

Public Comments and BLM Responses on the Revised Draft SEIS Environmental Groups

Comment Number **EG-1-1-AL-1**

Comment

Provisions that Should Be Adopted from Alternative D (as modified in some cases).

Requirements for installation of additional liquids gathering system, more directional drilling, computer assisted operations, 80 percent NOx reduction (or more if needed to achieve zero days of visibility impairment in Class I areas), other air quality mitigation measures applicable to this alternative, no more than 250 additional well pads (535 total) and generally concentrated development. See Pages 2-42, 2-43, 2-52, Appendix 4. **Provisions that Should Be Adopted from Alternative E (as modified in some cases).** The maintenance of seasonal timing limitation stipulations, especially relative mule deer and pronghorn crucial winter ranges and sage grouse nesting areas.

Response

A range of alternatives is provided to show the various methods of managing development in the PAPA and the impact those management differences are expected to have on the resources. Impacts to resources will occur under all alternatives. The BLM appreciates the issues presented in your comment as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. The BLM will look carefully at these decisions to ensure that the appropriate evaluation of uses and impacts has been made in fulfilling this responsibility.

Comment Number **EG-1-2-AL-2**

Comment

Provisions that Should Be Adopted from Alternative D (as modified in some cases).

Adoption of a Wildlife Monitoring and Mitigation Matrix, Appendix 10, but modified in the ways discussed herein and in the expert comments submitted by Dr. Alldredge (Exhibit 2). Pages 2-42, 2-43, 2-52, Appendix 4. **Provisions that Should Be Adopted from Alternative E (as modified in some cases).** The continuation of limitations on well pad density and disturbed acreage limitations in the identified special management areas. Table 2.4-13, Appendix 13. However, the buffer and flank areas should not allow for these levels of development, these areas should be off limits to drilling until the core area has been fully drilled and reclamation is established. As noted in Dr. Alldredge's comments, the percent of disturbed habitat that would be allowed in the buffer and flanks exceeds the percentage already shown by Hall Sawyer's research to be extremely detrimental to mule deer in this area.

Response

The issue you present with the density of development in the flanks was reviewed by the BLM. Given the checkerboard pattern of leaseholders in the PAPA for Alternative E, the BLM set well pad limits for this alternative that are reasonable, yet stringent.

Comment Number **EG-1-3-AL-3****Comment****Provisions that Should Be Adopted from Alternative D (as modified in some cases).**

Suspension of leases; the 49,903 acres specified in this alternative being minimum although as will be discussed below there are greater opportunities. Suspensions should be continued until drilling in the core area has been completed and at a minimum interim reclamation standards have been met. The flank areas (including the Potential Development Area (PDA)) should affirmatively be made off limits to drilling until the core area has been fully drilled and reclamation is established. **Provisions that Should Be Adopted from Alternative E (as modified in some cases).** The slower pace of development provided for in this alternative should be maintained.

Response

The issue you present with the pace of development is within the range of alternatives provided. Concerning the release of the flanks, those decisions would be made at the annual planning meeting.

Comment Number **EG-1-4-AL-4****Comment****Provisions that Should Be Adopted from Alternative D (as modified in some cases).**

Provision for the Pinedale Anticline Mitigation and Monitoring Fund, although as discussed in Dr. Alldredge's comments, funds should be provided until there has been complete restoration of habitat. Additional needs are discussed below. **Provisions that Should Be Adopted from Alternative E (as modified in some cases).** The number of well pads allowed for (415 new well pads, 700 total) should not be permitted, rather the provisions for maximum number of well pads provided for in Alternative D should be adhered to.

Response

The alternatives describe how the BLM would operate in the future; the designation of the preferred alternative provides the reader with the BLM's preference and the ROD will formalize the operating procedures that will be allowed in the PAPA.

Comment Number **EG-1-5-AL-5****Comment**

Provisions that Should Be Adopted from Alternative D (as modified in some cases). The provisions in Appendices 5D, 8D, and 9C related to transportation plans, reclamation plans, and the wildlife mitigation plan. **Provisions that Should Be Adopted from Alternative E (as modified in some cases).** Appendix 8D reclamation plan.

Response

The alternatives describe how the BLM would operate in the future; the designation of the preferred alternative provides the reader with the BLM's preference and the ROD will formalize the operating procedures that will be allowed in the PAPA.

Comment Number **EG-1-6-AL-6**

Comment**Provisions that Should Be Adopted from Alternative D (as modified in some cases).**

Because the operators can access the area with directional drilling, there should be no PDA, this area should be made part of the "flanks" and managed as such (no development until the core area has been fully drilled and at a minimum interim reclamation standards have been met). **Provisions that Should Be Adopted from Alternative E (as modified in some cases).** There should be no "buffer" area, this area should be made part of the "flanks" and managed as such (no development until the core area has been fully drilled and at a minimum interim reclamation standards have been met).

Response

The alternatives describe how the BLM would operate in the future; the designation of the preferred alternative provides the reader with the BLM's preference and the ROD will formalize the operating procedures that will be allowed in the PAPA. Alternatives B and C contemplate not having a PDA. Under Alternative E, as written, development would occur in the flanks as well as the core area and the buffer area.

Comment Number **EG-1-7-AL-7**

Comment**Provisions that Should Be Adopted from Alternative D (as modified in some cases).**

Provisions related to limiting disturbance around raptor nests, bald eagle wintering areas and nests, sage grouse leks, and the Lander Trail should be maintained. See Appendix 4 at pages 4-18 to 4-22. See also page 2-21. **Provisions that Should Be Adopted from Alternative E (as modified in some cases).** Provisions related to limiting disturbance around raptor nests, bald eagle wintering areas and nests, sage grouse leks, and the Lander Trail should be maintained. See Appendix 4 at pages 4-18 to 4-22. See also page 2-21.

Response

The issue that you present with regards to limiting disturbance around these resources is within the range of alternatives.

Comment Number **EG-1-8-LS-1****Comment**

The BLM should affirmatively designate these areas off-limits to future leasing at least until the leased areas on the Pinedale Anticline have not only been reclaimed following development, but actually restored.

Response

Leasing decisions are beyond the scope of this analysis and are made at the RMP level. In the Final SEIS, leasing decisions would not be made within the PAPA until completion of the RMP revision. This was a component of Alternative E in the Revised Draft SEIS.

Comment Number **EG-1-8-LS-2****Comment**

Similar provisions should apply outside of the Pinedale Anticline, especially in the Ryegrass and Cottonwood (also known as Bench Corral) areas because this would help preserve effective offsite mitigation opportunities.

Response

This is outside of the PAPA analysis area; the BLM can make the recommendation, but it is being addressed in the RMP Revision.

Comment Number **EG-1-8-AQ-1****Comment**

The "any and all available means" language should be restored and made part of the approved Pinedale Anticline project requirements.

Response

The language has been modified. Any and all available means is within the range of alternatives as it was provided in Alternative C.

Comment Number **EG-1-9-G-1****Comment**

That is what NEPA is all about—not EIS paperwork—and the Pinedale Anticline SEIS and decisions based on it must pursue these goals even if they are not specifically enforceable by a court. As an executive branch agency charged with faithfully executing the laws of this country, the BLM cannot ignore these requirements.

Response

The BLM appreciates the issues presented in your comment as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. The BLM will look carefully at these decisions to ensure that the appropriate evaluation of uses and impacts has been made in fulfilling this responsibility.

Comment Number **EG-1-10-W-1**

Comment

Given these events, the BLM is under an obligation to do far more to protect these species than is provided for in the Revised SEIS.

Response

One reason why the BLM is preparing the SEIS is to formally deviate from the BLM's guidance and IM's. The alternatives describe how the BLM would operate in the future, the designation of the preferred alternative provides the reader with the BLM's preference and the ROD will formalize the operating procedures that will be allowed in the PAPA. The BLM recommends that current mineral development activities should avoid prairie dog towns where practicable. Currently there is no direct BLM policy that mandates the avoidance of prairie dog towns. Current policies are being developed concerning monitoring and buffering pygmy rabbit burrow complexes but because of their preliminary nature, the policies have not been included in the Revised Draft SEIS.

Comment Number **EG-1-11-W-2**

Comment

This is an affirmative obligation established by the BLM manual—the BLM must put in place specific habitat and population management objectives designed to remove these species from the special status species list, that is, to conserve them.

Response

The BLM appreciates the issues presented in your comment as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. Impacts to resources will occur under all alternatives proposed in the SEIS and due to mineral leasing laws the BLM is not in the position to conserve all potential habitats for sensitive species within the planning area. One reason why the BLM is preparing the SEIS is to formally deviate from the BLM's guidance and IM's. The alternatives describe how the BLM would operate in the future, the designation of the preferred alternative provides the reader with the BLM's preference and the ROD will formalize the operating procedures that will be allowed in the PAPA. The alternatives provide the basis for management changes in the PAPA for both oil and gas development and mitigation of impacts to other resources.

Comment Number **EG-1-12-W-3****Comment**

That is, the BLM must ensure that activities that affect the habitat of the pygmy rabbit, greater sage grouse and white-tailed prairie dog are done in a manner that is consistent with these species being removed from the sensitive species list, that is, with their conservation. To meet these obligations the BLM should adopt the provisions we have highlighted above so as to better conserve these species, and additional protections that are needed for these species will be addressed below.

Response

One reason why the BLM is preparing the SEIS is to formally deviate from the BLM's guidance and IM's. The alternatives describe how the BLM would operate in the future, the designation of the preferred alternative provides the reader with the BLM's preference and the ROD will formalize the operating procedures that will be allowed in the PAPA. The alternatives describe how the BLM would operate in the future, the designation of the preferred alternative provides the reader with the BLM's preference and the ROD will formalize the operating procedures that will be allowed in the PAPA. The alternatives provide the basis for management changes in the PAPA for both oil and gas development and mitigation of impacts to other resources.

Comment Number **EG-1-13-G-2****Comment**

Given this widespread evolving recognition of the need to "go slow" in areas with high environmental values, especially wildlife values, the Revised SEIS should be built around and recognize such sentiments, and not be built on a philosophy of maximizing the pace of development at all costs.

Response

What many people do not realize is that the number of rigs operating is based upon economics. By requiring that the Operators drill out these pads instead of the hit and miss technique currently being applied, a more orderly development of the field will ensue. While this is not necessarily a "slower" pace, it is a more efficient and manageable scenario which will allow the BLM greater control of the development.

Comment Number **EG-1-14-W-4****Comment**

Abandoning winter drilling stipulations so as to allow the rate of development to be maximized is clearly not in conformance with official state policy.

Response

The alternatives describe how the BLM would operate in the future, the designation of the preferred alternative provides the reader with the BLM's preference and the ROD will formalize the operating procedures that will be allowed in the PAPA. The Wyoming Game and Fish Department has been a cooperator in the development of the alternatives, the BMP, the wildlife matrix, and the mitigation recommendations in the SEIS.

Comment Number **EG-1-15-G-3**

Comment

It needs to be given a chance to work, and the Revised SEIS should recognize that need and accommodate it, especially where there are large contiguous blocks of BLM land that could support the Initiative, such as on the flanks of the Pinedale Anticline.

Response

The BLM agrees and fully supports the goals and objectives of the WLCI. The value of the flanks has been realized by the BLM. To this end, leasing decisions would not be made within the PAPA until completion of the RMP Revision. Leasing decisions would then be made in conformance with the RMP. The RMP Revision takes into account initiatives like WLCI.

Comment Number **EG-1-16-V-1**

Comment

The Revised SEIS engages in no analysis of how BLM's acknowledged failure to abide by this RMP direction can be excused; perhaps more importantly it engages in no analysis of why the Pinedale Anticline infill project is not being "modified in order to meet the VRM class objective," (emphasis added), which is specifically the BLM's obligation under the terms of the RMP.

Response

The PAPA SEIS reveals the potential for this action to cause significant impacts to visual resources. Visual resource management of public lands allows for change to the characteristic landscape. Visual change may temporarily exceed RMP visual resource management objectives. In the short term, some areas or sites within the PAPA with VRM II and III objectives will be exceeded. However, in the long term, with the installation of liquids gathering systems, centralized production facilities, the re-establishment of vegetation and other such mitigation, impacts to visual resources will be substantially reduced. A long-term viewshed monitoring program will be initiated to improve the effectiveness of visual mitigation. Gas field Operators will be required to comply with Operator submitted and BLM approved visual resource protection plans for all applications to drill and major rights-of-way. It is expected VRM Objectives will be maintained over time.

Comment Number **EG-1-17-W-5****Comment**

While the BLM may be able to make exceptions to this overarching policy on a case-by-case basis, the RMP explicitly does not authorize wholesale abandonment of stipulations. Issues related to granting exceptions to stipulations will be discussed in more detail below.

Response

A range of alternatives is provided to show the various methods of managing development in the PAPA and the impact those management differences are expected to have on the resources. Impacts to resources will occur under all alternatives. The alternatives presented do not contemplate a "wholesale abandonment" of seasonal restrictions but rather sets the conditions in which exceptions would be granted, such as requiring the use of a liquids gathering system and concentrating development.

Comment Number **EG-1-18-AQ-2****Comment**

Yet as will be discussed below, not only does the Revised SEIS show that air quality legal standards are already being violated, it proposes to authorize continuing violations of the applicable "increments" for increased air pollution and to continue to violate the national goal of zero days of visibility impairment.

Response

The BLM's obligations under the Clean Air Act and the Federal Land Policy and Management Act is simply to assure actions (direct or authorized) comply with applicable local, state, tribal, and federal air quality requirements. The BLM's obligations under NEPA are to analyze and disclose potential significant adverse air quality impacts to the public and decision maker (including "direct and indirect impacts from the action and its cumulative impacts" before a decision is made to deny, approve, or approve with the mitigation the Proposed Action or alternative. The BLM recognized its responsibility for the need to compare predicted impacts to applicable PSD increments and that the WDEQ has the regulatory authority to perform a PSD increment consumption analysis. BLM comparisons of potential concentrations with PSD increments are included for informational purposes only. In addition, a visibility mitigation plan has been agreed upon and included in modeling of alternatives: Alternative B, the Proposed Action with no mitigation, and Alternative C, which included mitigation. The plan involves stepped down (20% per year) NO_x emission reduction over the course of 4 years. However, modeling results still indicate up to 10 days above 1 deciview (dv) impairment (Reference: Section 4.9.3.5 page 4-84 to 4-87) in the Bridger Wilderness at the end of this period. This does not mean that NO_x reduction would cease; NO_x emissions would continue to be mitigated and/or a new (or amended) plan agreed to between the Proponents, BLM, WDEQ-AQD and EPA. The plan does in fact call for mitigation beyond the first 4 years; see Point 4, page 4-86: "During the Annual Planning Meeting, as specified in paragraph #1 in this section, Operators, WDEQ-AQD, and the BLM in consultation with EPA would collaboratively identify methods to reduce air emissions beyond the 80 percent drilling rig engine NO_x emissions goal". Point 4 goes on: "No later than the fifth annual planning session following signing of the ROD,

Operators would submit to the collaborative group an evaluation of alternatives, and recommend a plan that addresses all sources from project activities, and whose aim is to meet a predicted visibility impact objective of no more than zero days greater than 1.0 dv of visibility impairment".

Comment Number **EG-1-19-G-4**

Comment

The BLM has provided no "case-by-case" analysis of whether granting an exception to the stipulations will meet the requirements of 43.C.F.R. 3101.1-4, and thus it cannot allow drilling to proceed absent stipulations until it conducts such a "case-by-case" analysis.

Response

The BLM is also required to ensure that all operations be conducted in a manner which protects other natural resources and the environmental quality, protects life and property and results in the maximum ultimate recovery of oil and gas with minimum waste and with minimum adverse effect on the ultimate recovery of other minerals. Again, the BLM believes that by allowing these well pads to be drilled out in an orderly fashion the BLM is providing greater assurance that the habitat will be restored in a more efficient and orderly manner that what can currently be accomplished, thereby increasing the likelihood of providing quality habitat sooner than later.

Comment Number **EG-1-20-AI-8**

Comment

If nothing else, the BLM's high degree of retained rights in leased areas coupled with its legal obligations under numerous laws demands that the BLM consider a conservation alternative in the SEIS.

Response

The BLM has analyzed a reasonable range of alternatives, including alternatives that keep seasonal restrictions.

Comment Number **EG-1-21-AQ-3**

Comment

Thus, the BLM cannot violate the increments that have been established for Class I and Class II areas.

Response

The BLM's obligations under the Clean Air Act and the Federal Land Policy and Management Act is simply to assure actions (direct or authorized) comply with applicable local, state, tribal, and federal air quality requirements. The BLM's obligations under NEPA are to analyze and

disclose potential significant adverse air quality impacts to the public and decision maker (including "direct and indirect impacts from the action and its cumulative impacts" before a decision is made to deny, approve, or approve with the mitigation the Proposed Action or alternative. The BLM recognized its responsibility for the need to compare predicted impacts to applicable PSD increments and that the WDEQ has the regulatory authority to perform a PSD increment consumption analysis. BLM comparisons of potential concentrations with PSD increments are included for informational purposes only.

Comment Number **EG-1-22-AQ-4**

Comment

Thus, based on actual 2005 data and the predicted future emissions from the Pinedale Anticline project, the BLM is stating unequivocally that it will violate the law.

Response

Thank you for your comment, it is noted.

Comment Number **EG-1-23-AQ-5**

Comment

Even if the BLM cannot regulate others based on the analysis in Revised SEIS it can and must regulate itself; it need not wait on the Wyoming Department of Environmental Quality (DEQ) to step in and regulate the BLM, the BLM can and must regulate its own activities when it has concluded it is allowing violations of the law currently and would allow them to continue in the future.

Response

Thank you for your comment, it is noted.

Comment Number **EG-1-24-AQ-6**

Comment

Table 4.9-2 claims the NAAQS is 85 ppb. This is incorrect, the NAAQS is 80 ppb. Exhibit 10. See also Page 3-62 (Table 3.11-1) (stating the NAAQS is 157 ug/m³, which converts to 80 ppb). We understand that formal violations of the NAAQS may not be judged to occur by the DEQ or the EPA until levels exceed 84 ppb due to rounding issues, Exhibit 10, but that does not change the fact the NAAQS is 80 ppb not 85 ppb.

Response

Thank you for your comment. In practice, the ozone NAAQS and WAAQS is 84.99 ppb (rounded to 85 ppb). Modeling exercises for this project indicate no exceedance of this standard. However, as recently as the week of February 25, 2008 the highest monitored ozone

levels at the Wyoming DEQs' stations were: 76 ppb at Daniel, 85 ppb at Jonah, and 122 ppb was reached at the Boulder monitor. All of these levels are preliminary and may change after the data has been subjected to WDEQ-AQD quality control checks.

Comment Number **EG-1-25-AQ-7**

Comment

The BLM should correct this error and base its analysis on a recognition of the correct NAAQS.

Response

Thank you for your comment. In practice, the ozone NAAQS and WAAQS is 84.99 ppb (rounded to 85 ppb). Modeling exercises for this project indicate no exceedance of this standard. However, as recently as the week of February 25, 2008 the highest monitored ozone levels at the Wyoming DEQs' stations were: 76 ppb at Daniel, 85 ppb at Jonah, and 122 ppb was reached at the Boulder monitor. All of these levels are preliminary and may change after the data has been subjected to WDEQ-AQD quality control checks.

Comment Number **EG-1-26-AQ-8**

Comment

This should be corrected and the EIS should provide a discussion of the implications of nearly reaching the NAAQS. Even if the NAAQS is not actually exceeded, "knocking on the door" of an exceedance is terribly significant, and this should be considered in the Revised SEIS, but it is not.

Response

Thank you for your comment; please see response to Comment EG-1-24-AQ-6 and Comment EG-1-18-AQ-2. Mitigating NO_x emissions will in turn lower ozone levels in some instances. There is also discussion underway between state and federal agencies to mitigate VOC's which would reduce ozone levels even further.

Comment Number **EG-1-27-AQ-9**

Comment

Given the likely strengthening of the ozone NAAQS, the BLM should acknowledge this and address it.

Response

Thank you for your comment; please see response to Comment EG-1-24-AQ-6 and Comment EG-1-18-AQ-2. Mitigating NO_x emissions will in turn lower ozone levels in some instances. There is also discussion underway between state and federal agencies to mitigate VOC's which would reduce ozone levels even further.

Comment Number **EG-1-27-AQ-10****Comment**

At a minimum, the BLM should not finalize approval of this project until the new standards are released so that BLM can ensure it complies with the standard (as it must), and public comments should be allowed when the new ozone standard is released.

Response

Thank you for your comment. A decision on this Proposed Action will be based on existing standards. Waiting for future standards to be developed would be a never-ending process, as standards are always under review and subject to change.

Comment Number **EG-1-28-AQ-11****Comment**

Finally, the BLM should conduct a "sensitivity analysis" relative to ozone impacts by adding the predicted modeled ozone levels to actual monitored background levels.

Response

Thank you for your comment. In fact, this is what is done, although the BLM does not call this a "sensitivity analysis". Please refer to Section 4.9.4/Cumulative Impacts/pages 4-88 to 4-92 in the Revised Draft SEIS.

Comment Number **EG-1-29-AQ-12****Comment**

Consequently, the BLM must take stronger steps to reduce visibility impacts to zero days of visibility impairment as quickly as possible.

Response

Thank you for your comment. A visibility mitigation plan has been agreed upon and included in modeling of alternatives: Alternative B, the Proposed Action with no mitigation, and Alternative C, which included mitigation. The plan involves stepped down (20% per year) NO_x emission reduction over the course of 4 years. However, modeling results still indicate up to 10 days above 1 deciview (dv) impairment (Reference: Section 4.9.3.5 page 4-84 to 4-87) in the Bridger Wilderness at the end of this period. This does not mean that NO_x reduction would cease; NO_x emissions would continue to be mitigated and/or a new (or amended) plan agreed to between the Proponents, BLM, WDEQ-AQD and EPA. The plan does in fact call for mitigation beyond the first 4 years; see Point 4, page 4-86: "During the Annual Planning Meeting, as specified in paragraph #1 in this section, Operators, WDEQ-AQD, and the BLM in consultation with EPA would collaboratively identify methods to reduce air emissions beyond the 80 percent drilling rig engine NO_x emissions goal". Point 4 goes on: "No later than the fifth annual planning session following signing of the ROD, Operators would submit to the collaborative group an evaluation

of alternatives, and recommend a plan that addresses all sources from project activities, and whose aim is to meet a predicted visibility impact objective of no more than zero days greater than 1.0 dv of visibility impairment".

Comment Number **EG-1-30-AQ-13**

Comment

Given this clear differential, the BLM should use this information to reduce the rate of drilling in the northeastern part of the Pinedale Anticline relative to drilling in the southern part.

Response

Thank you for your comment, it is noted.

Comment Number **EG-1-30-AQ-14**

Comment

Thus, the BLM should fully consider reducing the rate of drilling to meet its obligations to protect visibility, at least in the northeastern part of the project area.

Response

Thank you for your comment. Please see response to Comment EG-1-18-AQ-2 and Comment EG-1-30-AQ-13.

Comment Number **EG-1-31-AQ-15**

Comment

Thus, the language quoted above regarding avoiding adverse impacts to wildlife as being a basis for not protecting air quality should be abandoned. This issue will be addressed further in section IX below.

Response

Thank you for your comment. A visibility mitigation plan has been agreed upon and included in modeling of alternatives: Alternative B, the Proposed Action with no mitigation, and Alternative C, which included mitigation. The plan involves stepped down (20% per year) NO_x emission reduction over the course of 4 years. However, modeling results still indicate up to 10 days above 1 deciview (dv) impairment (Reference: Section 4.9.3.5 page 4-84 to 4-87) in the Bridger Wilderness at the end of this period. This does not mean that NO_x reduction would cease; NO_x emissions would continue to be mitigated and/or a new (or amended) plan agreed to between the Proponents, BLM, WDEQ-AQD and EPA. The plan does in fact call for mitigation beyond the first 4 years; see Point 4, page 4-86: "During the Annual Planning Meeting, as specified in paragraph #1 in this section, Operators, WDEQ-AQD, and the BLM in consultation with EPA would collaboratively identify methods to reduce air emissions beyond the 80 percent drilling rig

engine NO_x emissions goal". Point 4 goes on: "No later than the fifth annual planning session following signing of the ROD, Operators would submit to the collaborative group an evaluation of alternatives, and recommend a plan that addresses all sources from project activities, and whose aim is to meet a predicted visibility impact objective of no more than zero days greater than 1.0 dv of visibility impairment".

Comment Number **EG-1-32-AQ-16**

Comment

Given this, the BLM should re-adopt the "any and all available means" language that appeared in the SEIS. We would note that this language does not mandate any particular action, but it does not take options off the table either, as the new language would do. The BLM should retain all options for protecting air quality.

Response

The language has been modified. Any and all available means is within the range of alternatives as it was provided in Alternative C.

Comment Number **EG-1-33-AQ-17**

Comment

As discussed above, the BLM should consider limiting drilling more in the north part of the project area than in the south because drilling in the north clearly has greater impacts on the Bridger Wilderness Class I area.

Response

Thank you for your comment. It is noted.

Comment Number **EG-1-33-AQ-18**

Comment

Second, the BLM should specifically consider limiting the times when drill rigs are active. While reducing the number of active drill rigs might partially affect when drill rigs are active, the BLM should retain authority to limit the seasons when drilling is occurring because atmospheric conditions can be greatly different in the summer versus the winter, and thus the impacts of drilling at different times can be greatly different.

Response

Thank you for your comment. Year-round development would only be allowed in the core area. Alternatives B, C, and D include year-round development by exception in otherwise seasonally restricted seasonal habitats for big game and greater sage-grouse "Where" development would ultimately occur is dictated by the location of the resource. Core areas have been defined to

delineate “how” and “when” year-round development would be allowed under Alternatives B, C, and D. A comparison of the elements of each of the five alternatives is provided in Table 2.4-2. Also see Map 2.4-3.

Comment Number **EG-1-33-AQ-19**

Comment

Last, the possibility of obtaining emissions offsets should be put on this list. This approach was of course used when the 2000 PAPA EIS/ROD was adopted.

Response

Thank you for your comment.

Comment Number **EG-1-34-AQ-20**

Comment

This emphasizes how practical (effective) this means is for achieving visibility benefits and the BLM should not take this option off the table by essentially deeming it not practicable in the new language that appears in the Revised SEIS.

Response

The language has been modified. Any and all available means is within the range of alternatives as it was provided in Alternative C.

Comment Number **EG-1-35-AQ-21**

Comment

We believe the BLM should consider likely climate impacts that will occur on the Pinedale Anticline. How will this effect reclamation potential, for example?

Response

Thank you for your comment. In future documents the BLM and cooperators will include serious discussion of greenhouse gas emissions in oil and gas development. Possible topics for inclusion may be 1. CH₄ and N₂O emissions as 'carbon equivalents' 2. GHG comparison to other energy development sector's 3. GHG RFD comparison to other ongoing and possible projects 4. GHG emissions and climate change. However, it would still be quite difficult to estimate climate impacts from this project alone; climate change occurs at a much larger spatial and longer temporal scale.

Comment Number **EG-1-36-AQ-22****Comment**

Furthermore, at a minimum the BLM should provide an estimate of the quantity of CO₂ emissions that will be generated by activities on BLM lands and identify means to reduce those emissions. At least as importantly and perhaps more importantly, the BLM should identify the quantity of methane (CH₄) that will be emitted as a result of oil and gas development activities on the Pinedale Anticline and identify means to reduce those emissions.

Response

Thank you for your comment. Currently the project emission inventories do not include methane and carbon dioxide. These pollutants are not regulated. The air quality stakeholder group did not recommend quantifying these emissions. However, for a qualitative discussion of GHG emissions in oil and gas development please go to the following url's and/or references:

1. A. Zahniser. 2007. Characterization of Greenhouse Gas Emissions Involved in Oil and Gas Exploration and Production Operations. Review for the California Air Resources Board.
http://www.wrapair.org/WRAP/ClimateChange/GHGProtocol/meetings/071025/Characterization_of_O&G_Operations_Sector_Emissions.pdf
 2. American Petroleum Institute: Toward a Consistent Methodology for Estimating Greenhouse Gas Emissions from Oil and Natural Gas Industry Operations
http://www.climatevision.gov/sectors/oil_gas/pdfs/ghg_synopsis.pdf
 3. 2007 Draft U.S. Greenhouse Gas Inventory Report Draft Inventory Of U.S. Greenhouse Gas EmissionsAnd Sinks: 1990-2005, February 2007.
<http://epa.gov/climatechange/emissions/usinventoryreport07.html>
 4. Canadian Association of Petroleum Producer, Technical Report on a National Inventory of Greenhouse Gas, Criteria Air Contaminant, and Hydrogen Sulphide Emissions by the Upstream Oil and Gas Industry, Volume 4.
<http://www.capp.ca/raw.asp?x=1&dt=NTV&e=PDF&dn=86224>
 5. Wyoming Greenhouse Gas Inventory and Reference Case Projections 1990-2020.
http://www.wrapair.org/WRAP/ClimateChange/WY_GHG_I&F_Report_WRAP_08-20-07.pdf
- After review of these documents, the text has been revised in Chapters 3 and 4.

Comment Number **EG-1-37-W-6****Comment**

As discussed above, the greater sage grouse, pygmy rabbit, and white-tailed prairie dog may all moving toward being listed under the ESA. Moreover, all of these species are recognized as BLM sensitive species, and consequently under the BLM special status species manual, the BLM must take actions to remove these species from the sensitive species list in order to meet its obligation to conserve them.

Response

The BLM appreciates the issues presented in your comment as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. Impacts to resources will occur under all alternatives proposed in the SEIS and due

to mineral leasing laws the BLM is not in the position to conserve all potential habitats for sensitive species within the planning area.

Comment Number **EG-1-38-W-7**

Comment

With respect to the greater sage grouse, the BLM must move to require greater protection for this species, not less.

Response

Thank you for your comment. There are different levels of protection for greater sage-grouse provided by different alternatives.

Comment Number **EG-1-39-W-8**

Comment

Perhaps most importantly, this research shows that at a minimum the BLM should adopt a minimum of a three- to four-mile no surface occupancy and no surface disturbance/vegetation treatment buffer around sage grouse leks in order to protect the leks themselves as well as surrounding nesting habitat.

Response

The Anticline development is well beyond developing a conservation strategy with an NSO of 3-4 miles (see Figure 3.22-4 in the Revised Draft SEIS) and because of this, many of the best management practices have been adopted to minimize fragmentation and disturbance due to human presence to the maximum extent practicable.

Comment Number **EG-1-39-W-9**

Comment

Given the BLM's obligations under its special status species manual, the National Sage-Grouse Conservation Strategy (the memorandum of understanding referenced in it is especially significant), the Wyoming Game and Fish Department's Greater Sage Grouse Conservation Plan, and the Game and Fish Department's Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats report, and the far from speculative coming obligations it may have under the ESA, the BLM must adopt enhanced protections for the sage grouse on the Pinedale Anticline, not reduced protections.

Response

The BLM is analyzing measures such as the liquids gathering system to minimize human presence, pad development outside of the nesting season to minimize destruction of nests; to maintain some protective measures on the PAPA. The BLM anticipates that implementing the

Adaptive Management in Section 2.4.2.1 in Chapter 2 will assist conservation of sage-grouse. However, the BLM also recognizes that development on the PAPA to date has been "extreme" as defined by the WGFD. As an area of "Extreme Impact", the WGFD recognizes that "habitat function is substantially impaired and cannot generally be recovered through management or habitat treatments." The WGFD recommends compensatory mitigation (including off-site or off-lease) to offset unavoidable impacts within the "Extreme" impact category. As noted in other responses to commenters, the BLM cannot legally require provisions for offsite mitigation. Mitigation measures developed by the Proponents applicable to Alternative D include a mitigation and monitoring fund and an offer of lease suspensions and term NSO leases.

Comment Number **EG-1-40-W-10**

Comment

We ask that the BLM get this information and data from WWC and factor it into its management decisions for the Pinedale Anticline. At a minimum, the BLM should provide that pygmy rabbit habitat, especially occupied habitats identified by WWC, will be "avoided" and it should put in place requirements to survey for pygmy rabbit presence in areas that might support this species prior to allowing disturbance.

Response

The BLM annually receives wildlife data from wildlife consulting firms that collect wildlife data as directed by the BLM through the APD permitting process. Further, the BLM has obtained the data WWC has collected. Current policies are being developed concerning monitoring and buffering pygmy rabbit burrow complexes. Changes to better protect pygmy rabbits and their habitat are being implemented by new PFO policy to utilize avoidance to the maximum extent practicable in coordination with the Operators. The changes will provide opportunities to avoid pygmy rabbits/habitat before surface disturbance occurs.

Comment Number **EG-1-40-W-11**

Comment

As a BLM sensitive species, BLM must avoid impacts so as to meet its obligation to "include specific habitat and population management objectives designed for conservation" and "management strategies necessary to meet those objectives."

Response

The BLM appreciates the issues presented in your comment as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. Impacts to resources will occur under all alternatives proposed in the SEIS and due to mineral leasing laws the BLM is not in the position to conserve all potential habitats for sensitive species within the planning area.

Comment Number **EG-1-40-W-12****Comment**

The BLM should especially avoid disturbance in sand dune areas because such disturbance, according to the recently released draft EIS for the Moxa Arch Infill in the Kemmerer Field Office, "may rarely be fully reclaimed to the original vegetative composition and structure."

Response

The BLM agrees and has requirements for construction in sandy soils that may be hard to revegetate when no other options are available.

Comment Number **EG-1-41-W-13****Comment**

Consequently, we believe the following requirements should be imposed in the SEIS. There should be no surface disturbing activities within 50 meters of white-tailed prairie dog colonies. In addition, above-ground facilities should not be permitted within one-quarter mile of prairie dog towns unless equipped with raptor anti-perch devices, and power poles should not be allowed in prairie dog towns.

Response

This recommendation was a result of a BO prepared for the Continental Divide/Wamsutter II Gas Project. The BLM has no guidance that this is a necessary action within the Pinedale Anticline. However, the BLM attempts to avoid disturbing prairie dog towns where the project proposal allows for this flexibility. Current BLM management guidance supports placing anti-raptor perching devices on powerlines within sensitive areas, as per the Avian Power Line Interaction Committee 1996 guidelines.

Comment Number **EG-1-41-W-14****Comment**

Given the possibility of listing of this species, the BLM should take strong proactive management steps to remove this species from its sensitive species list, not to mention preventing listing under the ESA.

Response

The status of the special status species, and other wildlife concerns, would be considered as the BLM makes and implements the decision.

Comment Number **EG-1-43-RC-1****Comment**

Our only specific comment with regards to the mitigation plan in that appendix is that we think it is important to specify that restoration of sagebrush habitat must be required in many if not most instances. As currently worded, there is sometimes ambiguity in this regard with reference made to "habitat, "plant community" and "shrubs" but no specification of sagebrush particularly. Given the overwhelming importance of sagebrush to the ecological function on the Pinedale Anticline we think it is important for the reclamation plan to specify that sagebrush must be restored in all cases where that was the preexisting plant community.

Response

Although sagebrush is not listed specifically, it is covered within the reference of "habitat"; this will not change as there are many shrub species/ecotypes the BLM is concerned with, hence the general criteria language. Reclamation will be done, however, on a site-specific basis for individual pads at which point species lists will be included for BLM review to ensure proper reclamation.

Comment Number **EG-1-44-RC-2****Comment**

In our prior comments we asked the BLM to consider the reclamation plans being developed for the Little Snake Field Office in Colorado and for the Otero Mesa area in New Mexico, and we ask again that those plans be considered.

Response

The BLM appreciates the reference.

Comment Number **EG-1-44-RC-3****Comment**

In addition, however, we ask the BLM to consider the reclamation provisions that apply to coal mining in Wyoming. The coal mining reclamation program is far better developed and more established than oil and gas reclamation is due to the commands of the Surface Mining Control and Reclamation Act.

Response

Thank you for your comment.

Comment Number **EG-1-45-AP-1****Comment**

Quite simply whether it be deemed performance-based management or adaptive management, the BLM must specify the “who, what, when, and where” of how adaptive decision-making will be done. While BLM may not be able to prescribe every needed action in detail at this point in time, it should be able to state with particularity who will have responsibility for making decisions, when they will make decisions, and what criteria the decisions must meet. The funding that will be available to implement decisions must be specified and be sufficient to meet the needs. The Revised SEIS must specify these kinds of things in all instances and it is not clear it meets these needs at this time.

Response

It is envisioned that the PAWG would continue under all alternatives and would serve to provide recommendations to the BLM on the monitoring and mitigation of PAPA development. Further management responses to address potential air quality and wildlife impacts have been identified.

Comment Number **EG-1-45-AP-2****Comment**

We would especially like to note the importance of having overarching goals that all “adaptive management” must meet. For air, such a standard is specified; the objective is for zero days of significant visibility impairment in Class I areas. This is an important statement, and the BLM should carefully specify in the ROD that all future “adaptive management” must further and seek to achieve this overarching and binding criterion. All decisions must move in this direction.

Response

Thank you for your comment. The BLM will consider this issue in its decision.

Comment Number **EG-1-46-LS-3****Comment**

As part of this alternative we are requesting that the flank areas receive full protection, including provision for extending the lease suspensions beyond five years and to more leases; that the PDA be dropped and that it be considered as part of the flank area; and that provisions in the wildlife mitigation matrix (Appendix 10) be modified.

Response

Thank you for your comment. Alternatives B and C contemplate not having a PDA. The leases offered for suspension and term NSO were analyzed. Further, the value of the flanks has been realized by the BLM. To this end, leasing decisions would not be made within the PAPA

until completion of the RMP Revision. Leasing decisions would then be made in conformance with the RMP.

Comment Number **EG-1-46-LS-4**

Comment

In addition, we believe it is important that the Pinedale Anticline development plan provide for lease buyouts and trades, habitat protection as a principal focus of offsite mitigation, and that the Pinedale Anticline Mitigation and Monitoring Fund have appropriate provisions.

Response

Thank you for your comment.

Comment Number **EG-1-47-LS-5**

Comment

All leases in the flank areas should be suspended. See page 1-3 (Map 1.1-2) (presenting existing leases on the Pinedale Anticline). If Map 1.1-2 is overlaid with Map 2.4-9, it is apparent that quite a few leases on the flanks would not be subject to the suspension. This needs to be corrected.

Response

The reader has correctly noted that not all the leases on the flanks are offered for suspension or term NSO. That which has been offered for suspension or term NSO was analyzed.

Comment Number **EG-1-48-LS-6**

Comment

Consequently it should put in place requirements that help it achieve full protection of the flanks while development occurs in the core area.

Response

The value of the flanks has been realized by the BLM. To this end, leasing decisions would not be made within the PAPA until completion of the RMP Revision. Leasing decisions would then be made in conformance with the RMP.

Comment Number **EG-1-49-LS-7****Comment**

In addition, provision should be made that ensures that lease suspensions are in place for more than five years. Lease suspensions should be in place at least until drilling is complete in the core area and at a minimum until interim reclamation requirements have been met on all leases in the core area.

Response

The lease suspensions and term NSOs were analyzed as offered. The need for continued lease suspensions and term NSOs will be reviewed annually.

Comment Number **EG-1-49-LS-8****Comment**

The provisions in Appendix 8D relative to the criteria for demonstration of successful interim reclamation should be met before lease suspensions are lifted.

Response

Thank you for your comment.

Comment Number **EG-1-49-LS-9****Comment**

There must be stated criteria for when suspensions will be lifted and they must meet the mitigation accountability needs discussed above.

Response

Thank you for your comment.

Comment Number **EG-1-49-RC-4****Comment**

It is stated that habitat may qualify as restored when the land provides forage. This is far too narrow a view of what needs to be provided. In addition to providing forage, the plant community at a minimum should be providing the cover and shelter functions for wildlife of the pre-existing plant community. Habitat function must be demonstrated not just forage production potential.

Response

The intent, as expressed in Appendix 8D-5, is to restore habitat function, not just forage, as suggested by the comment. The BLM will clarify the wording of this concept.

Comment Number **EG-1-50-LS-10**

Comment

Consequently, the BLM should commit as part of the ROD to not leasing these areas at least until the core area has been fully developed and habitat function restored (i.e., more than just interim reclamation should be in place before these areas are leased).

Response

Those areas currently not leased within the PAPA would remain unleased until completion of the RMP Revision.

Comment Number **EG-1-50-LS-11**

Comment

Likewise, it is our understanding that there is contiguous unleased similar habitat to the west in the Ryegrass and Cottonwood (Bench Corral) areas and perhaps to the east in the Wind River Front Area. The BLM should also remove these contiguous areas from consideration for leasing for the life of the Pinedale Anticline project.

Response

This is outside of the PAPA analysis area; the BLM can make the recommendation, but it is being addressed in the RMP Revision.

Comment Number **EG-1-51-AL-9**

Comment

The BLM should eliminate the PDA and make it part of the flanks with corresponding lease suspensions put in place.

Response

Removal of the PDA is part of Alternatives B and C.

Comment Number **EG-1-52-AL-10****Comment**

Unless the BLM can come forward with data showing that potential development focused in these moderate potential areas (with directional drilling likely reaching well out into the low potential areas) is likely to significantly increase gas production it simply cannot approve the development in the PDA at this time.

Response

Given the geographic proximity of the PDA to the known gas field productive areas, it is reasonable for the BLM to assume that the area would be productive. The BLM agrees that data gathering is necessary for this area and if it proves unproductive that it will not become part of the core.

Comment Number **EG-1-53-W-15****Comment**

Since the direct causative factor of concern here would be the massive oil and gas development that would be occurring, the first response should be to address this causative factor. Exhibit 2 at 5.

Response

The BLM has expressed similar concerns in Section 4.20.3.5 on page 4-161 of the Revised Draft SEIS. It is not required to mitigate the specific cause of the impact but rather to mitigate the impact.

Comment Number **EG-1-54-LS-12****Comment**

The pursuit of lease buyouts and trades in the flanks (or in nearby areas with comparable habitats) should be made a priority and clearly specified as a ROD component and priority.

Response

Thank you for your comment.

Comment Number **EG-1-55-MF-1****Comment**

Habitat protection is where a substantial amount of the Pinedale Anticline Mitigation and Monitoring Fund monies should be spent, and the ROD should so provide.

Response

Thank you for your comment.

Comment Number **EG-1-56-MF-2**

Comment

An assessment of how much mitigation of impacts on the Pinedale Anticline is going to actually cost needs to be made, and a budget for meeting those needs developed accordingly, and provided for with assurance in the ROD. Moreover, funds must be available until habitat function is actually restored, which may well be beyond the life of the project (LOP)—approximately 60 years.

Response

Thank you for your comment

Comment Number **EG-1-EXHIBIT 2-1-W-1**

Comment

It is my professional opinion that, as presented, neither Alternative D or E will reduce impacts to mule deer and pronghorn antelope populations to the extent that could be achieved with a combination of these alternatives. Furthermore, because of the uniqueness of both mule deer and pronghorn herds that winter on the Mesa (Sawyer et al. 2005b), these big game mammals warrant our concern.

Response

The BLM appreciates the issues presented in your comment as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. The BLM will look carefully at these decisions to ensure that the appropriate evaluation of uses and impacts has been made in fulfilling this responsibility. The ROD will formalize the operating procedures that will be allowed in the PAPA.

Comment Number **EG-1-EXHIBIT 2-2-W-2**

Comment

There is no mention of how the best functional connectivity and highest quality will be determined and for what wildlife species these determinations will be made, nor is it clear the location and size of these habitat "blocks."

Response

The amount of surface disturbance and level of concentration of surface disturbance varies with alternatives and the impacts are disclosed in Chapter 4 of the Revised Draft SEIS. A discussion on habitat fragmentation and effectiveness is provided in Section 4.20.3 in the Revised Draft SEIS.

Comment Number **EG-1-EXHIBIT 2-3-W-3**

Comment

In my professional opinion the rapid pace of development proposed in Alternative D will not reduce impacts to wildlife populations but will, instead, result in more disturbance and habitat loss at critical times of the year in crucial habitats.

Response

The BLM appreciates the issues presented in your comment as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. The BLM will look carefully at these decisions to ensure that the appropriate evaluation of uses and impacts has been made in fulfilling this responsibility.

Comment Number **EG-1-EXHIBIT 2-4-W-4**

Comment

The approach suggested in Alternative D is contrary to this best available scientific evidence and in my opinion would only exacerbate an already serious situation for mule deer and pronghorn antelope that depend on the Mesa for crucial winter habitat.

Response

Criteria advanced by the WGFD (Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats -December 6, 2004) would categorize most of the current Pinedale Anticline Crest as an area of "Extreme Impact" with >16 well locations per square mile and >80 acres of well-field disturbance per square mile - whether in areas of crucial winter range (for pronghorn and mule deer) or areas of sage grouse leks, nesting and early brood-rearing habitats. The SEIS outlines alternatives with the existing development in mind to allow for additional development while mitigating impacts to other resources.

Comment Number **EG-1-EXHIBIT 2-5-W-5**

Comment

In short, there is little logic, and no scientific credibility in suggesting that with rapid development on the Mesa, "core/crest and Flank" habitats could be improved to accommodate displaced big game.

Response

Criteria advanced by the WGFD (Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats -December 6, 2004) would categorize most of the current Pinedale Anticline Crest as an area of "Extreme Impact" with >16 well locations per square mile and >80 acres of well-field disturbance per square mile - whether in areas of crucial winter range (for pronghorn and mule deer) or areas of sage grouse leks, nesting and early brood-rearing habitats. As an area of "Extreme Impact", the WGFD recognized that "habitat function is substantially impaired and cannot generally be recovered through management or habitat treatments." Offsite mitigation is necessary to maintain properly functioning biotic communities and sustainable land uses by creating or enhancing replacement habitats. However, the BLM can not legally require provisions for offsite mitigation.

Comment Number **EG-1-EXHIBIT 2-6-W-6**

Comment

Fast-paced development as suggested in Alternative D could hinder identification of population responses to disturbance and preclude response capability via any sort of theorized mitigation.

Response

Thank you for your comment.

Comment Number **EG-1-EXHIBIT 2-7-W-7**

Comment

There is no indication how 15% change was determined to be the appropriate trigger nor are methods for ascertaining this change elucidated.

Response

The thresholds were incorporated after consulting with the WGFD, designated as the state agency lead. As the regulatory agency designated for managing population numbers, the BLM is relying on their judgment.

Comment Number **EG-1-EXHIBIT 2-8-W-8**

Comment

Based on impacts to mule deer and pronghorn that have already occurred from energy development in the PAPA, a 15% change in numbers should trigger a mitigation response regardless of what is happening in a reference area.

Response

Thank you for your comment. The intent of the APM is to adjust development with application of additional BMP's if adverse impacts are noted. In Section 4.20.3.5 on page 4-161 of the Revised Draft SEIS, the BLM stated: "Rather than apply these mitigations in strict sequence, the BLM would require review of annual monitoring program results during the Annual Planning Meeting and apply the recommended measures."

Comment Number **EG-1-EXHIBIT 2-9-W-9**

Comment

In my professional opinion over-winter fawn survival is the appropriate parameter to measure for a mitigation response trigger.

Response

Thank you for your comment.

Comment Number **EG-1-EXHIBIT 2-10-W-10**

Comment

Mitigation responses (10-6) are also problematic...The BLM must justify why adjustments in the Proponents actions are not a higher priority mitigation response and if they cannot do so, response number 4 should become response number 1.

Response

These thresholds and mitigation priorities were proposed by the Operators after consulting with the WGFD. In Section 4.20.3.5 on page 4-161 of the Revised Draft SEIS, the BLM stated: "Rather than apply these mitigations in strict sequence, the BLM would require review of annual monitoring program results during the Annual Planning Meeting and apply the recommended measures."

Comment Number **EG-1-EXHIBIT 2-11-LS-1/W-11**

Comment

Secondly, the SEIS provides no assurances that the BLM will not lease adjacent areas or that there are areas available for conservation easements that have not been leased for minerals. If undisturbed areas that could provide alternative habitats for displaced wildlife exist, they should be clearly identified in the SEIS and assurances provided that they will be protected and available for wildlife use for the LOP.

Response

Decisions made regarding leasing designation will be made in conformance with the pending RMP ROD. All decisions are required to comply with all laws as they pertain to NEPA.

Comment Number **EG-1-EXHIBIT 2-12-W-12**

Comment

The BLM must assure that there are accessible habitats that can be enhanced and provide details for the sorts of enhancements that are envisioned to improve these habitats such that they meet over-winter needs of displaced mule deer and pronghorn antelope. Protection of these habitats needs to be assured for the LOP.

Response

Decisions made regarding leasing designation will be made in conformance with the pending RMP ROD. All decisions are required to comply with all laws as they pertain to NEPA.

Comment Number **EG-1-EXHIBIT 2-13-W-13**

Comment

Because habitat enhancements can be habitat disturbance, at least initially, consideration must be made as to whether these "enhancements" are in fact removing habitat at least initially, and some consideration of how long that will occur should be made. This is especially important when the likely lag in population responses to disturbance is factored in.

Response

Thank you for your comment.

Comment Number **EG-1-EXHIBIT 2-14-W-14**

Comment

The BLM and the public need assurances that mitigation will occur, what it will entail, how "values" and habitat needs will be assessed and how habitats will be improved.

Response

Significant effects to several species of wildlife are expected. This includes pronghorn antelope, elk, mule deer, sage-grouse, sensitive fish species, vegetation and recreation under any of the action alternatives. The BLM believes there is no way to fully develop the oil and gas resources within the project area without these effects, although site-specific review at the annual work planning stage would allow for the use of best management practices to reduce adverse effects.

Comment Number **EG-1-EXHIBIT 2-15-MF-1****Comment**

The BLM should require the Proponents to justify the dollar amounts associated with the "Fund" and assure that funds will be available for mitigation and monitoring beyond the LOP.

Response

Economics are outside the purview of NEPA and cannot legally be considered outside of a "technically or economically" not feasible assessment.

Comment Number **EG-1-EXHIBIT 2-16-W-15****Comment**

The PDA should be incorporated into the "Buffer Area" and "Flanks" found in Alternative E and protected from disturbance for at least the life of the project.

Response

This issue you raise here is within the range of alternatives - see Alternative E.

Comment Number **EG-1-EXHIBIT 2-17-RC-1****Comment**

This reclamation plan is well done, addressed concerns expressed in my earlier comments and provides measurable objectives with temporal constraints for monitoring success. The BLM should ensure these plans are fully implemented so as to ensure impacts to big game re reduced.

Response

The BLM appreciates the issues presented in your comment as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. The BLM will look carefully at these decisions to ensure that the appropriate evaluation of uses and impacts has been made in fulfilling this responsibility. The ROD will formalize the operating procedures that will be allowed in the PAPA.

Comment Number **EG-1-EXHIBIT 2-18-W-16****Comment**

Given these factors, the BLM should ensure that there is no disturbance in either the flanks or the buffer area under Alternative E or the LOP.

Response

This requirement cannot be imposed upon valid existing leases; however, the BLM has added under Common to All Alternatives that leasing within the PAPA would not occur until completion of the Pinedale RMP revision.

Comment Number **EG-1-EXHIBIT 2-19-RC-2**

Comment

Understandably interim reclamation of some well pads would be limited under Alternative E (2-258) but this could be regulated if the BLM would require interim reclamation prior to allowing construction of another well pad.

Response

Thank you for your comment.

Comment Number **EG-1 EXHIBIT 2-20-W-17**

In my professional opinion, slowing the pace of development and reducing human disturbance by enforcing winter timing limitations will help reduce impacts to wintering big game animals on the Mesa far more than concentrated development occurring on a year-round basis.

Response

Thank you for your comment. The issue you raise here is within the range of alternatives analyzed.

Comment Number **EG-1 EXHIBIT 2-21-W-18/AL-2**

A "preferred alternative" that would be more salubrious for big game animals and likely many other species of wildlife would be a combination of Alternative D and E with improvements in mitigation and monitoring. From Alternative D the BLM should select:

- All activities that reduce surface disturbance.
 - Computer monitoring and personnel bussing to reduce human impacts.
 - Mitigation and Monitoring Fund.
 - Financial support for research and habitat studies.
 - Protection of "Buffer" and "Flank" habitats for the LOP.
 - Planning and coordination meetings.
- Reclamation Plan for Alternatives D and E.

Response

Thank you for your comment. The items you present are within the range of alternatives analyzed and the BLM will consider your input in making a decision.

Comment Number **EG-1-EXHIBIT 2-22-G-1****Comment**

The BLM should slow the pace of development by at least 10 years as suggested in Alternative E, enforce wildlife seasonal timing limitations and make every effort to reduce human activity in crucial winter habitats during winter. In addition, the BLM should consult qualified wildlife and range scientists and develop a wildlife monitoring and mitigation plan that will actually work. This plan should define triggers, methods of measurement and mitigation responses. The trigger for mule deer and pronghorn antelope should be based on over-winter fawn survival and mitigation should allow for modification of oil and gas operations (the causative factor) as a primary response if a threshold is triggered.

Response

The BLM believes this document demonstrates exactly what you are asking for. There are always multiple factors affecting a closed system. Adaptive management through the application of BMP's and spatial progression will be applied as conditions warrant.

Comment Number **EG-1-EXHIBIT 2-23-G-2****Comment**

Conclusions drawn from my analysis of the PASEIS remain unchanged. That document and The Revised Draft Supplemental Environmental Impact Statement for the Pinedale Anticline Oil and Gas Exploration and Development Project (RDPASEIS) fail to meet the standards under NEPA for a scientifically credible and supportable documentation of impacts resulting from a project and presentation of means by which those impacts can be reduced. Addition of Alternatives D and E do not alter my earlier conclusion that the "single-minded focus on energy extraction appears to violate the multiple use requirements of FLPMA."

Response

This document is assessing a proposal for oil and gas development and its effects on the primary environment. Application of mitigation is proffered and designed to minimize the degree of impact. Such analysis is never an exact science and is not expected to be.

Comment Number **EG-1-EXHIBIT 3-1-SE-1****Comment**

BLM has failed to adequately address many of the economic costs likely associated with accelerated natural gas development and production, including the costs of compromised air quality, water quality, reduced populations of wildlife, threats to endangered species, increased noise, and others. These effects are discussed in SEIS (p. 4-16), but SEIS makes no effort to quantify these recognized effects. However, 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 PAPA area to obtain a complete catalog of estimates of the economic consequences of the various alternatives.

Response

The BLM recognized the value of environmental amenities and the non-market values associated with them. Though a quantification of these values is not provided in the SEIS for this specific project, the Final SEIS refers to Freeman's work and several other contingent valuation researchers. It also refers to a contingent valuation study that Don McLeod of the University of Wyoming conducted in Sublette County in 1998. Therefore the comment has been addressed in the Final SEIS. The BLM appreciates the issues presented in your comment and will consider this as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. The BLM will look carefully at these decisions to ensure that the appropriate evaluation of uses and impacts has been made in fulfilling this responsibility.

Comment Number **EG-1-EXHIBIT 3-2-SE-2**

Comment

In the DSEIS, BLM has emphasized the importance of the energy extraction industries, to the apparent exclusion of other industries and other sources of income. However, this emphasis is not supported by the data.

Response

The text has been revised.

Comment Number **EG-1-EXHIBIT 3-3-SE-3**

Comment

BLM has also mischaracterized the economic importance of the oil and gas industry by ignoring obvious connections between the rapid pace of oil and gas exploration and development and inflation and higher cost of living.

Response

The text has been revised.

Comment Number **EG-1-EXHIBIT 3-4-SE-4**

Comment

In the SEIS, BLM acknowledges that "Changes in employment and income trigger impacts on community services, social structures, and lifestyles (p. 4-30)." But BLM fails to make a connection between this recognition and serious discussion of the potential economic costs of these likely consequences of accelerated natural gas development.

Response

The text has been revised.

Comment Number **EG-1-EXHIBIT 3-5-SE-5**

Comment

In the SEIS, BLM acknowledges that "Changes in employment and income trigger impacts on community services, social structures, and lifestyles (p. 4-30)." But again there is a failure to make a connection between this recognition and serious discussion of the consequences for the economic well-being of long-time local residents. One set of likely consequences is social, cultural, economic and environmental disruptions viewed unfavorably by local residents. (See, for example, Fuller 2007).

Response

This is discussed in the Revised Draft SEIS.

Comment Number **EG-1-EXHIBIT 3-6-SE-6**

Comment

In the DSEIS, BLM has emphasized the importance of the energy extraction industries and some of the likely adverse consequences for environmental and social quality, but has failed to make the economic connection between the two.

Response

The potential impacts on environmental and social quality are discussed in Chapter 4 of the Final SEIS. The likelihood of these impacts occurring is beyond the scope of analysis allowed by the available data.

Comment Number **EG-1-EXHIBIT 3-7-SE-7**

Comment

A more complete analysis of the various alternatives requires that BLM adapt extant methodologies to conditions in and around PAPA to produce quantitative estimates of the economic costs resulting from the adverse health effects of air quality deterioration and likely adverse economic impacts due to deteriorating hunting opportunities.

Response

The BLM recognized the value of environmental amenities and the non-market values associated with them. Though a quantification of these values is not provided in the SEIS for this specific project, the Final SEIS refers to Freeman's work and several other contingent

valuation researchers. It also refers to a contingent valuation study that Don McLeod of the University of Wyoming conducted in Sublette County in 1998. Therefore the comment has been addressed in the Final SEIS. The BLM appreciates the issues presented in your comment and will consider this as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. The BLM will look carefully at these decisions to ensure that the appropriate evaluation of uses and impacts has been made in fulfilling this responsibility.

Comment Number **EG-1-EXHIBIT 4-1-G-1**

Comment

On June 15, 2007 I submitted detailed comments regarding water issues relevant to the Draft EIS for the Pinedale Resource Area revised RMP. Those comments discuss my education and experience dealing with water contamination and other environmental problems. Because the PAPA is part of the PRA and will be managed under the new RMP, those earlier comments are relevant to the Pinedale Anticline Project Area as well. In fact, the PAPA decision will likely be the most significant, most controversial and most environmentally damaging project implemented under the new RMP. For this reason I am incorporating my June 15, 2007 comments into the present comments. I ask the BLM to address all of the issues in those earlier comments when reaching a decision on the PAPA expansion proposal.

Response

The comments that you made on the RMP will be addressed in the RMP response to comments. Those comments you made on the Revised Draft SEIS are responded to in the response to comments for the SEIS.

Comment Number **EG-1-EXHIBIT 4-2-G-2**

Comment

I am formally asking the BLM to develop a new Purpose and Need statement that does not contain a specific target for new wells. The new P&N should reflect the proponents' actual purpose which is opportunities for increased production. The RDSEIS passage just quoted would make a suitable P&N statement with minor modifications: The Purpose and Need for the proposal is to allow for the development of additional gas resources from the highly productive PAPA while protecting other resources, including wildlife.

Response

Thank you for your comment.

Comment Number **EG-1-EXHIBIT 4-3-AL-1****Comment**

I am also formally asking the BLM to prepare an amendment to the RDSEIS to evaluate a full spectrum of increased production alternatives.

Response

In the Revised Draft SEIS, the BLM analyzed an adequate range of alternatives.

Comment Number **EG-1-EXHIBIT 4-4-G-3**

To address the various concerns and competing interests the BLM should be taking a comprehensive look at PAPA - to find the best way to manage the area and protect its resources in the face of existing and proposed developments - not just putting on blinders that only allow the agency to see the possibility of dropping environmental safeguards in order to authorize 4,399 new wells. To this end, a P&N along the following lines would be a more appropriate starting point for the PAPA Supplemental EIS: Based on new information and new development proposals, there is a need for the BLM to re-evaluate resource management in the Pinedale Anticline Project Area, to find ways to better protect the area's special values and, where practicable, to pursue opportunities for additional gas production.

Response

In the Revised Draft SEIS, the BLM analyzed an adequate range of alternatives.

Comment Number **EG-1-EXHIBIT 4-5-AL-2****Comment**

I am formally asking the BLM - yet again -to rigorously explore, objectively evaluate and select for implementation a true reduced pace development alternative for the Pinedale Anticline Project Area, an alternative that stages full field development over the next 50-100 years.

Response

It is unreasonable for the BLM to project development over the next 50 to 100 years.

Comment Number **EG-1-EXHIBIT 4-6-AL-3****Comment**

The RDSEIS instead merely dismissed the entire set of conservation ideas from any consideration. This is contrary to NEPA. To address this omission in the RDSEIS, I am formally petitioning the BLM to fully and fairly evaluate the conservation alternative for the PAPA proposal.

Response

In the Revised Draft SEIS, the BLM analyzed an adequate range of alternatives.

Comment Number **EG-1-EXHIBIT 4-7-WQ-1**

Comment

Another type of alternative the RDSEIS ignores is one based on increased protections for water resources.....If the BLM felt some of the proposed water protection measures were impracticable, the agency could still evaluate, consider and implement an alternative incorporating the remaining set of measures. I am formally petitioning the BLM to rigorously explore and objectively evaluate such an alternative for the PAPA proposal.

Response

Adequate mitigation to protect water resources has been included. These protective measures have been developed in cooperation with the WDEQ-WQD.

Comment Number **EG-1-EXHIBIT 4-8-G-4**

Comment

If the BLM elects to abandon the seasonal restrictions the agency will have the burden of explaining and justifying the decision. For instance, what are the specific reasons BLM believes it is appropriate to allow further significant impacts to visual quality, air quality, water quality, soil health, and wildlife in order to achieve "less impact on trace levels" and better "stability of the drilling rig fleet and associated workforce"? Does BLM view increasing stability of corporate drilling rig fleets to be more important than protecting the environment? Does BLM believe increasing short-term gas production is more important than preventing a hard economic bust from impacting local communities? The energy companies working the PAPA are already reaping huge profits. At the same time, however, the activities yielding these profits are causing air quality violations and wildlife populations declines. Why should a federal agency take action to worsen these public problems just to further increase the profits of private corporations? Given the extensive public opposition that has been expressed to the proposal the BLM must provide answers to these kinds of questions.

Response

Thank you for your comment.

Comment Number **EG-1-EXHIBIT 4-9-GW-1**

Comment

Concerning ground water resources, the RDSEIS does not present any information about ground water movement. While recharge from the Wind River Range tends to move ground waters near PAPA to the southwest, away from the communities of Pinedale and Boulder, the

Mesa (Anticline) may move some ground water from the Mesa towards those communities. This would allow ground water contaminated by energy development activities to migrate towards populated regions where people depend on potable ground water. The RDSEIS only includes passing mention of ground water flow. That discussion is not sufficient to address local ground water movements throughout the PAPA.

Response

The BLM, in cooperation with applicable state agencies, is currently collecting additional information which should help to address your concern. The Final SEIS has been updated to include additional mitigation measures potentially available to negate further water quality degradation. The potentiometric analysis for the project area in both the 2002 report by Dynamac and the 2008 report by Geomatrix indicate a regional flow direction to the southwest. The complex geology within the PAPA makes local groundwater flow volumes, distances and directions too complex for a meaningful analysis at this time. The isolation of shallow groundwaters in hydrocarbon and commercial water wells and the continued monitoring program are existing protections. The additional BMPs and mandated practices being implemented under the SEIS will provide additional protections and monitoring opportunities. With time additional data on small scale ground water flow vectors, volumes, and interactions may become may become available. At such times, more definitive statements could be made.

Comment Number **EG-1-EXHIBIT 4-10-GW-2****Comment**

I realize these issues have not been carefully studied, but I also understand there is at least one study underway that will offer some insights into the ways ground waters move in the PAPA, both within aquifers and between aquifers. Before issuing a final RSEIS on the PAPA proposal, the BLM should wait for this study to be completed so that the results can be considered by the public and decision-maker. Without at least a basic understanding of how ground waters move, the public and decision-maker will not be able to understand the potential risks of ground water contamination from energy development activities in the PAPA.

Response

The report referenced is the 2008 Geomatrix report and its analysis has been included in the Final SEIS.

Comment Number **EG-1-EXHIBIT 4-11-GW-3****Comment**

Also missing from the RDSEIS is information about aquifer characteristics. Aquifer conditions vary across the PAPA, due to differences in soil conditions, recharge rates, and other factors. These conditions can make some areas highly susceptible to contamination from surface hazmat spills. Highly susceptible areas should be managed with more stringent protections to prevent contamination. With respect to aquifers, the RDSEIS seems to treat all areas in the PAPA as the same. Attached to my June 15, 2007 comments were maps showing depth to

ground water, aquifer recharge rates and aquifer sensitivity. I am asking BLM to disclose this kind of information in any revised draft or final NEPA document relevant to the PAPA.

Response

See response to Comment EG-1-EXHIBIT 4-9-GW-1. The depth to initial groundwater maps provided reflect only one aspect of the water situation. The data has been considered. However, the SEIS is not designed as an encyclopedic source of all available data. The Geomatrix Report has been referenced in the Final SEIS and some of the maps from that study have been incorporated.

Comment Number **EG-1-EXHIBIT 4-12-GW-4**

Comment

The RDSEIS acknowledges benzene and other volatile hydrocarbons have been found in 88 water wells in the PAPA, with 2 wells showing benzene in excess of the Maximum Concentration Level [MCL] allowed under the Safe Drinking Water Act. RDSEIS at 3-84 and 3-85. The RDSEIS then asserts "[w]here detections are above the MCL, the contamination is known to be related to drilling pit water siphoning back into the well and to backflow from transportation trucks. WDEQ-WQD has since required that check valves be installed on supply wellheads.* * * The source of the widespread low concentration detections (lower than MCL) is not known." Id. Has it been conclusively demonstrated that backflow was the cause of the over MCL benzene readings? The RSEIS should discuss the evidence that led to this conclusion so the public and independent experts can validate or refute the conclusion. BLM should also explain why it claims only 2 wells exceed benzene MCL when DEQ reports 5 wells exceed MCL.

Response

This issue is being address by the WDEQ-WQD which is the agency with primacy in matters related to violations of Wyoming State water quality standards. The complexity and changing nature of the situation prevent a definitive statement as to the outcome of this process at the time of publication.

Comment Number **EG-1-EXHIBIT 4-13-GW-5**

Comment

More importantly, the discovery of more than 80 water wells with measurable benzene and other hydrocarbons is alarming, yet the RDSEIS does not contain any discussion of possible sources. To adequately discuss the affected ground water environment, the BLM has an obligation to discuss existing contaminants and the sources of these contaminants. If the agency does not currently know the source of a contaminant such as benzene, it should take steps to identify the source or probable source.

Response

See response to Comment EG-1-EXHIBIT 4-9-GW-4. The BLM is presently working with all appropriate state and federal agencies to address water quality issues.

Comment Number **EG-1-EXHIBIT 4-14-GW-6**

Comment

On the topic of the ground water environment, I would also like to emphasize that the risks of contamination in the PAPA are much higher than in the Jonah field. This is because the depth to ground water is much shallower in PAPA and many regions in PAPA have highly porous surface sediments. Moreover, the ground waters around the PAPA are used for domestic consumption and agricultural purposes. For these reasons - and because ground water contamination is often exceedingly difficult or impossible to fully correct - BLM should address ground water concerns very carefully in the new PAPA decision and RSEIS.

Response

Thank you for your comment. See response to Comment EG-1-EXHIBIT 4-9-GW-4 and Comment EG-1-EXHIBIT 4-13-GW-5.

Comment Number **EG-1-EXHIBIT 4-15-SW-1**

Comment

The RDSEIS also has some gaps in its description of the surface water environment. While there is a map (page 3-87) showing the main rivers and subwatersheds in the PAPA, there is no data on background sediment loads in these waters.

Response

Sediment modeling is an involved and expensive process. There is not sufficient background information at this time to determine if the amount of sediment being produced from surface disturbance has created significant volumes over and above background levels or if the sediment being produced is within natural background ranges. Obtaining this specific data would require time, money, effort, and materials that would be better used to monitor other aspects. As an alternative approach to this question, the surface water monitoring program includes sampling of macroinvertebrates as an indicator of environmental conditions.

Comment Number **EG-1-EXHIBIT 4-16-SW-2**

Comment

To address these concerns, I am asking BLM to begin estimating total sediment load in the New Fork and Green Rivers - at strategic points at and above the confluence - so future monitoring can reveal the extent to which the sediment load is increasing due to energy development. This

should be done on at least an annual basis. I am also requesting the agency conduct monthly TSS assessments of these two rivers - again, at strategic points at and above the confluence.

Response

See response to Comment EG-1-EXHIBIT 4-15-SW-1.

Comment Number EG-1-EXHIBIT 4-17-SW-3**Comment**

Another omission in the discussion of surface water environments relates to wetlands. The RDSEIS (page 3-107) does include a map of select wetlands and wetland management zones. This is very useful information. What is missing, however, is information about how sensitive these wetlands (including springs) are to drying up as the water table is lowered in the PAPA due to water extraction for energy development. I am asking BLM to estimate wetland sensitivity and disclose this information through the PAPA NEPA process.

Response

See response to Comment EG-1-EXHIBIT 4-11-GW-3, Comment EG-1-EXHIBIT 4-12-GW-4, and Comment EG-1-EXHIBIT 4-13-GW-5. The BLM is working with all appropriate agencies to determine the effects of development upon water supply and retention. The extent to which changes in shallow groundwater are the result of extraction and how much may be the result of other factors such as climate and/or surface manipulation will most likely be a topic of discussion. However, this data and subsequent analysis are not available at this time and will of necessity be part of the ongoing monitoring and analysis set forth in the SEIS.

Comment Number EG-1-EXHIBIT 4-18-CU-1**Comment**

Before proceeding to discuss specific examples, I would like to first address a significant overarching problem I see with the RDSEIS's treatment of impacts. It is a problem that applies generally to all impacts considered in the NEPA document. It is the failure to properly evaluate and disclose indirect and cumulative impacts, including those from connected actions.

Response

Direct, indirect, and cumulative impacts have been adequately disclosed.

Comment Number EG-1-EXHIBIT 4-19-CU-2**Comment**

The RDSEIS largely ignores these analysis requirements and focuses attention on the impacts from actions the BLM is directly authorizing.

Response

Direct, indirect, and cumulative impacts have been adequately disclosed.

Comment Number **EG-1-EXHIBIT 4-20-CU-3**

Comment

RDSEIS at 4-104. There is no discussion of potential cumulative impacts to ground water from such things as drilling fluids leaching from outside well casings, leaking pit liners, and surface discharge of produced waters (with high TDS and contaminants) for road watering and dust suppression. Instead, the RDSEIS simply assumes such contamination would "likely" not occur.

Response

Direct, indirect, and cumulative impacts have been adequately disclosed.

Comment Number **EG-1-EXHIBIT 4-21-CU-4**

Comment

Nor does the RDSEIS discuss cumulative impacts to water resources that will result from the large influx on new workers who come to Sublette County to work in the PAPA if BLM approves any of the "action" alternatives.

Response

It would be impossible for the BLM to determine the location of the water sources for these new workers would be. The demand for water resources could occur throughout Sublette, Lincoln, and Sweetwater counties.

Comment Number **EG-1-EXHIBIT 4-22-CU-5**

Comment

The RDSEIS does acknowledge authorization of any of the "action" alternatives would result in a significant influx of new workers into the region. See RDSEIS pages 4-13 through 4-15 (noting that the PAPA workforce would increase to over 1,000 workers for up to 20 years, then remain at up to 600 workers through 2073, with perhaps 60% of these workers moving to Sublette County). However, the discussion largely focuses on jobs, revenues and other employment benefits. Emphasizing positive impacts of the proposal while ignoring negative impacts is another indication of bias.

Response

The impacts whether positive or negative have been disclosed in the Revised Draft SEIS.

Comment Number **EG-1-EXHIBIT 4-23-CU-6****Comment**

Other water depletions - that would result from connected and cumulative actions associated with the PAPA proposal - also appear to be ignored in the RDSEIS. In my June 15, 2007 comments on the RMP Draft EIS I outlined various kinds of water depletions associated with energy development in the Pinedale Resource Area. This included water depletions from various activities in the PAPA. The RDSEIS does not evaluate all of those depletions.

Response

Water depletions associated with development in the PAPA have been disclosed in the Revised Draft SEIS.

Comment Number **EG-1-EXHIBIT 4-24-CU-7****Comment**

The RDSEIS also appears to ignore some connected activities that would occur off BLM lands if the PAPA proposal is approved. For instance, large amounts of water will be used to make cement and more water will be used to clean equipment. The RDSEIS discloses water depletions associated with pipeline testing and dust control (pages 4-106 and 4-134). But other reasonably foreseeable water depletions are ignored.

Response

The location and amounts of water used are expected to be minor in comparison to the amounts disclosed in the Revised Draft SEIS for water usage in the PAPA. Further, the amount of water and the source of the water are not readily known.

Comment Number **EG-1-EXHIBIT 4-25-CU-8****Comment**

Another example of connected actions that are not adequately addressed in the RDSEIS are those associated with the disposal of produced water. Massive amounts of produced water would be generated if the PAPA proposal is approved. Yet the RDSEIS does not explain precisely how all this contaminated water will be disposed of and what impacts would result from the disposal.

Response

The amounts of produced water have been disclosed in the Revised Draft SEIS. Disposal of produced water is regulated by the WDEQ-WQD and the WOGCC.

Comment Number **EG-1-EXHIBIT 4-26-CU-9****Comment**

The RDSEIS does contain some discussion about disposal of produced water, but there is no overall assessment of impacts from this important aspect of the PAPA proposal. Furthermore, there does not appear to be any well thought out plan for dealing with all the produced water, and BLM is apparently leaving it to the operators to deal with in the future. This is unacceptable. The PAPA field will generate far more produced water than the Jonah field. Before the BLM considers authorizing 4,400 new wells the agency should have a clear understanding that disposing of all the produced water is feasible and will not cause any significant direct, indirect or cumulative impacts. The agency should not simply assume there won't be problems disposing of whatever produced waters come out of the PAPA under the decision to authorize thousands of new wells.

Response

Disposal of produced water may result in significant impact; thus, the BLM is analyzing the Proposed Action and alternatives through a SEIS and not an EA. Disposal of produced water will meet all applicable laws and regulations.

Comment Number **EG-1-EXHIBIT 4-27-GW-7****Comment**

RDSEIS at 4-99. "Citing regulations" does not constitute analysis of potential impacts. And the RDSEIS does not demonstrate any of the measures in question are adequate to protect ground waters from contamination. In fact, the measures cited have failed in the past.

Response

See Response to Comment EG-1-EXHIBIT-4-12-GW-4 and Comment EG-1-EXHIBIT-4-13-GW-5.

Comment Number **EG-1-EXHIBIT 4-28-GW-8****Comment**

The RDSEIS acknowledges "[g]roundwater quality could be impacted by leaky well seals allowing cross-aquifer contamination...." RDSEIS at 4-100. But the RDSEIS fails to actually analyze the impacts that would result from leaky seals or discuss how often seals fail. Moreover, cement used to seal casings generally has harmful chemicals (e.g., bactericides) that can leach into ground waters over time. The RDSEIS ignores this issue as well.

Response

See Response to Comment EG-1-EXHIBIT-4-12-GW-4 and Comment EG-1-EXHIBIT-4-13-GW-5.

Comment Number **EG-1-EXHIBIT 4-29-GW-9****Comment**

The RDSEIS ignores this source of ground water contamination. BLM should immediately prohibit the use of drilling fluids that contain potential ground water contaminants.

Response

See Response to Comment EG-1-EXHIBIT-4-12-GW-4 and Comment EG-1-EXHIBIT-4-13-GW-5.

Comment Number **EG-1-EXHIBIT 4-30-GW-10****Comment**

The RDSEIS does not present any historical data on the number of spills, types of chemicals spilled and quantities of materials spilled in the region. Based on operator reports from the large number of existing wells, it is possible to an estimate for what kinds of spills are likely to occur if the PAPA expansion is approved.

Response

See Response to Comment EG-1-EXHIBIT-4-12-GW-4 and Comment EG-1-EXHIBIT-4-13-GW-5. The data is available and was considered but was not included in the Revised Draft SEIS.

Comment Number **EG-1-EXHIBIT 4-31-WQ-2****Comment**

RDSEIS at 4-100. Again, this is not analysis of potential impacts. It is an assertion that impacts would be avoided by following non-enforceable SPCC Plans that are not subject to public review, comment, protest or judicial review. Federal agencies cannot rely on undeclared, unreviewed mitigation measures to assert impacts will be minimized. If BLM is going to rely on mitigation measures to avoid water contamination, the agency has an obligation to demonstrate they will actually be effective, not just rosy sounding words on paper.

Response

The BLM will continue to work cooperatively with the State of Wyoming in addressing any issues pertaining to groundwater and surface water.

Comment Number **EG-1-EXHIBIT 4-32-HW-1/GW-11**

The RDSEIS does not even disclose the quantities of potential water contaminants that would be used or produced in the PAPA under each alternative. Appendix 12 of the RDSEIS does contain a list of some chemicals used in production, completion, stimulation and processing activities. But there is no information about quantities. A mere list of potential contaminants is

meaningless without quantity information. For example, a material that has relatively low toxicity can be problematic if released into the environment in sufficient quantities.

Response

See Response to Comment EG-1-EXHIBIT-4-12-GW-4 and Comment EG-1-EXHIBIT-4-13-GW-5. Given the life of the document and the potential for reuse of materials, changes in drilling methods, and geologic conditions, total volumes are difficult to estimate. Existing laws and regulations regarding the handling and disposal volumes and type of materials apply. Mandatory mitigation measures apply to prevent pollution and exposure to hazardous materials. The potential location, nature, and extent of accidents/spills is not known. The BLM is not required to do a worst-case analysis.

Comment Number **EG-1-EXHIBIT 4-33-HW-2/GW-12****Comment**

The BLM should develop a risk ranking for chemicals used in the PAPA, based on their degree of toxicity (e.g., health risks), the anticipated quantities that will be used or transported in the PAPA, and the difficulty they pose in clean-up if a release occurs. The RSEIS should also disclose past spills related to oil and gas production in the region, including names and quantities of chemicals released.

Response

See response to Comment EG-1-EXHIBIT-4-32-HW-1/GW-11.

Comment Number **EG-1-EXHIBIT 4-34-HW-3/GW-13****Comment**

Contamination from Pits. As with the other sources of potential ground water contamination, the RDSEIS does not actually analyze impacts from chemicals escaping waste and reserve pits.

Response

See response to Comment EG-1-EXHIBIT-4-32-HW-1/GW-11.

Comment Number **EG-1-EXHIBIT 4-35-HW-4/GW-14****Comment**

Contamination from Industrial Water Wells. The RDSEIS (page 4-99) mentions in passing that "drilling and completion techniques of water wells need to be changed to correct the alkalinity problem." Unless I overlooked something, there is no discussion in the RDSEIS of what this "alkalinity problem" is, how serious it is, or how much ground water has been impacted by the problem. Nor is there any evaluation of alternative measures that could be used to eliminate the problem.

Response

Page 4-99 of the Revised Draft SEIS discusses impacts considered in the PAPA DEIS. In the PAPA DEIS, this was suspected to be a completion problem but as discussed in Chapter 3 of the Revised Draft SEIS, studies have measured regional pH in the Wasatch Formation aquifer commonly between 8.5 and 9.5.

Comment Number **EG-1-EXHIBIT 4-36-GW-15**

Comment

Contamination of Injection Wells. RDSEIS at 4-99. What specifically does the operator have to demonstrate? To what degree of certainty must the operator demonstrate injection activities will not endanger fresh water sources? What does BLM mean by "endanger"? Could a faulty injection well contaminate ground water to some degree and still not endanger that source? And why are operators only required to demonstrate well integrity once every five years? Produced waters that are disposed of through injection are corrosive, and injection subjects casings to high pressures. An injection well casing may fail in much shorter time frame than five years, yet this would not be detected based on the measure outlined in the RDSEIS. I am asking the BLM to adopt more stringent measures for injection wells that require annual demonstration of mechanical integrity.

Response

Please see page 4-99 in the Revised Draft SEIS as the answers to your questions are described as much as possible as the BLM has no legal authority over the project unless it is proposed to cause surface disturbance on public lands.

Comment Number **EG-1-EXHIBIT 4-37-GW-16**

Comment

The BLM must disclose the assumptions and methodologies used in its models. And the agency must provide a rigorous defense of its drawdown modeling, given the apparent discrepancy between the natural recharge rate in the PAPA and the model's prediction that recovery of aquifers would be rapid.

Response

The BLM is unsure of which discrepancy to which you speak. This model assumes one water well per well pad which is a gross exaggeration. The BLM will continue to encourage limited dependence upon freshwater sources through recycling and reuse programs.

Comment Number **EG-1-EXHIBIT 4-38-SW-4****Comment**

In any case, BLM must adopt adequate measures to ensure the proposed PAPA developments will not discharge sediment to the Green River. This can be done by adopting NSO (off existing roads) within 1 mile of the Green. A larger buffer may be needed for areas with steep slopes or highly erosive soils. BLM should also adopt measures to minimize sediment loading in the New Fork which is also ecologically important.

Response

There are standard restrictions regarding access to wetlands, riparian areas, and intermittent/ephemeral/perennial channels as well as sensitive soil resources. Further evaluation will occur through the site-specific analysis where opportunities for further application of BMP's may be applied as appropriate.

Comment Number **EG-1-EXHIBIT 4-39-SW-5****Comment**

Unfortunately, the RDSEIS does not contain any assessment of how contemplated activities in the PAPA would affect sediment loading in the Green or New Fork....I am asking the BLM to make this assessment before authorizing any new oil or gas wells in the PAPA.

Response

See response to Comment EG-1-EXHIBIT-4-38-SW-4.

Comment Number **EG-1-EXHIBIT 4-40-SW-6****Comment**

I am therefore asking BLM to develop new significance criteria that will ensure measurable increases in sediment loading in Class I, II or III surface waters will be deemed significant.

Response

The BLM assumes you meant to say insignificant and not significant. Your comment has not provided any additional information which leads us to believe that significant criteria are inadequate. Thank you for your comment.

Comment Number **EG-1-EXHIBIT 4-41-SW-7**

I am asking the BLM to develop and implement an alternative that will avoid or truly minimize all potential water depletions from energy development in the PAPA. This will require re-evaluating the previously authorized activities. The Endangered Species Act requires the BLM to use it

authorities to help recover these species and the ecosystems upon which they depend. Thus far, the agency is not meeting this critically important obligation.

Response

The BLM currently employs a wide array of BMP's and SOP practices which discourage further withdrawals of freshwater sources. The BLM welcomes any additional technological advances that you may suggest. Thank you for your comment.

Comment Number **EG-1-EXHIBIT 4-42-SW-8/AL-6**

Comment

The RDSEIS states that the issue of water depletions will be addressed through consultation with the U.S. Fish and Wildlife Service. This issue should have been fully briefed in the RDSEIS. Because the BLM has deferred full treatment of this issue until Section 7 consultation is complete, this deprives the public, scientists and other concerned parties of the opportunity to review and comment on the discussion of impacts to the endangered fish and their critical habitat. Moreover, the consultation process will likely result in a jeopardy opinion and the imposition of reasonable and prudent alternatives to avoid jeopardy. Those alternatives should be addressed through the NEPA process. By delaying this important aspect of the analysis process, the BLM may find itself in the unfortunate position of having to prepare yet another "revised" draft SEIS for the PAPA.

Response

The same language is used in the Revised Draft SEIS and in the Biological Assessment to address Colorado River Fish. According to the USFWS, any action that would lead to water depletion in the Colorado River system would potentially affect the four endangered fish species and critical habitat. For determination of effects, the quantitative information in Table 4.19-1 is required by the USFWS to distinguish between a determination of "no effect", "not likely to adversely affect", or "likely to adversely affect". A one-time contribution to the Recovery and Implementation Program would follow as a reasonable and prudent measure.

Comment Number **EG-1-EXHIBIT 4-43-SW-9**

Comment

First and foremost, the RIP is not working. At least two of the species remain critically endangered and are not reproducing despite the RIP and fees previously paid into this program for depletions. Accordingly, the BLM should develop and implement other alternatives to mitigate any water depletions that cannot be avoided (and to avoid jeopardy the BLM should only allow water depletions that truly cannot be avoided).

Response

The BLM currently employs a wide array of BMP's and SOP practices which discourage further withdrawals of freshwater sources. The BLM welcomes any additional technological advances that you may suggest. Thank you for your comment.

Comment Number **EG-1-EXHIBIT 4-44-SW-10****Comment**

Second, the BLM would only pay into this program when a "single incremental withdrawal" would result in 100 acre-feet or more of average annual depletion. The problem with this is BLM could piecemeal out the overall withdrawals of the PAPA project so that none or only few of the withdrawals reach the 100 acre-foot threshold. For instance, BLM could assert a particular pipeline test would result in less than 100 acre-feet of withdrawals and is therefore exempt from the mitigation requirement. The relevant measure is the overall net withdrawal for the entire PAPA project. When all sources of PAPA-related depletions are accounted for, this net withdrawal may total hundreds of acre-feet per year. All depletions must be mitigated.

Response

The issue you raise is under the purview of this USFWS administered program. The BLM currently employs a wide array of BMP's and SOP practices which discourage further withdrawals of freshwater sources. We welcome any additional technological advances that you may suggest. Thank you for your comment.

Comment Number **EG-1-EXHIBIT 4-45-SW-11****Comment**

The RDSEIS does not come close to evaluating all the PAPA-related surface water withdrawals that would occur under the proposed developments.

Response

Based on the best available information, the water (acre-feet) withdrawn from surface and groundwater sources by various components of each alternative are provided in Table 4.19-1. Any future project under federal jurisdiction would be subject to similar analyses.

Comment Number **EG-1-EXHIBIT 4-46-SW-12****Comment**

I am asking BLM to take a hard look at this issue and estimate the likely annual water depletion due to drawdown of the water table in PAPA.

Response

Average annual water depletions are provided in Table 4.19-1, based on the best available information.

Comment Number **EG-1-EXHIBIT 4-47-SW-13****Comment**

I am asking the BLM to require this kind of monitoring as soon as practicable and to continue it for at least three years. Reductions in discharge of ground water to surface waters should be treated as a water depletion subject to Section 7 consultation and mitigation under the ESA.

Response

Issues associated with water depletions and Section 7 consultation have been addressed in the Revised Draft SEIS and the Biological Assessment. See the response to Comment EG-1-Exhibit 4-42-SW-8/AL-6.

Comment Number **EG-1-EXHIBIT 4-48-SW-14****Comment**

To address this concern, I am asking BLM to evaluate wetlands - based on elevation, potentiometry, and proximity to planned developments - to determine which are susceptible to being impacted, either through reduced water supply or complete desiccation. This information should be disclosed to the public and decision-maker through the NEPA process.

Response

There are restrictions regarding access to wetlands, riparian areas, and intermittent/ephemeral/perennial channels as well as sensitive soil resources. Further evaluation will occur through the site-specific analysis where opportunities for further application of BMP's may be applied as appropriate.

Comment Number **EG-1-EXHIBIT 4-49-SW-15****Comment**

I am also asking the BLM to adopt binding wetland protection measures that would prohibit water wells from being drilled in regions where drawing down the water table could adversely impact wetlands. This would allow water wells to be drilled in less sensitive parts of the PAPA, and it will encourage operators to recycle produced water where possible, in place of ground water.

Response

See Response to Comment EG-1-EXHIBIT-4-9-GW-4 and Comment EG-1-EXHIBIT-4-9-GW-5. The BLM is working with the State of Wyoming and the U.S. Army Corps of Engineers to address wetland issues.

Comment Number **EG-1-EXHIBIT 4-50-AL-7****Comment**

Accordingly, I am asking the BLM to develop and implement an alternative that incorporates all the measures outlined in my June 15, 2007 comments. If the agency feels any of the measures I have requested are impracticable or unnecessary, please explain the reasons for this position, citing the sources and authorities relied upon to support the agency's position.

Response

The BLM has analyzed an adequate range of alternatives and additional measures may be implemented through BMPs.

Comment Number **EG-1-EXHIBIT 4-51-AL-8****Comment**

Because the RDSEIS does not include a true reduced pace alternative with adequate safeguards for water, wildlife and air resources, the BLM has left me without an alternative I can endorse in good conscience. I am again asking the BLM to rigorously explore, objectively evaluate and implement such an alternative for the PAPA.

Response

Thank you for your comment.

Comment Number **EG-1-EXHIBIT 4-52-G-5****Comment**

I am formally requesting that these comments (and those submitted by others) be included in their entirety in an appendix to the Final Supplemental EIS, as was historically done by the agency.

Response

Thank you for your comment. Historically, the BLM has not received more than 50,000 comments on an EIS and therefore, it is difficult to include all comments in an appendix.

Comment Number **EG-2-1-G-1****Comment**

We strongly support the use of directional drilling and would request that directional drilling and clustered well pads be required by BLM. To obtain exceptions to this requirement, we recommend that operators have to clearly demonstrate on a case-by-case basis that directional drilling or clustered well pads are technologically not feasible.

Response

Alternatives B, C, and D strive to maximize directional drilling and reduce pad size.

Comment Number **EG-2-2-LS-1**

Comment

These suspended and term NSO leases must extend for the duration of the concentrated development of the Core Area and PDA.

Response

The BLM is contemplating granting exceptions to seasonal restrictions, not granting a modification or waiver of a lease stipulation that would last from now into perpetuity.

Comment Number **EG-2-3-LS-2**

Comment

Even for the duration of concentrated development in the Core Area and PDA, we would expect little or no hardship to leaseholders from suspended or NOS leases. We therefore request that the suspensions and terms be modified to extend for as long as development is occurring in the Core Area and PDA.

Response

The need for continued lease suspensions and term NSOs will be reviewed annually.

Comment Number **EG-2-4-G-2**

Comment

We ask BLM to set these as conditions for all leases.

Response

The value of the flanks has been realized by the BLM. To this end, leasing decisions would not be made within the PAPA until completion of the RMP Revision. Leasing decisions would then be made in conformance with the RMP.

Comment Number **EG-2-5-W-1****Comment**

As part of the analysis, each lease stipulation must meet the criteria that factors have changed and protection is unwarranted or that the operations would cause no unacceptable impacts.

Response

The BLM is not contemplating waiver of seasonal restrictions much less lease stipulation; rather, the BLM is contemplating in Alternatives B, C, and D, exceptions to seasonal restrictions. On page 2-15 of the Revised Draft SEIS it states "one of the purposes of the analysis in the Revised Draft SEIS is to determine if one or more of the alternatives (B, C, or D) would result in better protection for big game and greater sage-grouse populations than what is currently afforded by the seasonal restrictions (Alternatives A and E)."

Comment Number **EG-2-6-W-2****Comment**

We request that changes be made to Alternative D to implement retention of seasonal wildlife stipulations without exceptions and waivers.

Response

A range of alternatives is provided to show the various methods of managing development on the PAPA and the impact those management differences are expected to have on the resources. Impacts to resources will occur under all alternatives, including those such as Alternative A and E that have maintained seasonal restrictions.

Comment Number **EG-2-7-W-3****Comment**

Because of the impacts of oil and gas development, more measures must be included in the Final SEIS to provide adequate protections for big game. These measures should include at a minimum: (1) mandatory requirement for directional drilling and clustered well pads when technologically feasible; (2) use by all operators of liquids gathering system throughout the PAPA; (3) use by all operators of remote monitoring—especially in winter months; (4) retention of all big game seasonal wildlife restrictions throughout the LOP; (5) use of centralized facilities by all operators; (6) slower pace of drilling with a limit of 250 new well pads; (7) suspension of leases in the Flanks for the duration of development in the Core Area; (8) stronger protections for wildlife migration corridors, starting with identification and mapping of corridors; and (9) elimination of the 1/2 mile PDA around the Core Area.

Response

The mitigation methods and measures contemplated here are encompassed in the range of alternatives or have been identified in Chapter 4 as additional mitigation opportunities.

Comment Number **EG-2-8-AL-1****Comment**

First, as we have stated repeatedly, a slower and phased pace of development must occur.

Response

The issue you present with the pace of development is within the range of alternatives provided.

Comment Number **EG-2-9-W-4****Comment**

Second, the seasonal wildlife stipulations for sage-grouse must be retained and enforced.

Response

Thank you for your comment. There are different levels of protection for greater sage-grouse provided by different alternatives.

Comment Number **EG-2-10-W-5****Comment**

Third, wellpad density throughout the PAPA must be reduced by maximum use of directional drilling and clustered well pads.

Response

Most of the core area of the PAPA has exceeded the recommended well spacing brought forward from Naugle and Holloran's research in energy developments. The Proposed Action was developed to maximize directional drilling and provide larger tracks of open space under the down-hole spacing afforded by the WOGCC. A reduced well pad density has been considered under the range of alternatives provided.

Comment Number **EG-2-11-RC-1****Comment**

Fourth, reclamation must restore sage-grouse habitat to its full functionality.

Response

Habitat function is a key component of successful reclamation. It is the intent of the criteria for final reclamation to restore functional habitat.

Comment Number **EG-2-12-AL-2****Comment**

Fifth, the PDA, which would be an expanded Core Area, must be eliminated.

Response

A range of alternatives is provided to show the various methods of managing development in the PAPA and the impact those management differences are expected to have on the resources. Alternatives B and C eliminate the PDA.

Comment Number **EG-2-13-W-6****Comment**

The BLM makes no mention of the fact that the pygmy rabbit (*Brachylagus idahoensis*) was petitioned for listing under the Endangered Species Act on April 21, 2003.

Response

That is correct. However, on May 20, 2005, the USFWS published a finding that the petition did not present substantial information indicating that listing the species was warranted. With that finding, the BLM did not make note that the petition had been filed as noted in the comment. But then in March 28, 2006, a complaint was filed alleging violations within the USFWS' 2005 finding. On September 26, 2007, a court ruled that the USFWS improperly imposed a higher than necessary standard on the 2005 petition. To comply with the September 26, 2007 ruling, the USFWS published a new finding on January 8, 2008 in which they acknowledge substantial scientific information was presented in the petition and listing for the pygmy rabbit may be warranted. The USFWS is now conducting a status review to determine if listing may be warranted. The status review is expected to be concluded in 12 months from initiation. None of this information was included in the Revised Draft SEIS but will be included in the Final SEIS.

Comment Number **EG-2-14-W-7****Comment**

Before the issuance of the FSEIS BLM must: (1) survey the entire PAPA for the species and inventory and map their locations; (2) designate critical habitat for the species; (3) design adequate plans to avoid impacts in the FSEIS and, when impacts cannot be avoided, design on-site mitigation to afford the necessary degree of protection to ensure sustainability and survival of the species. These steps are absolutely vital to the survival of this population of pygmy rabbit and they must be taken prior to allowing any further activities on the PAPA.

Response

Currently there is a monitoring plan in place that has been inventorying and mapping wildlife locations for the last 9 years. Many of the proposed mitigations in the SEIS such as directional drilling, liquids gathering system, and remote monitoring are proposed for onsite mitigation to

avoid impacts. In addition, the reclamation requirements are being designed to ensure sustainability and survival of the species that inhabit the PAPA.

Comment Number **EG-2-15-W-8**

Comment

We urge BLM to conduct surveys for black-footed ferrets before a final SEIS is issued and additional development is approved.

Response

The BLM has required black-footed ferret surveys on a case-by-case basis and will continue to do so under ESA Section 7 requirements. The BLM is committed to continue to protect federally listed species under the ESA.

Comment Number **EG-2-15-W-9**

Comment

We also exhort BLM to provide specific protection measures for both species, and particularly for prairie dogs which are an essential food source for not only black-footed ferrets, but also many other species.

Response

Additional mitigation measures have been added to the Revised Draft SEIS.

Comment Number **EG-2-16-W-10**

Comment

We therefore request that no facilities above ground be permitted within 1/4 mile of prairie dog colonies unless they are fitted with anti-raptor devices to discourage perching.

Response

The BLM will consider the installation of anti-raptor perching devices for mitigation of white-tailed prairie dogs.

Comment Number **EG-2-16-W-11**

Comment

As a further protection for prairie dogs, BLM should allow no surface disturbing activities within 50 meters of white-tailed prairie dog colonies and no telephone poles or other such structures should be allowed in prairie dog colonies at all.

Response

This recommendation was a result of a BO prepared for the Continental Divide/Wamsutter II Gas Project. The BLM has no guidance that this is a necessary action within the Pinedale Anticline. However, the BLM does attempt to avoid disturbing prairie dog towns where the project proposal allows for this flexibility. Current BLM management guidance supports placing anti-raptor perching devices on powerlines within sensitive areas, as per the Avian Power Line Interaction Committee 1996 guidelines.

Comment Number **EG-2-17-W-12**

Comment

Seasonal protections for raptors must be retained.

Response

The BLM will comply with all applicable federal laws and regulations, such as the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Comment Number **EG-2-18-W-13**

Comment

Answers to these questions and many more must be answered before a Final SEIS is released. Much more analysis is needed for these Sensitive Species.

Response

Thank you for your comment. Ecosystem Research Group analyzed data collected by other contractors annually on the PAPA and vicinity. The references made to ERG, 2006 in the Revised Draft SEIS were to those analyses. The monitoring data were not necessarily collected to address the specific questions included in the comment.

Comment Number **EG-2-19-W-14**

Comment

We request that stronger measures be included in the FSEIS for protection of native aquatic species.

Response

The BLM is consulting with the USFWS on all matters that may affect the Colorado River fishes located downstream of the SEIS boundary. The BLM appreciates the issues presented in your comment as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. The BLM will look carefully at these

decisions to ensure that the appropriate evaluation of uses and impacts has been made in fulfilling this responsibility.

Comment Number **EG-2-20-W-15**

Comment

We discussed above in the "Big Game" section the need to survey, identify and map all wildlife migration corridors. These steps must be finished before the project can be implemented.

Response

The BLM and the WGFD are in the process of completing wildlife migration corridor designations. However, there is not a mandate to complete this process before the SEIS ROD; there is always an opportunity for the oversight committee to assess development based on new scientific information.

Comment Number **EG-2-21-W-16**

Comment

The proposed well pad density in Alternative D cannot be permitted. Directional drilling must be mandatory unless the operator can clearly demonstrate that is not technologically feasible to do so. We strongly advocate for one wellpad per section to reduce the impacts to sensitive wildlife below the significant level.

Response

The BLM does not know how the commenter ascertained that Alternative D proposes up to three well pads per acre. Well pad densities in Alternative D are likely to be similar to densities in Alternatives B and C. A limit of one well pad per section is not feasible in checkerboard areas where leaseholds are split among quarter-sections. In all development areas, directional drilling was the premise of development; for one pad per section and to maximize directional wells to maintain larger open areas for habitat.

Comment Number **EG-2-22-RC-2**

Comment

We have discussed previously, and reiterate here, that reclamation must be undertaken and successfully completed using only native species, and that the landscape must be returned to its natural condition existing immediately prior to development.

Response

Thank you for your comment. The BLM is committed to ensuring that reclamation is successful.

Comment Number **EG-2-23-RC-3****Comment**

Reclamation success is measured against a reference site. It should go without saying, but we will say it anyway, that the reference site must truly reflect the character and plant components of the disturbed area.

Response

The BLM agrees and appreciates your comment.

Comment Number **EG-2-24-W-17****Comment**

We would like scientific verification that the specific changes which require mitigation are based on sound scientific data, starting with accurate numbers of each species which are monitored annually.

Response

For the most part mitigation plans will be based on sound science; population estimates are just that, an estimate; a management agency can never have 100% accurate population data because there are no census techniques that can achieve that level of accuracy.

Comment Number **EG-2-24-W-18****Comment**

We emphasize that the delay in selecting, recommending and implementing any mitigation response may also be too long.

Response

Thank you for your comment.

Comment Number **EG-2-25-W-19****Comment**

We would also like scientific verification that the criteria for each species is the appropriate one to monitor.

Response

The most up-to-date monitoring techniques will be used for this field.

Comment Number **EG-2-25-W-20****Comment**

And speaking of viability, the BLM still has not determined what comprises a viable population of any species on the PAPA, a determination that must be precedent to planning the Monitoring and Mitigation Matrix.

Response

Although a viable population parameter has not been set, it has been determined that population data available at the time of the ROD would be used as a baseline for the mitigation matrix.

Comment Number **EG-2-26-W-21****Comment**

BLM must acknowledge that it may have to take dramatic action quickly to forestall devastating impacts to wildlife, action such as changing slowing pace of development.

Response

Thank you for your comment.

Comment Number **EG-2-26-W-22****Comment**

BLM must take the actions necessary to protect wildlife, not the actions desired by the operators. Since it is oil and gas development which is creating the impacts, consideration of reduction of development activities must be given at the outset of any warning sign of trouble.

Response

The BLM has expressed similar concerns in Section 4.20.3.5 on page 4-161 of the Revised Draft SEIS. It is not required to mitigate the specific cause of the impact but rather to mitigate the impact.

Comment Number **EG-2-26-W-23****Comment**

This resource is too valuable to play waiting games with. BLM must take the actions necessary to protect wildlife, not the actions desired by the operators. Since it is oil and gas development which is creating the impacts, consideration of reduction of development activities must be given at the outset of any warning sign of trouble.

Response

Thank you for your comment.

Comment Number **EG-2-27-W-24**

Comment

The whole suite of mitigation responses should be available at any time a response is triggered; mitigation should not be sequential.

Response

Thank you for your comment.

Comment Number **EG-2-28-W-25**

Comment

BLM has a legal obligation to consider the cumulative impacts of oil and gas development, which includes the impacts which have already occurred. To exclude impacts prior to 2005-2006 gives a skewed view of the impacts to wildlife.

Response

The BLM appreciates the issues presented in your comment as the BLM pursues its statutory mandate of ensuring multiple use of the public lands while balancing the associated impacts of those uses. The BLM has included discussions of impacts that occurred prior to 2005-2006 throughout the Revised Draft SEIS. The BLM will look carefully at these decisions to ensure that the appropriate evaluation of uses and impacts has been made in fulfilling this responsibility. The alternatives themselves are a response to observed impacts.

Comment Number **EG-2-29-MF-1**

Comment

We ask that BLM define what compliance activities will not be covered by the offsite mitigation fund.

Response

Compliance activities include the work that the BLM staff performs to ensure that conditions of approval are being implemented.

Comment Number **EG-2-30-W-26****Comment**

We strongly echo the recommendations of the article and urge BLM to apply not only the customary seasonal sage-grouse restrictions, but also other measures supported by the best available science and detailed in the article.

Response

Thank you for your comment. As discussed in the BLM's Handbook H-1790-1 (2008 - National Environmental Policy Act Handbook), peer-reviewed science and methodology should be given greater consideration than non-peer reviewed work, but the BLM reiterates that the best available science be used to support NEPA analyses without excluding non-peer reviewed documentation when peer-reviewed documentation is not available.

Comment Number **EG-2-31-G-3****Comment**

Is there any justification for not constructing the pipelines at the same time?

Response

It is not the current practice before there is enough natural gas production to warrant the additional trunk line capacity.

Comment Number **EG-2-32-G-4****Comment**

Alternative E - We fully support a slower pace of development. Although we have repeated this throughout our comments, it bears repeating yet again that all seasonal wildlife restrictions must be retained, with no exceptions. If exceptions are to be allowed, then they must conform to the requirements IM 2008-032.The liquids gathering system throughout the PAPA must be retained as proposed in Alternative D. The number of new well pads should be limited to 250.We would urge restricting initial disturbance to the limits placed in Alternative E (10,427 acres). We support the smaller Core Area defined in Alternative C; we find no justification for the expanded Core Area defined in Alternatives D and E.

Response

The issues you present here are within the range of alternatives analyzed.

Comment Number **EG-3-1-W-1****Comment**

NWF and WWF believe that given the wildlife losses already occurring on the Anticline, BLM should require these BMPs in addition to existing timing stipulations.

Response

The BLM will comply with MBTA, BGEPA, and the ESA.

Comment Number **EG-3-2-W-2****Comment**

In addition, provision should be made to ensure lease stipulations are in place for more than five years. Lease suspensions should remain until drilling is complete in the CDA and PDA and at a minimum until all habitat functions there have been restored.

Response

Lease suspension requests beyond 5-years will be brought forward to the oversight committee. The oversight committee will decide whether or not to lift the suspension.

Comment Number **EG-3-3-W-3****Comment**

We strongly suggest that BLM review the sage-grouse mitigation measures proposed in other western states.

Response

Thank you for your comment.

Comment Number **EG-3-4-W-4****Comment**

Based upon the recent memorandum analyzing the most recent research on sage-grouse written by Tom Christiansen and Joe Bohne of the Wyoming Game and Fish Department (WGFD), no more than one well pad per section should be permitted within two miles of sage-grouse leks.

Response

Most of the core area of the PAPA has exceeded the recommended well spacing brought forward from Naugle and Holloran's research in energy developments (see Map 3.22-4 in the

Revised Draft SEIS). The Preferred Alternative was developed to maximize directional drilling and provide larger tracks of open land. Alternative E proposes to limit the amount of well pads per section; however, some of the designations were larger due to the checkerboard pattern of leaseholders in a section.

Comment Number **EG-3-4-W-5**

Comment

In addition, seasonal stipulations should apply from March through June in mapped breeding habitats or within four miles of active leks and NSO buffers should be applied to wintering habitats.

Response

Thank you for your comment. Maintaining seasonal restrictions is within the range of alternatives.

Comment Number **EG-3-5-W-6**

Comment

There should be additional thresholds measured and those thresholds should be more incremental.

Response

Thank you for your comment.

Comment Number **EG-3-6-G-1**

Comment

Revised DSEIS at 2-45, the Revised DSEIS utterly fails to assess the impacts of including the PDA. For example, the document repeatedly states that the amount of surface disturbance will be the same for Alternative D as for Alternatives B and C which do not include the PDA.¹⁶

Response

The fact that the surface disturbance amount does not change does not correlate to an utter failure "to assess the impacts of including the PDA." Inclusion of the PDA does not control if the development would occur, but at what time the development would occur.

Comment Number **EG-3-7-MF-1****Comment**

The Revised DSEIS should acknowledge that off-site mitigation is inappropriate for some habitat losses.

Response

This is one reason why the BLM has emphasized onsite mitigation.

Comment Number **EG-3-7-MF-2****Comment**

Moreover, no off-site mitigation proposal should be accepted without a thorough assessment of: 1) the availability of other habitat, 2) the feasibility of long-term restoration/enhancement/protection of alternative habitat, and 3) the adequacy of funding to sustain the alternative habitat for the life of the project (including time required for final reclamation standards to be achieved).

Response

Thank you for your comment. These types of questions will be contemplated in implementation.

Comment Number **EG-3-8-MF-3****Comment**

Monitoring the impacts of this project is the responsibility of BLM and the industry proponents so that adaptive changes in management can be pursued. The money in this fund should be used instead to achieve on-the-ground long-term improvements in wildlife habitat in order to compensate for the unavoidable losses resulting from this project.

Response

Thank you for your comment. Use of the fund will be targeted towards on the ground projects.

Comment Number **EG-3-8-MF-4****Comment**

BLM needs to conduct a thorough analysis of the availability and cost of effective compensatory mitigation for the impacts of this project on the Anticline's wildlife.

Response

The analysis discusses the effectiveness of the off site mitigation in addressing impacts.

Comment Number **EG-4-1-G-1****Comment**

The SEIS only includes the information up to November 2006 and does not include the available most up-to-date information about what has been authorized, implemented, or planned between November 2006 and December 2007.

Response

The reader has correctly noted that November 2006 data was used. This was clearly disclosed in the document.

Comment Number **EG-4-2-G-2****Comment**

There is no “interim management” or other information about what the BLM will or will not authorize while this project is being contemplated and while the Pinedale Resource Management Plan is being revised.

Response

Development continues as outlined in the PAPA ROD and subsequent decisions, until a new ROD is issued for this project.

Comment Number **EG-4-3-G-3****Comment**

This proposal only addresses the current formations and does not take into account the “deep” formations for which the companies have been actively exploring in the last few years.

Response

Development of the deeper formations would be developed under the constraints of the alternatives. At this time there is insufficient information to understand the level of development that may occur for recovery of natural gas from deeper formations.

Comment Number **EG-4-4-G-4****Comment**

This project does not incorporate all of the “pilot” or “demonstration” projects data and information nor does it present the information in a fashion that you can deduce that the BLM or the companies “learned” anything from these experiments.

Response

Thank you for your comment. The BLM has presented the reader with enough information to provide a substantive analysis.

Comment Number **EG-4-5-W-1**

Comment

The 24 month transition period is un-justified and un-necessary and could impact resources like mule deer, sage grouse, and pronghorn beyond what is considered in the SEIS.

Response

The 24 month transition period is believed to be needed due to a number of reasons, including lead time for APD approvals, construction windows, and acquisition of new equipment.

Comment Number **EG-4-5-W-2**

Comment

All leases outside of the core development areas should be fully protected for the life of the project without exception – therefore providing real assurances that habitat will not be disturbed and allowing animals to use the area unmolested from energy development activities.

Response

The value of the flanks has been realized by the BLM. To this end, leasing decisions would not be made within the PAPA until completion of the Pinedale RMP Revision. Leasing decisions would then be made in conformance with the RMP.

Comment Number **EG-4-6-W-3**

Comment

Combined with continuing erosion of intact habitats from development ongoing through the prolonged period until the provisions of the SEIS are implemented (two years after the ROD is signed), what is left in protected status will be substantially eroded in value to wildlife. By the time development is focused on the Core there will be little opportunity left for the clustering of facilities and drilling that is a key provision of the plan to provide the maximum benefit to wildlife and may not provide any benefit therefore making the approach unlikely to provide any assurance for the sustainability of the wildlife and their habitats.

Response

The BLM recognizes that as more time elapses between now and the ROD more impacts are occurring with the PDA and the Flank areas. And some activity is needed within the PDA in

order to determine whether or not there is a recoverable resource. The development of the PDA would occur with year-round development of the Core.

Comment Number **EG-4-7-W-4**

Comment

Five years of the limited protection described above is not enough for wildlife based on current knowledge of wildlife responses to development on the Anticline, given the 17 year or longer field development plan. Protection should be for the life of the intensive development period and possibly the life of the field, and should include more areas such as those withheld by industry, and then consideration should be given to whether it needs more time based on the status of the wildlife resource at the time. BLM has authority to suspend leases for the benefit of wildlife without cooperation from industry and this should be considered in all alternatives as mitigation for current and future impacts to fish and wildlife resources.

Response

A range of alternatives is provided, including an alternative that allows for lease suspensions. The need for continued lease suspensions and term NSOs will be determined at the annual planning meetings as outlined in Alternative D.

Comment Number **EG-4-8-W-5**

Comment

The core area for intensive development has been enlarged from early proposals and does not concentrate development enough to assure a positive effect for wildlife, especially mule deer. The expansion potential of the new "buffer" will enlarge the development and reduce wildlife protection including the ability of animals to move freely from one habitat to another, particularly in winter. This provides no certainty for wildlife, and reduces the amount of habitat animals may use with fewer disturbances.

Response

Additional mitigation measures, including lease suspensions and a monitoring and mitigation fund, were included in the alternative with the increase in access. The core areas of Alternatives B and C remain unchanged in size since the Draft SEIS issued in 2006.

Comment Number **EG-4-9-W-6**

Comment

This Alternative does not use current management experience or science about effects of development on sage grouse, and will repeat the same mistakes of the past. Actions that peer reviewed science has shown to not be effective in protecting sage grouse is most prominently exemplified by the ¼ mile surface occupancy buffer – an action that is completely inadequate for continued use.

Response

The majority of the core of the PAPA has already been developed beyond the recommendations of recent reports. These alternatives are formulated with that fact in mind.

Comment Number **EG-4-10-W-7**

Comment

This SEIS and its Preferred Alternative presents the clear premise that substantial further wildlife losses are expected, even planned for. Mitigation as proposed - starts at substantial, well documented reduced population levels of mule deer (>45%) and sage grouse without acknowledging the losses already experienced, or suggesting mitigation for those losses.

Response

The liquids gathering system, change in the development philosophy, computer assisted operations and lease suspensions are all a part of the acknowledging of the impacts the development has had on the PAPA resources and is suggested mitigation for those impacts.

Comment Number **EG-4-10-M-1**

Comment

The overall mitigation package is not based on the most effective use of science to avoid or minimize impacts and will not protect the public's interest in its wildlife.

Response

The PAWG under all alternatives would serve as a method for public involvement. The role of the PAWG is not reduced in the preferred alternative, nor any other alternative. In Section 2.4.2.1 of the Revised Draft SEIS, the BLM has defined Adaptive Management that would be implemented by the BLM Authorized Officer.

Comment Number **EG-4-11-W-8**

Comment

There is no stated intent to restore populations to predevelopment levels or even to sustain them at reduced levels.

Response

The wildlife monitoring and mitigation matrix sets wildlife population changes that would trigger mitigation to sustain the population. The Matrix was agreed to by the WGFD, a cooperator on the SEIS.

Comment Number **EG-4-11-W-9****Comment**

Plans for habitat work on some of the Flanks provide little detail, such as what will be done if we continue to experience drought in an area that gets less than 10 inches of annual precipitation.

Response

The detail of the mitigation can not be determined at this time. It is unknown at this time where, how much, when and what type of habitat enhancement may be needed. It is the intent that future plans will be developed on a site-specific basis with stand-alone NEPA analysis.

Comment Number **EG-4-11-M-2****Comment**

Planning for further wildlife loss without effective mitigation plans (one that is completed, committed to and funded BEFORE development is undertaken and authorized) is not balancing development and protecting wildlife.

Response

The BLM has set forth Practices and Restrictions for the Pinedale Anticline Project Area in Appendix 4 of the Revised Draft SEIS. The Operators have prepared a Wildlife and Habitat Mitigation Plan for Alternative B in Appendix 9A and, in consultation with the WGFD, prepared a Wildlife and Habitat Mitigation Plan for Alternative D in Appendix 9C.

Comment Number **EG-4-12-AM-1****Comment**

The public is excluded from adaptive management and other deliberations, and management responses in mitigation of wildlife damage, as has been the case with development of this alternative.

Response

It is envisioned that the PAWG would continue under all alternatives and would serve to provide recommendations to the BLM on the monitoring and mitigation of PAPA development.

Comment Number **EG-4-13-M-3****Comment**

Removal of prior mitigation requirements and commitments in the 2000 ROD and under subsequent actions like the Questar Year Round Drilling "Experiment" approval are not

acceptable (as requested by operators and included in the preferred alternative by BLM) and give up the chance to replace some of the values lost to the public.

Response

Thank you for your comment.

Comment Number **EG-4-14-RC-1**

Comment

The Reclamation Plan is useful but needs disturbance caps to be effective since nothing in the Preferred Alternative will prevent the entire Core area to be under development all at once, which could make reclamation ineffective.

Response

A disturbance cap is considered under additional mitigation opportunities for vegetation resources.

Comment Number **EG-4-15-M-4**

Comment

The BLM should not look to the companies for land and resource management decisions and actions but require these actions and mitigation that have been, up until recent history, ones that any public land user had to comply with.

Response

The operator-committed measures were offered by the Proponents and therefore analyzed as such. The commenter is correct that some of these are required by law and regulation. Operator-committed measures, if selected in the ROD, are binding upon the Operators. Therefore, the BLM does not construe this to be a weakening of regulatory authority.

Comment Number **EG-4-16-W-10**

Comment

We further suggest that an effort to develop the PAPA in a way that could benefit and sustain wildlife be redeveloped through the appropriate NEPA process and complimentary conservation planning efforts.

Response

Given the existing development on the PAPA, it is the intent of the alternatives in the SEIS to present various methods for sustaining wildlife habitat and reducing impacts to other resources while allowing for additional development.

Comment Number **EG-4-16-W-11****Comment**

The threshold for impacts should be at a level as to sustain current populations of fish and wildlife through all phases of development to achieve “no net loss” of habitat function or wildlife use of existing or restored habitats.

Response

Thank you for your comment. While a goal of no net loss is admirable and one that should be strived to achieve, the purpose of the analysis is to disclose the anticipated impacts of the proposed action and alternatives that meet the purpose and need. The BLM cannot fulfill a multiple use mandate and commit to a "no net loss" of habitat. Reclamation plans are included in each of the alternatives to present various methods for restoring habitat function.

Comment Number **EG-4-16-M-5****Comment**

The long-range intent for all mitigation and habitat management should be to restore wildlife populations to pre-development levels.

Response

The BLM agrees.

Comment Number **EG-5-1-C-1****Comment**

Agency protocol regarding on-site oversight and monitoring of all earthmoving activity should be rigorously followed.

Response

The BLM PFO has an aggressive construction monitoring program in place and has for many years. The BLM believes it is #1 in the State of Wyoming in this regard and will continue with aggressive monitoring.

Comment Number **EG-5-2-G-1****Comment**

The agency should conduct increased and improved in-house training for all responsible parties, from equipment operators, to managers, to corporate liaisons with the agency.

Response

The BLM agrees and notes the PAWG Cultural Historical Task Group has made the same recommendation.

Comment Number **EG-5-3-G-2**

Comment

Insofar as possible, the operators should be made aware of the positive aspects of compliance with applicable agreements, protocols, laws and regulations, as well as possible negative consequences of violations.

Response

The BLM agrees and notes the PAWG Cultural Historical Task Group has made the same recommendation.

Comment Number **EG-5-4-C-2**

Comment

Urge the agency to develop a PAPA-wide agreement, protocol and stipulations dealing with the protection of cultural and historical resources.

Response

The BLM has given serious consideration to a PAPA-wide PA, as did the PAWG Cultural/Historical Task Group. Due to the 2007 updates of the Wyoming Protocol, coupled with the complexities and diversity of cultural resource management over the entire PAPA, a PAPA PA seems impractical at present. Questar has, however, approached the BLM to see if a Questar PA might be worth pursuing, and if it is, the BLM will contact the Alliance as an Interested Party.

Comment Number **EG-5-5-C-3**

Comment

Limit earth-moving activities to snow-free months and also times in which the ground is not frozen. Insofar as this is part of the statewide BLM stipulations, we urge complete operator compliance.

Response

The BLM agrees and will continue to limit earth moving in culturally sensitive soils to those seasons that make cultural resources investigations possible.

Comment Number **EG-5-6-V-1****Comment**

...we support the agency attempts to install interpretive material to explain the discrepancy, and we also support the use of camouflage paints to somewhat lessen the visual impacts.

Response

Thank you for your comment.

Comment Number **EG-5-7-MF-1****Comment**

We support operator-supplied funding for mitigation efforts, but urge the agency to seek funding to mitigate cultural and historical impacts.

Response

The BLM agrees. Any applicant who proposes a permitted activity that threatens to adversely affect an historic property is required to mitigate the adverse effect. The BLM will strive to become more proactive in its historic property management, evaluation, and mitigation.

Comment Number **EG-5-8-C-4****Comment**

All applicable state and federal laws and regulations regarding protection of antiquities, cultural and historic resources, and the Lander Trail SRMZ should continue to be enforced.

Response

The BLM agrees. Any applicant who proposes a permitted activity that threatens to adversely affect an historic property is required to mitigate the adverse effect.

Comment Number **EG-5-9-C-5****Comment**

...we believe that insofar as these discoveries take place on the public domain, the interested public should be made aware of these finds and findings.

Response

The BLM agrees and notes the PAWG Cultural Historical Task Group has made the same recommendation.

Comment Number **EG-5-10-C-6****Comment**

We urge the agency to undertake significant public outreach to teach and explain what resources have been discovered in PAPA. We urge the agency to work with local and state schools (K-12, colleges and universities), museums, and interest groups, and we further urge the agency to catalogue and deposit important finds in publicly available collections.

Response

The BLM agrees and notes the PAWG Cultural Historical Task Group has made the same recommendation. Further, the BLM is pleased to indicate that in 2008 the Museum of the Mountain Man, in partnership with the BLM, received JIO funding to develop and display Jonah artifacts and archaeology. The BLM wants a similar display for the Anticline. Note, however, that artifacts recovered from public lands are public property and must be cataloged and curated through federally-permitted repositories. They can, and are, placed on long term loan to local museums.

Comment Number **EG-5-11-C-7****Comment**

Ask to participate as party to the Shell/Ultra Programmatic Agreement on mitigating effects to setting along the Lander Trail.

Response

The BLM has given serious consideration to a PAPA-wide PA, as did the PAWG Cultural/Historical Task Group. Due to the 2007 updates of the Wyoming Protocol, coupled with the complexities and diversity of cultural resource management over the entire PAPA, a PAPA PA seems impractical at present. Questar has, however, approached the BLM to see if a Questar PA might be worth pursuing, and if it is, the BLM will contact the Alliance as an Interested Party.

Comment Number **EG-6-1-AL-1****Comment**

We cannot endorse any of these alternatives. We believe that the BLM and the companies should sit down and find a reasonable way to reduce the number of proposed wells.

Response

The BLM cannot dictate the number of wells unless a limit is stipulated at the time the lease is issued. In this case, all existing leases carry no such stipulation. The leaseholder has the legal right and obligation to drill as many wells as necessary to extract the natural gas within their lease. The Wyoming Oil & Gas Conservation Commission ultimately determines the number and spacing (density) of wells. The BLM can, and does, implement measures to reduce

impacts from the wells. The drilling of multiple wells from a single pad, the consolidation of production facilities, the use of existing roads wherever possible and other measures are just some of the mitigation practices that reduce the impacts of drilling.

Comment Number **EG-7-1-G-1**

Comment

Assurances of Agency and Operators' adherence to the provisions of this Proposed Action Alternative are critical to our support now and on a continuing basis.

Response

Thank you for your comment.

Comment Number **EG-7-2-W-1**

Comment

We take seriously the commitment within the Proposed Action Alternative to an adaptive management process. We will expect clear evidence, in the form of positive actions, that changes will be made based on accumulating evidence of greater than anticipated losses, either in kind or magnitude. In fact, given the narrow buffers provided for sage grouse leks and the accumulating research concerning the sensitivity of these birds to disturbance, we believe that a greater than anticipated level of impact to this population can be expected.

Response

The BLM too takes seriously the need for effective adaptive management and is committed to enforcing the decisions that are made in the ROD.

Comment Number **EG-7-2-M-1**

Comment

We are prepared to assist however we can to respond to the need for modifications of the development plans and/or enhancing mitigation measures.

Response

The BLM would like to thank you for your suggestions and encourage you to participate in the Pinedale Anticline Working Group.

Comment Number **EG-8-1-G-1****Comment**

OCTA appears to be missing from the list of contributing organizations, although we appear in the main text.

Response

The BLM regrets the omission and has now included OCTA.

Comment Number **EG-8-2-MF-1****Comment**

I would like to suggest that provision be made for use of a portion of the identified funds for mitigation of impacts to the Lander Road.

Response

The Shell/Ultra Lander Trail PA is still the operative agreement for these companies and within the parameters of the original agreement. Any change in this document, or other Lander Trail issues, will be brought to the attention of OCTA, as is the BLM's normal procedure for OCTA's Interested Party status for all National Historic Trails projects. It is our understanding that the Anticline mitigation fund is not exclusive to wildlife projects, so Lander Trail mitigation projects can be proposed using the Anticline mitigation fund.

Comment Number **EG-8-3-RC-1****Comment**

The second area of concern is the pipeline crossing in areas inside and outside of PAPA. Crossings of the Sublette, main Oregon and California and Pony Express trails are noted. The documentation is somewhat oblique on these crossings with a mention that tunneling under could be done, but it is not firmly identified as a preferred approach. I note that the first option in mitigation as identified in the best management practices is avoidance. In any case, it should be clearly specified that impacts to the trails at these crossings is to be minimized and that the best possible restoration will be performed when the crossings are complete.

Response

The pipeline crossings in the KFO occur along a main upgraded road and the U.S. Highway 30/Union Pacific RR overpass with no remaining physical evidence of the Trail. Pipeline boring then becomes more a function of traffic control than preservation of trail ruts. In RSFO, two crossings of the East Bank Kinney Cutoff occur in previously disturbed areas, so no special COAs are proposed. The southern variant of the East Bank Kinney, the Baker-Davis Road and the Sublette Cutoff will be subject to boring 50 ft. either side of the Trail. All these Trail crossings occur in the Blue Forest MOA area, so setting is not an issue. The BLM will provide

OCTA the Section 106 Compliance documentation of these efforts, as is the BLM's normal procedure for OCTA's Interested Party status for all National Historic Trails projects.

Comment Number **EG-8-4-C-1**

Comment

On a technical point, I would like clarification of the values for initial surface disturbance given in Table 4.8-1. Under the preferred option (D), there is no impact to the trail itself and 0.25 miles on each side of it. However, this will not be true if there are new pipeline crossings.

Response

Table 4.8-1 indicates no impact to the 0.25 mile buffer of the Lander Trail as a result of natural gas development in the PAPA, excluding gas sales pipelines. The impact resulting from construction of the gas sales pipelines is addressed under "Pipeline Corridors and Gas Sales Pipelines" and is indicated to be 15.6 acres.

Comment Number **EG-8-4-C-2**

Comment

Also, the surface disturbance values for the SRMZ and the viewshed are up from 458.8 acres to 1,329.9 acres and 333.6 acres to 1,016.8 acres, respectively. Is this factor of three increase from alternative A entirely solely due to new well pad and supporting infrastructure? Where is the supporting data?

Response

The increase is due to new well pads and supporting infrastructure needed to support the full-field development. Alternative A is not a full-field development alternative.

Comment Number **EG-8-5-G-2**

Comment

The best management practices are an important part of the conduct of the project. In this case, I find them inconsistent and confusing. In particular, they seem to be a mixture of actual requirements drawn from other documents and general guidelines. I also question the frequent use of the word "would" in a requirement (or guideline). I understand the desire to avoid "shall" since that defines a requirement, but isn't the proper word "should"?

Response

Since the SEIS analyses option, or proposals, the use of the words "would" or "should" are acceptable. The use of the word "shall" is reserved for the Record of Decision.

Comment Number **EG-8-5-C-3****Comment**

I also suggest their complete review to ascertain if they are complete with respect to cultural resource protection and to make them grammatically consistent.

Response

The Best Management Practices will be reviewed and clarified in the ROD.

Comment Number **EG-8-6-C-4****Comment**

There are references to the Lander being part of the Oregon Trail. In fact the Lander is part of the California National Historic Trail as designated by Congress.

Response

You are correct that the Lander Trail was recognized as part of the California National Historic Trail Congressional designation. This has been corrected in the Final SEIS.

Comment Number **EG-8-6-C-5****Comment**

It is also more appropriate to refer to the Lander as a road since it was constructed.

Response

You are correct. Lander Road, Lander Trail and Lander Cutoff are all commonly used with reference to the "Ft. Kearney, South Pass and Honey Lake Wagon Road".

Comment Number **EG-8-7-G-3****Comment**

I note that the PA is included as an appendix, but there should be a clear statement regarding the PA's status such as "nothing in this document shall be construed to alter the terms of the PA." If that is not true, then the differences should be identified.

Response

The Shell/Ultra Lander Trail PA is still the operative agreement for these companies and within the parameters of the original agreement. Any change in this document, or other Lander Trail issues, will be brought to the attention of OCTA, as is the BLM's normal procedure for OCTA's Interested Party status for all National Historic Trails projects.