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WILDLIFE FEDERATION • AUDUBON WYOMING**

July 25, 2008

Mr. Caleb Hiner  
BLM Pinedale Field Office  
Attn: Pinedale Anticline Supplemental EIS  
1625 West Pine Street  
Pinedale, Wyoming 82941

**Re: Review of the Final Supplemental Environmental Impact Statement for the Pinedale  
Anticline Oil and Gas Exploration and Development Project**

Dear Mr. Hiner:

We have reviewed the above-referenced document (hereinafter, the PAPA FSEIS) as invited in the Dear Reader letter supplied with the PAPA FSEIS, the Bureau of Land Management's (BLM) press release announcing the PAPA FSEIS, and the Federal Register notice of the availability of the PAPA FSEIS and offer these comments as a result of that review so that the BLM can consider them in its review and decision for this project.

**Restatement of Prior Issues of Concern.**

Initially, we reincorporate by this reference the comments we have previously submitted on this project, first on April 5, 2007, and then on February 11, 2008. We ask the BLM to ensure that it has fully considered all of the issues and points made in those prior comments before issuing a record of decision (ROD) for this project. More specifically, it is our view that several significant issues were raised in those prior comments that the BLM does not seem to have adequately responded to or be poised to take action on. These include, but are not limited to, the following issues:

- The BLM states unequivocally in the PAPA FSEIS that it currently is and will be in violation a number of air quality standards and limits including the ozone 8-hour National Ambient Air Quality Standard (NAAQS), nitrogen dioxide (NO<sub>2</sub>) annual increment for Prevention of Significant Deterioration (PSD) Class II areas, and increments applicable to particulate matter of less than 10 micrometers in diameter, PM<sub>10</sub>.<sup>1</sup> As we have pointed out in our prior comments, BLM cannot allow for these violations of law pursuant to provisions in the Clean Air Act, the Federal Land Policy and Management Act (FLPMA), BLM regulations applicable to authorizations of land use, and provisions in the Pinedale Resource Management Plan (RMP). Allowing these violations of law poses a threat to the public health and air quality related values. Moreover, contrary to the BLM's statements in the PAPA FSEIS that "there are no applicable local, state, tribal, or federal regulatory visibility standards," PAPA FSEIS at 4-79, in fact as will be discussed below such standards do exist, and the PAPA FSEIS makes it clear these visibility standards are and will be violated. We request that BLM not approve this project until it is fashioned in a manner that will not allow continuance of these violations of the law, or create new or ongoing violations as the project is implemented.

We must also note that PM<sub>2.5</sub> concentration levels will reach 84 percent of the applicable 24-hour NAAQS and formaldehyde levels will reach 84 percent of the health-based standard. Tables 18.5 and 18.6.

- On March 22, 2008 a number of citizens in Pinedale and Sublette County, including the Sublette County Public Health Officer and many health professionals, submitted a letter to the BLM and other regulatory agencies requesting that "a comprehensive Health Impact Assessment (HIA) be completed in conjunction with the on-going BLM Pinedale Anticline Project Area (PAPA) Supplemental Environmental Impact Statement process." It does not appear to us the BLM has responded to this reasonable and needed request in the PAPA FSEIS. We request that it do so and ensure a comprehensive HIA is in place prior to approving this project. Clearly significant human and public health issues have arisen in this area with respect to water and air quality issues, and we do not believe it would be appropriate to approve this project without first ensuring there is a full and

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<sup>1</sup> We recognize that BLM apparently views a PM<sub>10</sub> level increase during Phase I mitigation of 29.9 ug/m<sup>3</sup> as being significantly less than the allowable incremental increase of 30.0 ug/m<sup>3</sup> in PSD Class II areas, and an increase of 29.6 ug/m<sup>3</sup> during Phase II of mitigation as also being significantly less than the allowable increment. See Table 18.15. But as we have noted in our prior comments, it is virtually impossible to imagine a confidence level in one's data or modeling that would allow such a claim with any scientific credibility; BLM certainly does not present any evidence that this degree of certainty is warranted for these minimal differences. This is especially true since currently, based on 2005 actual emissions, near-field concentrations of PM<sub>10</sub> exceed both the PM<sub>10</sub> 24-hour and annual increments for a Class II area. PAPA FSEIS at 3-77 (Table 3.11-6). Moreover, Table 18.4 shows that the near-field PM<sub>10</sub> 24-hour concentration level of 74.2 ug/m<sup>3</sup> will exceed the PSD Class II increment of 30.0 ug/m<sup>3</sup>. And finally, with respect to pronghorn survival rates in areas subject to natural gas development versus those without it the BLM deemed a difference of 69.3 percent survival versus 95 percent survival as not differing significantly, PAPA FSEIS at 3-133; how elsewhere BLM can deem differences of 0.1 or 0.4 as being significant is hard to fathom and requires explanation to be credible.

complete assessment of potential human health impacts. We have attached the referenced letter as Exhibit 1.

- The BLM cannot approve this project prior to revising the Pinedale RMP. We request that the BLM not approve this project until the RMP revision has been completed so that an up-to-date land use plan can guide this action. This issue will be addressed in more detail below.
- The BLM's regulation at 43 C.F.R. § 3101.1-4 only allows waiver or modification of a lease stipulation under carefully specified conditions; ensuring those conditions are met requires a case-by-case, site-specific determination of whether modification is appropriate, and does not permit a generalized relaxation of the stipulation, as the BLM would allow here with respect to several stipulations. As we have observed previously, this view is supported by the requirement in the Pinedale RMP that seasonal stipulations "will" be incorporated into land use authorizations wherever appropriate, and related provisions in BLM Instruction Memorandum 2008-032 and Onshore Order No. 1 § XI. Consequently, we request that stipulations applicable to big game crucial winter ranges not be modified or exempted absent a case-by-case analysis, and that the same condition be applied with respect to stipulations limiting disturbance from occurring within sage-grouse nesting habitat within two miles of a lek during the nesting season. We would also like to point out that the BLM seems to refer to the modification or waiver of these stipulations as a "relaxation," which as far as we know is not a defined or recognized form of change to a stipulation, and furthermore, in prior drafts of the SEIS the BLM referred to these as "temporary" changes whereas now it seems to have dropped that limitation. We request that it be made clear again these changes are temporary and that they be adopted as a recognized form of changes: a modification, waiver, or exception.

Additional areas of concern that we do not believe have been adequately considered or reviewed in the PAPA FSEIS will be discussed below.

### **Air Quality.**

We would like to offer several specific comments for consideration during the review of this project with respect to air quality. These include:

- Attached as Exhibit 2 are the comments of Dr. Jana Milford with respect to the analysis of ozone pollution impacts in the PAPA FSEIS. We incorporate those comments into these comments by this reference and ask the BLM to consider them fully as it reviews this project. Dr. Milford also submitted these comments to the BLM separately. As Dr. Milford's resume submitted with her comments makes clear, there can be no question that she is a leading expert on issues related to ozone and the modeling of ozone impacts.

Dr. Milford has determined that the analysis of impacts from ozone pollution disclosed in the PAPA FSEIS does not meet analytical needs or standards principally because the analysis does not fully recognize the new ozone 8-hour NAAQS, and because the high

ozone levels monitored in the Pinedale area during the winter 2008 make it all but certain this area is in nonattainment with the new NAAQS, but that fact is not adequately revealed or considered quantitatively in the PAPA FSEIS. Besides these overarching problems, the analysis also suffers from other significant deficiencies, including a failure to consider ozone impacts in the five years or so prior to implementation of Phase II mitigation, a built in underestimation bias in the modeling that has not been corrected, a too limited data set being used for model evaluation (only one local monitoring site is used), and an incomplete inventory of reasonably foreseeable development, including a failure to include previously disclosed emissions of ozone precursors, such as those from the Atlantic Rim Project. BLM has maintained this deficient analysis despite long-standing notice of the limits of this analysis. As Dr. Milford observes, these limitations should be corrected now, before this project is approved, to meet various legal requirements.

Attached as Exhibits 3, 4, 5, 6, and 7 are several of the documents referenced in Dr. Milford's comments.

- Attached as Exhibit 8 are data obtained from the Wyoming Department of Environmental Quality (DEQ) showing the current ozone pollution levels in the Pinedale area. As the BLM, can see, based on data from 2006, 2007, and 2008, the current average fourth highest 8-hour ozone levels are 0.080 parts per million (ppm) at the Boulder monitoring station, which exceeds the new NAAQS of 0.075 ppm.<sup>2</sup> We would note that the BLM recognizes that, “[t]he Boulder site . . . is considered by the [DEQ] as most representative of background conditions within the PAPA.” PAPA FSEIS at 3-67. Thus, these data from the Boulder monitoring station are the best representation of the ozone status in the Pinedale Anticline Project Area at this time.

We believe these data are very significant. The BLM attempts to paint a picture that current ozone levels are less than the new NAAQS. See PAPA FSEIS at 3-66 (Table 3.11-1 states that the background concentration of ozone at the Boulder monitoring station is 143  $\mu\text{g}/\text{m}^3$ , or 0.073 ppm, which is slightly below the new NAAQS of 0.075 ppm), 3-69 (Table 3.11-2 shows the same average concentration of 0.073 ppm). BLM achieves this claim by only considering the data from 2005, 2006, and 2007. But if the data from 2008 is considered, a violation of the new NAAQS is indicated. Exhibits 2 and 8. The most recent, up-to-date data show that the new NAAQS is being violated. Thus, we believe the BLM should proceed, and review the provisions in the PAPA FSEIS, from this basis—that the Sublette County area is nonattainment for the ozone 8-hour NAAQS—and not on the basis of old, incomplete data showing the area is still in compliance. Mitigation should be approached from the standpoint that this area is already in nonattainment, not from the perspective that it is still in attainment, making more tenable postponement of mitigation and uncertain mitigation, which is the approach taken in the PAPA FSEIS.

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<sup>2</sup> The data in Exhibit 8 differ very slightly from that presented in Exhibit 2 by Dr. Milford in her Table 1, however, the difference in three-year average fourth highest 8-hour ozone levels is very minor, 0.080 ppm vs. 0.079 ppm.

Besides these data, there is additional support that Sublette County is no longer in compliance with the ozone NAAQS. On June 5, 2008 DEQ Air Division Administrator Dave Finley stated to the Wyoming Air Quality Advisory Board at the Board's meeting in Casper that, "We are anticipating we are going to have a non-attainment area" in Sublette County. In addition, on June 14, 2008 a number of citizens in the Pinedale area and several environmental groups submitted a petition to the EPA to designate Sublette County a nonattainment area for the new ozone 8-hour NAAQS. That petition is attached as Exhibit 9. It outlines in great detail why Sublette County is now in nonattainment. So again, we ask the BLM to review the PAPA SEIS and develop the resulting ROD from the perspective of having to correct a nonattainment condition, not from the standpoint of this being some future potential problem, which is the perspective evidenced in the PAPA FSEIS.

- Attached as Exhibit 10 is the presentation made to the public in Pinedale by the DEQ on April 21, 2008 in response to the furor over the high ozone levels in the Pinedale area this past winter and the water well contamination on the Pinedale Anticline. We ask the BLM to fully review this information as it moves toward a ROD for this project. Among many other things, the DEQ notes that the "[p]reliminary [Air Quality Division] view is that [volatile organic compound, or VOC] controls should be the primary focus" of efforts to deal with the high ozone levels in this area (slide number 34). Yet concrete mitigation in the PAPA FSEIS is almost completely focused on nitrogen oxides (NO<sub>x</sub>) reductions, not VOCs reductions, and even this is done with a focus on visibility issues not ozone pollution. Moreover, the DEQ presentation shows that it will be difficult if not impossible to achieve further emissions reductions from many of the sources singled out in the PAPA FSEIS for potential NO<sub>x</sub> reductions, including emissions from completions; emissions from tanks, dehydrators, and PADs; emissions from internal combustion engines; and emissions from turbine engines. As the DEQ presentation shows, a great deal of emissions reductions have already occurred for these sources, bringing in to question whether there are significant emissions reductions still to be had, other than through means like reducing the rate of drilling and emissions offsets. The BLM should bear this in mind as it specifies the mitigation that will apply in its decision document. And as discussed below, it is crucial that any mitigation be effective and enforceable; meeting these needs is brought into question if mitigation is focused on reductions from sources that may have already achieved virtually all that can be achieved.
- BLM's identified "mitigation opportunities" relative to ozone are presented in section 4.9.5 of the PAPA FSEIS. As is true of virtually all mitigation measures mentioned in the PAPA FSEIS, these measures are characterized by delay and uncertainty. Electric compression "could" be installed. After the ROD is signed, the BLM will engage in more inventories and modeling including consideration of the new DEQ BACT requirements. The BLM will "sequentially review and employ" emissions reductions technologies, "if needed." This is little more than a plan to make a plan. As discussed above, this area is already in nonattainment, so mitigation is already needed and the BLM should be taking concrete steps now to reduce ozone precursors and not wait to take

action for some indeterminate period. And as also discussed above, the BLM is prohibited from pursuing actions that violate air quality standards, a situation which is already occurring relative to ozone. And of course BLM's own modeling predicts these violations will continue. PAPA FSEIS at 4-82 (Table 4.9-2, showing ozone levels are predicted to be 76.5 parts per billion). We would also note that BLM's analysis and modeling is predicated on the notion of "Phase II" mitigation being in place, meaning there would have already been an overall reduction in NO<sub>x</sub> emissions of approximately ninety percent from 2009 NO<sub>x</sub> levels (see discussion of NO<sub>x</sub> reductions in next section). Thus, BLM is not likely going to avoid ozone problems through further NO<sub>x</sub> reductions, the analysis presented in the PAPA FSEIS is already based on dramatic NO<sub>x</sub> reductions, yet there is no concrete plan in place whatsoever to achieve VOC reductions. Last, BLM says it will consider the new DEQ BACT limits as a way to deal with ozone problems. We would note that these provisions apply to new emissions sources not existing, already-permitted sources, so this may not be a means to effectively deal with ozone problems. We ask the BLM to fully consider these issues as it reviews the PAPA FSEIS in pursuit of needed ROD provisions.

- Under BLM's plan, and specifically with respect to visibility impacts, the BLM says it will require a substantial reduction in NO<sub>x</sub> emissions. This will be done first by implementation of Phase I mitigation and then by implementation of Phase II mitigation. In 2009, the BLM predicts that there will be either 5,885 or 4,735 tons per year (tpy) of NO<sub>x</sub> emissions, at least under the operators' proposal. PAPA FSEIS at 4-78 (Table 4.9-1), Air Quality Impact Analysis Technical Support Document at 11 (Table 2.1). Under its plan to achieve Phase I mitigation, NO<sub>x</sub> emissions would have to be reduced to 2005 levels within one year of signing the ROD, or in other words by roughly the beginning of 2010 NO<sub>x</sub> levels will have to reach 3,512 tpy, a 40 percent reduction.<sup>3</sup> Then, within 3-1/2 years, NO<sub>x</sub> emissions would have to be further reduced by 80 percent, so in roughly 2014 NO<sub>x</sub> emissions could not exceed 702 tpy, an overall reduction from 2009 levels of as much as nearly ninety percent. In the original 2000 Pinedale Anticline environmental impact statement (EIS) NO<sub>x</sub> emissions levels of 693.5 tpy were predicted and analyzed. So, the BLM is saying that even though literally thousands more wells will be drilled now, NO<sub>x</sub> emissions will still roughly equal what was predicted under a far more limited development plan back in 2000. But then beyond that the BLM says it will impose further emission reductions on some unknown timeline to get to whatever emissions level is needed to achieve zero days of visibility impairment in Class I areas. For purposes of argument let's say that is a NO<sub>x</sub> emissions level of 500 tpy, or an overall reduction of nearly ninety three percent from maximum levels.

As the BLM engages in its review of the PAPA FSEIS in preparation for issuing a ROD, we ask it to consider if these reductions are realistically achievable. Can a reduction of

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<sup>3</sup> In 2005, the forth-highest, 8-hr. ozone levels were 79 ppb. Exhibits 2 and 8. Because this level exceeds the new federal standard, achieving 2005 emissions levels is not likely to prevent violations of the ozone standard.

5,000 tpy in NO<sub>x</sub> emissions realistically be achieved in roughly 5 years using technological means that are realistically available at this time or within five years? We think it is crucial that there be a realistic chance these emissions levels will be achieved on the timeline specified by the BLM using the means it wants to employ as its first tier response (fuel additives, Tier 2 equivalent drill rigs, selective catalytic reduction, electric drill rigs, etc.). BLM states there are limits on its ability to achieve further reductions in compression and fugitive emissions. PAPA FSEIS at 4-89. If the BLM cannot reach such a conclusion that these levels of reductions can be achieved through technological means that are realistically available on the timeline contemplated, we urge it to require an immediate reduction in drill rig numbers or the times and places when drill rigs are allowed to be active because we believe this would be necessary to meet BLM's commitment "to assuring that any mitigation necessary to achieve the goal of zero days of modeled visibility impairment will be implemented," not to mention achieve reductions in ozone levels PAPA FSEIS at 4-89 to -90.

- As we noted above, the BLM asserts in the PAPA FSEIS that "there are no applicable local, state, tribal, or federal regulatory visibility standards." We do not believe this is true. Under the FLPMA, not only must the BLM prevent violations of air quality law and standards, it must also provide for compliance with adopted "implementation plans." 43 U.S.C. § 1712(c)(8). The BLM recognizes the obligation to abide by duly adopted relevant plans in the PAPA FSEIS, stating "the BLM cannot authorize activities that do not conform to all applicable local, state, tribal, and federal air quality laws, statutes, regulations, standards, and implementation plans." PAPA FSEIS at 4-75 (emphasis added). And under the Pinedale RMP, the BLM will strive to minimize emissions that "degrade visibility." Pinedale RMP ROD at 15. Thus, to the extent there are "implementation plans" in place relative to visibility, they constitute "applicable . . . visibility standards" the BLM must comply with.

The Forest Service has in place several applicable "implementation plans" that seek to protect visibility in Class I areas, especially the Bridger Wilderness Area. Among other provisions, the Bridger-Teton Forest Plan states as Goal 4.6, "The Wilderness character of Congressionally designated Wilderness Areas is retained or regained." Bridger-Teton Land and Resource Management Plan at 120. Objective 4.6(a) reads, "Retain and, where necessary, restore high quality wilderness environments." There is no doubt that unimpaired visibility is a significant component of wilderness character and a high quality wilderness environment. The Forest Service Manual establishes a nationwide objective to "[p]rotect air quality and related values, including visibility, on wilderness land designated class I by the Clean Air Act as amended in 1977." Forest Service Manual Part 2300 § 2323.61. Exhibit 11. Moreover, the Forest Service is pursuing a nationwide effort called the 10-Year Wilderness Stewardship Challenge. Among other things this plan calls for protection of wilderness character and recognizes wilderness has "clean air." Exhibit 12.

In addition to these implementation plans that the Forest Service has in place, the Clean Air Act itself imposes on the Forest Service as a Federal Land Manager (FLM) the

“affirmative responsibility to protect the air quality related values (including visibility)” of Class I areas, and this encompasses a duty to “preserve, protect, and enhance” the air quality in protected areas like the Bridger Wilderness Area, and to meet the goal of no impairment of visibility in Class I areas stated in section 169A of the Clean Air Act. 42 U.S.C. §§ 7470(2), 7475(d)(2)(B), 7491(a)(1). Thus, there is no doubt there is a standard in place relative to visibility in Class I areas, and that standard is zero days of visibility impairment.

Given these “implementation plans” related to visibility that have been adopted by the Forest Service, the provisions in the Clean Air Act, the terms of FLPMA, and the requirements of the Pinedale RMP, the BLM must ensure the standard of zero days of visibility impairment is adhered to. The Forest Service is formally seeking to fully abide by the Clean Air Act’s mandate to prevent impairment of visibility in Class I areas or rectify it where it exists. 42 U.S.C. § 7491(a)(1) (stating Clean Air Act goal for Class I areas). And thus the BLM too must abide by this direction. What this means is that it is not permissible for the BLM to allow significant impairment of visibility in the Bridger Wilderness Area to continue for at least the next five years, as would occur under BLM’s Phase I and Phase II mitigation, and in fact for an even longer unspecified period before the 10 days of residual significant impairment can be corrected. There would still be at least 10 days of significant visibility impairment in the Bridger Wilderness following implementation of BLM’s Phase II mitigation, and no clear assurance of when or how zero days of impairment would be reached. This does not meet the established plan or standard for protecting visibility. Because the Forest Service has implementation plans in place seeking to prevent or rectify this kind of impact the BLM is prohibited from taking actions that violate this standard, which is zero days of visibility impairment. We ask the BLM to fully consider this issue as it reviews the PAPA FSEIS in preparation for issuing a ROD and to take steps to ensure that zero days of visibility impairment are achieved immediately since such is fully within the BLM’s authority, or at a minimum that it state specifically how and when the further necessary reduction of significant visibility impacts from ten days to zero days will be achieved.

We would also point out that allowing significant visibility impacts to continue for an unknown time frame threatens the State’s ability to comply with EPA’s regional haze rule, and as indicated, the ability of FLMs such as the Forest Service to meet their “affirmative obligation” to protect visibility in Class I areas. The ROD should not impose such burdens or potential burdens on either the State or the FLMs.

- Attached as Exhibit 13 is a report just released by the Western Regional Air Partnership (WRAP) regarding compliance with the new ozone standard. We believe this report has many important points and areas of discussion the BLM should consider before finalizing the Pinedale Anticline infill project. Based on modeling, the report states that "ozone is clearly a regional issue," meaning regional solutions will be needed to fully address this problem. The report states, "In contrast to EPA's national ozone modeling predictions, broad regions throughout the west are predicted to exceed and/or violate the new ozone NAAQS." The report notes that oil and gas sources of air pollution are "likely to become

a key component in regional control strategies for ozone air quality." The report concludes by stating "there is clearly a critical need for additional [ozone] monitors throughout the region." The report also shows areas where the fourth highest ozone readings are expected to be higher than the new NAAQS. This report can be viewed at: [http://www.wrapair.org/forums/toc/meetings/080729m/Revised\\_8hrO3\\_NAAQS\\_draft\\_7\\_15\\_08.pdf](http://www.wrapair.org/forums/toc/meetings/080729m/Revised_8hrO3_NAAQS_draft_7_15_08.pdf).

### **EPA "EU-3 Letter".**

On February 14, 2008 the Environmental Protection Agency (EPA) submitted comments on the Revised Draft SEIS for the Pinedale Anticline infill project and as required by statute and regulation rated the quality of the Revised Draft SEIS. The EPA gave the Revised Draft SEIS its lowest possible rating, an "EU-3"—environmentally unsatisfactory with inadequate information presented. The EPA especially raised concerns regarding ozone pollution, impacts to visibility in Class I areas, and benzene contamination of water wells and groundwater. It also registered concerns regarding wetlands, surface water impacts and the BLM's characterization of the No Action alternative. Fundamentally what the EPA was concerned about was a need to ensure effective and enforceable mitigation with assurance of public accountability so as to meet the requirements of the National Environmental Policy Act (NEPA).

As we have reviewed the PAPA FSEIS it is not apparent to us these significant concerns have been adequately addressed. Frankly, the analysis and mitigation presented in the PAPA FSEIS is characterized by avoidance, minimization, delay, and uncertainty. For example, avoidance of issues is indicated by BLM's statements that modeled ozone levels "are predicted to be below the [NAAQS] for ozone that were in effect at the time the Revised Draft SEIS was released for public comment." See, e.g., PAPA FSEIS at 4-88. Yet the BLM's own analysis shows the new NAAQS will be violated; this is the relevant consideration not whether some old, superseded standard will be complied with or not. As Dr. Milford explains and documents in detail in her comments, the BLM had long fair warning that the new ozone NAAQS was coming, predating by a considerable time even the Revised Draft SEIS.

Minimization is exemplified by the situation discussed above where the BLM used 2005, 2006, and 2007 ozone data to paint a picture of current compliance with the ozone NAAQS when if the most recent data had been used from 2008 the three-year average fourth highest 8-hour ozone level would be in excess of the new NAAQS, showing Sublette County is in violation of the new ozone standard (even if it will not be formally designated as a nonattainment area for approximately two more years). Besides the data submitted with Exhibits 2 and 8 showing the new NAAQS is now exceeded, the fact that DEQ was forced to issue five public health advisories this past winter due to elevated ozone levels belies BLM's attempt to claim this area is still in compliance with the ozone NAAQS. Exhibit 14. When ozone levels reach as high as 122 parts per billion, there is clearly a problem that demands immediate attention, not minimization.

Delay of dealing with impacts and issues is shown time and time again in the PAPA FSEIS. Repeatedly the PAPA FSEIS presents little more than a "plan to make a plan." At some

point in the future the BLM will “evaluate” ways to achieve NO<sub>x</sub> emissions reductions beyond 80 percent. PAPA FSEIS at 4-90 to -91. No firm timeline is presented. With respect to ozone, BLM will “refine” inventories and do new modeling and then at some unspecified point “sequentially review and employ” mitigation. *Id.* at 4-98. With respect to well contamination and groundwater, further measures are “proposed,” and depending on later monitoring at an unknown time the effectiveness of these measures may be determined. *Id.* at 4-106. We could go on but will not; delay characterizes almost all potential mitigation measures.

Uncertainty is shown by the repeated use of “could” to describe mitigation measures that may be employed (or not be employed). We lost count of the number of times that word was used in reference to mitigation measures (see detailed discussion of this issue below in the *Groundwater* quality section). Given this level of avoidance, minimization, delay, and uncertainty, EPA’s demand for effective and enforceable mitigation so as to meet the requirements of NEPA is not being met, and thus this EIS remains “environmentally unsatisfactory” with “insufficient information.” This EIS still suffers from a lack of providing for full public accountability; EPA requested a new draft SEIS be issued in its “EU-3 Letter,” yet the BLM has published a final EIS. Thus, public accountability is not being demonstrated; it is being shortchanged.

We ask the BLM to consider these continuing shortcomings as it reviews the PAPA FSEIS in preparation for issuing a ROD. These shortcomings should still be corrected. Clear, enforceable mitigation with stated timelines based on the reality of the current environmental conditions present in the area should be provided for in the ROD. The BLM is required to ensure the most up-to-date information possible is used in an EIS and to ensure the professional and scientific integrity of an EIS. 40 C.F.R. §§ 1502.22, 1502.24. Ensuring the mitigation that will be applied to this project meets the high standards EPA has requested is an important means to ensure these requirements are met.

**This Project Should Not Be Approved Until the Pinedale RMP is Revised and The BLM Cannot Exceed Limits on the Reasonably Foreseeable Development Scenario in the Pinedale RMP.**

In our comments dated April 5, 2007 we raised with BLM the need delay approval of the Pinedale Anticline infill project until the Pinedale RMP has been revised. We renew that plea here. The BLM is of course right in the midst of revising the 1988 Pinedale RMP and a final EIS for the revised RMP will likely be issued soon. Thus, waiting to allow the guidance of the new RMP to be in place to guide this project is appropriate. While the BLM apparently feels the PAPA FSEIS will be in accordance with the new Pinedale RMP, it cannot really know that until it issues the final RMP; the review process of the RMP draft EIS would be a sham otherwise.

Moreover, there appear to be significant issues that the RMP is grappling with that may or may not prove to be adequately reflected in the PAPA FSEIS and decision document. For one, the BLM is struggling with what protections should or must be made to protect the sage-grouse so as to avoid listing of that species under the Endangered Species Act. The revised RMP might well establish different conditions for protection of the sage-grouse than are reflected in

the PAPA SEIS; in particular, the BLM's decision to abandon the stipulation protecting nesting habitat within two miles of leks in the Core Area might well prove to be inconsistent with the RMP's provisions.

Second, operators in the Pinedale Anticline field are apparently increasingly expressing interest in pursuing natural gas at very great depths, well in excess of the depths of the wells considered in the PAPA FSEIS. If this proves to be true, the nature of natural gas development on the Pinedale Anticline could prove to be quite different than considered in the PAPA FSEIS, and the cumulative impacts much greater. It is our understanding the Pinedale RMP EIS may be considering and analyzing this changed circumstance. Thus, again, we urge the BLM to not issue a decision document allowing the proposed Pinedale Anticline infill to go forward as described under Alternative D in the PAPA FSEIS until the revised Pinedale RMP is in place to help guide this development.

Furthermore, we believe that approval of this project as contemplated is well beyond the reasonably foreseeable development scenario (RFD) provided for in the 1988 Pinedale RMP, and thus is not in accordance with or conformity with the Pinedale RMP as required by FLPMA and BLM regulations. The 1988 Pinedale RMP allowed for no more than 900 wells as the RFD. Draft EIS, Pinedale RMP at 191 (1988). And even if the BLM were to claim that the original 2000 Pinedale Anticline EIS amended the Pinedale RMP RFD to allow for 1,944 wells, Record of Decision, Final Environmental Impact Statement for the Pinedale Anticline Oil and Gas Exploration and Development Project at 34 (July 2000), the proposal here for nearly 4,400 new wells greatly exceeds that level (and the BLM has already approved 3,100 additional wells in the Jonah field).<sup>4</sup> Thus, it is clear that approval of the Pinedale Anticline infill project as contemplated in the PAPA FSEIS would not be in conformity with or in accordance with the RMP, which is impermissible under both FLPMA and the BLM regulations implementing FLPMA.

The BLM may argue that the relevant consideration is not well numbers but long-term surface disturbance. But even under that measure the BLM would be far in excess of any level of disturbance allowed under the 1988 Pinedale RMP if it pursues the Pinedale Anticline infill as presented in the PAPA FSEIS. The 1988 RMP authorized no more than 7,492 acres of disturbance. 1988 Pinedale RMP Draft EIS at 191. And even if the BLM were to claim the 2000 Pinedale Anticline ROD amended the 1988 RMP—even though the ROD explicitly says there was no attempt at amendment—the most that would be permissible for long-term surface disturbance would be 20,376 acres (the 6,300 acres of disturbance authorized in the 2000 Pinedale Anticline ROD plus the 14,076 acres of existing long-term disturbance recognized in that NEPA process). See 2000 Pinedale Anticline Draft EIS at 5-8. Yet at a minimum the BLM is preparing to allow the following levels of long-term surface disturbance:

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<sup>4</sup> In fact, the 2000 Pinedale Anticline EIS and ROD did not amend the 1988 Pinedale RMP. The Pinedale Anticline ROD is explicit that it “does not include any amendments to decisions in the Pinedale Resource Management Plan (RMP).” Pinedale Anticline ROD at 34. At most the Pinedale Anticline ROD provided an “update” to RFD levels. Id.

1. 5,190 acres authorized by the Jonah Infill EIS. Jonah Infill Final EIS at 1-10.
2. 14,076 acres of existing disturbance recognized in the 2000 Pinedale Anticline Draft EIS.
3. 4,834 acres of existing disturbance since approval of the Pinedale Anticline project. PAPA FSEIS at 2-6, 4-4.
4. 4,012 acres of new disturbance in the Pinedale Anticline. PAPA FSEIS at 2-16.

This totals to 28,112 acres of long-term surface disturbance, far in excess of the 7,492 acres allowed by the 1988 RMP and even the 20,376 acres mentioned in the 2000 Pinedale Anticline NEPA documents. Thus, even if this issue is framed as being a question of permissible long-term surface disturbance the BLM is far in excess of any amount approved under the Pinedale RMP. And thus the BLM is precluded from approving this project until the Pinedale RMP is revised in a manner that would allow for, and mitigate, such disturbance levels.

### **Water Quality Impacts.**

#### *Surface Water.*

Substantial impacts to surface water resources are anticipated from BLM's preferred alternative, with the amount of surface disturbance in six hydrologic subbasins at least doubling, and an increase in annual sediment yields of 20 percent. PAPA FSEIS at 2-64. Impacts from this disturbance could include increased salinity, turbidity, and sedimentation. *Id.* at 4-113. In addition there will be substantial water withdrawals from the Colorado River system, creating adverse impacts on the downstream species of fish listed as endangered under the Endangered Species Act. The BLM does not appear to have engaged in consultation with the Fish and Wildlife Service for this likely jeopardizing impact to date, as required by the Endangered Species Act.

Apparently the mitigation that would be used to address sedimentation impacts would be the reclamation measures specified in Appendix 8D. PAPA FSEIS at 4-116. While this reclamation plan has many strong measures, given the level of impacts anticipated to surface waters, it is apparent these measures do not go far enough. This may partly be due to limitations in the mitigation specified in Appendix 4. For example, it is not "recommended" that there be surface disturbance on slopes in excess of 25 percent. PAPA FSEIS at Appendix 4 page 4-1. There are only prescriptions to "avoid" adverse impacts. *Id.* at 4-5 to 4-6. We feel the ROD should specify more clearly-defined and enforceable measures that greatly reduce these impacts. Construction on slopes in excess of 25 percent should be prohibited; very little of the Pinedale Anticline is characterized by steep topography so this limitation is unlikely to prohibit development. Construction in areas with highly erodible soils such as the Blue Rim should be prohibited unless sediment production can be greatly reduced below what is now predicted. As noted in our previous comments, we feel there is little doubt the BLM has sufficient retained rights despite having leased an area to require such measures, and in fact it has a legal obligation to do so under various statutes and regulations.

*Groundwater.*

In its EU-3 letter the EPA commented on the significant impacts to water wells from benzene that were revealed in the Revised Draft SEIS, though not in enough detail to allow a useful understanding. The PAPA FSEIS reveals those impacts in somewhat more detail, and the concerns raised by this information are disturbing. Table 3.15 shows that many wells are greatly in excess of the DEQ water quality standard for benzene. Moreover, at least two wells show contamination from other hydrocarbons, including xylenes and toluene. And as shown by Map 5.15-3 the presence of both wells containing petroleum hydrocarbons and wells where the water quality standard was exceeded were widely distributed throughout the Pinedale Anticline project area, and map 3.15-2 makes it clear at least some of these contaminated wells are near domestic wells, especially in the northern part of the project area and along the New Fork River. These maps show water well contamination is a systemic problem not confined to one location on the Pinedale Anticline or one operator and that domestic water wells are potentially threatened.

BLM commented on these problems in the PAPA FSEIS further emphasizing how severe they are. Even with the proposed mitigation (discussed below), BLM said that well contamination “could be an ongoing impact under all Alternatives.” PAPA FSEIS at 4-106. And that absent mitigation there could be “unnecessary or undue degradation and violation of State of Wyoming Water Quality Standards.” *Id.* at 4-11.

Yet despite this clear need for effective, certain, and enforceable mitigation, the PAPA FSEIS is remarkably vague regarding what if any mitigation will be applied to clean up the existing contamination and prevent future contamination. Mitigation is postponed until sometime in the future, and will not necessarily be part and parcel of the ROD. As is so common in the PAPA FSEIS, a “plan” will be developed after the ROD is signed, PAPA FSEIS at 4-110, monitoring and cooperative efforts will be pursued, *id.*, and this “will allow for the development of a set of actions necessary to maintain water quality within established standards that could be used in an [adaptive management] approach,” *id.* (emphasis added). Then the BLM states several mitigation measures that “could be implemented,” using the word “could” six additional times to describe what might (or might not) be done. *Id.* at 4-110 to -111. The operators are “encouraged” to consult with DEQ and implement certain measures. *Id.* at 4-111. Previously in the FEIS the BLM had described potential mitigation measures using the word “should” four times. *Id.* at 4-106.

This level of uncertainty is unacceptable and should not be perpetuated in the ROD. As the EPA stated in its EU-3 letter, “EPA believes that such impacts [to groundwater and drinking water] are environmentally unsatisfactory.” For this reason the EPA demanded effective and enforceable mitigation be put in place to address this significant problem. Yet as just discussed, the mitigation proposed in the PAPA FSEIS fails this need. Consequently, prior to approving the ROD we ask the BLM to ensure that the mitigation that will be applied to address groundwater and water well contamination problems be re-worded to ensure it will actually be applied. To start, all of the “coulds” and “shoulds” mentioned above should be changed to “shalls.” In any event, before approving the ROD we ask the BLM to develop and put in place effective and enforceable mitigation that will address this severe groundwater contamination problem. We

believe it has an obligation to do so both under NEPA, and under non-discretionary statutes such as the “unnecessary or undue degradation” clause in FLPMA.

Finally, we must comment on BLM’s unfortunate choice of wording on page 3-92 of the PAPA FSEIS. There the BLM says that one possible cause of the water well contamination could be “malicious contamination by persons hostile to gas production.” This is a remarkably offensive statement that seems calculated to do little more than fan fears regarding “eco-terrorism” and take this matter out of the realm of thoughtful debate and intellectually honest decision-making and into the realm of inflammatory rhetoric and hyperbole. BLM offers not one shred of objective proof, or even an anecdote, to support this suggested cause of water well contamination. It just pulls it out of thin air, apparently to feed the political agenda, biases, or fears of it or its handlers. Unless the BLM can provide some objective proof to support this statement we ask that it be stricken from the ROD and that an apology be inserted into the ROD for making this uncalled for insult to the public. Information in an EIS is to be “high quality” and it is to provide a “full and fair” discussion of significant environmental impacts. 40 C.F.R. §§ 1500.1(b) and 1502.1. This statement fails those requirements and should be stricken.

**The BLM Should Not Approve This Project Until It Devises a Management Plan that Prevents the Widespread Environmental Impacts Documented in the PAPA FSEIS.**

The PAPA FSEIS is clear that in addition to the numerous significant impacts discussed above, implementation of this project will have many other severe impacts, especially to wildlife. Mule deer and pronghorn will be harmed. Sage-grouse populations will be further reduced. The pygmy rabbit and other sagebrush obligate species will suffer significant impacts. Bald eagles could suffer harm. Visual Resource Management Class II areas will be degraded and the Lander Cutoff National Historic Trail will suffer impacts.

With respect to wildlife, perhaps the best summary of the magnitude of these impacts was provided in the BLM’s discussion of “habitat function” in the PAPA FSEIS. Impacts on the Pinedale Anticline, especially in the core area, would be characterized as “extreme” under Wyoming Game and Fish Department (WGFD) policy and in an area with extreme impacts “the function and effectiveness of crucial winter habitat would be severely compromised” leading to the long-term “disintegration of the winter range complex.” PAPA FSEIS at 4-154 to -155. In areas with extreme impacts due to well field development, the WGFD concludes, “habitat effectiveness (of big game crucial winter ranges, sage-grouse nesting and brood rearing habitat) is essentially eliminated.” Id. The BLM then concluded, “Extreme impacts to habitats with vital and high value to wildlife species would continue to adversely affect habitat function within specific areas that coincide with core areas associated with Alternatives on the Anticline Crest.” Id.

Before allowing these impacts—not to mention the impacts to air and water quality discussed above—we urge the BLM to review the PAPA FSEIS to seek additional means to reduce the impacts of this project. In our prior comments we have highlighted in some detail a proposal that would greatly reduce these impacts while still allowing for full development of the gas field with 4,400 additional wells. See our comment letter dated February 11, 2008 at pages 6-

8. We urge the BLM to adopt as many of these measures as possible or find similar measures that would reduce impacts; the level of impacts currently contemplated in the PAPA FSEIS are simply environmentally unsatisfactory, and, we think, wholly unnecessary. We have outlined in some detail in our prior comments the legal authority and obligations that the BLM has to prevent this level of impacts, even in an area that has been leased, and we urge the BLM to reconsider those points before deciding the terms on which this project should be approved. We have also outlined the legal prohibitions on allowing such disturbance, including but not limited to FLPMA's prohibition on permitting unnecessary or undue degradation and provisions in BLM's special status species manual, not to mention the limitations discussed above relative to allowing wholesale waiver or modification of stipulations.

Somewhat more specifically, we again urge the BLM to modify the Wildlife Monitoring and Mitigation Matrix presented in Appendix 10 to allow modification of the spatial arrangement and pace of development to be a first tier response to documented impacts to wildlife that are exceeding a threshold. We feel that treating the symptoms rather than the cause of the problem, as the Appendix currently proposes, is inherently bad policy, and as documented in prior expert comments submitted by Dr. William Alldredge, the approach outlined in Appendix 10 has no scientific credibility.

Additionally we urge the BLM to not use 2005 as the base year for determining impacts to wildlife. Wildlife on the Pinedale Anticline was already damaged by 2005 (at a minimum documented significant impacts to mule deer and sage-grouse populations had occurred), so basing management decisions on conditions in 2005 rather than approximately in 2000 prior to disturbance occurring creates a false impression and does not allow for avoiding, minimizing, rectifying, reducing or eliminating, or compensating for the impact, 40 C.F.R. § 1508.20, because "the impact" is not being addressed, only a part of the impact is receiving attention. To meet NEPA's requirements, the BLM must consider mitigating the entirety of the impacts that have been created by this project. The BLM has framed this as a "supplemental EIS"—a continuation of the 2000 EIS and ROD—so it cannot avoid addressing impacts that may have occurred at earlier stages of this project when they are all part and parcel of the same thing.

Moreover, the slow, generalized degradation of the environment which can be hardly perceptible to the untrained or uninitiated is increasingly recognized as a significant issue, and the BLM should not contribute to this problem by creating "baselines" for decision-making that do not in fact represent the baseline. Creating a perception of 2005 as a baseline is disingenuous. As we described in some detail in our April 5, 2007 comments, as little as eight years ago the Pinedale Anticline was a virtually untouched place of astounding beauty and thriving wildlife. That is the baseline we should seek to restore, not conditions in 2005 when an industrial gas field had already supplanted what had been there before and severely diminished the wildlife populations.

Thank you for taking steps to significantly improve the Pinedale Anticline infill project beyond what is described in the PAPA FSEIS.

Sincerely,

Bruce Pendery,  
Wyoming Outdoor Council  
And on behalf of:

Erik Molvar,  
Biodiversity Conservation Alliance

Stephanie Kessler  
The Wilderness Society

Cathy Purves  
Trout Unlimited

Craig Kenworthy  
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Harv Forsgren, U.S. Forest Service  
Robert Bennett, BLM State Director