize it to a much greater degree. It is crucial that the stipulations provided in Appendix 2, the Best Management Practices specified in Appendix 5, the seasonal stipulations specified in Appendix 12, and the protections specified in Appendix 18 for listed species be fully applied at the leasing stage when there is no question BLM enjoys its maximum rights to condition development and thus protect the natural environment. BLM should firmly commit to applying the provisions in these Appendices at the leasing stage as needed. If it pursues “perfolueance based” guidelines, they should be coupled with sufficient “prescriptive” measures so as to ensure protection of the natural environment, which is clearly BLM’s obligation under numerous legal authorities, and which should be the basis for all management actions at least in the Unavailable Areas and the Large Block NSO Areas, where environmental protection is the explicitly stated management objective.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale. Appendix 3 has been revised in the final EIS.

Comment: Appendix 3 Line A3-8 to A3-9 Commentor WGFD We strongly recommend adding the following language: “For additional wildlife mitigation measure, we recommend use of the Wyoming Game and Fish’s document titled “Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats.” This document has been cited in the Casper RMP. Citation: WGFD. 2004. Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats. Wyoming Game and Fish Department.

Response: Appendix 3 has been revised in the final EIS.

Comment: PAGE: 2-113 SECTION: 2.5.5 RECOMMENDED CHANGE: Revise Appendix 3 to be performance based rather than prescriptive. EXPLANATION: The local governments support performance based management. The detailed “guidelines” in Appendix 3, however, are prescriptive in the sense that they require specific actions rather than standards to be achieved. Thus the RMP fails to achieve the goal of performance-based management.

Response: The final EIS has been changed to apply performance-based management to the project development scale, where it is most appropriate, not the land use planning scale. Appendix 3 has been revised in the final EIS.

Appendix 4

Comment: PAGE: SECTION: Appendix 4 RECOMMENDED CHANGE: REVISE and REDO As to criteria insert: The BLM Planning Handbook recognizes this fundamental element, App. C, p. 18 where it states: “[ACEC] must require special management to:

(1) Protect the area and prevent irreparable damage to resources or natural systems.

(2) Protect life and promote safety in areas where natural hazards exist.” EXPLANATION: See Comments Ch. 2-196. The Appendix 4 omits the BLM Planning Handbook criteria and FLPMA criteria that an ACEC only be established where there is a threat to protection of the resources.

Appendix 4 omits this important criteria. Because this is statutory and mandatory, both ACEC evaluation report and Appendix should be revised entirely.

Response: Appendix 4 is a summary of the ACEC review process, which was conducted by the RMP team. Individual relevance and importance criteria reports were prepared and are available on the project

website at:
http://www.blm.gov/rmp/wy/pinedale/documents/PinedaleBLM_ACEC_Evaluation_Report.pdf.

Appendix 5

Comment: Chapter Appendix 5 Page Reducing Impacts Line A5-1 Commentor WGFD Add on-site mitigation to the list of bullet items.

Response: This is not a necessary addition as most of the items on the bullet list are forms of onsite mitigation.

Comment: Public scrutiny is essential for developing a new Resource Management Plan. The CEQ NEPA regulations require that an EIS disclose the "[m]eans to mitigate adverse environmental impacts." 40 C.F.R. § 1502.16(h). Direction established in a RMP also constitutes a rule under the Administrative Procedure Act, so BLM is required to "give interested persons an opportunity to participate" in development of RMP direction "through submission of written data, views, or arguments." 5 U.S.C. § 553(c). BLM has not satisfied these requirements because some of the direction that would be incorporated into the new RMP was not presented for public comment in the DEIS. For example, the DEIS's direction for reducing water and watershed under Alternative 4 makes repeated reference to Appendix 5: "c. ... Discharge of produced waters to public lands would be authorized only when impacts on water quality and stream channels would be monitored and mitigated, or when found to be beneficial for other uses (Appendix 5). d. Use of produced waters to assist in reclamation could be considered on a case-by-case basis and would be governed by operating WDEQ standards and appropriate irrigation water quality standards (Appendix 5). * * * a. BMPs would be applied to mitigate surface disturbance and control non-point source erosion (Appendix 5)."

Similar references to Appendix 5 are given in the management direction for Alternative 2 (DEIS at 2-68) and Alternative 3 (DEIS at 2-97 and 2-98): Appendix 5 contains the direction on Fluid Mineral Best Management Practices. Even Alternative 1 (continuation of the 1988 RMP direction) relies heavily on Appendix 5: "The ... standard practices applied to surface disturbing activities (Appendix 5) would be used to control nonpoint sources of water pollution. These are examples of BMPs relative to the Clean Water Act of 1972, as amended. * * *

Examples of management practices to be applied throughout the planning area would include seasonal closures imposed because of saturated soil conditions and the standard practices applied to surface disturbing activities (Appendix 2 and Appendix 5). * * * Ground water protection would continue to be provided by applying the procedures de-scribed in Appendix 5. Special precautions would be taken to ensure protection of ground water quality when surface disturbance was to occur on ground water recharge zones. Criteria for determining depth of fresh water are found in Appendices 2 and 5." RMP DEIS at 2-35. Unfortunately, there is nothing in Appendix 5 of the DEIS that specifically deals with protecting water quality.

Response: BLM has provided for public input through the scoping process and again through the public comment period on the draft EIS. Concerning the mitigation, the commenter is correct in that the mitigation is often a list of measures that could be implemented. The decision to implement mitigation measures is made at the project-specific level.

Comment: The "direction" offered in Appendix 5 consists largely of generic lists of measures for reducing impacts to big game crucial winter range (e.g., conduct "remote well monitoring"), reducing impacts to sage grouse habitat (e.g., conduct "habitat enhancement"), reducing impacts to other wildlife habitat, reducing impacts to VRM Class II and III areas (e.g., screen facilities from view), reducing impacts to air quality (e.g., post speed limits on roads), and reducing impacts from fluid mineral

construction, operation and construction (e.g., use "submersible pumps"). The only items I could find in Appendix 5 that relate to water quality concerns are the following:

- "Avoidance of facility placement on steep slopes...."
- "Storage of chemicals within secondary containment in case of a spill" • "Onsite bioremediation of oil field wastes and spills"

DEIS, Appendix 5, page A-53. However, the DEIS states that these measures "may be applied to mitigate impacts." Id. at A5-1. Thus, these are not actually management requirements and, instead, are simply options BLM could consider requiring on certain projects. In addition, these statements are so ambiguous that there is no basis for determining whether they would effectively mitigate impacts. A deeper problem - with the text of the proposed direction and Appendix 5 - is the proposed mitigation measures are not described in any meaningful detail.

Response: Because BMPs are not always appropriate for all sites or types of projects, specific mitigation measures must be tailored to each project. BLM intends to continue adding practices to the BMP lists as new technology is developed and new practices prove effective.

Comment: What does BLM consider to be a "steep slope"? Which chemicals and quantities would require secondary containment? What type of bioremediation would be used? Would bioremediation be used for all types of spills or are there only certain types of chemical spills that would be subject to this type of mitigation? Where are the Clean Water Act BMPs to mitigate surface disturbance and control non-point source pollution? Where is the direction for stream channel conditions? How would "impacts on ... stream channels be ... mitigated"? What are the irrigation water quality standards? Where is the direction "for determining depth of fresh water"? Where are the seasonal closure provisions for protecting saturated soils? I could not find any of this information in Appendix 5, even though the DEIS informs readers this sort of information can be found there.

Response: Steep slopes are generally those exceeding 25 percent, except in areas of sensitive or erosive soils, where activities are limited to slopes less than 15 percent. Specific actions regarding spill containment and bioremediation is beyond the scope of the RMP. The appropriate course of action would be determined on a case-by-case basis in a field development EIS depending on the location of the spill and the types of chemicals used. Stream channel conditions would be required for meeting PFC standards, as a minimum assessment of physical channel stability. Mitigation of impacts on stream channels would be tailored to the project type, intensity, extent, and projected impacts. Groundwater quality standards are listed in Chapter 8 of the DEQ Wyoming Water Quality Rules and Regulations, pages 8–10, http://deq.state.wy.us/wqd/WQDrules/Chapter_08.pdf

Per the CFR: The operator shall isolate freshwater-bearing and other usable water containing 5,000 ppm or less of dissolved solids and other mineral-bearing formations and protect them from contamination. The operator shall conduct tests and surveys of the effectiveness of such measures using procedures and practices approved or prescribed by the authorized officer. Closures for protection of saturated soils would be applied case-by-case when soils are saturated because this condition changes annually. Additional BMPs have been added to Appendix 5 in the Final EIS regarding produced water and surface discharge.

Appendix 11

Comment: Appendix 11- Monitoring and Evaluation The DEIS states, "To address the changing conditions and provide management flexibility that uses best management practices (BMP), the Pinedale Field Office (PFO) conducts monitoring and evaluation, which measures the effectiveness of existing

actions through monitoring and application of new scientific research. Monitoring and evaluation analyzes the current resource conditions as a result of implemented actions and identifies and recommends alternatives or modified actions, as necessary, to reach established objectives and goals. This process provides the optimum means to check the effectiveness of management actions." Comment - It is important that monitoring and evaluation be done cost-effectively and in cooperation with other partners such as the USFS and WY DEQ. BLM should develop prioritized monitoring plans to address reclamation, wildlife, visual resource, and air quality issues, and staff the office for adequate data collection and evaluation in cooperation with industry and other stakeholders.

Response: Staffing issues will not be addressed in this RMP. Development of prioritized monitoring plans, such as for reclamation, would occur on a project-specific basis. Air quality monitoring is the responsibility of Department of Environmental Quality (DEQ).

Comment: PAGE: 2-14 SECTION: App. 11 RECOMMENDED CHANGE: EXPLANATION: The appendix does not adequately address monitoring needs with respect to vegetation and livestock grazing. BLM should have an active monitoring program for all allotments and visit them annually. Monitoring only every 10 years is not monitoring because it is unlikely to measure change over time or to address management issues.

Response: Monitoring every 10 years is appropriate for tracking trends in condition of upland range sites. Monitoring is not limited to every 10 years in Appendix 11, but is flexible to the type of information to be collected and the specific characteristics of the area to be monitored.

Appendix 12

Comment: Page Number & Issue: Appendix 12, A-4 Alt 4 Recommendations: BLM should use specific category language on any stipulation language.

Response: The language in the final EIS has been updated to clarify the point that the seasonal stipulations for raptors apply throughout the entire planning area.

Comment: Appendix 12 Page A-12-2&3 Commentor WGFD Edit Table A l2-4 under Elk Feedgrounds add "NSO within 1 mile of elk feedgrounds; Then add same verbiage to Table A 12 -2 and A 12-3 for Elk Feedgrounds.

Response: This change has been made in the final EIS, except for Alternative 2, where feedgrounds on BLM-administered lands would be eliminated.

Appendix 18

Comment: Appendix 18, page A18-7, the discussion of black-footed ferret recovery/reintroduction refers to Map 3 but no map 3 is available. Further, it references the Wyoming Black-tailed Prairie Dog Management Plan as providing guidelines and encouraging the removal of pest status for the prairie dog. This management plan was never adopted by the Wyoming Game and Fish Commission and was presented only as a draft for their consideration. The discussion in 2 should be removed. In addition, the citation is not found in the Literature Cited. The figures referenced in the discussion above follow; the data from which these figures were developed are available from the Wyoming Game and Fish Department and the Wyoming Oil and Gas Conservation Commission and the BLM PFO.

Response: The issues associated with references to Map 3 and the literature citation have been remedied in the final EIS. However, the language concerning removal of pest status is very applicable; it conflicts with the sensitive species status of white-tailed prairie dogs within BLM. This plan only addresses BLM

lands, and any management actions concerning white-tailed prairie dogs must be considered to prevent future listing under the ESA. Removal of this species across the landscape has significantly contributed to its decline and to the petition that it be listed in the ESA.