

## **Public Comments and BLM Responses on the Draft SEIS Environmental Groups**

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

### **Comment**

As it is abundantly clear from your careful documentation that the proposed alternative, as well as Alternative C, would result in a devastating loss of prized and irreplaceable historic and cultural resources, the Alliance for Historic Wyoming has little choice but to oppose both of these and support Alternative A, the no action alternative.

### **Response**

The BLM feels that if the appropriate mitigative treatments are applied to National Register quality prehistoric and historic sites and locales considered sacred, sensitive or of interest to modern day Native American Tribes, the adverse effects can be significantly reduced. The BLM will probably see some unmitigated adverse effects, especially due to unexpected discoveries and activities such as vandalism, illegal artifact collecting, and OHV impact.

**Comment Number**            **EG-1-2-C-1**

### **Comment**

Therefore, in light of the lack of scoping comments received from this particular constituency, we would suggest that the Pinedale Field Office should consider how it has reached out to the historic preservation community in the past and consider ways to enhance that outreach in the future.

### **Response**

The statement in the DSEIS indicating that there were no scoping comments relating to cultural and historic resources, we admit, was made in error. The Wyoming State Historic Preservation Office (SHPO) provided written and verbal scoping comments, the Oregon California Trails Association has provided a series of comments and the PAWG Cultural Historical Task Group provided extensive written comments and recommendations. We regret the error. Regarding PFO's historic preservation outreach, PFO did announce development of the SEIS repeatedly at the semi-annual meeting of the Wyoming Association of Professional Archaeologists (WAPA) and hoped that the outreach and public meetings throughout Sublette County provided a forum for the Sublette County Historical Society, the Sublette County Historic Preservation Commission and any local interested parties to express their opinions and concerns. PFO has had numerous consultations with the Shoshone Tribal representatives on a myriad of projects within the Anticline, and have always copied the Shoshone Tribal consultation letters to the Arapaho, the Bannock and the Ute. Too, PFO provided copies of the Draft SEIS to the Shoshone, the Arapaho, the Bannock and the Utes. The BLM-PFO feels the outreach is sufficient. The BLM agrees with the Alliance that there can be outreach in an enhanced capacity in the future and your comments are appreciated.

**Comment Number**            **EG-1-3-C-2****Comment**

We note with some dismay your statements that "inventory, recording, and data recovery projects triggered by surface disturbances would continue to increase the cultural resources database, likely improving future cultural resource management decisions." (page 4-59) While this is all well and good for resource management professionals, these vital internal tools offer little value to the casual user of these resources who may have lost a favored recreation site. They will have simply lost "approximately 800 additional acres of disturbance . . . within the Lander Trail SRMZ" (page 4-57), degrading their public lands' experience and, no doubt diminishing their respect and support for the work of your office.

**Response**

The estimates of disturbance within the Lander Trail SRMZ were calculated incorrectly or inaccurately and this has been corrected for the Final SEIS and ROD.

**Comment Number**            **EG-1-4-C-3****Comment**

In addition, to the possibility that "construction activities could be halted because of resource discoveries" (page 4-57) and the potential for "significant additional expense to the Operator" (page 4-58), we wonder what steps you have taken to inform the operators of their potential criminal liability under the Antiquities Act of 1906 should their operations result in damage to protected resources.

**Response**

Criminal liability under the Antiquities Act is appropriate only if the site disturbance is (or was) conducted lacking the appropriate license, permit or authorization, i.e. a trespass action. By severely limiting winter construction with frozen materials in archaeologically sensitive areas, the potential impact can be reduced or eliminated.

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

AHW would much prefer to see field offices offer intensive in-house training for personnel who will be working on these operations, not only informing them of the history and value of these resources but why they are protected and what the potential penalties are for damage to these sites.

**Response**

The BLM agrees with your recommendation that the BLM take a more proactive role in instructing operators and subcontractors concerning threats to cultural resources.

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

However, as currently stated, the apparently total deferral on the part of the BLM to individual operators is extremely disconcerting. We definitely cannot agree that the broad Wyoming Protocol Agreement developed by SHPO to offer general guidance in their dealings with BLM field offices is sufficient to provide the needed protection to the resources under your protection.

**Response**

The Shell/Ultra Lander Trail PA is an agreement document that binds Shell and Ultra to a series of mitigative treatments for a set number of wells and a set acreage of disturbance. Any other Anticline operator (or other Anticline project) will need to mitigate any adverse effect to the Lander Trail or its setting on a case-by-case basis, independent of the Shell/Ultra Lander Trail PA.

**Comment Number**            **EG-1-7-C-6****Comment**

If your office has not yet been able to document significant impacts that have already occurred under the existing agreements, how can the public be expected to offer meaningful comments on the potential impacts under this expanded proposal?

**Response**

The text has been revised.

**Comment Number**            **EG-1-8-VS-1****Comment**

We would, however, like to see the buffer zone guidelines dictated by Shoshone elder Richard Ferris, Sr. adopted as binding.

**Response**

The discovery of a Folsom point on the proposed well location was not the deciding factor in cancelling this project. The affected operator decided to let the lease expire rather than pursue development of the leasehold, which is on the extreme eastern flank of the productive portion of the Anticline. BLM did propose an alternate location for this well that avoided the Folsom find and this alternate was sensitive to other resource concerns such as VRM and proximity to drainage.

**Comment Number**            **EG-1-9-VS-2****Comment**

We also note with enthusiasm the suggestion of a possible Rural Historic Landscape designation for this area. (page 3-47)

**Response**

Thank you for your support of the Rural Historic Landscape concept. It is noted; however, that the vast majority of land and resources involved in this concept lie on private lands, outside any BLM authority or oversight.

**Comment Number**            **EG-1-10-VS-3****Comment**

We would strongly encourage you to explore this possibility more fully, as part of your multiple use mandate.

**Response**

Thank you for your comment.

**Comment Number**            **EG-1-11-R-1****Comment**

On a more general note, we were disappointed not to see the likely decrease in heritage tourism mentioned as a recreation and socio-economic consideration in your executive summary.

**Response**

To the extent its resources are available, the BLM is committed to supporting heritage tourism. The past track record of the cultural resources' staff in outreach, involvement with both county museums, the library system and public speaking events underscores this commitment.

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

In general Audubon Wyoming believes that the Pinedale SEIS Alternative C needs to be amended so that mineral development pre-planning document is required to initiate approval of development.

**Response**

The BLM appreciates your comment and the outline of your Pre-planning Development may provide a valuable tool to be utilized in the pre-planning as outlined in Appendix E. However, this level of detail is not needed in the SEIS.

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

**Comment**

Clearly define mitigation. All mitigation of adverse impacts to wildlife habitat from development activities shall be based on the following principles: a) avoid adverse impacts from oil and gas operations on wildlife resources to the maximum extent practicable; b) minimize the extent and severity of those impacts that cannot be avoided (minimize footprint); and c) mitigate the effects of unavoidable remaining impacts through compensatory measures (on and offsite). On-site impacts should be reduced to the maximum extent practicable.

**Response**

Thank you for your comment.

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

**Comment**

Research: Research needs to be done demonstrating what "sagebrush improvement" techniques work and which should be used (i.e. chaining/burning of decadent sage). So we do not end up destroying/eliminating double or triple the grouse habitat within and outside the development areas while hoping to improve the area for all affected species.

**Response**

Given the changes in precipitation patterns (drought) across the region, the BLM cannot insure that treatments to sage-grouse habitat would achieve desired effects.

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

**Comment**

Annual monitoring reports: Regular, consistent monitoring reports need to be required that evaluate population responses to development. If the reports are not given within the designated timeframe, a stop-work will be the consequence.

**Response**

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. Only Alternative D includes a Wildlife

Monitoring and Mitigation Matrix that would trigger specific Adaptive Management responses based on monitoring information.

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

**Comment**

Retiring and buying leases: Operators will be encouraged (as good mitigation strategies, i.e.: a means of ensuring protection of habitat for wildlife) to retire or buy leases to be set-aside.

**Response**

Thank you for your comment.

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

**Comment**

Habitat Improvement: Habitat improvement projects should conclusively establish what the limiting seasonal habitat is for species of interest, establish the component of that habitat making it limiting, propose management options aimed at that component and make sure that management option is proven to succeed.

**Response**

Please refer to the Operator's Wildlife Monitoring and Mitigation Matrix (Appendix 10 in the Revised Draft SEIS) and discussion of its application in Section 4.20.3.5 of the Revised Draft SEIS.

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

**Comment**

Refuge establishment: Create Set-asides or Grouse Refuges to conserve/protect all seasonal habitat needed by affected species such that wildlife populations residing in the area (not try and mitigate for what has been destroyed in another area) is maintained or enhanced as a reservoir population to reestablish the developed field.

**Response**

"Set asides" are contemplated in Alternative D of the Revised Draft SEIS as lease suspensions and term NSOs as well as in Alternative E as those areas that are currently not leased would remain so until completion of the RMP revision.

**Comment Number**            **EG-2-3-RC-1****Comment**

Define reclamation: Reclamation must include a system to follow well development regardless of ownership, including sufficient financial guarantees to restore habitat to its original condition and establish viable populations of native vegetation.

**Response**

Bonding is required.

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

Research: Research needs to be done that demonstrate/back-up validity and success of what reclamation is described in reports.

**Response**

Reclamation success criteria has been provided in the Revised Draft SEIS.

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

Annual monitoring reports: Regular, consistent monitoring reports need to be required that evaluate population responses to development. If the reports are not given within the designated timeframe, a stop-work will be the consequence.

**Response**

Monitoring requirements are provided in the Revised Draft SEIS.

**Comment Number**            **EG-2-3-RC-4****Comment**

Predevelopment Inventory: An inventory before development is begun to know what we must reclaim back to (i.e. species diversity, abundance, cover, and density), with clear reclamation techniques that work, with set dates for compliance and mandated actions if not met. Identification of important wildlife use patterns in area (i.e. corridors) also need to be addressed.

**Response**

A sample representation of the vegetative population is required for Alternative C in Appendix E.

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

Phased development: Development in gas fields should not be permitted until development in previously-disturbed areas has been fully reclaimed and ongoing disturbances minimized. Reclamation also needs to be done as development is occurring within a field.

**Response**

Thank you for your comment.

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

Only the crest should be developed in a phased-development manor and impose a moratorium on leasing (NO development) outside the "core area" (i.e. body of site). The lower-gas-potential "body" of the project area must be explicitly closed to new development until industry's "core development area" has been fully developed and reclaimed. Travel corridors within the body of the site should be planned and only implemented once approved.

**Response**

Thank you for your comment.

**Comment number**            **EG-2-4- AQ-1/W-5****Comment**

Define species, habitat and air Thresholds that if reached would trigger immediate reduction in development levels and/or pace.

**Response**

Air quality standards and thresholds are provided in the SDEIS Section 3.11.

**Comment Number**            **EG-2-4-W-6****Comment**

Development needs to be phased to keep critical habitats and migration corridors available to wildlife.

**Response**

Various degrees of phased development were contemplated through the alternatives in the Revised Draft SEIS. Mitigation measures developed by the Proponents applicable to Alternative D include suspending surface activity on certain leases outside of the Alternative D core area and Potential Development Area for at least 5 years. Lease suspensions could coincide with migration routes.

**Comment Number**            **EG-2-5-W-7**

**Comment**

Impacts to wildlife necessitate implementation of directional drilling, use of shared infrastructure (including condensate pipelines, smallest # of pads and smallest size to reduce habitat disturbance), remote monitoring, and centralized liquid and gathering process.

**Response**

Those practices are already in place and have been included in Alternatives, B, C, and D.

**Comment Number**            **EG-2-6-G-5**

**Comment**

Increased Formality, transparency, and public involvement in all decisions involving requests for variances, exceptions, exclusions, etc. from any plan provisions, decisions, lease stipulations, or conditions of approval that limit the timing, location, or footprint of oil and gas development activities.

**Response**

Thank you for your comment.

**Comment Number**            **EG-2-7-G-6**

**Comment**

Adoption of Audubon Wyoming's Mitigation Measures to be incorporated into the pre-planning process (see attached document).

**Response**

Thank you for your comment.

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

Adoption of all the components of Wyoming Game and Fish Department's Minimum Recommendations report (including any updates to that report).

**Response**

Please see response to letter FA-1. Updates to the WGFD document have been made but not been released.

**Comment Number**            **EG-2-9-G-7****Comment**

We cannot risk further reckless and environmentally unsound development practices to continue. Therefore we propose amendments of Alternative C - WITH consideration and incorporation of the above comments and the following mitigation measures when managing the current and future development of the site and within this crucial population of Greater Sage-grouse.

**Response**

Thank you for your comment.

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

If sage grouse are to remain viable in the Pinedale Anticline area, BLM must determine and provide for minimum populations of sage grouse and habitat areas of sufficient size to maintain these minimum populations, which it has failed to consider or provide for in the SEIS. Id. at 5.

**Response**

The Revised Draft SEIS provides measures for maintaining habitat areas outside of the core area and has included in Alternative D the Wildlife Monitoring and Mitigation Matrix.

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

Mitigation measures in the SEIS have little or not scientific basis, and specifically, mitigation measures developed by Connolly et al. 2000 must be followed if viable populations of sage grouse are to be maintained.

**Response**

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

**Comment Number**                    **EG-4-1-W-3**

**Comment**

In order to maintain viable populations of sage grouse, the peripheral areas outside the core area must be protected from development, with 90 percent of known winter use areas being protected, an area of at least one Township protected, and connectivity corridors of at least one-mile width must be provided for in these areas.

**Response**

Alternative D was developed in part by the Proponents and State (Wyoming Game and Fish Department and Department of Environmental Quality). Mitigation measures developed by the Proponents applicable to Alternative D include suspending surface activity on certain leases outside of the Alternative D core area and Potential Development Area (the flanks) for at least 5 years.

**Comment Number**                    **EG-4-2-AQ-1**

**Comment**

A complete assessment should consider 8-hour average ozone concentrations of 0.06 ppm or higher as potentially having adverse health impacts, and should consider cumulative ozone measures such as sum06 for effects on vegetation.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**                    **EG-4-3-AQ-2**

**Comment**

BLM should perform ozone modeling for multiple years, as required in regulatory analyses, and should assess how the meteorology in the years selected compares to other recent years in terms of meteorology conducive to ozone formation.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-4-4-AQ-3****Comment**

Certainly the BLM must consider and explain the implications of excluding area sources.

**Response**

All emissions were properly included in the CALGRID model runs. Please see the Revised Draft SEIS for additional ozone modeling analyses.

**Comment Number**            **EG-4-5-AQ-4****Comment**

To provide an adequate picture of what the model predicts, it would be helpful to see animations of ozone concentrations across the modeling domain, or at least show static contour plots of concentrations across the model domain for each time period when a peak concentration occurred.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-4-6-AQ-5****Comment**

How much worse will ozone pollution in the Upper Green River Valley be due to the direct impacts of the greatly increased level of development in the Pinedale Anticline field?

**Response**

As a result of elevated ozone levels recorded in the Upper Green River Valley, the WDEQ-AQD has initiated further evaluation of ozone formation through a field study and modeling project. The results of these efforts will form the basis for the WDQ-AQD to develop strategies to manage ozone formation in the Upper Green River Valley to ensure that the area remains in compliance with the ozone NAAQS and WAAQS.

**Comment Number**            **EG-4-7-AQ-6****Comment**

Given these already very high concentrations at the monitoring stations that BLM itself has deemed most relevant for determining background conditions in the project area, concentrations which are already at or near the NAAQS/WAAQS, the SEIS Ozone Supplement should provide

some indication of what the impacts of the nearby Pinedale Anticline project will be ozone concentrations at these locations.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-4-8-AQ-7**

**Comment**

Finally, with respect to air quality issues, we request that the information in Exhibit 1 be fully considered in the SEIS.

**Response**

The BLM considered this information.

**Comment Number**            **EG-4-8-AQ-8**

**Comment**

We specifically ask that BLM address the question of whether impairment of visibility in the Bridger Wilderness Area has or will occur, and what steps BLM will take to prevent this, in light of the information in this report.

**Response**

Visibility monitoring is ongoing for the Bridger Wilderness Areas and mitigation measures for AQRVs have been identified.

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

**Comment**

The models must consider that over time some lands within the Pinedale Anticline project area would be degraded, i.e., denuded of natural vegetation and by removal of stable topsoil, and also that deleterious range conditions would affect runoff.

**Response**

If these models that are referred to are the erosion prediction models that were run earlier on in the process then they were run making no adjustments for erosion control measures and assuming full contribution from all disturbed areas. In this way they are worse case scenarios. The number of variations run for each model were limited by time and funding. Additional runs could be made if it is determined that this is a valid argument. Reclamation standards require that the land returns to as near possible functional state as before disturbance.

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

While the DEIS, Volume 2, Appendix J at page 13 does assume that "disturbances" in the PAPA "were simulated for modeling purposes by assuming the land cover changes to equal bare ground," the model needs to also include the erosion from stockpiled soils from wellpad construction, waste pits, and pipelines among other potential erosion sources.

**Response**

Thank you for your comment. It is agreed that such additions could potentially change the model outcome. But the models also did not take into account any erosion control measures. The models were used as comparison of alternatives and used a simplified calculation for disturbance contributions. To include all aspects, both positive and negative, would create excessive complexities within the model.

**Comment Number**            **EG-4-10-SW-3****Comment**

It is crucial that changing rangeland conditions be factored into the water quality and analysis.

**Response**

Thank you for your comment. The BLM believes that is exactly what has been done through the impact analysis associated with landscape change.

**Comment Number**            **EG-4-11-SW-4****Comment**

However, given the high elevation of the PAPA and the accumulation of snowpack during the winter months (SEIS:3-88), soil erosion can also be caused by snowmelt occurring on the lands of the project area. It is not apparent these models considered the factor.

**Response**

Thank you for your comment. It is agreed that such additions could potentially change the model outcome. But the models also did not take into account any erosion control measures. The models were used as comparison of alternatives and used a simplified calculation for disturbance contributions. To include all aspects, both positive and negative, would create excessive complexities within the model.

**Comment Number**            **EG-4-12-SW-5****Comment**

While snowmelt and surface runoff of the water is natural, various anthropogenic activities may exacerbate the effects of snowmelt, increase erosion of topsoil, and adversely affect river and stream water quality by increasing salinity and suspended solids in perennial streams. This must be considered when modeling effects of erosion in the PAPA, and it is unclear if this was done.

**Response**

Given the variety of natural conditions, models cannot cover all potential variations.

**Comment Number**            **EG-4-13-SW-6****Comment**

Therefore, erosion models must consider any degraded conditions that exacerbate natural erosion, and models that exclude the effects of snowmelt within the PAPA are inaccurate, and must be corrected.

**Response**

Given the variety of natural conditions, models cannot cover all potential variations.

**Comment Number**            **EG-4-13-SW-7****Comment**

They must include erosion opportunities such as those associated with roads, culverts, pads, soil storage, snowplowing, and snow storage and must factor in the increasing acreages of degraded lands that would likely exponentially increase erosion.

**Response**

Given the variety of natural conditions, models cannot cover all potential variations.

**Comment Number**            **EG-4-13-SW-8****Comment**

Erosion models should assess rangeland conditions and changes that might occur to those rangelands.

**Response**

Given the variety of natural conditions, models cannot cover all potential variations.

**Comment Number**            **EG-4-13-SW-9****Comment**

Also, the BLM must enforce construction, monitoring, and corrective measures that eliminate these unnatural erosion opportunities, including other range uses such as grazing which can have an effect on soil compaction, percolation of water, and vegetation.

**Response**

Thank you for your comment. The BLM BMPs and construction and rangeland standards are designed to address this issue.

**Comment Number**            **EG-4-13-SW-10****Comment**

Monitoring erosion and silt load or sediment transport within and down gradient from gas field activities would also be important BLM to determine if BMPs and other conservation criteria are being followed by operators, and where violations are occurring.

**Response**

Thank you for your comment.

**Comment Number**            **EG-4-14-SW-11****Comment**

Additionally, adequate monitoring of the quality of the water discharged into the New Fork must occur, and regular reports must be given to the public and made available at all reasonable times (SEIS:3-79).

**Response**

This discharge was permitted by and under the jurisdiction of the WYDEQ. The NFR has undergone 5 years of water quality monitoring as required by the PAPA ROD and will continue under the SEIS. The BLM is undertaking a method of serving this data to the public.

**Comment Number**            **EG-4-14-SW-12****Comment**

Therefore, the discharged water must be continuously tested prior to discharge into the New Fork River, and must not be exceed suitability standards for discharge into the Colorado River Basin.

**Response**

This discharge was permitted by and under the jurisdiction of the WYDEQ. The NFR has undergone 5 years of water quality monitoring as required by the PAPA ROD and will continue under the SEIS. The BLM is undertaking a method of serving this data to the public.

**Comment Number**                    **EG-4-14-SW-13**

**Comment**

Moreover, the potential for increased water temperatures due to the release of produced waters must be considered relative to the potential adverse impacts on fisheries in the New York River.

**Response**

This discharge was permitted by and under the jurisdiction of the WYDEQ. The NFR has undergone 5 years of water quality monitoring as required by the PAPA ROD and will continue under the SEIS. The BLM is undertaking a method of serving this data to the public.

**Comment Number**                    **EG-4-15-SW-14**

**Comment**

While the water quality is "purported" to meet drinking water standards, this water must be frequently tested, and the results reported to the public regularly and made available at all reasonable times.

**Response**

This discharge was permitted by and under the jurisdiction of the WYDEQ. The NFR has undergone 5 years of water quality monitoring as required by the PAPA ROD and will continue under the SEIS. The BLM is undertaking a method of serving this data to the public.

**Comment Number**                    **EG-4-16-AH-1**

**Comment**

All reasonable measures must be taken not to harm local populations of fish and other aquatics at that location.

**Response**

Thank you for your comment.

**Comment Number**                    **EG-4-16-SW-15****Comment**

Withdrawals of water from PAPA area streams or rivers may harm fish. While it is imperative that measures be taken "for protection of fish at the pump intake" (SEIS:3-82), we suggest that the BLM, operators, Wyoming Game and Fish Department, and other stakeholders collaborate with area irrigation participants to screen agricultural irrigation intakes to prevent loss of Colorado River Cutthroat Trout and other trout species in area streams.

**Response**

Thank you for your comment. The BLM has no jurisdiction in this arena.

**Comment Number**                    **EG-4-17-SW-16****Comment**

The Green River through the Seedska-dee National Wildlife Refuge may qualify for designation as an Outstanding Natural Resource water, and requires the highest level of protection. These two pipelines plus the Bird Canyon pipeline corridor are also slated to cross the New Fork River in the PAPA. All mitigation and corrective measures possible must be implemented to minimize the effects described above.

**Response**

Thank you for your comment. These projects will be required to comply with all state, local, and federal regulations.

**Comment Number**                    **EG-4-18-SW-17****Comment**

However one very important visual component missing from Appendix J is to overlay gas field development onto the various maps portraying the modeled erosion. There is no way for the public to correlate gas field development with natural erosive characteristics of the different landscapes. This needs to be remedied before the public can be expected to offer informed comment on the alternatives in this SEIS.

**Response**

It is impossible to know the exact location of gas field development facilities. Any such visualization is speculative.

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

The use of hydraulic fracturing and the impacts of drilling fluids (muds) and chemicals must be fully considered in the SEIS.

**Response**

The original Pinedale Anticline EIS contained a discussion on airborne toxin effects and a discussion on impacts to hazardous materials and groundwater is included in the Revised Draft SEIS.

**Comment Number**            **EG-4-19-PA-2****Comment**

The appropriateness of using these chemicals must be addressed in the SEIS, and in particular the SEIS and subsequent decision should ensure compliance with all applicable laws relative to the use of these and other toxic and hazardous substances.

**Response**

BLM-permitted activities are controlled through monitoring and stipulations that require mandatory compliance with all applicable federal, state, and local laws, regulations, policies, guidance, and procedures for hazardous materials generation, use, storage, treatment, transportation, and disposal. Violations through accidental occurrences or noncompliance are possible. Stipulations require mitigation of releases in accordance with applicable laws and regulations. Violations are generally subject to fines. Although industrial operations are regulated to minimize potential spills, accidents cannot be eliminated completely. Monitoring, oversight, and review of authorized activities, coupled with effective management controls, reduce the severity of impacts from releases. The BLM does not seek "monetary damages." Material Safety Data sheets do nothing to prevent spills or releases of hazardous substances; they do provide guidance and information concerning the handling and disposal of hazardous substances. Drilling fluids generally consist of water and bentonite associated with well cuttings and generally do not contain toxic constituents. Liners are used when necessary, primarily to prevent the leakage of water into the ground, so that it remains available for use in the drilling operations. Frac fluids used to increase fluid flow from the producing subsurface formations do contain a wide variety of chemicals. Frac fluids are hauled to the well sites in tanks. Fluids that do not remain in the subsurface formations as a result of fracturing operations are extracted and placed back into the tanks to be hauled away for further use.

**Comment Number**            **EG-4-19-PA-3****Comment**

We specifically recommend that, if "fracing" is contemplated, the option of reusing water only - i.e., prohibiting the use of toxic chemicals - be considered.

**Response**

The use of fracking materials is an operational decision. The Operators would be required to comply with all federal, state, and local laws regarding the use of these materials.

**Comment Number**            **EG-4-19-PA-4**

**Comment**

The SEIS and decision should provide specific guidance regarding the requirements oil and gas companies must abide by to meet the requirements of these laws, and provide for complete and thorough compliance, monitoring, and enforcement by BLM.

**Response**

The BLM cannot enforce laws and regulations under the jurisdiction of other agencies.

**Comment Number**            **EG-4-19-PA-5**

**Comment**

Spill prevention and cleanup requirements must be adequately specified, and provisions for collecting and disposing of these wastes must be provided for in detail, with sufficient monitoring and enforcement to ensure compliance.

**Response**

BLM-permitted activities are controlled through monitoring and stipulations that require mandatory compliance with all applicable federal, state, and local laws, regulations, policies, guidance, and procedures for hazardous materials generation, use, storage, treatment, transportation, and disposal. Violations through accidental occurrences or noncompliance are possible. Stipulations require mitigation of releases in accordance with applicable laws and regulations. Violations are generally subject to fines. Although industrial operations are regulated to minimize potential spills, accidents cannot be eliminated completely. Monitoring, oversight, and review of authorized activities, coupled with effective management controls, reduce the severity of impacts from releases.

**Comment Number**            **EG-4-20-SW-18**

**Comment**

In related issues, BLM should ensure that gas field operations (including well pads) comply with any applicable stormwater discharge requirements.

**Response**

The BLM will continue to apply mitigation measures and BMP's and require compliance on BLM-authorized projects. WYPDES Storm Water Permitting requirements are under the jurisdiction of the WYDEQ and subject to their compliance requirements.

**Comment Number**            **EG-4-20-SW-19**

**Comment**

BLM clearly must ensure that sediment production is at least minimized and if possible prevented in order to meet the NEPA hard look requirement relative to water quality issues.

**Response**

Thank you for your comment.

**Comment Number**            **EG-4-21-AQ-9**

**Comment**

We strongly urge the BLM to reconsider this LOC and ask it to present an LOC that has a more defensible scientific basis.

**Response**

Thank you for your comment. The BLM uses LOCs that were developed by the USFS (FOX, 1989) for several areas including the Bridger Wilderness. The USFS had indicated that the values are set too high; however, there are no other FLM accepted LOCs established at this time. The BLM will continue to use the 1989 USFS LOCs in analyses until such time that updated or revised values are available.

**Comment Number**            **EG-4-21-AQ-10**

**Comment**

Furthermore, it is not clear why the SEIS only presents NO3 precipitation data for the period of 1990 to 2004 when data are available for 2005 and most of 2006 (USFS, <http://www.fs.fed.us/waterdata/>).

**Response**

The BLM utilizes annual summary data that were available on the CASTNET and NADP websites at the time of the analyses.

**Comment Number**            **EG-4-22-AQ-11****Comment**

It is our belief that the BLM must consider the impacts of NO<sub>3</sub> deposition within the Bridger Wilderness as a significant threat to the otherwise pristine condition of the watersheds within the Wilderness boundary and potentially other class I airsheds within the region.

**Response**

The BLM is concerned with the impacts from all components of nitrogen deposition on terrestrial area and watersheds throughout the Bridger Wilderness and other Class I areasheds within the regions. The modeling performed for the SEIS included these analyses.

**Comment Number**            **EG-4-22-AQ-12****Comment**

Mitigation measures must also be considered for the various alternatives should NO<sub>3</sub> deposition continue to increase which would create a clear and significant threat to plant community composition (Bowman et al., 2006) and various ecosystem attributes and processes including nutrient cycling, lake and stream chemistry, and trophic cascades (Fenn et al., 2003).

**Response**

Modeling results for nitrogen deposition indicated impacts below BLM levels of concern.

**Comment Number**            **EG-4-23-W-4****Comment**

Given the high degree of protection afforded to the bald eagle, BLM is under a heightened standard to analyze the impacts that might occur to the eagle in the Pinedale Anticline project area and to in fact prevent such impacts.

**Response**

Impacts to bald eagles have been analyzed for each alternative in section 4.19.3.1 of the revised Draft SEIS. Bald eagles have been removed from the list of Endangered and Threatened Species.

**Comment Number**            **EG-4-24-W-5****Comment**

At least with respect to Alternative C (BLM's Preferred Alternative, SEIS at Dear Reader Letter page 2), it is very unclear whether the provisions in Appendix C relative to the bald eagle will apply. SEIS at 2-29 (stating the "development procedures for well field activities" of Appendix C

would apply, but failing to indicate whether the Wildlife Habitat Mitigation Plan of this appendix would apply).

**Response**

Below and in Chapter 4 of the Revised Draft SEIS are USFWS' recommended BMPs on private lands that are not within the BLM's jurisdiction and would be used voluntarily by the Operators. The BMPs apply to other raptor species as well as bald eagles and were designed to minimize adverse effects during development. Although BMPs suggested by the USFWS are voluntary on private land, the New Fork and Green Rivers Biological Opinion would apply on BLM-administered public lands. The USFWS stated in the New Fork and Green Rivers Biological Opinion that the following terms and conditions would be applied:

- avoid activities within 1 mile of active bald eagle nests from courtship (February 1) through fledging (August 15),
- avoid activities within 1 mile of roosts used during winter, November 1 through April 1,
- strive to conserve potential nesting, roosting, and foraging habitats of mature and old growth trees, particularly within 0.5 mile of water,
- conduct appropriate surveys before commencement of ground disturbing activities and within 1 mile of proposed disturbance to determine the status of known nests and roosts and to identify new nests and roosts; and
- monitor activities that may adversely impact bald eagles and other raptor species.

**Comment Number**                      **EG-4-25-V-1**

**Comment**

The SEIS engages in no analysis of how BLM's 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," which is specifically BLM's first obligation under the explicit terms of the RMP.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**                      **EG-4-26-AL-1**

**Comment**

That is, this SEIS serves absolutely no purpose relative to providing the additional environmental analysis that would be required to allow the existing plan to continue to be implemented.

**Response**

Based upon this comment and others, the BLM has developed Alternative E in the Revised Draft SEIS.

**Comment Number**            **EG-4-27-AL-2****Comment**

Consequently, the SEIS must "rigorously explore and objectively evaluate all reasonable alternatives," as must any EIS.

**Response**

Based upon this comment and others, the BLM has developed alternatives D and E in the Revised Draft SEIS.

**Comment Number**            **EG-4-28-AL-3****Comment**

At minimum, to meet its obligations under NEPA, BLM must consider a conservation alternative in the SEIS, and elements of such an alternative are considered next.

**Response**

Based upon this comment and others, the BLM has developed alternatives D and E in the Revised Draft SEIS.

**Comment Number**            **EG-4-29-AL-4****Comment**

Thus, the no action alternative is not a "conservation alternative, and a true conservation alternative must be identified and evaluated in the SEIS.

**Response**

Based upon this comment and others, the BLM has developed alternatives D and E in the Revised Draft SEIS.

**Comment Number**            **EG-4-30-PA-6****Comment**

Development could spread out from the crest and potentially be quite intensive in the "flank" or "peripheral" areas outside the core area; the SEIS would not preclude this. This needs to be corrected and an alternative needs to be considered that would clearly prevent development in the flank areas until development in the core area had been fully achieved and the disturbance reclaimed.

**Response**

See the Revised Draft SEIS, Alternatives D and E.

**Comment Number**            **EG-4-31-PA-7**

**Comment**

BLM should consider all of these models as means by which lease suspension might be pursued in the peripheral areas of the Pinedale Anticline.

**Response**

See the Revised Draft SEIS, Alternatives D and E.

**Comment Number**            **EG-4-32-PA-8**

**Comment**

Unitization is a key component of the means by which development would be allowed on the Roan Plateau in Colorado in an effort to also protect the natural environment, and BLM should thoroughly consider this model.

**Response**

Thank you for your comment.

**Comment Number**            **EG-4-33-PA-9**

**Comment**

We urge the BLM to consider and in fact adopt an alternative that would not allow these areas to be leased as a mechanism to ensure the flank areas of the Pinedale Anticline receive long-term protection while the core area undergoes development.

**Response**

See the Revised Draft SEIS, Alternatives D and E.

**Comment Number**            **EG-4-34-PA-10**

**Comment**

As for Anschutz and its holdings on the northeast periphery of the Pinedale Anticline, BLM can and should promote and facilitate buyout and exchange of leases with other operators as one option to lease suspension.

**Response**

Thank you for your comment. The Revised Draft SEIS includes provisions for lease suspensions and term NSO leases in the flanks.

**Comment number**                    **EG-4-34-W-6**

**Comment**

As with the current leases subject to the Development Area 5 provisions, this extended core area would likely need to continue to be subject to stipulations for the protection of sage grouse, even in the core area.

**Response**

Provisions in Development Area 5 have been revised in the BLM's Preferred Alternative, Alternative D in the revised Draft SEIS, which was developed in part by the Proponents and State (Wyoming Game and Fish Department and Department of Environmental Quality).

**Comment Number**                    **EG-4-35-PA-11**

**Comment**

Last, as one component of protecting the flank areas, BLM should consider carrying forward the current Management Area designations found in PAPA ROD relative to these flank areas (i.e., areas outside the core area).

**Response**

This is a component of Alternative E in the Revised Draft SEIS.

**Comment Number**                    **EG-4-36-PA-12**

**Comment**

To meet its legal obligations the BLM must consider means to spread these impacts out over time so that they are not so intense.

**Response**

Thank you for your comment. The alternatives present various methods for management prescriptions to reduce impacts.

**Comment Number**            **EG-4-36-PA-13****Comment**

BLM must regulate the pace of development so that areas are first drilled and then reclaimed before allowing development to spread into other areas. BLM should regulate development to a pace that ensures the thresholds that will be discussed in the next section are not exceeded.

**Response**

Every alternative contains an element of Adaptive Management which would regulate the development sequence and would also regulate the pace of development.

**Comment Number**            **EG-4-37-PA-14****Comment**

So, again, it is incumbent on BLM to come forward with objective evidence in support of any claims that maximizing the rate of development is somehow better than, or "not so bad," relative to carefully regulating the pace of development.

**Response**

It is the intent of the SEIS and the alternatives analyzed to show the comparison between relaxing seasonal restrictions and keeping seasonal restrictions in place.

**Comment Number**            **EG-4-38-PA-15****Comment**

Another component of a conservation alternative that should be considered in the SEIS is the definition and establishment of thresholds that will precipitate adaptive management actions (mitigation) should the thresholds be exceeded.

**Response**

Adaptive management thresholds and actions are identified in the Revised Draft SEIS.

**Comment Number**            **EG-4-39-PA-16****Comment**

In addition, in considering the environmental consequences of a project, BLM must discuss "Means to mitigate adverse environmental impacts" that have not been fully covered in the Alternatives section of an EIS Id. At §1502.16(h).

**Response**

Additional mitigation opportunities have been identified in the Revised Draft SEIS.

**Comment Number**            **EG-4-40-AQ-13**

**Comment**

Consequently, BLM should provide that determinations be made on an ongoing basis as to whether any air quality limitation is being exceeded, and if it is exceeded specify steps that will be taken that are sufficient to prevent exceedance of the limitation.

**Response**

Mitigation for AQRVs has been identified.

**Comment Number**            **EG-4-41-W-6**

**Comment**

With respect to mule deer, pronghorn, and sage grouse, at a minimum BLM should determine thresholds for these species' populations and/or essential habitats that ensure their long-term viability on the Pinedale Anticline.

**Response**

See the Wildlife Monitoring and Mitigation Matrix in Appendix 10 in the Revised Draft SEIS in which wildlife trend thresholds for multiple species have been proposed.

**Comment Number**            **EG-4-41-W-7**

**Comment**

With respect to sage grouse, thresholds that ensure the continued viability of sage grouse on the Pinedale Anticline are the minimum that BLM must ensure; in addition the thresholds should serve as assurance that BLM is not engaging in actions that "contribute" toward a need to list the species.

**Response**

The Wildlife Monitoring and Mitigation Matrix in Appendix 10 in the Revised Draft SEIS proposes wildlife trend thresholds for multiple species, mitigation, and mitigation ratios to be implemented once population declines have been detected.

**Comment Number**            **EG-4-42-W-8****Comment**

Given this significance, BLM should establish thresholds that ensure the long-term viability of these magnificent herds on the Pinedale Anticline, both because they "are primary concerns among the public and state and federal agencies: and because of their "large . . . economic importance" in western Wyoming.

**Response**

See the Wildlife Monitoring and Mitigation Matrix in Appendix 10 in the Revised Draft SEIS in which wildlife trend thresholds for multiple species have been proposed.

**Comment Number**            **EG-4-43-PA-17****Comment**

As discussed above, BLM can and should require a paced form of development, and it would certainly be appropriate to tie the pace of development to the thresholds mentioned here.

**Response**

Every alternative contains an element of Adaptive Management which would regulate the development sequence and would also regulate the pace of development.

**Comment Number**            **EG-4-44-W-9****Comment**

We believe it is crucial for BLM to adopt specific provisions for offsite mitigation as a component of a conservation alternative.

**Response**

Alternative D was developed in part by the Proponents and State (Wyoming Game and Fish Department and Department of Environmental Quality). Mitigation measures developed by the Proponents, applicable to Alternative D, include an expected \$36 million for a mitigation and monitoring fund.

**Comment Number**            **EG-4-44-W-10****Comment**

It is also crucial that there be adequate funding for offsite mitigation, and BLM should require or negotiate such funding from the operators on the Pinedale Anticline field, as has occurred in the Jonah Field.

**Response**

Alternative D was developed in part by the Proponents and State (Wyoming Game and Fish Department and Department of Environmental Quality). Mitigation measures developed by the Proponents, applicable to Alternative D, include an expected \$36 million for a mitigation and monitoring fund.

**Comment Number**                    **EG-4-45-W-11**

**Comment**

We also believe the SEIS should make the following provisions relative to offsite mitigation. First, the mitigation must occur early, prior to development occurring or early in the development phase. Waiting to mitigate impacts until the full magnitude of the impact has been documented will only harm the effectiveness of offsite mitigation because over time there will be fewer and fewer desirable offsite mitigation opportunities. The time to mitigate impacts is when they occur, not at some point in the future.

**Response**

As noted in other responses to commenters, the BLM can not legally require provisions for offsite mitigation.

**Comment Number**                    **EG-4-46-W-12**

**Comment**

We ask BLM to consider this information and to ensure that any offsite mitigation that is pursued as a component of a conservation alternative focuses on habitat protection and not "habitat improvement."

**Response**

As noted in other responses to commenters, the BLM can not legally require provisions for offsite mitigation.

**Comment Number**                    **EG-4-47-W-13**

**Comment**

Consequently, BLM should identify off-site options for mitigation that are in unleased areas to the extent possible.

**Response**

As noted in other responses to commenters, the BLM can not legally require provisions for offsite mitigation.

**Comment Number**            **EG-4-47-W-14****Comment**

And, alternatively, the BLM should pursue exchange and/or buyout of leases if needed to ensure that offsite mitigation areas are in fact capable of being protected in the long-term.

**Response**

Alternative D was developed in part by the Proponents and State (Wyoming Game and Fish Department and Department of Environmental Quality). Mitigation measures developed by the Proponents applicable to Alternative D include suspending surface activity on certain leases outside of the Alternative D core area and Potential Development Area (the flanks) for at least 5 years.

**Comment Number**            **EG-4-47-W-15****Comment**

Areas that have not been leased in the Pinedale Field Office which also have a high degree of importance for wildlife are shown in Exhibit 5, and we ask that BLM consider this map and use it as an aid for identifying priority areas for offsite mitigation.

**Response**

As noted in other responses to commenters, the BLM can not legally require provisions for offsite mitigation.

**Comment Number**            **EG-4-48-W-16****Comment**

Consequently BLM should commit to adhering to the mitigation measures in the Recommendations Policy.

**Response**

The BLM has set forth Standard 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 prepared a Wildlife and Habitat Mitigation Plan for Alternative D in Appendix 9C. 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."

**Comment Number**            **EG-4-49-PA-18****Comment**

A final element of conservation alternative should include a commitment by BLM to not process future applications for permit to drill (APD) in the Pinedale Anticline pursuant to the categorical exclusion provisions available under the energy Policy Act of 2005. 42 U.S.C. § 15942.

**Response**

The BLM will comply with the Energy Policy Act of 2005.

**Comment Number**            **EG-4-50-PA-19****Comment**

The ROD in this matter should provide that the Energy Policy Act categorical exclusions will not be utilized on the Pinedale Anticline.

**Response**

The BLM will comply with the Energy Policy Act of 2005.

**Comment Number**            **EG-4-51-PA-20****Comment**

Thus, in order to comply with the policies of the State of Wyoming, and a number of other states, BLM should commit to not using categorical exclusions from NEPA compliance at the APD stage on the Pinedale Anticline.

**Response**

The BLM will comply with the Energy Policy Act of 2005.

**Comment Number**            **EG-4-52-PA-21****Comment**

We should also note that the Western Governors' Association policy resolution calls for several other conservation measures that should be adopted to protect resources from the impacts of oil and gas development. Exhibit 7. BLM should consider adopting these policies as components of a conservation alternative for the Pinedale Anticline.

**Response**

The BLM has included two additional alternatives in the Revised Draft SEIS.

**Comment Number**            **EG-4-53-PA-22****Comment**

BLM must put in place mitigation that is clearly specified, adequately funded, and enforceable.

**Response**

This has been included in the Revised Draft SEIS.

**Comment Number**            **EG-4-53-PA-23****Comment**

Mitigation to reduce all significant impacts must be put in place and clear indication of funding amounts and sources be confirmed.

**Response**

Mitigation to reduce impacts has been included in the Revised Draft SEIS. Mitigation to reduce impacts to levels below significance is not necessary.

**Comment Number**            **EG-4-53-PA-24****Comment**

In addition, it must be made clear where there are adequate amounts of contiguous wildlife habitat within the Upper Green River Valley at a ratio of 3:1, as Plan Proponents have indicated they will commit to: that is, for every one acre of habitat that is impacted, three acres of habitat should be assuredly protected or improved.

**Response**

Thank you for your comment. Additional mitigation has been added to the Revised Draft SEIS.

**Comment Number**            **EG-4-53-PA-25****Comment**

Adequate monitoring to ensure mitigation is enforced must be specified. In this regard, annual monitoring reports and a predevelopment inventory should be required.

**Response**

The BLM will consider making monitoring reports available to the general public and the PAWG.

**Comment Number**            **EG-4-53-PA-26****Comment**

Mitigation must be put in place from the inception of this massive infill project, not 3-5 years after it begins, as seem to be the case for some mitigation.

**Response**

The BLM agrees. There will be some lead time necessary to obtain equipment for implementation of some mitigation measures including the liquids gathering system and drill rig engines.

**Comment Number**            **EG-4-54-AQ-14****Comment**

Tier 2 technology on drill rigs should be implemented and required immediately so as to meet the BLM's stated goal of 0 days of significant visibility impairment in the Bridger Wilderness Class I Area due to development on the Pinedale Anticline.

**Response**

It is the BLM's policy not to apply a prescriptive approach.

**Comment Number**            **EG-4-54-AQ-15****Comment**

If Tier 2 technology cannot be implemented immediately, BLM should use "any available means" to achieve this goal, including regulating the rate of drilling, i.e., phased development should be used.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-4-54-AQ-16****Comment**

This mitigation should achieve at least an 80 percent reduction in emissions, as BLM will seek to do through its Phase II mitigation.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-4-54-AQ-17****Comment**

But this degree of mitigation should be required immediately so as to prevent the 45-60 days per year of significant visibility impairment in the Bridger Wilderness that will result in approximately the next 4-5 years if BLM implements mitigation gradually, as it currently plans.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-4-54-AQ-18****Comment**

Under the best of circumstances, even after Phase II mitigation is implemented, there will still be 10 days of significant impairment of visibility in the Bridger Wilderness, a level of impact that fails to meet the BLM's stated goal of 0 days of impairment, so clearly BLM must require additional mitigation in the SEIS so as to avoid violating its own stated goal.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-4-55-AQ-19****Comment**

"Any and all available means," including regulating the rate of drilling, must also be used to prevent violations of Class II increments for NO<sub>2</sub> and PM<sub>10</sub> emissions.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-4-55-AQ-20****Comment**

If caps on emissions need to be set to ensure these legal violations do not occur, the BLM must set such caps as a component of the "any and all available means" that it recognizes are within its authority.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-4-56-AQ-21****Comment**

Last with respect to air quality, we urge BLM to maintain the current language on page 4-75 of the SEIS which states that BLM will use "any and all available means" to ensure that visibility impairment in the Bridger Wilderness Area does not exceed 1.0dv.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-4-57-RC-1****Comment**

That is, in most circumstances restoration of functional sagebrush habitat should be required and ensured. Appendix E does not establish this requirement with assurance, and it should be rewritten so as to clearly establish a requirement for restoration of the native shrub habitat, if native shrubs occupied the site prior to disturbance.

**Response**

There will be a reclamation plan including monitoring to meet BLM objectives. The objectives will be based upon criteria reflecting the plant community in undisturbed areas adjacent to the actual disturbance. The criteria will reflect the diversity and cover of the predisturbed plant community. This will ensure that the restoration includes the sagebrush component of the adjacent plant community.

**Comment Number**            **EG-4-58-RC-2****Comment**

At least two recent BLM analyses establish what we believe are relevant provisions relative to reclamation, and we ask that BLM consider these in the SEIS.

**Response**

There will be a reclamation plan including monitoring to meet BLM objectives. The objectives will be based upon criteria reflecting the plant community in undisturbed areas adjacent to the actual disturbance. The criteria will reflect the diversity and cover of the predisturbed plant community. These plans will be submitted to the BLM annually for BLM review and concurrence.

**Comment Number**            **EG-4-59-G-1****Comment**

It is our view it would be inappropriate to approve massively increased development on the Pinedale Anticline pursuant to the admittedly out-of-date 1988 RMP when a revised RMP to guide land management in this area is so close at hand.

**Response**

Thank you for your comment. The SEIS alternatives are in conformance with the 1988 Pinedale RMP and also in conformance with the alternatives in the Draft EIS for the Pinedale RMP.

**Comment Number**            **EG-4-60-SE-1****Comment**

However, there are large costs associated with natural gas development, and the associated increases in transient and residential population and industrial activity, and BLM fails to discuss these costs.

**Response**

The Revised Draft SEIS provides estimates of population increases under each alternative by year and also provides the anticipated impacts by county and community. It is beyond the scope of this SEIS to produce a budgetary planning analyses specific to the affected counties and communities.

**Comment Number**            **EG-4-61-SE-2****Comment**

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 present the 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 Alternatives A and B.

**Response**

The non-market impacts associated with rapid oil & gas development are an important consideration; however, the quantification of these impacts is beyond the scope of this effort. Therefore, non-market values impacted by rapid oil & gas development in the Anticline are only discussed in a qualitative manner.

**Comment Number**            **EG-4-62-SE-3****Comment**

In the SEIS, BLM has emphasized the importance of the energy extraction industries, to apparent exclusion of other industries and other sources of income.

**Response**

This is a value judgment and does not lend itself to a specific response.

**Comment Number**            **EG-4-63-SE-4****Comment**

In the SEIS, 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 Revised Draft SEIS provides a range of estimated population increases under each alternative by year. Because of data limitations it discusses, but does not quantify, anticipated impacts to affected communities.

**Comment Number**            **EG-4-64-SE-5****Comment**

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**

Thank you for your comment.

**Comment Number**            **EG-4-65-SE-6****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.

**Response**

The Revised Draft SEIS provides a discussion of the boom/bust scenario in a rural setting where growth is driven by oil and gas development.

**Comment Number**                    **EG-4-66-SE-7**

**Comment**

A more complete analysis of Alternatives B and C 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.

**Response**

The Revised Draft SEIS provides a discussion on the health effects related to air emissions.

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

**Comment**

The BLM should adopt a policy of no surface disturbance within 3 miles of occupied leks as data clearly show negative impacts to sage-grouse at the present distance of 0.235 miles or even 2 miles.

**Response**

The BLM's Preferred Alternative, Alternative D in the Revised Draft SEIS, insures no surface disturbance within 0.25 mile of occupied sage-grouse leks. Anticipated negative impacts to sage-grouse have been disclosed in the Revised Draft SEIS.

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

**Comment**

Further, adequate data are available to demonstrate that most female sage-grouse nest within 3 miles of active leks. This is the minimum required to maintain and stabilize the decline in the present sage-grouse population.

**Response**

The BLM's Preferred Alternative, Alternative D in the Revised Draft SEIS, insures no surface disturbance within 0.25 mile of occupied sage-grouse leks. Anticipated negative impacts to sage-grouse have been disclosed in the Revised Draft SEIS.

**Comment number**                    **EG-5-1-W-3****Comment**

The BLM, at the minimum, must expand the year long NSO area to at least 1 mile and preferably 3 miles, if sage-grouse, are to remain viable in the Pinedale Anticline area.

**Response**

The BLM's Preferred Alternative, Alternative D in the Revised Draft SEIS, insures no surface disturbance within 0.25 mile of occupied sage-grouse leks. Anticipated negative impacts to sage-grouse have been disclosed in the Revised Draft SEIS.

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

All areas used by sage-grouse during both average or "normal" and severe winters should be given special protection from wild fire, manipulation of sagebrush, and human-induced disturbance. This is the minimum required to maintain and stabilize the present sage-grouse population.

**Response**

A winter distribution map of sage-grouse has not been developed for the PAPA.

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

Adherence to time of use for restriction of activities from 6:00 PM through 9:00 AM during the breeding and nesting periods should be strictly monitored and enforced. This is the minimum required to maintain and stabilize the present sage-grouse population.

**Response**

Such timing restrictions were not included in Appendix 4 - BLM's Standard Practices and Restrictions for the Pinedale Anticline Project Area, but are included in the BLM Instruction Memorandum No. WY-2004-057 - Statement of Policy Regarding Sage-Grouse Management Definitions, and Use of Protective Stipulations, and Conditions of Approval (COAs): "Avoid human activity between 8 p.m. and 8 a.m. from March 1 - May 15 within ¼ mile of the perimeter of occupied sage-grouse leks." Such policy would be applied to leks not subject to exceptions for seasonal stipulations.

**Comment number**                    **EG-5-4-W-6****Comment**

Management of mid to late summer brood-rearing areas should encourage forb regrowth while maintaining at least a 6 inch residual grass height with taller (>24 inches in height) live sagebrush of >15% canopy cover in close (<200 yds) proximity for use as escape cover. No gas and oil development activities should be allowed in areas identified to be used for nesting or brooding rearing. This is the minimum required to maintain and stabilize the present sage-grouse population.

**Response**

The BLM's Preferred Alternative, Alternative D in the Revised Draft SEIS, insures no surface disturbance within 0.25 mile of occupied sage-grouse leks. Anticipated negative impacts to sage-grouse have been disclosed in the Revised Draft SEIS.

**Comment Number**                    **EG-5-5-W-7****Comment**

Mitigation should be required for all activities known to negatively impact sage-grouse. Mitigation measures should include, but are not limited to: burial or modification of power lines, off set drilling, road closures and time restrictions, removal of livestock grazing, nitrogen fertilization of winter and nesting areas, removal or modification of existing fences, etc.

**Response**

The BLM has set forth Standard 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 prepared a Wildlife and Habitat Mitigation Plan for Alternative D in Appendix 9C.

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

Full mitigation would be to replace the exact number of sage-grouse impacted by development activities by increasing the number per unit of area that the remaining areas can support to equal the number displaced. This is the minimum required to maintain and stabilize the present sage-grouse population.

**Response**

The BLM's Preferred Alternative, Alternative D in the Revised Draft SEIS, insures no surface disturbance within 0.25 mile of occupied sage-grouse leks. Anticipated negative impacts to sage-grouse have been disclosed in the Revised Draft SEIS.

**Comment Number**            **EG-5-5-W-9****Comment**

The ratio of 3 acres to 1 acre for off-site mitigation proposed by the industry will not be adequate. Sage-grouse are a landscape scale species and peripheral, contiguous areas each equivalent to at least one Township (36 square miles) and probably >50 miles squared of suitable habitat with connectivity corridors at least 1 mile in width to maintain viable population. These areas must be outside of core development areas.

**Response**

Alternative D was developed in part by the Proponents and State (Wyoming Game and Fish Department and Department of Environmental Quality). Mitigation measures developed by the Proponents applicable to Alternative D include suspending surface activity on certain leases outside of the Alternative D core area and Potential Development Area (the flanks) for at least 5 years.

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

Some lease buy outs in areas not presently developed, especially within 2-3 miles of active leks, should be considered.

**Response**

Alternative D was developed in part by the Proponents and State (Wyoming Game and Fish Department and Department of Environmental Quality). Mitigation measures developed by the Proponents applicable to Alternative D include suspending surface activity on certain leases outside of the Alternative D core area and Potential Development Area (the flanks) for at least 5 years.

**Comment Number**            **EG-5-6-W-11****Comment**

Standard surveys of all areas to locate active leks should be conducted in spring 2007 and continue at 3-year intervals. This will provide data on lek extinction and recruitment caused by oil and gas development activities. This is the minimum required to maintain and stabilize the present sage-grouse population.

**Response**

Leks are surveyed annually rather than once at 3-year intervals.

**Comment Number**            **EG-5-7-W-12****Comment**

Leks classified as active should be counted (number of cocks present) 3-4 times each spring at 7-10 intervals starting in late March-early April and continuing into mid May. Those leks classified as inactive should be checked in late April/early May every 2-3 years to ascertain change in status. This is the minimum required to maintain and stabilize the present sage-grouse population.

**Response**

Leks identified as active and occupied (including inactive leks) are surveyed using the standard methods included in the comment.

**Comment Number**            **EG-5-8-W-13****Comment**

Harvest data based on examination of sage-grouse wings collected from hunters should continue on a well-defined population basis. Statistics needed to measure responses of sage-grouse to oil and gas development are those relating to nest success, chicks per hen, and age/gender composition. This is the minimum required to maintain and stabilize the present sage-grouse population. Most of these data are being collected by Wyoming Department of Game and Fish personnel. BLM must recognize the value of these data and use them in adaptive management and in modeling sage-grouse population trends.

**Response**

The comment certainly addresses an important concept, that of understanding how oil and gas developments affect sage-grouse demographic parameters. The commenter should be aware that wings from harvested birds are placed in collection barrels (18 wing barrels were established in Sublette County during 2005). These data are problematic, however, since there is no way of identifying where any given wing (or bird) was harvested (impacted well-field vs unimpacted habitat). The best that could be done would be an examination of demographic trends within Sublette County over time. Any trend would be an effect of cumulative impact rather than impact specific to oil and gas development on the PAPA. A similar trend in sage-grouse populations in the region was presented in the Draft SEIS using catch per unit effort (birds harvested per hunter day). The regional trend has been decreasing since 1984 but can not be related specifically to oil and gas development on the PAPA or within the county or within the region.

**Comment Number**            **EG-5-9-W-14****Comment**

Monitoring of the proposed 'coordinated approaches' (whatever they may be) must be standardized, long-term (40-60 years) and scientifically defensible. It would also be appropriate

for monitoring to include all peripheral areas set aside from development as outlined in the analysis (Mitigation Measures, Item 5).

**Response**

Alternative D was developed in part by the Proponents and State (Wyoming Game and Fish Department and Department of Environmental Quality). Mitigation measures developed by the Proponents applicable to Alternative D include suspending surface activity on certain leases outside of the Alternative D core area and Potential Development Area (the flanks) for at least 5 years.

**Comment Number**                    **EG-5-10-W-15**

**Comment**

Vegetation in areas disturbed that are reclaimed following cessation of development should be described at 2-3 year intervals as to live sagebrush canopy cover and height, grass cover and height, and forb cover and height.

**Response**

The BLM has set forth Standard 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 prepared a Wildlife and Habitat Mitigation Plan for Alternative D in Appendix 9C.

**Comment Number**                    **EG-5-11-W-16**

**Comment**

Monitoring should be both on- and off-site where mitigation activities are implemented.

**Response**

As noted in other responses to commenters, the BLM can not legally require provisions for offsite mitigation. Mitigation measures developed by the Proponents applicable to Alternative D include an expected \$36 million for a mitigation and monitoring fund.

**Comment Number**                    **EG-5-12-W-17**

**Comment**

Industry should fund all monitoring efforts and scientific studies.

**Response**

Mitigation measures developed by the Proponents applicable to Alternative D include an expected \$36 million for a mitigation and monitoring fund.

**Comment Number**            **EG-5-13-W-18****Comment**

Habitat guidelines published by Connelly et al. (2000) should be incorporated into preparation of a "desired future condition" to be achieved to improve nest success and early chick sage-grouse survival.

**Response**

The BLM has set forth Standard 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 prepared a Wildlife and Habitat Mitigation Plan for Alternative D in Appendix 9C.

**Comment Number**            **EG-5-13-W-19****Comment**

Desired future condition should be defined for core and peripheral areas where no development will occur until the disturbed core areas are reclaimed and used by sage-grouse for all life purposes.

**Response**

Reclamation plans for all Alternatives are provided in Appendices 8A through 8D in the revised Draft SEIS while Wildlife and Habitat Mitigation Plans for the various alternatives are provided in Appendix 9A through Appendix 9C. No decisions have been made about which plan(s) will be implemented.

**Comment Number**            **EG-5-14-W-20****Comment**

Nesting areas, since they are difficult to locate at a population or subpopulation scale, should be defined as all areas within 3 miles of active leks.

**Response**

The BLM recognizes that most female sage-grouse nest within 3 miles of leks.

**Comment Number**            **EG-5-15-W-21****Comment**

BLM and industry should immediately implement strategies to improve sage-grouse chick survival.

**Response**

Since most brood-rearing habitat is not within the PAPA, measures to improve chick survival would most likely be off-site. The BLM can not legally require provisions for offsite mitigation. Mitigation measures developed by the Proponents applicable to Alternative D include an expected \$36 million for a mitigation and monitoring fund.

**Comment Number**                    **EG-5-16-W-22**

**Comment**

The cumulative impacts of all human-induced activities within a given, describable sage-grouse population unit should be studied over a period sufficiently long (20-30 years) to be able to predict actual long- and short-term effects. When industry is involved in causing the impacts, they should be expected to fully support financially, all studies as they have the burden to demonstrate their activities are not negative to sage-grouse.

**Response**

Mitigation measures developed by the Proponents applicable to Alternative D include an expected \$36 million for a mitigation and monitoring fund, but specific applications have not been advanced.

**Comment Number**                    **EG-5-17-W-23**

**Comment**

The concept of creating (and transferring) 'credits' to non-disturbed lands from areas disturbed by development should not be adopted as mitigation lands for sage-grouse should be immediately adjacent to or within 5-10 miles of the areas developed. Lands selected for mitigation should be at least equal in value for sage-grouse and should be sufficiently close to serve as refugia for birds 'displaced' from areas developed.

**Response**

Mitigation measures developed by the Proponents applicable to Alternative D include an expected \$36 million for a mitigation and monitoring fund, but specific applications have not been advanced.

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

**Comment**

After perusing the Environmental Impact Statement that was recently printed, I am pleased with the protection written into it for the Lander Road. It is encouraging that Shell and Ultra are limiting the number of wells and size of each drilling pad and with the use of low profile tanks painted to blend with the landscape. I am also pleased with the inclusion in the mitigation comments that Ultra Resources will remove all the surface facilities that are at Pinedale Federal

#2. I am grateful that Shell and Ultra will find a replacement of the windmill in Township #30 as well.

**Response**

Thank you for your support. The BLM will continue to work with your office and other interested parties to identify and implement more innovative Lander Trail mitigation projects.

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

**Comment**

Also, it is difficult to understand why Alternative C was not selected since it provides at least a small degree of protection for wildlife with about the same opportunity for development. Wildlife matters are not OCTA's primary concern, but it suggests that the selection of Alternative B was pre-determined.

**Response**

Alternative C was identified as the Preferred Alternative in the Draft SEIS.

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

**Comment**

Why have not alternatives been developed and examined that will avoid these impacts?

**Response**

The figures describing impacts within the ¼ mile NSO for the Lander Trail as they appeared in the Draft SEIS were prepared in error and the BLM will provide for more accurate figures in the Final SEIS and ROD. The BLM will continue to work with your office and other interested parties to identify and implement more innovative mitigative projects.

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

**Comment**

Will mitigation be required and what might it be?

**Response**

Such mitigative efforts might include a Lander Trail website, the Lander Trail streaming video monitoring system, or historic archaeological excavations of Lander Trail associated campsites, to suggest a few. The BLM is open to additional suggestions or proposals.

**Comment Number**            **EG-7-4-C-3****Comment**

"There were not project scoping comments related to cultural and historic resources." This is clearly in error as shown in Appendix B, page 2. The issues and procedures were raised and should be addressed.

**Response**

The statement in the Draft SEIS indicating that there were no scoping comments relating to cultural and historic resources was made in error. The Wyoming State Historic Preservation Office (SHPO) provided written and verbal scoping comments, the Oregon California Trails Association has provided us a series of comments and the PAWG Cultural Historical Task Group provided extensive written comments and recommendations. The BLM regrets the error.

**Comment Number**            **EG-7-5-C-4****Comment**

OCTA signed a programmatic agreement with the BLM, SHPO, NPS, and developers in October 2004. Is there anything in the SEIS that changes terms of that agreement?

**Response**

Those circumstances that affect the Shell/Ultra Lander Trail PA relate to the larger pad size, more directional wells per pad scenario that is an operator-generated situation. The BLM PFO is currently contacting the Shell/Ultra Lander Trail PA signatories and interested parties to evaluate this new operator proposal. The PA is still in full force and effect.

**Comment Number**            **EG-7-6-C-5****Comment**

Are intrusions to the 0.25 mile buffer zone limited to pipeline and road crossings? Specifically, are there well pads, wells or other infrastructure intruding into the buffer zone?

**Response**

Because of the error involved in generating the ¼ mile buffer disturbances in the DSEIS, the BLM feels that disturbance within the ¼ mile NSO is limited to pipeline crossings and expansion of existing corridors.

**Comment Number**            **EG-7-7-C-6****Comment**

Does Appendix C (Development Procedures for Well field Activities) supersede any of the BLM's best management practices as documented elsewhere or in any way reduce mitigation requirements?

**Response**

No, it does not.

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

We have grave concern that the BLM has, in already granting a waiver to the restrictions and stipulations on the leases regarding seasonal drilling restrictions, not carried out the appropriate process to do so.

**Response**

The BLM has not "already granted a waiver" as stated in this comment. As disclosed in Section 1.5 of the Revised Draft SEIS, a lease stipulation waiver is a permanent exemption to a lease stipulation. The NEPA process and this Draft Supplemental Environmental Impact Statement is the appropriate process to implement a Proposed Action that includes exceptions from the BLM's seasonal restrictions.

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

We suggest that experts without ties to the BLM and the companies be empanelled to review the data, see where more information is required, and outline a plan for the reasonable extraction of gas done in an environmentally acceptable manner before any decisions are made to proceed with either the industry plan or the BLM preferred alternative.

**Response**

Scientific entities are welcome to monitor and review the data as suggested; however, complete independence from federal and oil and gas industries would mean that no funding from government and industry could be used and an independent funding source would have to be found to cover the expense. The BLM followed proper procedures for contracting the environmental analysis.

**Comment Number**            **EG-8-3-G-2****Comment**

We recommend that a reduced footprint and an environmentally improved set of options could become the first phase of a new ROD with increments added as production experience with pad sharing and other measures to reduce impacts evolves.

**Response**

Thank you for your comment. The BLM will consider this when issuing a decision.

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

Federal monitors of benchmarks outlined in a set of new RODs may be an alternative approach worth considering.

**Response**

Please see the Revised Draft SEIS.

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

We recommend a defined phased, stepped, sequential program that incorporates reclamation as a condition of subsequent well installation and the use of the temporary relaxation of certain restrictions as may become appropriate in time and as an incentive to better operations and staged field development.

**Response**

This is included in the range of alternatives analyzed in the Revised Draft SEIS.

**Comment Number**            **EG-8-6-AQ-1/GW-1****Comment**

A more sophisticated and more comprehensive air quality monitoring, and aquifer protection and water analysis program needs to be implemented before going forward to a subsequent stage of development.

**Response**

Thank you for your comment. The BLM agrees that the enhanced monitoring would be of great value, and the BLM will certainly support and use the relevant monitoring data.

**Comment Number**            **EG-8-7-G-5****Comment**

Along these lines, we recommend that a real-time formal management arrangement with the Fish and Wildlife Service be established as a part of a "performance matrix" to make sure the program moves according to milestones that are prescriptive.

**Response**

The BLM will comply with the Endangered Species Act, the Migratory Bird Treaty Act, and the Bald and Golden Eagle Protection Act.

**Comment Number**            **EG-8-7-G-6****Comment**

We recommend a similar arrangement with EPA Region 8, Wyoming DEQ, and the USGS for air and water.

**Response**

The BLM fully understands the authority of the WDEQ with regards to air and water resources and the EPA with regards to drinking water. The WDEQ is a cooperator on the SEIS.

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

Use of individual dosimeters for workers as well as correctly placed field monitors with frequency measures suitable for the pollutants of interest including air toxics measures for public health and safety need to be planned and implemented.

**Response**

The WDEQ has primacy on air quality issues with regard to public health and safety.

**Comment Number**            **EG-8-9-G-8****Comment**

Incentives to meet environmental thresholds need to be set. The temporary lifting of restrictions can selectively be used as a carrot toward these ends.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-8-10-SE-1****Comment**

The companies make the case that year round workers and year round drilling will attract a more stable and "community viable" work force thereby reducing the impediments to a more efficient schedule, however, no substantive information is available that analyzes workforce and equipment demand and supply commensurate with the target number of wells. This is a strong shortcoming that we recommend be corrected.

**Response**

The Revised Draft SEIS provides a discussion of the boom/bust scenario in a rural setting where growth is driven by oil and gas development.

**Comment Number**            **EG-8-11-PA-1****Comment**

The number of pads impacted by a consolidation of activities among the companies may be a more useful measure than the number of wells. We would suggest that "renovation of pads" to accommodate an increase in wells may present challenges unanticipated yet again.

**Response**

Thank you for your comment.

**Comment Number**            **EG-8-12-GW-2****Comment**

Water supply relative to the targeted pads needs to be developed as well.

**Response**

The amount of water per well required does not change. The amount of water which is being recycled and reused continues to grow and is encouraged by the BLM and at this time is a moving target.

**Comment Number**            **EG-8-13-G-9****Comment**

Optimization of the use of well pads should decrease some negative effects but we recommend phased work and maintenance of seasonal restrictions that could be periodically relaxed as the progress of the work and the seasonal impacts coincide.

**Response**

Thank you for your comment.

**Comment Number**            **EG-8-14-G-10**

**Comment**

We recommend that development "sprawl" be contained.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-8-14-G-11**

**Comment**

A new alternative should spell out how this would occur in terms of existing and new pads.

**Response**

Please see the Revised Draft SEIS, Alternatives D and E.

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

**Comment**

Transport and generators are major sources of air pollutants. We recommend the use of bio-diesel and or other alternative fuels to optimize the reduction in pollutants released to the atmosphere.

**Response**

Thank you for your comment.

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

**Comment**

Given that the SEIS proposes year round and very intensive drilling of the "core development area," which represents 22% of the project area but most of the natural gas reserve, we feel it imperative that this SEIS explicitly prohibit all new drilling, well pad construction, and road building in much of the "flank" or non core area during the field's development phase.

**Response**

See the Revised Draft SEIS, Alternatives D and E.

**Comment Number**            **EG-9-1-G-2****Comment**

Moreover, it is very easy for the BLM to prevent further environmental degradation by prohibiting any additional non-NSO leasing of the few remaining areas of the PAPA that are currently unleased (such as the parcels being considered for June lease sale), which are all in the perimeter portions of the PAPA and could serve as "secured" wildlife areas during the many years of disturbance associated with the drilling of 4,400 new wells.

**Response**

See the Revised Draft SEIS, Alternatives D and E.

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

In order to build in such wildlife certainty or a wildlife "safety net," the Final SEIS and ROD must include measurable habitat/wildlife trend thresholds for multiple species.

**Response**

See the Wildlife Monitoring and Mitigation Matrix in Appendix 10 of the Revised Draft SEIS in which wildlife trend thresholds for multiple species have been proposed.

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

Furthermore, as we discussed, such thresholds must be written in a way that they trigger explicitly-defined changes to allowed development levels and pace, without waiting to fully detail gas developments' role or level of contribution.

**Response**

Thresholds have been established in Alternative D, but whether thresholds trigger an immediate change in development remains to be seen.

**Comment Number**            **EG-9-2-W-3****Comment**

We advocate that should a population, population trend, or habitat loss threshold be exceeded, the final Record of Decision must dictate stringent measures that will be immediately imposed (i.e. no new APDs approved, all timing stipulations re-imposed, etc.) and an adaptive management process to be implemented - with opportunity for meaningful public involvement - to work out the needed long term changes to the ROD's development approach.

**Response**

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. Only Alternative D includes a Wildlife Monitoring and Mitigation Matrix that would trigger specific Adaptive Management responses based on monitoring information.

**Comment Number**            **EG-9-3-W-4**

**Comment**

We advocate that the Draft SEIS ensure that habitat protection (not just habitat enhancement) be a defined part of any off site mitigation program, including stating that the possible purchase and retirement of undeveloped leases in important nearby wildlife areas will be pursued when practicable.

**Response**

Mitigation measures developed by the Proponents applicable to Alternative D include a mitigation and monitoring fund, but specific applications have not be advanced.

**Comment Number**            **EG-9-3-W-5**

**Comment**

The Draft SEIS also needs to ensure that operators fund a detailed baseline habitat inventory of the impacted project area and the larger area for any possible off site mitigation projects.

**Response**

Mitigation measures developed by the Proponents applicable to Alternative D include a mitigation and monitoring fund, but specific applications have not be advanced.

**Comment Number**            **EG-9-4-G-3**

**Comment**

In closing, we want to make clear that we the undersigned are not endorsing any alternative, but only re-stating our concerns with the Draft SEIS for this very important project.

**Response**

Thank you for your comment.

**Comment Number**            **EG-10-1-G-1****Comment**

Most importantly, Interim Management guidelines need to be developed during the completion of this NEPA analysis that outlines what the BLM will approve and authorize from the existing decisions as to not preclude selection of any viable alternative.

**Response**

Thank you for your comment.

**Comment Number**            **EG-10-2-G-2****Comment**

It is unclear from this document what decisions and authorizations are being carried forward from the 2000 PAPA Record of Decision and subsequent other decisions for the project area (Questar Year-round Drilling, etc.).

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-10-3-AL-1****Comment**

Based on the scope of the proposal and how it was analyzed, we believe that this should not have been a "supplemental" document, but a complete, full, stand-alone EIS that evaluates more than just 2 alternatives (proposed actions and alternative C) and include alternatives that fully consider phased development outside of already developed areas on the PAPA.

**Response**

Thank you for your comment. The BLM respectfully disagrees.

**Comment Number**            **EG-10-4-G-3****Comment**

No new leasing of un-leased acres (or expired and leases that have been turned back in) should take place and be included in the SEIS.

**Response**

See the Revised Draft SEIS, Alternative E.

**Comment Number**            **EG-10-5-G-4****Comment**

No development in the un-developed "flanks" and other important wildlife habitats should take place while consolidated development takes place within the crest (including delineation or wildcat well drilling.)

**Response**

See the Revised Draft SEIS, Alternatives D and E.

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

Specific areas for mitigation should be identified and included in an approved mitigation plan before the project is approved.

**Response**

See the Revised Draft SEIS, Alternatives D and E.

**Comment Number**            **EG-10-7-T-1****Comment**

Mitigation that is stated for reduction in traffic (pipelines) should be in place before any year round consolidated development proceeds, similar to the commitment in the Questar YRD DR.

**Response**

Thank you for your comment. The BLM will consider your input when issuing a decision.

**Comment Number**            **EG-10-8-W-1****Comment**

Complete disclosure of existing mitigation actions need to be included in the final EIS including where the current 3:1 acre for acre mitigation has taken place and how it was effective in off-setting impacts from development.

**Response**

See the Alternative D Wildlife and Habitat Mitigation Plan in Appendix 9C and the Wildlife Monitoring and Mitigation Matrix in Appendix 10 of the Revised Draft SEIS in which mitigation and mitigation ratios have been proposed.

**Comment Number**            **EG-10-9-G-6****Comment**

The mitigation process needs to be clear and defined and not just a single payment buyout (like Jonah). It should include structured, science-based evaluation of what is being lost and what would be replaced by restoration and management.

**Response**

Thank you for your comment. The evaluation of the impacts is disclosed in the analysis.

**Comment Number**            **EG-10-10-G-7****Comment**

Strong regulation of activity by personnel and vehicles with careful monitoring must be a part of impact reduction attempts.

**Response**

Thank you for your comment.

**Comment Number**            **EG-10-11-G-8****Comment**

Monitoring should include scientifically sound approaches to tracking development effects on already damaged mule deer and sage grouse populations, and pronghorn that will face new pressures as the geographical as well as intensity of development spreads. There should be a monitoring plan and commitments to conduct it as part of the decisions.

**Response**

Thank you for your comment. The BLM will consider this when issuing a decision.

**Comment Number**            **EG-10-12-W-2****Comment**

Stipulations to protect wildlife from disturbance in winter should be employed on all areas outside clearly designated drilling and production facilities. This includes no exceptions for development or operations during development of the crest.

**Response**

Stipulations remain in place outside of Core Development Areas in various Alternatives. The BLM retains use of exceptions remain.

**Comment Number**            **EG-10-13-G-9****Comment**

Thresholds for reduced development activity should be set before this stage of development begins, which includes acknowledgment and consideration of losses already occurred through development to-date (this is a supplement, so this is a valid statement).

**Response**

The thresholds for reduced development activity are included in the Revised Draft SEIS for air quality and wildlife.

**Comment Number**            **EG-10-14-G-10****Comment**

Accounting and clarification of what has been done and what not been done, and why, should be part of the SEIS.

**Response**

Thank you for your comment. The discussion provided is sufficient.

**Comment Number**            **EG-10-15-AM-1****Comment**

It is unclear if the PAWG will be part of the approval of the SEIS, given its failure a clear adaptive management process with trigger points for action should be included.

**Response**

See the Revised Draft SEIS, where the PAWG would to continue under all alternatives.

**Comment Number**            **EG-10-16-G-11****Comment**

There should be a clear mitigation plan before further development occurs.

**Response**

Thank you for your comment.

**Comment Number**            **EG-10-17-G-12****Comment**

Commitment to Best Management Practices needs to be mandatory for all development and post development actions.

**Response**

Thank you for your comment.

**Comment Number**            **EG-10-18-G-13****Comment**

Impacts from operation and maintenance of well and infrastructure needs to be included in the analysis and part of any mitigation.

**Response**

Thank you for your comment.

**Comment Number**            **EG-10-19-W-3****Comment**

Impacts to wildlife from the foreseeable paving and upgrading of County and BLM roads needs to be included in the analysis and mitigated.

**Response**

Paving and upgrading of County and BLM roads are not specific components of any Alternative. Such actions are considered as cumulative impacts, Section 4.20.4.

**Comment number**            **EG-10-20-W-4****Comment**

Onsite mitigation should consider the "site" as the area of influence of development activity on specific wildlife, not just the disturbed surface area-thus the 3:1 acres cannot be just road and pad surface, but the zone of negative influence on wildlife, which varies by species, but is documented.

**Response**

The revised Draft SEIS recognizes a "zone of effect" that includes more than surface disturbances. Mitigation ratios have been proposed by the Operators in their Wildlife Monitoring and Mitigation Matrix in Appendix 10 in the Revised Draft SEIS. Just how mitigation ratios will

be applied has not been determined. As noted in other responses to commenters, the BLM can not legally require provisions for offsite mitigation.

**Comment Number**            **EG-10-21-W-5**

**Comment**

Mule deer and sage grouse research and monitoring should be continued -the base of data on pre- and post-development impacts is critical to evaluating future development.

**Response**

Mitigation measures developed by the Proponents applicable to Alternative D include mitigation and monitoring fund.

**Comment Number**            **EG-10-22-TE-1**

**Comment**

Any depletion or withdrawal of water, groundwater or surface, from the Green River Basin is considered an adverse impact to Colorado River fishes and therefore must be formally consulted the US Fish and Wildlife Service and a Biological Opinion received, before project approval.

**Response**

Depletion and withdrawal of water, groundwater or surface water from the Green River Basin is addressed in the Biological Assessment. A Biological Opinion will be received before project approval.

**Comment Number**            **EG-10-23-T-2**

**Comment**

Results of the traffic and activity monitoring for winter-time activities must be included in the analysis, both from the monitoring station and the Sublette Mule Deer Study.

**Response**

Thank you for your comment. Information on traffic numbers is reported in the Revised Draft SEIS.

**Comment Number**            **EG-10-24-G-14****Comment**

Development of the deep, or any other, formations for fluid minerals must be included in this analysis because of the potential impacts to surface resources.

**Response**

The Draft SEIS stated that development of the deep formation would be carried out in the same manner as the alternatives.

**Comment Number**            **EG-10-25-W-6****Comment**

Update fish and wildlife information should be used in the final EIS based on the most recent surveys and inventories.

**Response**

Updated information on wildlife trends was included in the Revised Draft SEIS.

**Comment Number**            **EG-10-26-R-1****Comment**

Impacts to the fishing and hunting in the region that are a consequence of this development need better investigation and analysis.

**Response**

The Revised Draft SEIS contains adequate analysis.

**Comment Number**            **EG-10-27-G-15****Comment**

We urge the BLM not to preemptively restrict its options in the Resource Management Plan revision by, in a decision on the PAPA project, foreclosing any alternative that would preserve some or all of the PAPA area for its wildlife, watershed, and recreation values.

**Response**

The alternatives in the Revised Draft SEIS conform to the existing RMP and they are also allowed for in the alternatives in the Draft EIS for the Pinedale RMP.

**Comment Number**            **EG-10-28-W-7****Comment**

I suggest that a conservation strategy for wildlife and fisheries be included within this document before approval.

**Response**

Please see the Draft Resource Management Plan.

**Comment Number**            **EG-10-29-W-8****Comment**

Considering a large portion of the Sublette mule deer herd's crucial winter range and many sage-grouse leks will be affected by current proposed SEIS, an adequate strategy for limiting the affects on wildlife should be included in the plan.

**Response**

The BLM has set forth Standard 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 prepared a Wildlife and Habitat Mitigation Plan for Alternative D in Appendix 9C. Also see the Wildlife Monitoring and Mitigation Matrix in Appendix 10 in the Revised Draft SEIS.

**Comment Number**            **EG-10-29-AM-2****Comment**

Subsequently, adaptive management processes should be used and based upon monitoring data so that a systematic approach to adjusting development can be made when other natural resources are affected.

**Response**

Thank you for your comment. Please see the Revised Draft SEIS.

**Comment Number**            **EG-10-30-AL-3****Comment**

This document needs to be a stand-alone EIS that includes more alternatives than the ones presented.

**Response**

Thank you for your comment. The BLM respectfully disagrees.

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

**Comment**

Consider what actions must be taken to guarantee no visual impairment of the Gros Ventre, Popo Agie, Washakie and Bridger Wilderness.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-11-2-AQ-2**

**Comment**

What must be done to minimize or prevent any potential effect to Global warming?

**Response**

Impacts of global warming are beyond the scope of this analysis. The Revised Draft SEIS contains a discussion on greenhouse gases.

**Comment Number**            **EG-12-1-G-1**

**Comment**

2000 ROD PAPA - Adaptive environmental management hope [lead to] failure to monitor, evaluate, [therefore] recommend and implement changes and management.

**Response**

Please see the Revised Draft SEIS. The BLM is fully aware of the struggles the PAWG has faced. Therefore, measures are included in the Revised Draft SEIS to supplement the PAWG and the BLM continues to have high expectations in implementing adaptive management through the PAWG.

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

**Comment**

WOC would like to see BLM adopt the WGFD minimum recommendations to mitigation wildlife impacts.

**Response**

See Revised Draft SEIS where the BLM has included the suggested mitigation measures for the level of development currently on the PAPA.

**Comment Number**            **EG-12-1-G-2**

**Comment**

WOC supports the UGRVC proposal "Doing it Right" to assure sustainability of all resources instead of the Boom and Bust we see happening to Pinedale now.

**Response**

Thank you for your comment.

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

**Comment**

Because of this, the BLM must consider an alternative that will actually reduce impacts and develop more scientifically credible means for estimating impacts. Scientifically based means exist to develop an alternative that allows for energy resource extraction while reducing impacts to mule deer and pronghorn, thus the BLM has an obligation under NEPA and FLPMA to consider and present such an alternative.

**Response**

Please see the Revised Draft SEIS.

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

**Comment**

The PASEIS also needs to clarify what exactly constitutes the development phase and the production phase and who makes this decision.

**Response**

This is clearly stated in the Revised Draft SEIS.

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

**Comment**

The BLM should provide unequivocal assurances that drilling will not occur outside CDAs until habitats within the CDAs have been successfully reclaimed to a functional sagebrush

community and big game populations have demonstrated a positive response to this reclamation.

**Response**

There will be a reclamation plan including monitoring to meet BLM objectives. The objectives will be based upon criteria reflecting the plant community in undisturbed areas adjacent to the actual disturbance. The criteria will reflect the diversity and cover of the predisturbed plant community.

**Comment Number**            **EG-13-2-G-3**

**Comment**

The BLM should also provide a better definition of what is meant by "temporary relaxation."

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-13-3-W-1**

**Comment**

The BLM should specify the location and size of habitat blocks described in Alternative B and C with assurance that they will not be disturbed by future energy extraction.

**Response**

The BLM is not sure to what habitat blocks the commenter is referring. Nevertheless, habitat outside of the core areas associated with Alternatives B, C, and D is, to varying degrees, likely to be disturbed by future wellfield development.

**Comment Number**            **EG-13-3-W-2**

**Comment**

Furthermore, as I state below, the failure to include any monitoring negates adaptive management and the basic premise of the proposed meetings. Meetings may serve the purpose of sharing information with involved parties, but they will do little good in ameliorating impacts to populations of mule deer and pronghorn.

**Response**

Monitoring has been established in the Operator's proposed Wildlife Monitoring and Mitigation Matrix (Appendix 10 in the Revised Draft SEIS).

**Comment Number**            **EG-13-4-RC-2****Comment**

The BLM should have monitoring data from other surface disturbance actions to provide a more plausible description of problems associated with reclamation of sagebrush communities.

**Response**

The BLM does have monitoring data from other surface disturbing actions in the field office. There will be a reclamation plan including monitoring to meet BLM objectives. The objectives will be based upon criteria reflecting the plant community in undisturbed areas adjacent to the actual disturbance. The criteria will reflect the diversity and cover of the predisturbed plant community. These plans will be submitted to the BLM annually for BLM review and concurrence. The BLM offers guidelines and leaves it up to the operators on how they accomplish the objectives.

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

The BLM must acknowledge that reclamation of this sagebrush ecosystem will not compensate for habitat losses during the LOP and provide a more scientifically credible estimate of impacts to mule deer and pronghorn populations.

**Response**

In the PAPA EIS of 2000, the BLM recognized the difficulties in re-establishing sagebrush. In Section 4.16.3.1 of the Revised Draft SEIS, the BLM stated that the continued direct impact to sagebrush and other native vegetation types is expected under each Alternative due to removal of vegetative cover and the long re-growth timeframe of shrubs.

**Comment Number**            **EG-13-5-W-4****Comment**

The BLM should acknowledge that with all alternatives, they are going to sacrifice a significant portion of mule deer and pronghorn winter ranges and, thus, their populations for many years to come.

**Response**

In Section 4.20.3.1 of the revised Draft SEIS, recent research on impacts to mule deer and pronghorn has been disclosed but effects have been generally confined to local populations inhabiting the PAPA, not to populations at the herd unit level. Nevertheless, the Revised Draft SEIS acknowledges that "lost habitat and diminishing habitat function may eventually lead to population declines (pronghorn) but such demographic response to impact would probably occur after some time has elapsed." Also, "there is potential for a declining population (mule deer), given a time lag between lost habitat effectiveness and function and a population-level

response." Population declines at the herd unit level are possible and should be detected during monitoring proposed in the Wildlife Monitoring and Mitigation Matrix (Appendix 10 in the Revised Draft SEIS).

**Comment Number**                    **EG-13-6-W-5**

**Comment**

The BLM should be more forthright in acknowledging the magnitude of impacts to mule deer and pronghorn populations and habitats. Existing scientific literature allows this forthright acknowledgement of impacts, thus the BLM must present this full disclosure of information if it is to meet its scientific obligations under NEPA.

**Response**

The BLM cited numerous studies that suggest impact to mule deer and pronghorn by wellfield development. In Section 4.20.3.1 of the revised Draft SEIS, recent research on impacts to mule deer and pronghorn has been disclosed but effects have been generally confined to local populations inhabiting the PAPA, not to populations at the herd unit level. Nevertheless, the Revised Draft SEIS acknowledges that "lost habitat and diminishing habitat function may eventually lead to population declines (pronghorn) but such demographic response to impact would probably occur after some time has elapsed." Also, "there is potential for a declining population (mule deer), given a time lag between lost habitat effectiveness and function and a population-level response."

**Comment Number**                    **EG-13-7-W-6**

**Comment**

The BLM must provide a more accurate assessment of habitat fragmentation and its potential impacts on populations of mule deer and pronghorn.

**Response**

As noted elsewhere, there can be no accurate assessment of habitat fragmentation without specific knowledge on how development would proceed, on the ground within the PAPA, through 2023. Habitat fragmentation may well contribute to effects on mule deer and pronghorn populations (sub-populations inhabiting the PAPA) but the BLM expects that specific impact to species' demographic parameters due to fragmentation alone, will not be possible to identify given the concurrent effects due to all other aspects of well-field developments.

**Comment Number**                    **EG-13-8-RC-3**

**Comment**

Because of reclamation problems I noted above, acres associated with pipelines should also be included in this estimation.

**Response**

Pipelines and well pads will be included in reclamation planning and monitoring. There will be a reclamation plan including monitoring to meet BLM objectives. The objectives will be based upon criteria reflecting the plant community in undisturbed areas adjacent to the actual disturbance. The criteria will reflect the diversity and cover of the pre-disturbed plant community.

**Comment Number**                    **EG-13-8-W-7**

**Comment**

The BLM must provide a realistic assessment of both direct and indirect habitat losses for mule deer and pronghorn by utilizing data for habitat avoidance from site-specific studies and the scientific literature, and at least attempt to relate habitat impacts to population impacts.

**Response**

Discussion of direct and indirect effects related to population impacts are included in the Revised Draft SEIS. The effects of displacement over time have been addressed in the Revised Draft SEIS, Chapter 4, Section 4.20.3.1. As disclosed in the Revised Draft SEIS, the reduced use of habitats and diminished distribution of wildlife as a result of impact, including use of winter range by big game, is expected to lead to greater risk of stochastic events adversely affecting the more confined population. A more confined population is also subject to density-dependent effects, which eventually cause declines.

**Comment Number**                    **EG-13-9-W-8**

**Comment**

Consideration should also be given to impacts resulting from increased traffic, recreation, and poaching.

**Response**

See the Revised Draft SEIS, section 4.20.2.

**Comment Number**                    **EG-13-9-W-9**

**Comment**

These impacts should be related to current predicted population trends and can be done with little added expense.

**Response**

Those Direct and Indirect impacts were discussed in the 1999 PAPA DEIS and were brought forward in the revised Draft SEIS in Section 4.20.2. The focus on impact addressed in the original and revised Draft SEIS has been on demonstrable impact that has occurred since the

2000 PAPA ROD. See section 4.20.2 in the Revised Draft SEIS. There are limited data available on poaching and vehicle-related mortality, the latter have been included in the Revised Draft SEIS. Recreational harvest has been included in population estimates provided by the WGFD but harvest is often related to public demand as well as population level. To relate the limited data on poaching and/or vehicle-related mortalities to population predictions would be extremely speculative and not productive.

**Comment Number**                    **EG-13-9-W-10**

**Comment**

The BLM should expand the scope of their cumulative impact analysis to consider all integrated environmental impacts encountered by migrating mule deer and pronghorn.

**Response**

Cumulative Impact Analysis Areas (CIAA) applicable to wildlife vary by species and are described in Section 4.20.4 of the Revised Draft SEIS. The CIAA for pronghorn includes the northern portion of the Sublette Herd Unit while the CIAA for moose and mule deer are the respective species' herd units in their entirety. The CIAA applicable to greater sage-grouse includes the area encompassed by SUGMAs 3 and 7. The CIAA for all other wildlife and aquatic species is the PAPA. BLM recognizes that cumulative impacts have occurred to the pronghorn and mule deer populations (sub-populations) that inhabit the PAPA. The purpose of cumulative impact analysis is to examine the effects of the proposed action (or preferred alternative) along with other past, present, and reasonably foreseeable future actions so that effects of the proposed action (or preferred alternative) would not be regarded as insignificant if it contributed with other, individually minor but collectively significant actions, to adversely affect the sub-populations on the PAPA. The BLM acknowledges in the Revised Draft SEIS that implementation of all Alternatives would impact pronghorn and mule deer. Any of those alternatives would cumulatively affect those sub-populations. Knowledge of all environmental impacts encountered by sub-populations of mule deer and pronghorn, as the commenter recommends, would not change that conclusion.

**Comment Number**                    **EG-13-10-T-1**

**Comment**

If it is feasible to bus personnel to work during winter it should be even more feasible to do in summer and this should be done.

**Response**

Thank you for your comment.

**Comment Number**                    **EG-13-10-T-2**

**Comment**

Computer assisted remote monitoring of producing wells should be mandatory to reduce traffic volumes.

**Response**

Computer assisted remote monitoring is included as part of the alternatives.

**Comment Number**            **EG-13-10-W-11**

**Comment**

The BLM should make all recommendations for mitigating impacts to wildlife in Appendix C mandatory regardless of which alternative they select and define enforcement measures, associated penalties for violations and decision points for habitat mitigation requirements.

**Response**

The BLM has set forth Standard 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 prepared a Wildlife and Habitat Mitigation Plan for Alternative D in Appendix 9C.

**Comment Number**            **EG-13-11-RC-4**

**Comment**

The BLM must provide details for required reclamation procedures, indicating seed mix, a reasonable time frame for achievement and measurable endpoints for reclamation success.

**Response**

There will be a reclamation plan including monitoring to meet BLM objectives. The objectives will be based upon criteria reflecting the plant community in undisturbed areas adjacent to the actual disturbance. The criteria will reflect the diversity and cover of the predisturbed plant community. These plans will be submitted to the BLM annually for BLM review and concurrence. The BLM offers guidelines and leaves it up to the Operators on how they accomplish the objectives.

**Comment Number**            **EG-13-12-W-12**

**Comment**

The BLM should also ensure that part of off-site migration is permanent protection of other habitats known to be important to big game animals.

**Response**

As noted in other responses to commenters, the BLM can not legally require provisions for offsite mitigation.

**Comment Number**                    **EG-13-12-W-13**

**Comment**

The BLM should require the proponents to provide a detailed habitat mitigation plan prior to the SEIS ROD release. This plan should indicate what habitat improvements will be conducted, the location of areas to be improved, the movement corridor or area that will allow deer and pronghorn to access the improved habitats and assurance that these habitats will be protected for perpetuity.

**Response**

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

**Comment Number**                    **EG-13-13-W-14**

**Comment**

BLM and the Proponents should commit to long term monitoring studies on both pronghorn and mule deer associated with wellfield development on the Pinedale Anticline.

**Response**

Alternative D was developed in part by the Proponents and State (Wyoming Game and Fish Department and Department of Environmental Quality). Mitigation measures developed by the Proponents applicable to Alternative D include an expected \$36 million for a mitigation and monitoring fund.

**Comment Number**                    **EG-13-14-W-15**

**Comment**

Thresholds themselves are not enough; the BLM must also identify the sorts of actions that would be triggered if thresholds were reached.

**Response**

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. Only Alternative D includes a Wildlife

Monitoring and Mitigation Matrix that would trigger specific Adaptive Management responses based on monitoring information.

**Comment Number**                    **EG-13-14-W-16**

**Comment**

The BLM must develop a scientifically valid monitoring plan that will document impacts to mule deer and pronghorn populations and their habitats and results of monitoring must be used to determine thresholds for adaptive management strategies.

**Response**

Alternative D includes a Wildlife Monitoring and Mitigation Matrix that would trigger specific Adaptive Management responses based on monitoring information.

**Comment Number**                    **EG-13-15-RC-5**

**Comment**

The BLM must assure that an invasive weed monitoring and management plan is established and this plan must include methods, triggers, and remediation actions and identification of responsible parties.

**Response**

There will be a reclamation plan including monitoring to meet BLM objectives. The objectives will be based upon criteria reflecting the plant community in undisturbed areas adjacent to the actual disturbance. The criteria will reflect the diversity and cover of the predisturbed plant community. These plans will be submitted to the BLM annually for BLM review and concurrence. The BLM offers guidelines and leaves it up to the Operators on how they accomplish the objectives.

**Comment Number**                    **EG-13-16-AL-1**

**Comment**

Scientifically based means exist to develop an alternative that allows for energy resource extraction while reducing impacts to mule deer and pronghorn, thus the BLM has an obligation under NEPA and FLMPA to consider and present such an alternative.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-13-17-G-4****Comment**

The BLM should also provide a better definition of what is meant by "temporary relaxation."

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-13-17-PA-1****Comment**

The BLM should provide unequivocal assurances that drilling will not occur outside CDAs until habitats within the CDAs have been successfully reclaimed to a functional sagebrush community and big game populations have demonstrated a positive response to this reclamation.

**Response**

Please see the Revised Draft SEIS.

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

The BLM should specify the location and size of habitat blocks described in Alternative B and C with assurance that they will not be disturbed by future energy extraction.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-13-19-G-5****Comment**

Meetings may serve the purpose of sharing information with involved parties, but they will do little good in ameliorating impacts to populations of mule deer and pronghorn

**Response**

Thank you for your comment.

**Comment Number**            **EG-13-20-RC-6****Comment**

The BLM must acknowledge that reclamation of this sagebrush ecosystem will not compensate for habitat losses during the LOP and provide a more scientifically credible estimate of impacts to mule deer and pronghorn populations.

**Response**

There will be a reclamation plan including monitoring to meet BLM objectives. The objectives will be based upon criteria reflecting the plant community in undisturbed areas adjacent to the actual disturbance. The criteria will reflect the diversity and cover of the predisturbed plant community. Local biologists are consulted when developing the criteria for reclamation.

**Comment Number**            **EG-13-21-W-17****Comment**

The BLM should acknowledge that with all alternatives, they are going to sacrifice a significant portion of mule deer and pronghorn winter ranges and, thus, their populations for many years to come.

**Response**

In Section 4.20.3.1 of the Revised Draft SEIS, recent research on impacts to mule deer and pronghorn has been disclosed but effects have been generally confined to local populations inhabiting the PAPA, not to populations at the herd unit level. Nevertheless, the Revised Draft SEIS acknowledges that "lost habitat and diminishing habitat function may eventually lead to population declines (pronghorn) but such demographic response to impact would probably occur after some time has elapsed." Also, "there is potential for a declining population (mule deer), given a time lag between lost habitat effectiveness and function and a population-level response." Population declines at the herd unit level are possible and should be detected during monitoring proposed in the Wildlife Monitoring and Mitigation Matrix (Appendix 10 in the Revised Draft SEIS).

**Comment Number**            **EG-13-22-W-18****Comment**

The BLM should be more forthright in acknowledging the magnitude of impacts to mule deer and pronghorn populations and habitats. Existing scientific literature allows this forthright acknowledgement of impacts, thus the BLM must present this full disclosure of information if it is to meet its scientific obligations under NEPA.

**Response**

In Section 4.20.3.1 of the Revised Draft SEIS, recent research on impacts to mule deer and pronghorn has been disclosed but effects have been generally confined to local populations inhabiting the PAPA, not to populations at the herd unit level. Nevertheless, the Revised Draft

SEIS acknowledges that "lost habitat and diminishing habitat function may eventually lead to population declines (pronghorn) but such demographic response to impact would probably occur after some time has elapsed." Also, "there is potential for a declining population (mule deer), given a time lag between lost habitat effectiveness and function and a population-level response." None of the scientific studies conducted on wildlife in the PAPA has provided predictions of how future development on the PAPA would affect mule deer and pronghorn populations. BLM will acknowledge that since the future level of development (under any alternative) will exceed the past and present level of development, mule deer and pronghorn populations will not be impacted any less than they have been already and future impacts are likely to exceed those that have been described by the scientific studies so far.

**Comment Number**                      **EG-13-23-W-19**

**Comment**

The BLM must provide a more accurate assessment of habitat fragmentation and its potential impacts on populations of mule deer and pronghorn.

**Response**

There can be no accurate assessment of habitat fragmentation without specific knowledge on how development would proceed, on the ground within the PAPA, through 2023. The amount of edge created by well-field components was used as one measure of fragmentation because operators provided well pad sizes, but not specific locations of those pads. Linear edges created by road and pipeline rights-of-way were likewise estimated, numerically but not spatially specific. Habitat fragmentation may well contribute to effects on mule deer and pronghorn populations (sub-populations inhabiting the PAPA) but the BLM expects that specific impact to species' demographic parameters due to fragmentation alone, will not be possible to identify given the concurrent effects due to all other aspects of well-field developments.

**Comment Number**                      **EG-13-24-W-20**

**Comment**

The BLM must provide a realistic assessment of both direct and indirect habitat losses for mule deer and pronghorn by utilizing data for habitat avoidance from site-specific studies and the scientific literature, and at least attempt to relate habitat impacts to population impacts.

**Response**

Discussion of direct and indirect effects related to population impacts are included in the revised Draft SEIS.

**Comment Number**            **EG-13-25-CU-1****Comment**

The BLM should expand the scope of their cumulative impact analysis to consider all integrated environmental impacts encountered by migrating mule deer and pronghorn.

**Response**

The cumulative impact analysis presented in the Revised Draft SEIS is adequate.

**Comment Number**            **EG-13-26-W-21****Comment**

The BLM should make all recommendations for mitigating impacts to wildlife in Appendix C mandatory regardless of which alternative they select and define enforcement measures, associated penalties for violations and decision points for habitat mitigation requirements.

**Response**

The BLM has set forth Standard 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 prepared a Wildlife and Habitat Mitigation Plan for Alternative D in Appendix 9C.

**Comment Number**            **EG-13-27-RC-7****Comment**

The BLM must provide details for required reclamation procedures, indicating seed mix, a reasonable time frame for achievement and measurable endpoints for reclamation success.

**Response**

There will be a reclamation plan including monitoring to meet BLM objectives. The objectives will be based upon criteria reflecting the plant community in undisturbed areas adjacent to the actual disturbance. The criteria will reflect the diversity and cover of the predisturbed plant community. These plans will be submitted to the BLM annually for BLM review and concurrence. The BLM offers guidelines and leaves it up to the Operators to accomplish the objectives.

**Comment Number**            **EG-13-28-RC-8****Comment**

The BLM should require the proponents to provide a detailed habitat mitigation plan prior to the SEIS ROD release. This plan should indicate what habitat improvements will be conducted, the

location of areas to be improved, the movement corridor or area that will allow deer and pronghorn to access the improved habitats and assurance that these habitats will be protected for perpetuity.

**Response**

There will be a reclamation plan including monitoring to meet BLM objectives. The objectives will be based upon criteria reflecting the plant community in undisturbed areas adjacent to the actual disturbance. The criteria will reflect the diversity and cover of the predisturbed plant community. Local biologists are consulted when developing the criteria for reclamation.

**Comment Number**                      **EG-13-29-W-22**

**Comment**

The BLM must develop a scientifically valid monitoring plan that will document impacts to mule deer and pronghorn populations and their habitats and results of monitoring must be used to determine thresholds for adaptive management strategies.

**Response**

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. Only Alternative D includes a Wildlife Monitoring and Mitigation Matrix that would trigger specific Adaptive Management responses based on monitoring information.

**Comment Number**                      **EG-13-30-RC-9**

**Comment**

The BLM must assure that an invasive weed monitoring and management plan is established and this plan must include methods, triggers, and remediation actions and identification of responsible parties.

**Response**

There will be a reclamation plan including monitoring to meet BLM objectives. The objectives will be based upon criteria reflecting the plant community in undisturbed areas adjacent to the actual disturbance. The criteria will reflect the diversity and cover of the predisturbed plant community. These plans will be submitted to the BLM annually for BLM review and concurrence. The BLM specifically monitors and requests information on noxious weeds.

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

The BLM must propose a detailed and enforceable mitigation plan, using any and all means, prior to issuance of the ROD that will ensure no visibility impairment and no other violations of Clean Air Act standards.

**Response**

This is within the range of alternatives presented in the Draft SEIS - see Alternative C.

**Comment Number**            **EG-15-1-AQ-2****Comment**

The BLM must prepare a proper air quality analysis and then must develop an alternative that results in no violations of Clean Air Act standards.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-15-2-AQ-3****Comment**

Under NEPA, the Bureau of Land Management has obligations to assess and report the cumulative impacts of expected emissions from the proposed project on the National Ambient Air Quality Standards (NAAQS), prevention of significant deterioration (PSD) increments, and air quality related values (AQRVs), and to identify alternatives or other mitigation measures sufficient to prevent expected violations of NAAQS, PSD increments and adverse impacts on AQRVs.

**Response**

The BLM's obligations under the Clean Air Act and the Federal Land Policy and Management Act is simply to assure its 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 of the action, and its cumulative impacts" before a decision is made to deny, approve, or approve with mitigation the Proposed Action or Alternative). The BLM is not obligated to develop a separate emissions inventory than used in the NAAQS analysis that includes emissions from all new and modified sources added after the regulatory major and minor PSD baseline dates. The State of Wyoming is the regulatory agency obligated to implement the Clean Air Act (with EPA oversight) including regulatory PSD Increment Consumption analyses.

**Comment Number**            **EG-15-2-AQ-4****Comment**

Furthermore, the Federal Land Policy and Management Act (FLPMA) mandates that, "In the development and revision of land use plans, the Secretary shall . . . (8) provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans . . ." (43 U.S.C. § 1712(c)(8); See also 43 C.F.R. § 2920.7(b)(3) (requiring the same for land use authorizations).

**Response**

See response to Comment EG-15-2-AQ-3.

**Comment Number**            **EG-15-3-AQ-5****Comment**

In order to meet its obligation under FLPMA to "provide for compliance" with the requirements of the Clean Air Act (CAA), the BLM must identify an allowable level of emissions for the proposed project that would not cause or contribute to violations of pollution limits in the ambient air or adverse impacts on air quality related values in class I areas, and identify mitigation capable of preventing such violations.

**Response**

The BLM's obligations under the Clean Air Act and the Federal Land Policy and Management Act is simply to assure its 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 of the action, and its cumulative impacts" before a decision is made to deny, approve, or approve with mitigation the Proposed Action or Alternative). The BLM recognizes that the State of Wyoming is the regulatory agency obligated to implement the Clean Air Act (with EPA oversight) including complying with the EPA Regional Haze Rule so as to achieve "reasonable progress" toward the national goal of no impairment of visibility due to manmade sources of air pollution in Class I areas. The BLM has adopted numerous air quality protections necessary for compliance with the reasonable progress goals. Mitigation has been identified in the various alternatives.

**Comment Number**            **EG-15-3-AQ-6****Comment**

Unfortunately, the BLM has failed to follow these requirements with this DSEIS.

**Response**

The BLM's obligations under the Clean Air Act and the Federal Land Policy and Management Act is simply to assure its 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 of the action, and its cumulative impacts" before a decision is made to deny, approve, or approve with mitigation the Proposed Action or Alternative). The BLM recognizes that the State of Wyoming is the regulatory agency obligated to implement the Clean Air Act (with EPA oversight) including complying with the EPA Regional Haze Rule so as to achieve "reasonable progress" toward the national goal of no impairment of visibility due to manmade sources of air pollution in Class I areas. The BLM has adopted numerous air quality protections necessary for compliance with the reasonable progress goals.

**Comment Number**                    **EG-15-4-AQ-7**

**Comment**

The BLM is required under FLPMA, 43 U.S.C. § 1712(c)(8), to "provide for compliance with" all Clean Air Act requirements and thus the BLM cannot authorize an action that would allow the PSD increments to be exceeded.

**Response**

See response to Comment BI-1-138-AQ-26.

**Comment Number**                    **EG-15-5-AQ-8**

**Comment**

The BLM is required to "provide for compliance with" all CAA requirements, and cannot authorize an action that would violate the PSD increments, which are a CAA requirement under Section 163.

**Response**

See response to Comment BI-1-138-AQ-26.

**Comment Number**                    **EG-15-6-AQ-9**

**Comment**

Because calculations for visibility impairment from the proposed project are only based on the incremental amount (or number of days) above 1.0 dv using 2005 as the baseline year, the effect is that the visibility impairment already caused by the unexpected additional pollution from current development in the Pinedale Anticline are ignored by this draft SEIS.

**Response**

The BLM disagrees. Please see mitigation for Alternative C of the Draft SEIS. The impact from current development is not ignored.

**Comment Number**            **EG-15-7-AQ-10****Comment**

Under federal requirements, the BLM must not authorize the PAPA project if it will cause or contribute to adverse impacts on visibility in any Class I area.

**Response**

Please see the mitigation in the alternatives of the Revised Draft SEIS.

**Comment Number**            **EG-15-7-AQ-11****Comment**

The draft SEIS fails to provide an adequate mitigation scenario that would remedy the additional adverse visibility impacts predicted for several protected Class I areas.

**Response**

Thank you for your comment.

**Comment Number**            **EG-15-8-AQ-12****Comment**

Because the Class I areas with potentials to be adversely impacted by this proposed project are either under Forest Service or NPS control, the BLM must fully acknowledge and discuss the significance of impacts using their impact threshold of 0.5 dv, even if it does not adhere to this standard.

**Response**

The BLM's obligations under the Clean Air Act and the Federal Land Policy and Management Act is simply to assure its 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 of the action, and its cumulative impacts" before a decision is made to deny, approve, or approve with mitigation the Proposed Action or Alternative). The BLM recognizes that the State of Wyoming is the regulatory agency obligated to implement the Clean Air Act (with EPA oversight) including complying with the EPA Regional Haze Rule so as to achieve "reasonable progress" toward the national goal of no impairment of visibility due to manmade sources of air pollution in Class I areas. The BLM has adopted numerous air quality protections necessary for compliance with the reasonable progress goals.

**Comment Number**            **EG-15-9-AQ-13****Comment**

The BLM should coordinate with the Wyoming DEQ to ensure that the predicted impacts due to the planned increased oil and gas production in the PAPA be accounted for in the State Implementation Plan (SIP) for visibility.

**Response**

See response to Comment BI-3-13-AQ-6.

**Comment Number**            **EG-15-10-AQ-14****Comment**

It is imperative that the BLM properly assess whether the health-based NAAQS will be complied with in the Pinedale Anticline area, and that it not allow any development that would threaten compliance with these standards.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-15-11-AQ-15****Comment**

Under NEPA, the BLM must disclose the cumulative impacts of the proposed project. However, it is unclear whether cumulative HAP impacts were analyzed for this draft SEIS.

**Response**

Only project HAPs were considered in the analyses. In the vicinity of the PAPA the only significant sources of HAPs are project sources and it has been demonstrated that HAP concentrations resulting from project emissions are below the applicable thresholds and cancer risks within and nearby the PAPA.

**Comment Number**            **EG-15-12-AQ-16****Comment**

Furthermore, BLM should quantify emissions from 1,3-butadiene, secondary formaldehyde and diesel exhaust.

**Response**

HAP emissions from diesel exhaust are negligible as compared to those from production activities in the field. AP-42, Chapter 3, Table 3.4-1 lists emission factors for the major HAPs contained in diesel exhaust and regulated under the Clean Air Act. Benzene is the HAP emitted in the largest quantity and would total less than 1 tpy for all construction activity including trucks and drill rigs for max modeled year 2009. Compared to production emissions from the same time period, this emissions level is insignificant in comparison. Secondary formaldehyde formation is a complex process involving concentrations of many different species along with heat, light, temperature and other effects. Taking all of this information into account for an analysis such as this is not possible. Secondary formaldehyde production is expected to be much smaller in magnitude as compared to the primary formaldehyde presently calculated for natural gas combustion sources. 1,3-butadine is expected to be emitted in quantities that would produce negligible impacts such as those from other HAPs emitted by diesel combustion sources.

**Comment Number**                      **EG-15-12-AQ-17**

**Comment**

If this is indeed the case, the BLM should notify the public within the document that it has not included all possible estimations of cancer risk.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**                      **EG-15-12-AQ-18**

**Comment**

If the BLM has indeed included these emissions, it should provide an explanation so that the analysis is clearer to the public.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**                      **EG-15-13-AQ-19**

**Comment**

Additionally, the BLM's assessment has entirely neglected the cancer risk associated with diesel exhaust emissions from oil and gas development, which may be highly significant.

**Response**

See response to Comment EG-15-12-AQ-16.

**Comment Number**            **EG-15-13-AQ-20**

**Comment**

The BLM must disclose these potential impacts in association with the risks presented by formaldehyde and benzene emissions.

**Response**

See response to Comment EG-15-12-AQ-16.

**Comment Number**            **EG-15-14-AQ-21**

**Comment**

Given the fact that lakes in areas nearby the PAPA are already experiencing impacts, this draft SEIS should provide a means to limit any additional impacts. At a minimum, it must acknowledge and discuss these impacts.

**Response**

The BLM is concerned with the impacts from all components of nitrogen and sulfur deposition on terrestrial area and watersheds throughout the Bridger Wilderness and other class I areasheds within the regions. The modeling performed for the SEIS included these analyses. The modeling results indicated impacts below BLM levels of concern.

**Comment Number**            **15-15-AQ-22**

**Comment**

Volume 1 of the air quality TSD states that there were no values above the DAT for sulfur deposition for any of the direct project impact scenarios. But, according to Table M.19 in Appendix M, the DAT for sulfur deposition at Bridger is 0.0093 under Alternative C. There is either an error in this table or the TSD needs to be amended to reflect this apparent elevated value

**Response**

Text has been changed in the Revised Draft SEIS.

**Comment Number**            **EG-15-15-AQ-23****Comment**

The TSD also does not include a write-up of the modeling results for nitrogen and sulfur deposition impacts from direct project and regional sources.

**Response**

Text has been changed in the Revised Draft SEIS.

**Comment Number**            **EG-15-15-AQ-24****Comment**

This is an impact of potential significance recognized by the Federal Land Managers, so BLM must consider and discuss these elevated DATs in the DSEIS.

**Response**

Text has been changed in the Revised Draft SEIS.

**Comment Number**            **EG-15-16-AQ-25****Comment**

As described in detail in below, the BLM has failed to include all relevant sources in its modeling inventory and has under-predicted emissions from sources it did include.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-15-17-AQ-26****Comment**

The BLM's assumptions are not justified without being identified as mitigation measures and made enforceable by the BLM.

**Response**

All of the emissions controls used in the analysis were either required by The WDEQ-AQD or were Proponent-offered. The Proponent-committed measures become legally binding in the ROD.

**Comment Number**            **EG-15-18-AQ-27****Comment**

The BLM must make clear a commitment to establish, as an enforceable measure, these control requirements if it will be basing its final decision on this level of control.

**Response**

All of the emissions controls used in the analysis were either required by the WDEQ-AQD or were Proponent-offered. The Proponent-committed measures become legally binding in the ROD.

**Comment Number**            **EG-15-19-AQ-28****Comment**

Furthermore, given that drill rigs in the area are only achieving Tier 2 compliance on a spotty basis and in fact will be given several additional years to move toward Tier 2 compliance under the BLM's Alternative C Phase II mitigation plan, we see no rational basis for the BLM to assume that all Frac and Completion engines will immediately meet Tier 2 emissions standards.

**Response**

Emissions estimates provided by frac/completion companies stated that all frac/completion engines currently meet Tier 2 standards.

**Comment Number**            **EG-15-20-AQ-29****Comment**

If the BLM is going to assume all completions in the Pinedale Anticline project area are flareless then the BLM must make that an enforceable requirement.

**Response**

Current operating practice is that flaring only occurs for upset conditions.

**Comment Number**            **EG-15-21-AQ-30****Comment**

The BLM must reconcile the discrepancy in these data and model the potential number of wells drilled based on consistent duration activity data (i.e., either the emissions must be based on an average duration of 57 days/well in 2009 or the number of wells modeled for the year must be 381).

**Response**

Modeled emissions from the drill rigs are based on a maximum lb/hr emission rate representing all rigs proposed for the year running at the same time to produce a worst case scenario. The discrepancy between the 305 or 381 wells is due to differing operator drilling practices and therefore differing number of days to drill a well between the operators. The correct number is the 305 wells as stated in the document and the tpy number is also correct reflecting the differing drilling duration times between operators. The tpy numbers have no effect on the modeling and are only presented to estimate potential emissions based on the rigs and number of wells drilled including duration. Modeled numbers only represent the worst case of all rigs running simultaneously.

**Comment Number**                      **EG-15-22-AQ-31**

**Comment**

In addition, the 2009 annual NO<sub>x</sub> emissions from Ultra's drill rig engines in the proposed action inventory (Table F.3.74) are not consistent with the emissions calculations in Tables F.3.23 and F.3.24 of Volume 2 of the AQTSD. The annual emissions should be 1,238 TPY, instead of the 1,093 reported in Table F.3.74. This represents an underestimate of 13%.

**Response**

Per information obtained from Ultra, 11 of the 16 rigs proposed to be operated in 2009 will meet Tier 2 requirements for the entire year of 2009. The 5 remaining rigs will meet Tier 2 requirements by 3/1/2009. The lb/hr numbers (which are the numbers input to the model for 2009) in Table F.3.74 represent the worst case scenario for the first 2 months when there could potentially be 11 Tier 2 and 5 Tier 1 rigs operating at any given time. The tpy numbers are correct based on a ratio of the number of wells drilled in the first 2 months by the Tier 1 rigs (6) and the number of wells drilled by the Tier 2 rigs during the entire year (100).

**Comment Number**                      **EG-15-22-AQ-32**

**Comment**

The overall annual NO<sub>x</sub> emissions in 2009 for all operators should be 3,325 TPY, instead of the 3,180 TPY reported in Table F.3.74. This represents an underestimate of 5% of the annual NO<sub>x</sub> emissions from all drill rig engines in 2009.

**Response**

See response to Comment EG-15-AQ-22-31.

**Comment Number**                    **EG-15-23-AQ-33****Comment**

There is no support in the draft SEIS for the concept that compressor engines are the Pinedale Compressor Station will be subject to a stricter NO<sub>x</sub> emission rate of 0.2 g/hp-hr. If the BLM is to maintain that this emission factor is appropriate it must come forward with information that the Wyoming DEQ will require that all state permits for compressors supporting the Pinedale Anticline field do or will require a 0.2g/hp-hr emission factor, or otherwise ensure this is a federally enforceable standard.

**Response**

Information was provided by Questar showing a 0.2 g/hp-hr emission rate for the large natural gas fired turbines. Given that these large turbines will be subject to 40 CFR part 60, Subpart GG, "Standards of Performance for Stationary Turbines", depending on turbine setup and fuel nitrogen load, 0.2 g/hp-hr is a reasonable emission rate to conform to this regulation.

**Comment Number**                    **EG-15-24-AQ-34****Comment**

The BLM's cumulative emission inventory did not include any sources that were permitted and operating prior to January 1, 2005.

**Response**

The BLM maintains that it is not necessary to develop a comprehensive emissions inventory before January 1, 2005. Emissions before 2005 are represented by the background conditions. The background conditions are applicable for year 2005.

**Comment Number**                    **EG-15-24-AQ-35****Comment**

The approach of assuming certain sources were reflected in background concentrations is not consistent with current practice for analyzing emissions impacts.

**Response**

The BLM believes the air quality analysis accurately represents the potential impacts of the project alternatives along with reasonably foreseeable development and reasonably foreseeable future actions. Background air monitoring results incorporated into modeling efforts ensure that existing impacts are accounted for. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**                    **EG-15-24-AQ-36****Comment**

Thus, unless the BLM can demonstrate that the impacts of all existing sources are reflected in the monitoring data, and show that the monitoring data are reflective of maximum concentrations in the area and have been properly collected and quality-assured, the BLM cannot use the background monitoring data to reflect all existing sources in or affecting the region and must, instead, inventory and model all existing sources in the project area.

**Response**

See responses to Comments EG-15-AQ-24-34 and EG-15-AQ-24-35.

**Comment Number**                    **EG-15-25-AQ-37****Comment**

As presented, the BLM's PSD increment analysis is seriously deficient since it only assesses the emissions changes that have occurred or are expected to occur since 2005.

**Response**

The PSD demonstrations performed for this SDEIS serve information purposed only and do not constitute a regulatory PSD increment analysis, which may be completed as necessary by WDEQ-AQD. See comment response for EG-15-2-AQ-3.

**Comment Number**                    **EG-15-25-AQ-38****Comment**

The BLM must prepare an inventory of all emissions changes that have occurred since the major and minor PSD baseline dates and model those changes in emissions to determine compliance with the PSD increments.

**Response**

See response to EG-15-2-AQ-3.

**Comment Number**                    **EG-15-25-AQ-39****Comment**

This same inventory should also be used to determine visibility impacts.

**Response**

The BLM believes the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**                    **EG-15-25-AQ-40**

**Comment**

The BLM should assess the impacts that the Pinedale Anticline project sources have on nearby (Class II) increments as well as the impacts that areas considering all other sources that impact the same Class I areas that are impacted by the Pinedale Anticline project.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**                    **EG-15-25-AQ-41**

**Comment**

Furthermore, the BLM must base its PSD increment analysis on a comprehensive inventory of sources in order to meet its obligation to ensure the scientific validity of this analysis.

**Response**

See response to Comment EG-15-2-AQ-3.

**Comment Number**                    **EG-15-26-AQ-42**

**Comment**

The BLM can only credit sources for emissions decreases if the sources' emissions are known to be part of the background concentration and only if the decrease reflects actual emissions reductions (not just permitted or potential emissions reductions).

**Response**

The BLM included permitted emissions increases and decreases the state-permitted source inventory for the inventory period January 1, 2005 through February 1, 2006. The BLM believes the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-15-26-AQ-43****Comment**

Because it is unclear whether these emissions reductions reflect actual or just potential emissions reductions it is possible that the BLM's state-permitted source emission inventory underestimated emissions and, therefore, that the BLM underestimated ambient impacts. The BLM must ensure, and provide information showing, that this is not the case.

**Response**

See response to Comment EG-15-26-AQ-42.

**Comment Number**            **EG-15-27-AQ-44****Comment**

As discussed in Part I, the BLM must include emissions from drilling rigs in its PSD increment analysis.

**Response**

The WDEQ and EPA have not determined whether drilling rigs are categorized as stationary sources. Drilling rigs have not operated at the same exact location in excess of 2 years in the PAPA. The BLM has included drilling rig emissions in the PSD analyses performed for the SEIS. Although the PSD demonstrations performed for this SEIS serve information purposes only and do not constitute a regulatory PSD increment analysis, which may be completed by the WDEQ-AQD.

**Comment Number**            **EG-15-28-AQ-45****Comment**

Collectively, these sources represent significant emissions of NO<sub>x</sub> and, therefore, must be properly accounted for in the BLM's inventory and the resulting impact analyses.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-15-29-AQ-46****Comment**

The BLM must make sure that all sources that were excluded from the state-permitted inventory are adequately accounted for in the WOGCC inventory. It does not appear that this is the case. It appears that the regional inventory under-predicts NO<sub>x</sub> emissions from these sources.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**                    **EG-15-30-AQ-47**

**Comment**

Furthermore, the WOGCC inventory did not include any estimates of PM, VOC or HAP emissions from these production sites. This is a significant oversight to not include these emissions in the regional inventory.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**                    **EG-15-31-AQ-48**

**Comment**

It is a significant oversight to fail to inventory sources of VOCs in the region due to the contribution of these compounds to ozone formation.

**Response**

Regional VOC emissions from the Western Regional Air Partnership (WRAP) 2018 emission inventory were included in the ozone analyses.

**Comment Number**                    **EG-15-32-AQ-49**

**Comment**

The reasonably foreseeable projects inventory should have included all sources recently permitted or operating, that will have an impact on the same areas impacted by the Pinedale Anticline project sources.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-15-33-AQ-50****Comment**

All of these power plants have the potential to impact the same Class I areas that are impacted by Pinedale Anticline project sources and, therefore, must be considered in the BLM's cumulative analysis.

**Response**

The power plants listed fall outside of the modeling domain. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-15-33-AQ-51****Comment**

In addition, the BLM must include in the regional inventory any other new or modified sources, other than power plants, proposed in the region.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-15-34-AQ-52****Comment**

The regional inventory also failed to include any emissions from NEPA projects in other states that could be impacting the same area as the Pinedale Anticline sources.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-15-34-AQ-53****Comment**

The remaining development inventory is incomplete and therefore underestimates cumulative air quality impacts in the region.

**Response**

Thank you for your comment. The BLM believes that the data and analyses provided in the SDEIS and AQTSD are adequate for this impact assessment.

**Comment Number**            **EG-15-36-AQ-55****Comment**

Given the fact that a slightly higher background concentration (i.e., 7-16% higher) would result in 24-hour PM<sub>2.5</sub> NAAQS violations, it is important that the BLM explain why it did not use the maximum observed 24-hour concentration from either 2005 or 2006 as the representative maximum background concentration in the area.

**Response**

Background concentrations are typically determined for conditions upwind of source activity, i.e. to not include contributions from project sources. Modeled impacts are added to background conditions to provide a total concentration for comparison to ambient standards and thresholds. If project impacts are already included in background conditions, adding modeled impacts to these values double counts the impacts from project sources. Maximum measured concentrations are typically downwind of project sources. Using a second highest value as a background condition provides a conservative estimate of the total impact.

**Comment Number**            **EG-15-36-AQ-56****Comment**

If not, then the BLM must disclose its evaluation as to why 15 $\mu$ /m<sup>3</sup> is more representative of the maximum background concentrations in the area.

**Response**

See response to Comment EG-15-36-AQ-55.

**Comment Number**            **EG-15-37-AQ-57****Comment**

Given the fact that a background concentration this high would result in annual NO<sub>2</sub> concentrations from the BLM's analysis of the Pinedale Anticline project and other regional sources that is almost 90% of the NAAQS, it is important that the BLM carefully evaluate which monitor is more representative of the maximum background concentrations in the area.

**Response**

See response to Comment EG-15-36-AQ-55.

**Comment Number**            **EG-15-38-G-1****Comment**

Considering the fact the BLM's analysis already shows visibility impairment, increment violations and threatened NAAQS and none of the proposed alternatives are sufficient to mitigate these predicted air quality impacts, we do not support the proposed project under any of the BLM's development alternatives.

**Response**

Thank you for your comment.

**Comment Number**            **EG-16-1-W-1****Comment**

In the Executive Summary, p. viii, para 3 **Wildlife and Aquatic Resources**, please change sentence 1, "Implementation of any alternative is likely" to "Implementation of any alternative will create additional barriers to wildlife."

**Response**

The Executive Summary of the revised Draft SEIS has not been changed. Since all "wildlife" is addressed in the sentence, the use of "likely" reflects something less than absolute certainty, which the commenter supports. Such a high level of certainty may eventually be supported by appropriate wildlife monitoring but the suggested change may not be applicable to all species.

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

Chapter 2, p.7, para 3 notes that BLM "coordinates a review with the Wyoming Game and Fish Department." EPF requests that language be added that BLM will comply with the recommendations of the WG&F.

**Response**

The BLM complies with the recommendations of the WGFD to the extent practicable, within context of other land uses.

**Comment Number**            **EG-16-3-W-3****Comment**

EPF asks the BLM add information in all applicable chapters and sections on the behavioral changes addressed in the recent regional game studies and includes those estimated totals as

well in the Proposed Action and other sections in order for the public to understand the true impact of development.

**Response**

Wildlife response to existing wellfield developments was included in the Revised Draft SEIS.

**Comment Number**            **EG-16-4-G-1****Comment**

Chapter 1, Section 1.7 Purpose and Need, p. 9, last paragraph "The Operators" Proposed Action Would: provide for compensatory mitigation, EPF asks that this be defined. Just what constitutes "compensatory mitigation"?

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-17-1-G-1****Comment**

You asked for comments on this draft that we believe to be in error, I would ask you to review this decision in light of the Multiple Use and Sustained Yield Act.

**Response**

The BLM appreciates the issue 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 have been made in fulfilling this responsibility.

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

We start by declaring a no-net-loss policy - a goal - for wildlife in the proposed area.

**Response**

In the revised Draft SEIS, the BLM acknowledges the impairment of existing and future habitat function. With diminished habitat function and availability, wildlife population declines are expected. The Wildlife Monitoring and Mitigation Matrix in Appendix 10 of the Revised Draft SEIS proposes wildlife trend thresholds for multiple species, mitigation, and mitigation ratios to be implemented once population declines have been detected. Whether or not implementation of the proposal will attain "no net loss" is unknown.

**Comment Number**            **EG-17-3-W-2****Comment**

We begin by adopting the minimum standards recommended by the WY G & F. I am distressed that Appendix C mentions that the adoption of most of the G & F minimum standards. How are we to interpret this? If these are the minimum standards then adoption of less than the minimum standards means sacrificing wildlife.

**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 recognizes that "habitat function is substantially impaired and cannot generally be recovered through management or habitat treatments."

**Comment Number**            **EG-17-4-G-2****Comment**

We cooperate. Minimizing impacts will require uncharacteristic cooperation between companies, between agencies, and uncommon patience on the part of the public and the NGOs.

**Response**

Thank you for your comment.

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

We go slow and develop the core in a linear fashion to minimize the disturbance to N > S migration. Choose the well locations with wildlife impacts in mind. Minimizing impacts might mean deferred locations but leaving natural gas in the ground might mean higher profits in the long run.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-17-6-PA-2****Comment**

We stay light on our feet. The BLM calls this adaptive management. To us it means we learn lessons along the way and we don't repeat mistakes.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-17-7-PA-3****Comment**

We get ready to mitigate. The scale of both the company's proposal and the BLM's preferred alternative is so massive that mitigation both on-site and off-site has to be planned for to achieve our objective.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-17-8-SE-1****Comment**

We safe guard local quality of life. Again this calls for community impact assistance and a new paradigm our new neighbors the gas developers.

**Response**

Thank you for your comment.

**Comment Number**            **EG-17-9-AQ-1****Comment**

We take special notice of air quality concerns.

**Response**

Thank you for your comment.

**Comment Number**            **EG-18-1-W-1****Comment**

We would like to see the BLM enforce 3:1 offsite mitigation, and give a definition of what that would include.

**Response**

See the Alternative D Wildlife and Habitat Mitigation Plan in Appendix 9C and the Wildlife Monitoring and Mitigation Matrix in Appendix 10 of the Revised Draft SEIS in which mitigation and mitigation ratios have been proposed.

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

We would like to see the BLM commit to a strong monitoring program, and not just turn it over to the petroleum companies.

**Response**

Thank you for your comment. See Revised Draft SEIS - monitoring and mitigation.

**Comment Number**            **EG-18-3-W-2****Comment**

We feel that the BLM has an obligation to enforce more effective methods, such as netting, to prevent migratory bird fatalities.

**Response**

Included in Appendix 4 of the revised Draft SEIS, any pits with harmful fluids in them would be maintained in a manner that would prevent migratory bird mortality.

**Comment Number**            **EG-18-4-W-3****Comment**

We feel that there is adequate information already available on what resources are needed to sustain sage grouse populations. The BLM has an obligation to implement available practices that will benefit this species.

**Response**

The BLM is aware of the resources needed to sustain sage-grouse populations. Based on analyses presented in Section 4.20.3.1 in the revised Draft SEIS, "it is uncertain if habitats

would still provide some function to greater sage-grouse by the end of the development phase under all action Alternatives."

**Comment Number**            **EG-18-5-W-4**

**Comment**

We would like to see the BLM commit to a certain population number for the mule deer and antelope herds.

**Response**

The Wildlife Monitoring and Mitigation Matrix in Appendix 10 in the Revised Draft SEIS proposes wildlife trend thresholds for multiple species, mitigation, and mitigation ratios to be implemented once population declines have been detected.

**Comment Number**            **EG-18-5-W-5**

**Comment**

We would like to see the BLM commit to do all within their power to never allow the deer herd population to drop below a level close to around 26,000 deer within the region.

**Response**

Mule deer populations are managed by Wyoming Game and Fish Department. Population objectives are based on a variety of factors, including availability and condition of habitats within the area (herd unit) inhabited by the population. The BLM can not commit to managing population or habitats that are not within their jurisdiction. The BLM has continued to coordinate development on the PAPA with the Wyoming Game and Fish Department.

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

**Comment**

BLM must go back to the drawing board and prepare a new draft SEIS which provides for multiple use of the land and protects the precious resources of these lands, including wildlife, air, water, cultural and historic resources.

**Response**

See the Revised Draft SEIS, Alternatives D and E.

**Comment Number**            **EG-19-1-AL-1****Comment**

A reasonable range of alternatives must be developed and carried forward for consideration throughout the final SEIS.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-19-2-G-2****Comment**

These technologies are not new, nor are they infeasible for this project. BLM must require this level of accountability, at a minimum.

**Response**

Thank you for your comment. The BLM will consider this when issuing a decision. See the Revised Draft SEIS additional mitigation opportunities.

**Comment Number**            **EG-19-3-G-3****Comment**

Additionally, BLM must require remote monitoring of well sites, which will drastically reduce vehicle traffic in the area.

**Response**

Thank you for your comment. This is considered within the range of alternatives in the Revised Draft SEIS.

**Comment Number**            **EG-19-4-AL-2****Comment**

These two alternatives which were dropped from further analysis must be reconsidered and a conservation alternative and phased drilling alternative, at a minimum, must be included in a new draft SEIS or final SEIS, in order to comply with the requirement for a reasonable range of alternatives.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-19-5-W-1****Comment**

More, not fewer, measures must be taken by BLM and industry to provide protections for wildlife.

**Response**

The BLM has set forth Standard 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 prepared a Wildlife and Habitat Mitigation Plan for Alternative D in Appendix 9C.

**Comment Number**            **EG-19-6-W-2****Comment**

With these and other regulatory requirements in mind, BLM must fully abide by the Wyoming Game and Fish report "Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats" to the maximum extent possible.

**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 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 can not legally require provisions for offsite mitigation. Mitigation measures developed by the Proponents applicable to Alternative D include an expected \$36 million for a mitigation and monitoring fund.

**Comment Number**            **EG-19-7-W-3****Comment**

First, seasonal wildlife stipulations **MUST** be retained permanently and without exception (as provided in the Conservation Alternative which was eliminated).

**Response**

Alternative D was developed in part by the Proponents and State (Wyoming Game and Fish Department and Department of Environmental Quality) and includes seasonal wildlife stipulations outside of core development areas.

**Comment Number**            **EG-19-7-W-4****Comment**

Second, the protections called for in the Wyoming Game and Fish "Recommendations" report must be adhered to and incorporated in a new draft SEIS or final EIS.

**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 "the function of an important wildlife habitat is essentially lost even though some animals may still be present within the project area. Seasonal use restrictions and intensive implementation of standard management practices and/or habitat mitigation options are still useful, however the impact cannot be fully mitigated within the project area. Off-site mitigation is necessary to maintain properly functioning biotic communities and sustainable land uses by creating or enhancing replacement habitats. Off-site mitigation should be located within the same landscape unit." There are no recommendations that allow for adherence except recommendations for mitigation. As noted in other responses to commenters, the BLM can not legally require provisions for offsite mitigation.

**Comment Number**            **EG-19-7-W-5****Comment**

Third, Dr. Clait Braun's "Blueprint for Sage Grouse Conservation and Recovery" must also be incorporated and followed in a new draft SEIS or final SEIS.

**Response**

The BLM's Preferred Alternative, Alternative D in the Revised Draft SEIS, insures no surface disturbance within 0.25 mile of occupied sage-grouse leks. Anticipated negative impacts to sage-grouse have been disclosed in the Revised Draft SEIS.

**Comment Number**            **EG-19-8-G-4****Comment**

BLM has a duty under NEPA to ensure that significant impacts disclosed by NEPA analysis will be mitigated so that they are no longer cross the significant impact threshold. This must be done before offsite (or compensatory) mitigation is considered.

**Response**

The Draft SEIS has disclosed that significant impacts to various resources would occur even with the Operator-committed environmental protection measures. Further, the Revised Draft SEIS has identified additional mitigation opportunities. The BLM is not required to reduce impacts to below a level of significance. If this were true, the development could have been analyzed in an environmental assessment.

**Comment Number**            **EG-19-9-G-5**

**Comment**

Instead of authorizing a nine-fold increase in the level of drilling, BLM must significantly slow the pace of drilling and, in addition to the measures recommended in sub-paragraph 1 above, require industry practices which will decrease the footprint of drilling.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-19-9-G-6**

**Comment**

First, directional drilling must be required wherever feasible, without regard to increased cost to industry.

**Response**

These requirements must also be economically feasible.

**Comment Number**            **EG-19-9-G-7**

**Comment**

Industry has proposed to implement the project using fewer wellpads than are currently authorized by the PAPA ROD. We applaud this and request that BLM mandate it.

**Response**

Thank you for your comment. The BLM will consider this in issuing a decision.

**Comment Number**            **EG-19-9-G-8**

**Comment**

Third, remote monitoring must be implemented throughout the project area.

**Response**

This is included in the range of alternatives analyzed in the Revised Draft SEIS.

**Comment Number**            **EG-19-9-G-9**

**Comment**

The whole project must be served by a liquids gathering system to further lessen the footprint of drilling.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-19-10-G-10**

**Comment**

BLM must permanently set aside large contiguous tracts of wildlife habitat for big game and sage grouse which supply at least equal forage to that being lost in the entire project area.

**Response**

See the Revised Draft SEIS, Alternatives D and E.

**Comment Number**            **EG-19-11-RC-1**

**Comment**

First, BLM must require that reclamation be achieved with a mix of shrubs, sagebrush, forbs and grasses, that as nearly as possible replicates the plant community that is present today.

**Response**

The reclamation plans vary by alternative in the Revised Draft SEIS.

**Comment Number**            **EG-19-11-RC-2**

**Comment**

Second, while sagebrush and other shrubs are taking hold and achieving maturity, adequate tracts of contiguous habitat, such as sagebrush habitat, to support wildlife must be permanently designated. These tracts must be kept intact and as free from human disturbance as possible. They must be able to sustain all the displaced wildlife resulting from drilling activities on the Pinedale Anticline.

**Response**

See the Revised Draft SEIS, specifically Alternative D.

**Comment Number**                    **EG-19-12-W-6**

**Comment**

There is no articulated plan to protect migration corridors from drilling impacts and to assure that big game will have free access to the habitat it needs for survival. This is a gap in the DSEIS which must be analyzed and filled in the new DSEIS. There can be no drilling allowed where there are known migration routes.

**Response**

Alternative D was developed in part by the Proponents and State (Wyoming Game and Fish Department and Department of Environmental Quality). Mitigation measures developed by the Proponents applicable to Alternative D include suspending surface activity on certain leases outside of the Alternative D core area and Potential Development Area (the flanks) for at least 5 years. Lease suspensions could coincide with migration routes.

**Comment Number**                    **EG-19-13-W-7**

**Comment**

For instance, where will replacement acres be found? How will wildlife know where these new areas are? Are there other factors associated with such lands which could render them less suitable and therefore they are avoided? Wildlife over many centuries has adapted to the southwest Wyoming region, locating and claiming the prime habitat for survival, which happens to coincide with the PAPA. How will BLM ensure viability of wildlife species on the Anticline? What are threshold numbers of each species needed for viability? What will happen when population numbers drop below the threshold? None of these issues is discussed in the DSEIS. They must be.

**Response**

The Wildlife Monitoring and Mitigation Matrix in Appendix 10 of the Revised Draft SEIS proposes wildlife trend thresholds for multiple species, mitigation, and mitigation ratios to be implemented once population declines have been detected. 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 can not legally require provisions for offsite mitigation. Mitigation measures developed by the Proponents applicable to Alternative D include an expected \$36 million for a mitigation and monitoring fund.

**Comment Number**            **EG-19-14-TE-1****Comment**

Authorizing winter drilling which could result in killing of bald eagles violates the ESA. Winter drilling should not be allowed. Furthermore, regular (at least annual) monitoring of wintering bald eagles must be implemented and/or continued.

**Response**

At the time the comment was submitted, bald eagles were listed under ESA, though the species has been delisted (see discussion in the Revised Draft SEIS) since then and remains protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act. The BGEPA specifically prohibits "Take" which does include disturbance to bald eagles at any time of year, not just winter. Monitoring will continue.

**Comment Number**            **EG-19-15-TE-2****Comment**

Until ferret surveys have been conducted and ferrets determined not to be present within the project area, BLM should not authorize any drilling activity in the Big Piney Prairie Dog Complex area.

**Response**

As noted in Chapter 3, 64 square miles in the PAPA are part of the Big Piney Prairie Dog Complex that would require surveys for black-footed ferrets. The BLM has drafted a Biological Assessment that addresses conservation measures applicable to black-footed ferrets, including surveys for the species.

**Comment Number**            **EG-19-16-SW-1****Comment**

The DSEIS also reveals that 630,000 gallons of surface discharge will occur daily. This raises questions which are not addressed in the DSEIS: Where is surface discharge going? Is any being discharged onto surface, or will it be collected at a central facility? We are cognizant that none of the alternatives proposes liquids gathering systems for the entire project area; where will liquids be discharged that are not centrally collected? What mitigation plans are in place for this discharge? What monitoring plans have been designed for water collection and discharge? Why is there more contribution than depletion of water resources? What is the source of this additional water? These questions must all be answered in the new draft SEIS before the project can be authorized.

**Response**

Discussion on disposal of produced water is included in the Revised Draft SEIS.

**Comment Number**            **EG-19-17-TE-3****Comment**

The endangered Colorado River fish species must be protected and adequate instream flow must be maintained. Sediment loads will be greatly increased under all alternatives and there will be significant impacts to fish species. These have not been addressed in the DSEIS.

**Response**

The BLM has drafted a Biological Assessment that addresses effects of water withdrawn from the Green River Basin on Colorado River fishes. Sediment loads have been addressed in Section 4.14 Surface Water Resources and in Section 4.20 Wildlife and Aquatic Resources.

**Comment Number**            **EG-19-18-TE-4****Comment**

Therefore, all BLM sensitive species in the PAPA must receive increased levels of protection comparable to candidate species under the ESA. This has not been provided in the DSEIS. BLM must rectify this failure in the new DSEIS.

**Response**

Candidate species do not have protection under the ESA. BLM-sensitive species are managed under the BLM's sensitive species policy - September 2002.

**Comment Number**            **EG-19-19-G-11****Comment**

BLM cannot refuse to define mitigation plans upfront and assess their efficacy, and then rely on adaptive management to fill in all the blanks after project implementation. It must do the analysis before the project commences, utilizing a verified and supported methodology by which it assesses the efficacy and probable success of the plan.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-19-20-G-12****Comment**

Nowhere in the DSEIS does BLM address the analysis and evaluation it has conducted regarding unnecessary or undue degradation, even though it was discussed in detail in scoping comments. This must be addressed in the DSEIS.

**Response**

NEPA does not require discussion of unnecessary or undue degradation. This is a FLPMA requirement.

**Comment Number**            **EG-19-21-AL-3**

**Comment**

As additional mitigation for lessening the footprint of drilling, BLM must slow the pace of drilling.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-19-22-W-8**

**Comment**

We reiterate that BLM must re-draw the DSEIS to incorporate more stringent protections for wildlife. Those measures must be clearly defined and thresholds established which will trigger specific responses when impacts reach those thresholds.

**Response**

The BLM has set forth Standard 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 prepared a Wildlife and Habitat Mitigation Plan for Alternative D in Appendix 9C. Also see the Wildlife Monitoring and Mitigation Matrix in Appendix 10 in the Revised Draft SEIS in which wildlife trend thresholds for multiple species have been proposed.

**Comment Number**            **EG-19-23-WT-1**

**Comment**

At a minimum, BLM must: (1) see that an inventory of existing impacts is conducted; (2) determine if appropriate permits are issued; (3) work with other landowners to develop adequate and appropriate mitigation and monitoring plans; (4) implement a slower pace and intensity of drilling; (5) reduce surface disturbance to wetlands and riparian zones by no surface occupancy restrictions; (6) reduce surface disturbance by requiring directional drilling and clustered wellpads; and (7) require BMPs and Performance -Based Objectives.

**Response**

The issues presented in the comment are generally contained within the range of alternative contemplated in the Revised Draft SEIS.

**Comment Number**            **EG-19-24-C-1****Comment**

Mitigation and monitoring for these priceless sites is woefully inadequate or lacking. The new DSEIS must deal effectively with the consequences of drilling to these resources.

**Response**

See the Revised Draft SEIS. Additional monitoring and mitigation requirements have been added.

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

If all the impacts are taken as a whole, what will the environment be like once the project is implemented? This is a critical issue which must be addressed in the new DSEIS.

**Response**

Impacts of the proposed development and alternatives are presented in the Revised Draft SEIS.

**Comment Number**            **EG-19-26-CU-3****Comment**

BLM fails to take into account other impacts from drilling projects outside the project area, as well as other sources of impact outside the project area. Thus, the DSEIS does not accurately depict the cumulative impacts of the proposed project.

**Response**

Cumulative impacts have been properly analyzed in the SEIS.

**Comment Number**            **EG-19-27-CL-1****Comment**

For BLM to simply climate impacts is a violation of its mandate under NEPA. Biodiversity Conservation Alliance insists that BLM conduct the appropriate inquiry, "which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decision making" on the proposed action.

**Response**

The BLM recognizes the value of environmental amenities and the values associated with them, though a quantification of this value is not provided in the SEIS. 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-20-1-G-1**

**Comment**

In principle, we recognize and support these characteristics that are components of this Proposed Action Alternative.

**Response**

Thank you for your comment.

**Comment Number**            **EG-20-2-G-2**

**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-20-3-G-3**

**Comment**

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.

**Response**

Thank you for your comment.

**Comment Number**            **EG-21-1-G-1**

**Comment**

To give concerned parties fair opportunities to understand and comment on these proposals, we are hereby formally asking the BLM to suspend work on the PAPA expansion project and Supplemental EIS until the revised Pinedale RMP is completed.

**Response**

Thank you for your comment.

**Comment Number**            **EG-21-1-G-2****Comment**

Major proposals should be presented to the public for comment between late spring and early fall, when most area home owners are present.

**Response**

Thank you for your comment.

**Comment Number**            **EG-21-2-TE-1****Comment**

Thus, conservation goes beyond the mere avoidance of "jeopardy"; it requires federal agencies to develop and implement affirmative conservation programs to protect and recover listed species. The PAPA D-SEIS indicates the BLM is not meeting these requirements.

**Response**

These plans would be beyond the extent of the PAPA, but may include portions of the PAPA.

**Comment Number**            **EG-21-2-TE-1****Comment**

Thus, conservation goes beyond the mere avoidance of "jeopardy"; it requires federal agencies to develop and implement affirmative conservation programs to protect and recover listed species. The PAPA D-SEIS indicates the BLM is not meeting these requirements.

**Response**

These plans would be beyond the extent of the PAPA, but may include portions of the PAPA.

**Comment Number**            **EG-21-3-TE-2/SW-1****Comment**

The BLM is not mitigating the depletions and apparently has not engaged in Section 7 consultation with the FWS over these impacts. Instead, the D-SEIS simply states "depletion fees may apply." D-SEIS at 4-116. Under what conditions would the fees be triggered? Who would the BLM monitor conditions to know when fees are triggered? Who would pay? How would fees translate into actual mitigation for degradation of endangered fish habitat? The DEIS is silent. This is contrary to NEPA and the Endangered Species Act.

**Response**

A BO will be issued by the USFWS before issuance of the ROD.

**Comment Number**                    **EG-21-4-SW-2**

**Comment**

To determine the annual depletion from the Colorado River Basin I will be necessary to estimate the rate of recharge or seepage as water tables are lowered. On an annual basis, this may be less than the rate of production, but it will still result in substantial surface water depletions. The D-SEIS does not attempt to estimate these depletions. Nor has the BLM engaged in Section 7 consultation with the FWS over these impacts.

**Response**

The BLM will work with the USFWS in determining the annual depletion.

**Comment Number**                    **EG-21-5-SW-3**

**Comment**

Third, the D-SEIS ignores evaporative losses from settling and evaporation ponds associated with PA field development....We believe the net evaporative depletions alone could exceed 100 acre-feet per year. Given that the FWS has previously concluded even small incremental water depletions will jeopardize the continued existence of the endangered fish species, this is a fatal defect in the PAPA D-SEIS.

**Response**

The BLM will work with the USFWS in determining the annual depletion.

**Comment Number**                    **EG-21-6-TE-3/SW-4**

**Comment**

To address these omissions, we are hereby requesting that the BLM promptly initiate Section 7 consultation with the FWS concerning water depletions - and associated impacts to the endangered fish and their habitats - associated with all oil and gas production activities in the Pinedale Resource Area.

**Response**

A BO will be issued by the USFWS before issuance of the ROD.

**Comment Number**            **EG-21-6-TE-4/SW-5****Comment**

To comply with these requirements, the BLM should provide the Service with the best obtainable data to help estimate water depletions in the Colorado River Basin, including all surface and ground water uses, evaporation rates (based on surface areas of ponds, sprinkler discharge rates, etc.), and estimated infiltration/recharge rates following production of ground waters. This consultation should also include all previously approved activities in the PAPA and Jonah Fields as well as all proposed or contemplated activities in these fields.

**Response**

A BO will be issued by the USFWS before issuance of the ROD.

**Comment Number**            **EG-21-7-TE-5/M-1****Comment**

Should the FWS determine that the PAPA expansion does pose a jeopardy to the endangered fish species (which will likely be the case), the Service and BLM should ensure that any proposed mitigation - Reasonable and Prudent Alternatives or Measures - will actually help offset the impacts and help recover these species.

**Response**

A BO will be issued by the USFWS before issuance of the ROD.

**Comment Number**            **EG-21-8-TE-6****Comment**

Although the FWS has apparently issued a preliminary determination that the PAPA and proposed expansion are not likely to adversely affect this species (id.), this position should be reconsidered.

**Response**

Thank you for your comment.

**Comment Number**            **EG-21-9-TE-7****Comment**

We are therefore concerned the BLM is not taking adequate steps to protect prairie dog colonies or survey proposed construction sites for signs of ferrets. The D-SEIS also fails to discuss the precise requirements for surveys. If energy companies or BLM seasonal employees are not trained to identify ferret signs, or if they are only required to do a single cursory walk-

through, ferret signs would almost certainly be overlooked. The Final SEIS must therefore specify survey requirements and ensure they are adequate to give a high degree of probability that any ferret signs will be detected.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-21-10-TE-8**

**Comment**

The D-SEIS also fails to specify what conditions the BLM will view as qualifying for "unavoidable" impacts to prairie dog colonies.

**Response**

Listing of all possible "unavoidable" impacts is not necessary. The BLM will work with the operators to move facilities outside of the prairie dog colonies, where economically and technically feasible.

**Comment Number**            **EG-21-11-TE-9**

**Comment**

Another issue not discussed in the D-SEIS relates to increased accessibility to prairie dog colonies. When new roads are constructed into or near colonies, this provides access to people who use prairie dogs for target practice. Other colonies in Wyoming have been decimated by such unethical acts. The Final SEIS should analyze the potential for these impacts, and the BLM should adopt measures (e.g., road closures) to ensure such losses of prairie dog colonies will not occur.

**Response**

The Revised Draft SEIS identifies recreational shooting of prairie dogs as a possible impact associated with the Proposed Action.

**Comment Number**            **EG-21-12-TE-10**

**Comment**

The D-SEIS does not demonstrate the BLM is using all methods and procedures which are necessary to improve the condition of special status species and their habitat. In fact, it appears the proposed actions would do just the opposite.

**Response**

The Revised Draft SEIS discloses impact by the Proposed Action. The BLM continues to manage special status species and their habitat as described in BLM Manual 6840.

**Comment Number**                    **EG-21-13-TE-11**

**Comment**

The D-SEIS does discuss various Special Status Species that are known or believed to inhabit the PA Project Area. D-SEIS at 4-117. Unfortunately, there is no comprehensive list of Special Status Species presented D-SEIS, and it seem some species that are or should be classified with "Special" status have been omitted. Moreover, for the species that are mentioned, the D-SEIS does not present any meaningful population data that could be used to gauge the significance of impacts to these species.

**Response**

All special status species identified by the BLM and WGFD that could occur within the Project Area are included in Tables 3.21-2, 3.21-3, and 3.21-4 in the Revised Draft SEIS. Effects to those species discussed in Chapter 4 are based primarily on surface disturbances within their associated habitats.

**Comment Number**                    **EG-21-14-TE-12**

**Comment**

Please gather the necessary data on populations and develop conservation plans and population objectives, in accordance with BLM Manual 6840. The final decision on the proposal should reflect the agency's directives to improve the condition of Special Status Species and their habitats. In particular, given the precarious status of mountain plovers and boreal toads, all efforts should be made to identify and completely avoid their habitats.

**Response**

Populations of sensitive species are unknown but population indexes have been used in the Revised Draft SEIS to estimate past and current trends for some with adequate data. Based on known population trends, the magnitude of development, and known effects of development on different species, statements of belief may be made with some confidence that future populations will be greater, the same, or less than current populations. This has been done in the Revised Draft SEIS.

**Comment Number**            **EG-21-15-TE-13****Comment**

It is unclear why this vulnerable species - which is known to be in decline throughout the west and has been petitioned for listing under the Endangered Species Act - was not classified as a Special Status Species.

**Response**

It was identified as a sensitive species but is also managed as an upland game bird by the WGFD and is discussed in detail within those sections.

**Comment Number**            **EG-21-16-TE-14****Comment**

As with other vulnerable species, however, the D-SEIS does not present any meaningful population or distribution data upon which reviewers could gauge potential impacts to the species.

**Response**

See response to Comment EG-21-15-TE-13.

**Comment Number**            **EG-21-17-TE-15****Comment**

Nevertheless, the D-SEIS does not propose adequate mitigation to protect leks and other grouse habitats from the previously authorized PAPA development or the proposed PAPA expansion. BLM Manual 6840 instructs the agency to use "all methods and procedures which are necessary to improve the condition of special status species and their habitats to a point where their special status recognition is no longer warranted." Precisely how does the PAPA project and proposed expansion meet this requirement? Why is BLM still using 0.25 mile buffers which the agency knows are inadequate to protect sage grouse?

**Response**

Please see the discussion of effects to sage-grouse in the Revised Draft SEIS.

**Comment Number**            **EG-21-18-W-1****Comment**

Although Chapter 4 of the D-SEIS is vague and there are no population decline figures presented in the Summary, it is our understanding the PAPA and proposed expansion would result in approximately 40% decline in the mule deer population. This is unacceptable.

**Response**

Population declines or increases will be determined during annual monitoring within the PAPA and larger herd units. Thank you for your comment.

**Comment Number**                    **EG-21-19-W-2/G-3**

**Comment**

In reviewing the D-SEIS, we could not find an estimate for the decline in the pronghorn population, but it would likely also be unacceptably large. As discussed below, there is a simply way to avoid significant impacts to these species, and this is by shifting to long-term development of the PAPA field as opposed to short-term rapid pace development contemplated in both D-SEIS action alternatives.

**Response**

No estimates have been made for declines in the pronghorn population. Population declines or increases will be determined during annual monitoring. See response to Comment EG-21-18-W-1.

**Comment Number**                    **EG-21-20-VG-1**

**Comment**

The D-SEIS does not specify how surveys would be conducted to determine whether or not rare plants exist at proposed construction sites. To allow high probability of detection, surveys must be done at particular times of the year when plants are flowering, and not all rare plants flower during the same times. In addition, surveys must be conducted by experts who are intimately familiar with Wyoming flora. The D-SEIS does not provide these assurances. Please address these issues in the Final SEIS and ROD.

**Response**

Please see the reclamation plans in the Revised Draft SEIS.

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

**Comment**

The D-SEIS suggests Alternative B (the proposed action) would result in even more days with visibility impairment in the Bridger Wilderness and other Class 1 airsheds in the region. In other words, BLM has not only violated federal law by allowing previous projects to degrade Class 1 airsheds, BLM is now proposing to exacerbate the violations. This is yet another unacceptable impact of the proposal. As discussed below, these unlawful degradations can be avoided by switching to long-term development of the field so that daily and annual emissions will be substantially reduced. The D-SEIS does not evaluate such an alternative.

**Response**

Mitigation for AQRVs has been identified. See Alternative C.

**Comment Number**                    **EG-21-22-AQ-2**

**Comment**

Even if PSD were the applicable standard, the BLM is ignoring the fact that the existing projects have already caused significant deterioration of air quality in the Class 1 airsheds. The agency is apparently assuming that because the proposed expansion would not cause significant "further" degradation of air quality - on top of the already significantly degraded state - then some additional degradation is legally allowed. We believe this reflects a misunderstanding of the applicable laws.

**Response**

Mitigation for AQRVs has been identified. See Alternative C.

**Comment Number**                    **EG-21-23-AQ-3**

**Comment**

While we applaud the BLM for exploring ways that might reduce air pollution and lessen violations of previously authorized activities, the D-SEIS's air quality estimates are based on complex modeling. Numerous courts have held that when such predictive models are used the agency has an obligation to discuss the methodologies and disclose all relevant assumptions used in the calculations. The D-SEIS does not make these disclosures.

**Response**

Please see the AQTSD.

**Comment Number**                    **EG-21-24-G-4**

**Comment**

To summarize, it would be completely irresponsible - to the nation's taxpayers and to the local communities - for BLM to approve the proposed rapid expansion of the PAPA field development. Please reconsider your development strategy and shift to a long-term plan that will achieve the greatest benefits with the least impacts.

**Response**

Thank you for your comment.

**Comment Number**            **EG-21-25-G-5****Comment**

In the present situation, the government has leased to private energy corporations the ownership rights to subsurface hydrocarbon resources in the PAPA field. However, as the D-SEIS makes clear, the BLM is now proposing to allow the energy companies to extract those resources in ways that will do considerable harm to public resources. We believe this proposal crosses the line and, if approved, would violate the Public Trust Doctrine.

**Response**

The BLM has determined that a significant impact is likely to occur and has disclosed this in the Draft SEIS.

**Comment Number**            **EG-21-26-G-6****Comment**

The sale of natural gas leases does not give companies an absolute right to access any reserves in the lease areas. It merely conveys rights to extract the resources subject to limitations, such as surface occupancy restrictions. In some cases, these restrictions can preclude extraction of the resources. It is a risk that is inherent in the energy business. Please recognize this in the F-SEIS and please ensure the eventual decision does not sacrifice the public good (e.g., wildlife, air, water) for short-term corporate profit. In particular, we ask that any decision not reduce wildlife populations further, not degrade air quality further and not degrade water quality further.

**Response**

Thank you for your comment.

**Comment Number**            **EG-21-27-G-7****Comment**

In the Final or revised Draft SEIS please fully describe the affected environment so that reviewers can understand the impacts posed by the alternatives.

**Response**

The affected environment is adequately described in the SEIS.

**Comment Number**            **EG-21-28-AL-1****Comment**

The D-SEIS evaluates only three alternatives (designated B and C). From the statements presented in the D-SEIS, the no action alternative - really an action alternative that would continue implementing the activities authorized in the 2000 PAPA ROD project - was included as a mere formality and is not being objectively considered as a pursuable option. So this means the BLM is only considering two action alternatives. Unfortunately, the two action alternatives are virtually identical in most key respects.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-21-29-AL-2****Comment**

There are several obvious alternatives the D-SEIS ignores, even though citizens asked the BLM to evaluate these options. In particular, the D-SEIS ignores alternatives that involve less ground disturbance and fewer wells. Why does BLM believe 4,399 additional wells and 12,278 acres of additional disturbance are the only options? Why not 1,000 additional wells and 3,000 acres of additional disturbance? Why not 500 new wells and 1,500 acres of disturbance? Just because industry wants 4,000 new wells doesn't mean BLM has to only consider that option.

**Response**

To analyze less than a full-field development alternative would be deceptive and inefficient.

**Comment Number**            **EG-21-30-AL-3****Comment**

In addition, there is no exploration of any alternative that would use a slower pace of development of the gas resources - to maximize revenues for the government , to protect wildlife, to protect air quality, and to reduce the various impacts caused at any given time.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-21-30-AL-3****Comment**

In addition, there is no exploration of any alternative that would use a slower pace of development of the gas resources - to maximize revenues for the government , to protect wildlife, to protect air quality, and to reduce the various impacts caused at any given time.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-21-31-AL-4****Comment**

Therefore, the BLM should have evaluated alternatives that would (1) reduce the amount of development contemplated/authorized in the 2000 ROD, and (2) reduce the rate of development contemplated in the 2000 PAPA ROD.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-21-32-AL-5****Comment**

Yet another class of alternatives the BLM should have explored is stronger mitigation measures across the board.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-21-33-AL-7****Comment**

As a related comment, we note that the D-SEIS also fails to present impacts of the alternatives in comparative form.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-21-34-T-1****Comment**

The DEIS does not adequately address impacts associated with the significant increase in motor vehicle accidents that will injure or kill local area residents, as a result of expanding field development and bringing more workers and work vehicles onto local roads and highways.

**Response**

Please see the Revised Draft SEIS.

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

The DEIS does not adequately address impacts associated with the significant increase in motor vehicle accidents that will injure or kill local area residents, as a result of expanding field development and bringing more workers and work vehicles onto local roads and highways.

**Response**

Please see the Revised Draft SEIS.

**Comment Number**            **EG-21-36-W-3****Comment**

The DEIS does not adequately address impacts to wildlife because the DEIS does not base its projections on actual population data (except for a few big mammal species). What are the current population sizes? What would the populations be after 10, 20 and 30 years of projected development? How significant would the population changes be?

**Response**

Population estimates have been modeled by the WGFD for big game species but not for other species. The WGFD may project those population estimates for 3 to 5 years into future, assuming constant environmental conditions and harvest, but those projections are revised annually. Populations for other species are unknown but population indexes have been used in the Revised Draft SEIS to estimate past and current trends. There are far too many unknown variables that can affect population size to estimate numbers of animals in 10, 20, or 30 years. Such an estimate would be pure conjecture. However, based on known population trends, the magnitude of development, and known effects of development on different species, statements of belief may be made with some confidence that future populations will be greater, the same, or less than current populations. This has been done in the Revised Draft SEIS.

**Comment Number**            **EG-21-37-HW-1****Comment**

The DEIS does not adequately address impacts from hazardous material releases.

**Response**

The BLM respectfully disagrees. The analysis of the impacts of the various alternatives is sufficient. Laws and regulations pertaining to the handling of hazardous materials and clean up of any accidental spills are in place.

**Comment Number**            **EG-21-38-R-1****Comment**

The DEIS does not adequately address impacts to roadless lands (i.e., those lands that lack improved and maintained roads), to potential ACECs, or to potential Wild, Scenic or Recreational River corridors.

**Response**

There are no ACECs, Wild, Scenic or Recreation River corridors in the PAPA.

**Comment Number**            **EG-21-39-T-2/W-4****Comment**

The DEIS does not adequately address increases in road kill and poaching.

**Response**

The BLM respectfully disagrees.

**Comment Number**            **EG-21-40-SE-2****Comment**

The DEIS does not adequately address the impacts that would result from the hard economic bust associated with rapid field depletion.

**Response**

The BLM has presented the impacts of the alternatives in Chapter 4.

**Comment Number**            **EG-21-41-G-8****Comment**

Please ensure the revised Draft or Final SEIS fully address these and all other reasonably foreseeable impacts of the proposed action and any alternatives.

**Response**

Thank you for your comment.

**Comment Number**            **EG-21-42-G-9****Comment**

Even the no action alternative is currently unacceptable because BLM has not been honoring the stipulations and mitigation measures committed to in the 2000 PAPA ROD.

**Response**

Thank you for your comment.

**Comment Number**            **EG-21-43-AL-8****Comment**

Because the D-SEIS does not evaluate any other alternatives, this has left us in the unfortunate position of being without a single alternative we can support. We again request the BLM rigorously explore slower-paced development alternatives as well as alternative (i.e., more protective) mitigation measures that can be applied to any alternative, including the no action (2000 PAPA ROD project).

**Response**

Please see the Revised Draft SEIS.