

**WYOMING OUTDOOR COUNCIL • GREATER YELLOWSTONE
COALITION • WESTERN WATERSHEDS PROJECT • NATURAL
RESOURCES DEFENSE COUNCIL • BIODIVERSITY
CONSERVATION ALLIANCE**

January 4, 2008

Moxa Arch Drilling Project Comments
Attn: Michele Easley
Bureau of Land Management
Kemmerer Field Office
312 Highway 189 North
Kemmerer, Wyoming 83101

**Re: Comments on the Moxa Arch Area Infill Gas Development Project Draft
Environmental Impact Statement**

Dear Ms. Easley:

Please accept these comments on behalf of the Wyoming Outdoor Council, Greater Yellowstone Coalition, Western Watersheds Project, XXXX, and XXX with respect to the above-referenced draft environmental impact statement (hereinafter “Moxa Arch Draft EIS”).

**I. THE MOXA ARCH DRAFT EIS DOES NOT CONSIDER AN
ADEQUATE RANGE OF ALTERNATIVES**

We will not belabor these comments with lengthy citation to court decisions and Council on Environmental Quality regulations governing compliance with the National Environmental Policy Act (NEPA), as well as related Bureau of Land Management (BLM) manual and handbook provisions, but it is well established that an agency must consider all reasonable alternatives that would not be contrary to the purpose and need for the project. Consideration of a reasonable range of alternatives is “the heart” of an environmental impact statement (EIS). The Moxa Arch Draft EIS fails to meet these requirements for the following reasons.

**A. An Alternative That Protects Contiguous BLM Land Holdings In The
Northern Portion Of The Moxa Arch Area Must Be Considered.**

The Moxa Arch EIS should consider an alternative that extends maximum protection to the areas of contiguous BLM lands in the Moxa Arch Area (MAA), primarily the contiguous BLM holdings in the northern twenty percent of the MAA. See Map 1-2. This area is the section of the MAA where the public has the greatest access

and BLM's ability to provide for multiple uses is greatest, in comparison to the railroad checkerboard lands to the south. Consequently, the BLM should ensure that this area where it has the greatest management flexibility and options is managed and recognized for its unique opportunities and conditions that do not exist to the same degree elsewhere in the MAA. Quite simply there are two radically different land ownership patterns present in the MAA that present radically different management options and challenges, and the BLM must consider an alternative that recognizes the important differences between areas with contiguous BLM land holdings and the railroad checkerboard.

Put more specifically, the "flank area" currently recognized in the MAA where development has been somewhat more limited should be expanded as far south as the railroad checkerboard in the northern twenty percent of the MAA and further development in this area should be prevented until other areas of the MAA have been fully developed and reclaimed, or at least development in this area should be very strongly regulated. The BLM could exercise its right to suspend leases in this area as a mechanism for achieving this goal.

We would note that BLM has been fully willing to suspend oil and gas leases in the trona mining area to the south because of human safety concerns, so it should be just as willing to exercise that option so as to meet multiple use obligations in the northern part of the MAA. We would also note that the BLM is moving toward suspending a large acreage of leases on the "flanks" of the Pinedale Anticline, so clearly this is an available and viable option. As will be discussed below, suspension of leases "in the interest of conservation" is a well recognized mechanism available to the BLM

If lease development were not fully suspended, BLM should at a minimum strongly regulate oil and gas development in this area; BLM's authority to strongly regulate oil and gas development is discussed in detail below. We would note that it appears that most if not all of the leaseholders in this northern area have other lease holdings further south in the railroad checkerboard, so their ability to develop oil and gas would likely not be entirely precluded, and certainly the MAA as a whole would still contribute to this nation's energy supply, in conformance with the purpose and need for this project. Map 1-3, pages 1-7 to 1-8.

The advantages of ensuring full protection for the northern section of the MAA with contiguous BLM land holdings are many. Extending enhanced protection to this area would help ensure that the recreational values of Fontenelle Reservoir (not to mention water quality in the Green River) are fully protected. It would help ensure that the wildlife and wildlife related values in Seedskaadee National Wildlife Refuge are fully protected. BLM is moving toward providing protection for "contiguous vegetation blocks" in its revision of the Kemmerer Resource Management Plan. Achieving this goal could be better met if this northern section of the MAA were fully protected from development until development is complete in other sections of the MAA and reclamation achieved.¹ There is substantial crucial winter yearlong pronghorn range in

¹ Many of the parties to these comments submitted comments on the Kemmerer Resource Management Plan draft EIS on October 11, 2007. Those comments address the need to protect contiguous BLM land

this area. Map 3-8. There is also very important crucial severe winter relief habitat for elk in this area. Map 3-10. There is substantial moose habitat along the Green River. Map 3-11. There are a considerable number of prairie dog colonies in this area, including a large concentration of high density burrows. Map 3-12. The presence of prairie dog colonies of course implicates many other species such as the endangered black-footed ferret and sensitive burrowing owl. A number of sage grouse leks are found in this area. Map 3-13. Much of this area is Visual Resource Management (VRM) Class II, or at a minimum VRM Class III. Map 3-16.

For all of these reasons it would be appropriate to consider an alternative in the Moxa Arch EIS that fully protects this northern contiguous area until other areas of the MAA have been fully developed and reclaimed. We would note that this approach would be fully consistent with the purpose and need for this project. The use of suspension in no way infringes on the rights of an operator to develop oil and gas, and as noted above, most if not all of these operators have other leases in the railroad checkerboard portion of the MAA. Map 1-3. And even if development in this part of the MAA were limited for a time, the MAA as a whole would contribute to this nation's energy demands, a stated need for the project. Pages 1-7 to 1-8. Consequently, this is an entirely "reasonable" alternative, and accordingly it must be considered by the BLM in the Moxa Arch EIS.

B. An Alternative That Protects River And Highway Corridors Must Be Considered.

In addition to ensuring protection for the large contiguous holdings of BLM land, the BLM should also consider an alternative in the Moxa Arch EIS that recognizes the important values along stream and highway corridors in the area and which actively seeks to protect those corridor areas. These corridors primarily include the Blacks Fork and Hams Fork Rivers and U.S. Highway 30 which tracks along the Hams Fork River.²

Not the least of the values associated with these corridors is the fact that they are major travel corridors for people. This is particularly true of the Hams Fork along which U.S. Highway 30 runs. People do not wish to have an industrial gas field in their face for mile after mile as they drive along this scenic highway, a major access route to Fossil Butte National Monument and even Yellowstone and Grand Teton National Parks.

A review of the maps in the Moxa Arch Draft EIS also emphasizes other important values that attach to these corridors. These corridors have heavy concentrations of pronghorn crucial winter yearlong habitat, and even crucial severe winter relief habitat. Map. 3-8. Moose yearlong habitat and winter yearlong habitat is prominent. Map 3-11. A number of BLM sensitive amphibian and fish species are found

holdings in some detail and we direct BLM to those comments as a supplement to these comments, particularly the discussion on pages 1-5 of those comments.

² For purposes of this discussion we will ignore the Green River/U.S. Highway 189/Wyoming Route 372 corridor in the north because it is implicated in our discussion of the need to protect the northern contiguous BLM land holdings. But the many of the same considerations and issues discussed in this section apply just as fully to the Green River/U.S. Highway 189/Wyoming Route 372 corridor.

in these areas. Pages 3-62 to 3-63. Historic trails utilized these same corridors. Pages 3-65 to 3-72, Appendix F. The majority of Class II and Class III VRM areas are found in these corridors. Map 3-16. Given this large concentration of special values, the BLM should consider an alternative that explicitly seeks to recognize and protect these values.

If nothing else, a corridor through which many thousands—if not hundreds of thousands—of people drive every year (U.S. Highway 30) demands special recognition and accommodation in BLM’s management plans. The very purposes of NEPA are to ensure that human welfare is bettered, so a corridor that attracts huge numbers of people must clearly be given special recognition in BLM’s NEPA analysis. See 42 U.S.C. §§ 4331(a)-(b) (presenting the policy and purposes of NEPA).

The existing Moxa Arch EIS prepared in 1997 seems to recognize the importance of these corridors, designating much of them Zones 2 and 3, although this is only generally true and much of the Hams Fork corridor is a “No Zone.” Map 2-2.

The BLM should consider an alternative that recognizes the uniqueness of the stream and U.S. Highway 30 corridors and seeks to protect them as much as possible. None of the current alternatives do this. The Operators’ proposal would pepper these corridors with new wells. Map 2-1. While Alternative A, continuation of existing management, would continue the zoning designations of the 1997 Record of Decision for the MAA, Zones 2 and 3 allow for the drilling of 242 and 393 wells, respectively, hardly any substantial protection. Maps 2-2 and 2-3. Alternatives B and C would open the floodgates to development in these areas. Map 2-4.

Just as was suggested above, BLM should suspend leases that are within approximately one mile of the referenced corridors until other leases in the MAA have been fully developed and reclaimed. This would allow BLM to protect the special values in these corridors while permitting substantial development to occur generally in the MAA, and thus be in full compliance with the stated purpose and need for this project. Or at a minimum, the BLM should fully exercise its retained rights and carefully regulate development of leases within approximately one mile of these corridors. As noted above, the high degree of “retained rights” that BLM enjoys despite having issued a lease will be discussed below. We recognize that the BLM limits development within 500 feet of a riparian area, but this limited protection in no way ensures the important values of these much wider corridors are fully protected.

We would note that these corridors have relatively little existing development in many cases. Map 1-4. This is especially true of the southern and eastern parts of the Blacks Fork and the northwestern part of Hams Fork. Consequently temporarily limiting development along these corridors is unlikely to markedly affect oil and gas production. We recognize that these corridors are almost entirely located in the railroad checkerboard and thus BLM’s ability to fully control development in these areas is more limited, and that many of the minerals are not federally owned. Map 1-2. Nevertheless, many many sections of federal land exist within about a mile of these corridors, so the BLM’s

management decisions can have an important impact on the environmental values along these corridors.

In all likelihood, the consideration of the provisions discussed in this section could be combined with consideration of the options described in the first section above; BLM should consider an alternative that both seeks to protect the BLM contiguous lands in the north and the lands along the corridors. This would allow for protection of many of the most environmentally significant resources in the MAA while still allowing for significant oil and gas development in the much of the core of the MAA.

C. The BLM Must Consider A True No Action Alternative And Alternative A In No Way Constitutes A Conservation Or “Low Development” Alternative.

The BLM is treating the existing Moxa Arch Record of Decision, Alternative A in the Moxa Arch Draft EIS, as the required “no action” alternative. But BLM is taking its view of Alternative A even farther: not only is it viewed as the no action alternative, it is also viewed as something of a conservation alternative because the level of development under it would be less than under any other alternative considered. See page 2-1 (“Because the No Action Alternative does not eliminate the potential for future development it serves two functions, as the no action and as a low development alternative.”). The BLM is trying to get this development alternative to do triple duty as a no action, conservation, and action alternative, but this is impermissible. An alternative cannot be both “no action” and “a low development alternative” at the same time. And it certainly cannot be both a no action alternative and one of the action alternatives.

The BLM should consider a true no action alternative. It should present an analysis of environmental impacts if no further oil and gas development occurred in the MAA. While we are well aware that much of the MAA has been leased and that a federal oil and gas lease conveys certain rights, we believe a no action alternative that considers no further development is still required. While such an alternative may be incapable of being fully implemented, consideration of such an alternative would allow for vitally important understanding of the development that does take place. At present all that is conveyed is some understanding of what impacts will be if 670 additional wells are drilled (Alternative A, the “no action” alternative) versus what impacts would be if 1,861 or 5,165 additional wells were drilled (the operators proposal or Alternatives B and C). This conveys no information whatsoever about the magnitude of the environmental tradeoffs that will occur if development occurs versus if it did not occur. It only conveys an understanding of the impacts of extreme levels of development versus a lesser level of development.

This is insufficient to meet the requirements of NEPA. The bedrock principles underlying NEPA are that an EIS should allow for full understanding of the environmental tradeoffs of a course action, and provide for informed public participation and agency decision-making based on such a full understanding. Comparing lots of development to not quite as much development conveys no such full understanding of the

environmental consequences of pursuing oil and gas development. It conveys at best only an incomplete understanding and at worst it is a misstatement of the true consequences (costs) of the chosen course of action. BLM should correct this failure and consider a true no action alternative in the Moxa Arch EIS so as to facilitate informed public participation in this matter and informed agency-decision making.

Similarly, Alternative A does not qualify as any form of a “conservation alternative” or even a “low development alternative” and it should not be presented or implicated as such. If nothing else, in the 1995 Expanded Moxa Arch Area EIS BLM considered an alternative (Alternative A) that would have only allowed for the drilling of 795 additional wells, whereas the alternative that BLM selected and which forms the basis for the current Alternative A in the Moxa Arch Draft EIS allowed for the drilling of 1,325 wells (this was the operators proposal in 1995) of which 670 can still be drilled. Thus, continuation of Alternative A under the framework of the current EIS is nothing more than the continuation of and completion of an intense development alternative that was initiated in 1997. Clearly Alternative A was never conceived of as a conservation alternative or even as a “low development alternative” and it should not be passed off as such at this time. A true conservation, or low development, alternative would include the elements discussed in the first two sections above and in the discussion on phased development presented in the next section.

D. The BLM Should Consider A Phased Development Alternative And An Alternative That Fully Recognizes Its Retained Rights And Legal Obligations In Leased Areas.

BLM chose not to consider a phased development alternative in the Moxa Arch Draft EIS. Pages 2-16 to 2-17. Some of the reasons for not pursuing a phased development alternative are unpersuasive and at least one stated reason for not considering a phased development alternative is absurd.

The absurd rationale relates to only allowing a certain percentage of wells to be drilled every year as one way to phase development. Page 2-17. BLM reasoned that because less than 100 percent of the permitted wells under any alternative would be drilled in any given year, this was in effect a phased approach, allowing it to not analyze this approach. This is silly. Have 100 percent of the permitted wells ever been drilled in a year’s time anywhere? We doubt it, unless only a very small number of wells were permitted. The place to start is to make some estimate as to the likely number of wells that would be or could be drilled annually (the Moxa Arch Draft EIS provides these estimates) and then determine if imposition of a lesser rate of drilling could achieve the purpose and need for the project, or not greatly impede achievement of them, while allowing for better environmental protection. That less than one hundred percent of the permitted wells will not be drilled at one time in no way constitutes any meaningful, planned form of phased development. It only reflects technological or economic limitations, not planning.

The BLM also declined to consider only allowing the drilling of a certain percentage of wells in sensitive areas each year. Page 2-17. Part of the reason for this decision was that in checkerboard areas development could still occur on private lands, possibly defeating any benefits.³ But at a minimum, BLM could pursue this approach in the northern contiguous BLM lands, as discussed above. Furthermore, BLM claims that Alternative B was developed to address impacts in sensitive areas, and thus it serves the function of any phased development approach. Page 2-17. This is a completely inaccurate assessment of what Alternative B might achieve.

The relevant provision of Alternative B is that it would limit active, un-reclaimed disturbance associated with oil and gas development to less than 10,921 acres. Page 2-12. The implication is that by doing this, environmental impacts will be kept acceptable or even reduced. But this rationale completely fails to consider or acknowledge the full scope of impacts that would occur under Alternative B. Even if it is assumed that reclamation is entirely effective (an invalid assumption, as will be discussed below) and that the 10,921 acre limit is never exceeded, this does not change the fact that Alternative B would leave 5,165 new wells in its wake. This huge number of wells will have massive and ongoing impacts that cannot be entirely rectified even if the area of disturbance is somewhat reduced. Viewsheds will be marred for a generation or more, noise and activity at the wells will continually disturb wildlife, air pollutants will be continuously emitted, roads will spill sediment, etc., etc., even if BLM is extremely successful in establishing western wheatgrass on reclaimed portions of a well pad. Consequently, there is no basis for BLM to claim or imply that Alternative B somehow serves a role equivalent to a phased development alternative just because the acreage of disturbance at any given time is limited.

In addition to these claims, the BLM also states as part of its reasoning for not pursuing a phased development alternative that “because of the varying lease conditions, stipulations, and conditions of approval across the MAA, BLM could be limited in its ability to prevent development in sensitive areas.” Page 2-17. This is a complete failure to recognize the substantial retained rights that BLM enjoys despite having issued an oil and gas lease that would not only allow it to pursue phased development, but a number of other conservation measures. These retained rights and their implications will be discussed next.

³ The BLM acknowledges in the Moxa Arch Draft EIS that if drainage of federal minerals occurs due to development on private lands, the BLM has authority to impose compensatory financial obligations on operators. Thus, the BLM should not try to “play off” development on private lands against development on federal lands, allowing it to justify minimizing the obligations it imposes on operators on federal lands. By requiring payments for any drainage, the BLM can minimize the “allure” of developing on private lands as means to avoid requirements on federal lands.

1. The BLM Has Adequate Retained Rights And Indeed Legal Obligations That Allow For And Require It To Substantially Regulate Oil And Gas Development.

It is our view that BLM has substantial retained rights even after an area has been leased and that pursuant to these retained rights the BLM has the ability to fully protect the natural environment in leased areas. In fact, it is our view that not only does BLM have the right to do this, it in fact has an obligation to ensure full environmental protection as a condition of development of existing leases.

There is no question that the BLM is legally empowered and in fact obligated to protect the natural environment even after a lease has been issued. The NEPA itself establishes important national policies for environmental protection and Congress “directs that, to the fullest extent possible . . . the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in [NEPA].” 42 U.S.C. § 4332(1). See also id. § 4331 (presenting the environmental protection policies of NEPA). The Council on Environmental Quality regulations reinforce this obligation to protect the natural environment. See, e.g., 40 C.F.R. §§ 1500.2(f) (Federal agencies “shall to the fullest extent possible . . . use all practicable means . . . to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment”); 1502.1 (“The primary purpose of an [EIS] is to serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government”). The courts too have recognized that the purposes and goals of NEPA control BLM’s oil and gas development activities. Getty Oil Co. v. Clark, 614 F.Supp. 904, 920 (D. Wyo. 1985) (“The Secretary is not only permitted, but is required, to take environmental values into account in carrying out his regulatory functions, unless there is a clear and unavoidable statutory authority prohibiting the Secretary from complying with NEPA’s mandate.”). Thus, the BLM must interpret its obligations where leases have been issued in light of the policies established by NEPA.

In addition to NEPA, the Federal Land Policy Management Act (FLPMA), BLM’s organic law relative to its mission and purpose, establishes a requirement to fully protect the natural environment in areas that that have been leased. “[I]t is the policy of the United States that—the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; . . . that will provide food and habitat for fish and wildlife and domestic animals” 43 U.S.C. § 1701(a)(8). The BLM is required to manage the public lands under a multiple use mandate, which requires among other things the “harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment. . . .” Id. § 1702(c). And last, “[i]n managing the public lands the Secretary [of the Interior] shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the [public] lands.” 43 U.S.C. § 1732(b).

With respect to this last requirement it is probably important to emphasize to the BLM that the FLPMA's mandate to prevent unnecessary or undue degradation imposes dual action requirements on the BLM, it must take action to prevent both unnecessary degradation as well as undue degradation of the public lands. Mineral Policy Center v. Norton, 292 F.Supp.2d 30, 42 (D.D.C. 2003). We would also note that this decision stands as the final word as to what the unnecessary or undue degradation clause means—the Department of the Interior did not appeal this decision, and thus it is the final word as to the Department's responsibilities and has been accepted as binding by the Department. Addressing this dual requirement, the court made plain that “Congress's intent was clear: Interior is to prevent, not only unnecessary degradation, but also degradation that, while necessary to mining, is undue or excessive.” Id. That is, while unnecessary degradation may only prevent activities that are not generally recognized or used to pursue mining operations, the undue degradation prohibition establishes a further requirement to prevent activities that would unduly harm or degrade the public land. As stated by the court, “FLPMA, by its plain terms, vests the Secretary of the Interior with the authority—and indeed the obligation—to disapprove of an otherwise permissible mining operation because the operation, though necessary for mining, would unduly harm or degrade the public land.” Id.

Despite this clearly established law, the BLM has often persisted in misstatements of the governing legal standard. It often continues to view its dual mandate under FLPMA as a unitary obligation (it still claims that unnecessary degradation and undue degradation are one and the same), and then proceeds to claim that only things not necessary for mining are prohibited unnecessary and undue degradation. The BLM's attempts to read the plain language of FLPMA in the conjunctive rather than the disjunctive were firmly rejected by the Mineral Policy Center court. The court clearly held that the undue degradation prohibition relates to degradation of the environment on the public lands, not mining considerations. It is impossible for the BLM to fully recognize let alone exert its retained rights when it persists in stating its legal obligations in an impermissibly constrained manner. The FLPMA, like NEPA, provides the BLM with authority, and indeed an obligation, to protect the natural environment even in areas that have already been leased.

Furthermore, a host of other laws impose a requirement on the BLM to consider environmental conservation as a key component of oil and gas development in the Kemmerer Field Office.⁴ Thus, it is clear that the BLM is under an obligation to ensure

⁴ For example, the purposes of the Endangered Species Act “are to provide a means whereby the ecosystems upon which [listed] species depend may be conserved and to provide a program for the conservation of such [species], and the Secretary of the Interior shall “utilize [programs administered by him] in furtherance of the purposes of this chapter.” 16 U.S.C. §§1531(b), 1536(a)(1). The objective of the Clean Water Act is to “restore and maintain the chemical, physical, and biological integrity of the Nation's waters.” 33 U.S.C. § 1251(a). The purposes of the Clean Air Act are “to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare . . .” 42 U.S.C. § 7401(b)(1). See also id. §§ 7470(2), 7491(a)(1) (directing that air quality in protected landscapes and airsheds be protected). Under the National Historic Preservation Act, prior to the approval of any Federal undertaking which may directly and adversely affect any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as maybe

environmental protection even in areas that have been leased. Unfortunately, and as indicated above, it is not clear the BLM fully recognizes the rights it retains despite issuing a lease, or the obligations it operates under to protect the natural environment in areas that have been leased.

In addition to the legal obligations noted above, a host of BLM policies, regulations, and contractual provisions relative to oil and gas development allow and in fact demand protection of the natural environment in areas that have been leased. Quite simply, the BLM has retained very substantial rights to condition development so as to protect the natural environment even though it has leased lands for oil and gas development. The BLM's standard lease form (form 3100-11) contains the following reservations of authority to BLM:

- Lease Terms Section 4: "Lessor reserves the right to specify rates of development and production in the public interest"
- Lease Terms Section 6: "Lessee must conduct operations in a manner that minimizes adverse impacts to the land, air, water, to cultural, biological, visual, and other resources Lessee must take reasonable measures deemed necessary by lessor to accomplish the intent of this section. To the extent consistent with lease rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures."
- Lease Terms Section 7: "To the extent that impacts from mining operations would be substantially different or greater than those associated with normal drilling operations, lessor reserves the right to deny approval of operations."

Clearly the BLM has retained very substantial rights under the standard lease contract, and under those retained rights the BLM has more than adequate authority to ensure that it fully complies with the laws and policies noted above by asserting these retained rights and the need to adhere to legal obligations when development is proposed on a lease.

The BLM sometimes invokes its regulation at 43 C.F.R. § 3101.1-2 as imposing limits on its ability to condition development, claiming that (in the absence of a specific stipulation or non-discretionary statute) it can only impose "reasonable measures" demanding no more than that lease operations be moved no more than 200 meters, leasehold operations be prohibited for no more than 60 days, or that operations be moved off the leasehold. This is an incorrect view of this regulation. In adopting this regulation, BLM commented that "the authority of the Bureau to prescribe 'reasonable,' but more stringent, protection measures is not affected by the final rulemaking." Oil and Gas Leasing, Geothermal Resources Leasing, 53 Fed. Reg. 17,340, 17,341 (May 16, 1988). Quite simply, this regulation establishes a floor, not a ceiling as to the reasonable measures provided for in the lease contract that the BLM may require. As noted above, the specific terms of the standard lease certainly do not limit BLM's authority to this

necessary to minimize harm to such landmark" 16 U.S.C. 470h-2(f). This is a small sampling of the numerous environmental protection statutes BLM operates under.

degree. It may be worth noting that the standard lease form and the regulation were both adopted in 1988; BLM certainly developed one in full recognition of the other. Consequently, the standard lease and the 3101.1-2 regulation must be considered together to determine the BLM's retained rights. The 3101.1-2 regulation does not stand as the sole word as to what constitutes "reasonable measures," as the BLM sometimes claims, and in any event it too hardly constrains the BLM's rights to condition development. By its own terms the regulation specifies reasonable measures "are not limited to" modifying siting or design of facilities, timing of operations, and specification of reclamation, and the specific reasonable measures mentioned in the regulation are "at a minimum" of what is within BLM's retained authority. 43 C.F.R. § 3101.1-2.

It may be worth noting what rights BLM conveys when it issues a lease and what rights it has retained. The BLM only conveys three limited rights when it issues a lease:

- An "exclusive right" to remove all of the oil and gas on the leasehold. Form 3100-11.
- The right to "use" as much of the leasehold as "necessary" to recover all of the leased resource. 43 C.F.R. § 3101.1-2.
- The right to build and maintain "necessary" improvements to extract the leased resource. Form 3100-11.

Thus, the only rights a lessee has are a right to exclude others from developing the lease, a right to use no more of the lease than is "necessary" to retrieve the leased oil and gas, and a right to build only "necessary" improvements. The operators have certainly not been conveyed a right to develop the oil and gas in exactly the manner they desire or on the exact timeline they desire. BLM has retained the right to condition those aspects of oil and gas development.

In contrast to the limited rights that have been conveyed, under the standard lease form and the 3101.1-2 regulation, the BLM has specifically retained the right to condition development based on the following:

- Applicable laws.⁵ Form 3100-11.
- Terms, conditions, and stipulations in the lease. Form 3100-11.
- Regulations and formal orders in effect when the lease is issued. Form 3100-11.
- Regulations and orders issued afterward, if not inconsistent with lease rights and provisions in the lease. Form 3100-11.
- Specific, non-discretionary statutes. 43 C.F.R. § 3101.1-2.
- Reasonable measures. 43 C.F.R. § 3101.1-2.

This broad range of retained rights gives the BLM almost complete authority to specify the time, place, and manner of oil and gas development.

⁵ We would note that this is a considerably broader statement than the reference to non-discretionary statutes in the 3101.1-2 regulation. Many laws are applicable even if they are not strictly non-discretionary.

The limited conveyance of rights under a federal oil and gas lease and the government's high degree of retained authority to condition development on leases was long ago recognized by the United States Supreme Court:

Unlike a land patent, which divests the Government of title, Congress under the Mineral Leasing Act has not only reserved to the United States the fee interest in the leased land, but has also subjected the lease to exacting restrictions and continuing supervision by the Secretary. . . . In short, a mineral lease does not give the lessee anything approaching the full ownership of a fee patentee, nor does it convey an unencumbered estate in the minerals.

Boesche v. Udall, 373 U.S. 472, 477-78 (1963). In addition, the court noted that “[r]ecognition of the Secretary’s power here serves to protect the public interest in the administration of the public domain.” Id. at 484.

Clearly, the BLM has more than sufficient authority to regulate development of an oil and gas lease in order to meet its legal obligations under numerous environmental laws and policies enacted to protect the natural environment.⁶ Or said differently, the BLM has more than sufficient authority to meet its legal obligations and management objectives despite leases being in place because what has been conveyed is an interest “subject[] . . . to exacting restrictions and continuing supervision,” not “an unencumbered estate in the minerals.”

In addition to the provisions in the standard lease form, the Mineral Leasing Act itself and BLM’s regulations relative to the conditions under which oil and gas development may be pursued are replete with retained authority to condition development of leases, and indeed a responsibility to do so in order to protect the natural environment. Many if not all of these provisions were “regulations and formal orders in effect” when many of the leases in the MAA were issued, and they are not “inconsistent with lease rights and provisions in the lease” in any event.

“Each lease shall contain provisions for the purpose of insuring the exercise of reasonable diligence, skill, and care in the operation of said property” 30 U.S.C. §187 (emphasis added). “The Secretary of the Interior is authorized to prescribe necessary and proper rules and regulations and to do any and all things necessary to carry out the and accomplish the purposes of this chapter, also to fix and determine the boundary lines of any structure, or oil and gas field” Id. § 189. “The Secretary of the Interior, for the purpose of encouraging the greatest ultimate recovery of [leasable minerals], and in the interest of conservation of natural resources, is authorized to waive,

⁶ BLM sometimes attempts to invoke BLM Instruction Memorandum (IM) 92-67 (issued December 3, 1991) as limiting its ability to condition development on a lease. But this IM is of no moment. For one it expired on September 30, 1992. Moreover, it is totally inconsistent with the decision in Mineral Policy Center v. Norton (discussed above), a decision that BLM did not appeal and which therefore stands as the final legal authority as to what BLM’s obligations are under the FLPMA unnecessary or undue degradation clause. A BLM IM, of course, cannot stand in the way of a U.S. District Court decision, especially one from the District of Columbia where BLM is headquartered.

suspend, or reduce the rental, or minimum royalty, or reduce the royalty on the entire leasehold” Id. § 209 (emphasis added). “The Secretary of the Interior . . . shall regulate all surface disturbing activities conducted pursuant to any lease issued under this chapter, and shall determine reclamation and other actions as required in the interest of conservation of surface resources.” Id. § 226(g) (emphasis added) (also requiring approval of a plan of operations and “complete and timely” reclamation and restoration of lease tracts).

Clearly the Mineral Leasing Act gives the BLM broad authority to condition oil and gas development in the interest of conservation, and this authority has been recognized by the courts. Copper Valley Machine Works, Inc. v. Andrus, 653 F.2d 595 (D.C. Cir. 1981) (determining that the “ordinary meaning” of the term “in the interest of conservation” in section 209 of the Mineral Leasing Act allows suspension of operations so as to protect the environment); Getty Oil Co. v. Clark, 614 F.Supp. 904 (D. Wyo. 1985) (holding sections 189 and 209 of the Mineral Leasing Act provide broad grants of authority allowing conditioning of development to protect the environment, even allowing denial of drilling operations to protect wilderness values when a suspension is requested by the lessee; also determining that NEPA imposes responsibility to consider environmental values in carrying out the Mineral Leasing Act).

As noted, BLM regulations regarding the conditions under which oil and gas development can occur are also replete with provisions allowing the BLM to condition the time, place, and manner of oil and gas development. “The authorized officer is authorized and directed to “. . . require compliance with lease terms, with the regulations in this title and all other applicable regulations promulgated under the cited laws, and to require that all operations be conducted in a manner which protects other natural resources and the environmental quality” 43 C.F.R. § 3161.2. “Before approving operations on a leasehold, the authorized officer shall determine . . . that the proposed plan of operations is sound both from a technical and environmental standpoint.” Id. “All operations will be conducted in a manner “which protects other natural resources and environmental quality” Id. § 3162.1(a) (also requiring the operating rights owner to comply with all applicable laws, regulations, lease terms, Onshore Oil and Gas Orders, Notices to Lessees, “and with other orders and instructions of the authorized officer”). “The operator shall conduct operations in a manner which protects the mineral resources, other natural resources, and environmental quality.” Id. § 3162.5-1(a) (also requiring compliance with orders, applicable laws, regulations, lease terms and the drilling/operations plan). “The operator shall exercise due care and diligence to assure that leasehold operations do not result in undue damage to surface or subsurface resources or surface improvements.” Id. § 3162.5-1(b).

And as also noted above, section 4 of the standard lease form clearly allows the BLM to regulate the pace of development. This authority is bolstered by many other provisions of law and policy noted above, and the courts have recognized that BLM has an obligation to consider regulating the pace of development in a NEPA analysis. In Northern Plains Resource Council v. BLM, No. CV 03-69-BLG-RWA (D. Mont. February 25, 2005) and Northern Cheyenne Tribe v. BLM, No. CV 03-78-BLG-RWA

(D. Mont. February 25, 2005) the court held that the BLM violated NEPA by not considering alternatives for phased development in the context of a coalbed methane development project.

The BLM itself has also recognized the need to consider phased and/or paced development alternatives. In the Pinedale Anticline Draft EIS (1999), the BLM acknowledged that “BLM can regulate the manner and pace of development” and that pursuant to Interior Board of Land Appeals decisions, “consider[ing] staggering development over time [is] an “*obvious* alternative.”” Pinedale Anticline Draft EIS at 2-43 (citing Wyoming Outdoor Council, 147 IBLA 105 (1998) and Powder River Basin Resource Council, 120 IBLA 47 (1991)). See also Pinedale Anticline Draft EIS at 2-2 (paced development is consistent with lease rights granted and required to meet the requirement to prevent unnecessary or undue degradation).

At least one implication of the above review of the degree of retained rights enjoyed by the BLM is that “takings” concerns are not of such a certain, severe magnitude that the BLM must in essence capitulate to the development desires of industry. In our experience, the BLM often quickly invokes (or bows to) concerns about there being a “taking” if it strongly regulates oil and gas development. Such concerns are greatly overstated. Before a taking can occur, a property right must have been given. While certainly the BLM has conveyed the right to extract oil and gas from a leasehold, it has done so subject to any development occurring under a highly regulated, comprehensive framework, as discussed in detail above. To quote the Supreme Court again, a federal lease is “subjected [] to exacting restrictions and continuing supervision” and “does not give the lessee anything approaching the full ownership of a fee patentee.” Boesche at 477-78. Furthermore, besides the fact that the BLM has given only a significantly limited property right, it is well established that a regulatory taking can only occur if the BLM deprives the leaseholder of all economically viable uses of the leasehold. Lucas v South Carolina Coastal Council, 505 U.S. 1003 (1992). This is “black letter law.” It seems unlikely that any restrictions that the BLM might place on lease development would deprive the leaseholder of all economically viable uses of the lease, and certainly a taking does not occur just because the leaseholder does not get to develop the lease in exactly the manner or on exactly the timeline they might desire. It is difficult for any “taking” to occur; the BLM should recognized this, and not acquiesce the first time the word “taking” is uttered.

We engage in this lengthy and somewhat detailed review of relevant law and policy so as to emphasize that the BLM certainly has the authority, and indeed an obligation, to fully protect the natural environment in the MAA. The BLM should provide a clear, unequivocal statement in the Moxa Arch EIS of the degree to which it has retained rights under the standard lease form and specify precisely the means by which it will exercise those retained rights so as to meet management objectives and legal obligations, not to mention its obligation to “protect the public interest in the administration of the public domain” recognized by the Supreme Court in Boesche. Specific means by which this retained authority should be exercised, such as by requiring the use of phased or paced development, will be discussed next.

a. *Paced and Phased Development*

One of the most important means by which environmental values can be protected is by adopting specific provisions requiring phased and/or paced development in environmentally sensitive areas. This is an “obvious” way to manage oil and gas development according to the IBLA. As noted above, section 4 of the standard lease form specifically allows regulation of the rate of development, and BLM has recognized the validity of this approach in the Pinedale Anticline EIS. The BLM should make specific provision for phased and paced development in the Moxa Arch EIS as a requirement for development of existing leases where this can help protect environmental values, particularly in the large contiguous block areas of BLM lands. The IBLA recently recognized that section 4 of the standard lease form allows the BLM to protect resources, even after a lease has been issued. National Wildlife Federation et al., 169 IBLA 146, 164 (2006).

b. *Clustered Development and Directional Drilling*

Another important means to achieve environmental protection is to require clustered development and the related technique of requiring directional drilling. Again, there is no doubt that imposing such requirements is well within the BLM’s retained rights under a federal oil and gas lease. Oil and gas lessees may have a right to retrieve all the oil and gas on a leasehold, but they do not have a right to do it exactly when, where, and how they chose; specifying the time, place and manner of oil and gas development is well within the BLM’s authority, and in fact in the words of the Mineral Leasing Act it has an obligation to “regulate” oil and gas development in this way so as to conserve surface resources. That directional drilling might cost a leaseholder somewhat more than straight-hole drilling is not sufficient reason in and of itself for the BLM to not require directional drilling, if such would better protect the natural environment that BLM has been charged with protecting. Only if all economically viable use of the leasehold would be precluded is BLM barred from requiring directional drilling. Consequently, the BLM should recognize and assert its rights in the Moxa Arch EIS, and require clustered development and the use of directional drilling.

c. *Lease Suspension*

Lease suspension is another means at BLM’s disposal to ensure full environmental protection is achieved in leased areas. As noted above, the Mineral Leasing Act gives the BLM authority to suspend leases “in the interest of conservation,” a term that includes conservation of environmental values. The BLM should utilize this authority to fully protect the large contiguous BLM land holdings in the northern part of the MAA so as to protect the substantial ecological and recreational/cultural resource values in this area. The BLM has exercised this authority in other areas, such as during development of the Jack Morrow Hill Coordinated Activity Plan, and is contemplating using it in the Pinedale Anticline Supplemental EIS for interim protection of some Pinedale Anticline flank areas that are leased.

d. Unitization

Another mechanism that could be utilized to protect the MAA is unitization of leases. This would allow lease holders to enjoy the benefits of development of leases while protecting sensitive areas. While there may be some limits on the ability to require unitization, the BLM could certainly urge operators to enter into voluntary unitization agreements and use other mechanism (pooling orders) to pursue unified development in sensitive areas. Unitization is a key component of the BLM's development plan on the Roan Plateau in Colorado which seeks also to protect the natural environment in that area, and BLM should thoroughly consider that model here. Pursuing unitization would allow for orderly development with less infrastructure and disturbance, while helping to eliminate issues such as those related to drainage.

e. Additional Conditions of Development

Other means to protect the natural environment that are well within BLM's retained rights to require include limitations on well pad size, requiring closed-loop drilling fluid systems, the use of remote well monitoring and car pooling and other traffic reduction techniques, and requirements to bury utility lines. The BLM should require these and other techniques and provisions as prerequisites to development on existing leases.

f. Retention and Enforcement of Lease Stipulations

One of the most important means by which the BLM can ensure that the natural environment is protected is to ensure that timing stipulations oriented toward the protection of wildlife crucial ranges are not abandoned and are in fact vigorously enforced. The WGFD recognizes the importance of these stipulations in its report Recommendations for Development of Oil & Gas Resources within Crucial & Important Wildlife Habitats, available at <http://gf.state.wy.us/downloads/pdf/og.pdf>. The BLM should expressly state in the Moxa Arch EIS the extremely limited and carefully specified conditions under which these exceptions could occur, as well as how the WGFD and the general public will be able to participate in the decision-making. Requiring these stipulations as provisions on any new leases that are issued in the MAA should also be maintained in all crucial wildlife habitats wherever they may be located.

g. Lease Buyout and Trade

Last, the BLM should fully consider and make provision for lease buyout and trades. The BLM has specifically made provision for doing just this in the Jack Morrow Hills Record of Decision, so it is clearly within the BLM's authority. While we realize that lease buyouts might require Congressional authorization or that means to acquire or provide these monies might be beyond what the Moxa Arch EIS can specifically require, the BLM certainly at a minimum can provide in the Moxa Arch EIS that lease buyout will always be considered and explored when development is proposed in sensitive areas. And pursuing trades of leases from willing traders is certainly well within the BLM's

authority without additional Congressional authorization, and BLM should make provision in the Moxa Arch EIS to fully explore and utilize this obvious means of environmental protection to the maximum extent possible, especially in the areas with contiguous BLM land holdings in the north.

II. THE BLM HAS FAILED TO PROVIDE A HARD LOOK AT MANY SIGNIFICANT ENVIRONMENTAL IMPACTS IN THE MOXA ARCH DRAFT EIS AND FAILS TO ADEQUATELY CONSIDER MITIGATION OPTIONS.

Again, we will not belabor these comments with extensive citation to court opinions or Council on Environmental Quality Regulations regarding NEPA compliance. But under these authorities there is no question that the BLM must fully consider every significant environmental impact and issue in its NEPA documents—it must provide a “hard look” at these impacts and means to mitigate them—and provide the public with a thorough analysis of these issues. The BLM has failed to meet this requirement relative to a number of significant environmental issues implicated by the MAA Infill Project.

A. Wildlife Issues Have Not Been Fully Considered.

The BLM’s consideration of impacts or issues related to a number of species of wildlife is not sufficient to meet the NEPA hard look requirement. Likewise, the Moxa Arch Draft EIS is deficient relative to consideration of mitigation options. Species that must receive a greater degree of consideration or analysis include the following.

1. Ferruginous Hawk

The ferruginous hawk is a BLM sensitive species. There are a large number of known or suspected ferruginous hawk nesting areas in the MAA. Map 3-7. They are primarily associated with certain topographic features, namely benches, ridgelines, and mesas. Page 3-55.

Despite the particularly large number of nests in the area and its status as a sensitive species, BLM does not provide any special consideration to the ferruginous hawk in the Moxa Arch Draft EIS or any special mitigation actions. The proposed mitigation is business as usual. It would restrict development within 1 mile of active nests (it is not clear if this limitation applies to the very large number of suspected nests in the MAA) between February 1 and July 31. This is BLM’s standard protection for ferruginous hawks that is routinely applied in dozens if not hundreds of BLM NEPA analyses; it is not clear that anything other than a rote prescription has been applied.

This is an insufficient NEPA analysis. Given the very large number of nests in this area, BLM should fully consider whether the standard timing limitation stipulation is enough and whether it needs to be modified so as to maintain this density of ferruginous hawks in this area. For example, given that BLM recognizes this BLM sensitive species

is primarily associated with certain topographic features, it should fully consider whether development should be limited or otherwise regulated in the vicinity of these features.

The BLM recognizes that when development reaches greater than 16 wells per section it constitutes an “extreme impact” to ferruginous hawks. Page 4-53 (Table 4-11). Alternatives B and C would lead to the drilling of 16 wells per section in the core area, essentially an extreme impact, and even the Operators’ Proposal would lead to the drilling of 4-12 wells per section in the core area, a moderate to high impact. Alternatives B and C would lead to the long-term disturbance of at least 23,430 acres, which likely exceeds the extreme impact level of greater than 80 acres per section.

Given these likely very severe impacts to ferruginous hawks in an area that is very important ferruginous hawk habitat, the BLM is obligated to fully consider the nature of these impacts and possible means to mitigate the impacts. It has failed to do so, which does not meet the requirements of NEPA to fully analyze and provide for mitigation of all significant environmental impacts. Again, all that has been done is to apply the standard stipulation in a rote fashion.

It is very likely that at a minimum noise will cause significant negative impacts to ferruginous hawks. Noise in excess of 49 dBA causes negative impacts to raptors, and “[a]ll alternatives would have some potential for noise impacts above 49 dBA within breeding habitat.” Pages 4-30, 4-40, 4-41. It is not apparent that such noise is only of concern when hawks are sitting on a nest, which is all that the standard stipulation guards against, and at a bare minimum the BLM should have fully considered field automation as a means to reduce noise impacts. See Page 4-31 (discussing field automation as a means to reduce noise, but not requiring it).

The BLM’s sensitive species manual provides that “[t]he protection provided by the policy for candidate species shall be used as the minimum level of protection for BLM sensitive species.” (emphasis added). For candidate species, among other things the BLM must develop plans and strategies that “include specific habitat and population management objectives designed for conservation” and “management strategies necessary to meet those objectives.” (emphasis added). The term “conservation” is defined in BLM’s special status species manual and specifically with respect to special status species (as opposed to ESA listed species) it means “to use, and the use of, methods and procedures such that there is no longer any threat to their continued existence or need for continued listing as a special status species.” (emphasis added). The BLM has failed to meet these requirements for the ferruginous hawk in the Moxa Arch Draft EIS, and this should be corrected.

More generally with respect to raptors we note this apparent discrepancy. In Appendix A it is stated that “[n]o activity or surface disturbance will be allowed for up to a 0.75 mile radius from active raptor nest sites from February 1 through July 31.” Page A-2. Yet on page 4-58 it is stated that the protection for most raptors will “apply within 0.5-mile of active nests.” This apparent discrepancy should be corrected, and any retreat to general application of a 0.5 mile distance should only be done if the BLM first

provides biological justification supporting a 0.5 diameter rather than the 0.75 mile diameter.

2. White-Tailed Prairie Dogs

The MAA is an important area for white-tailed prairie dogs. Map 3-12. It is heavily covered with prairie dog colonies and much of it is a recognized prairie dog complex. The BLM should provide explicit recognition of the value of this species and take steps to protect it.

In the Moxa Arch Draft EIS, white-tailed prairie dog colonies and occurrence areas are largely given attention (and potential protection) in the context of potentially providing habitat for the endangered black-footed ferret. Only limited consideration is given to direct impacts to prairie dogs, and then only in the context of the number of acres of prairie dog habitat that will potentially be disturbed. Table 4-10. No specific mitigation to avoid or reduce this impact is provided.

The BLM should correct this and actively seek to provide as much protection as possible for white-tailed prairie dog habitat. At a minimum, the BLM should limit or avoid development in medium and especially high density den/burrow areas. Map 3-12. This provides a “practical” approach to protecting prairie dogs because medium and high density colonies occupy a small area of the MAA. Many of these areas would be protected if BLM suspended leases and restricted development in the northern BLM contiguous lands area and along the riparian/road corridors, as discussed above, because many of the high and medium density colonies occur in these areas. As discussed above, there is no doubt that BLM has sufficient retained authority even in leased areas to actively pursue protection of these areas.

It is of course widely recognized that prairie dog colonies also provide important habitat for many other species, including BLM sensitive species such as the burrowing owl, mountain plover, and hunting areas for ferruginous hawks, not to mention black-footed ferrets. Consequently the benefits of providing explicit protection for prairie dog colonies extend far beyond just protecting prairie dogs. And the white-tailed prairie dog is a BLM recognized sensitive species. So, as noted above, pursuant to BLM’s sensitive species manual the BLM must develop plans and strategies that “include specific habitat and population management objectives designed for conservation” and “management strategies necessary to meet those objectives.”⁷ To meet this requirement, the BLM must do more than just list the number of acres of habitat that will be disturbed under the various alternatives and have surveys conducted intended to protect the black-footed ferret (but not prairie dogs per se), it must take concrete steps intended to prevent impacts to the white-tailed prairie dog that seek to “conserve” the species, meaning it must use any and all means necessary such that “there is no longer any threat to their continued

⁷ The term “conservation” is defined in BLM’s special status species manual and specifically with respect to special status species (as opposed to ESA listed species) it means “to use, and the use of, methods and procedures such that there is no longer any threat to their continued existence or need for continued listing as a special status species.”

existence or need for continued listing as a special status species.” That is, the requirement established by the BLM Manual is to not only to prevent this species from being listed under the ESA, but also to remove it from the BLM sensitive species list. There is no evidence in the Moxa Arch Draft EIS that the BLM is furthering this obligation.

Last, we must also note that the decision to not pursue listing the white-tailed prairie dog under the Endangered Species Act has recently been reversed by the U.S. Fish and Wildlife Service, in recognition of the inappropriate political interference exercised by former Department of the Interior official Julie MacDonald. Thus, there is a reasonably strong likelihood the white-tailed prairie dog will be listed in the not too distant future. Given this, the BLM should get out front of the listing decision by actively and aggressively implementing protection measures in the MAA. Otherwise it will likely have to engage in supplemental NEPA analysis in the not too distant future.

3. Greater Sage Grouse

There are a number of greater sage grouse leks in the MAA. Map 3-13. To protect this BLM sensitive species the BLM would employ what have become its standard protections—no surface disturbance within one-quarter mile of a lek from March 1 through May 15 and avoidance of disturbing activities within 2 miles of a lek from March 15 through July 15 to protect nesting habitat. Table 4-13, page 4-59.⁸ Yet it is increasingly widely recognized and scientifically shown that these protections do not work, they are not enough to protect the sage grouse.

For one, the scientific literature has established that the limitation on development surrounding a lek should be extended from 2 miles to 3 miles. Limitations of this degree are widely supported in the scientific literature and by premier sage grouse biologists. Exhibits 1, 2, and 3.⁹ Recent research by Dr. David Naugle and his associates in the Powder River Basin supports the need for enhanced protection beyond BLM’s standard stipulations, Exhibits 4, 5, 6, and 7, as does Matt Holloran’s research on the Pinedale Anticline (available at <http://www.voiceforthewild.org/general/pubs.html>).

Additionally, as the BLM is aware, Wyoming Governor Dave Freudenthal’s Sage-grouse Implementation Team recently released its report making recommendations

⁸ We note that on page 4-59 BLM makes this somewhat astounding statement: “allowing operators to develop within 0.25 miles of a lek could provide BLM with greater flexibility in protecting leks on federal surface as operators would not be as likely to move well locations to immediately adjacent sections of private surface where the timing and spatial stipulations do not apply.” Apparently the BLM is already preparing to waive stipulations. Given the likely listing of the sage grouse and the adoption of the Governor’s state policy regarding sage grouse, it is increasingly unlikely that operators will be able to retreat to private land as a means to avoid sage grouse protections. The BLM should fully protect the sage grouse on its lands and not try to engage in speculation about what will happen, what might happen, or what might not happen on private lands.

⁹ See also Connelly, J.W., M.A. Schroeder, A.R. Sands, and C.E. Braun. 2000. Guidelines to manage sage grouse populations and their habitats. Wildl. Soc. Bull. 28:967-985.

for the conservation of sage grouse. Exhibit 8. We ask that the BLM consider these recommendations and adopt them where possible. In particular we note that this team recommended protection of high value habitats through repurchase of leases, the use of no surface occupancy stipulations, and the preclusion of leasing in these habitats. It also recommended minimizing the footprint of energy development. These and other strategies identified by this team could aid in the conservation of the sage grouse and should be adopted and reflected in the Moxa Arch EIS. It is also apparent that BLM must greatly reduce noise from continuous or frequent traffic for a distance for several miles surrounding a lek. Page 3-33.

In accordance with these recommendations, we attach the mineral development measures recommended by Audubon Wyoming and ask that they be fully considered and implemented by the BLM. Exhibit 9. Furthermore, we note that on page 4-59 BLM recognizes two protections that could help reduce impacts but they would apparently be optional or discretionary. These measures are remote monitoring of wells and reduction of noise, and requirements to use directional drilling and hide wells when well density reaches a certain level. These measures should be made mandatory and not discretionary. This is particularly true because BLM recognizes that impacts to sage grouse are likely to be significant, particularly within in 2 miles of leks. Page 4-56.

The U.S. District Court in Idaho of course just determined that the decision by the U.S. Fish and Wildlife Service to not pursue consideration of listing the greater sage grouse under the Endangered Species Act (ESA) was arbitrary and capricious and has remanded that matter to the Fish and Wildlife Service for further consideration. Because of this remand there is a very strong likelihood that the sage grouse will be listed as a threatened species under the ESA. Given that likelihood and eventuality, the BLM should get out of ahead of listing and the likely restrictions that will result from that and adopt the measures discussed above and in the Exhibits, and certainly go well beyond the current limited protections that have been shown to be ineffective in several recent scientific studies. Otherwise there is a strong likelihood that BLM will be forced to do a revised EIS for the MAA within a few short years.

In reaching its decision to remand the no-listing decision, the court had this to say about BLM's energy program and the efficacy of its mitigation measures for protecting the sage grouse:

The court noted above that there was a singular lack of data or measures taken by the BLM to protect the sage grouse from energy development, the single largest risk in the eastern region. The e-mails show that the [Fish and Wildlife Service—FWS] staff was repeatedly frustrated in their attempts to obtain the data from the BLM. . . . Accordingly an early draft of the [FWS] staff's analysis—designed to be presented to the expert panel and Decision Support Team—stated as follows: “While the BLM has regulatory mechanisms to manage conserve [*sic*] greater sage-grouse habitat on the lands they manage, we have no specific data regarding specific implementation of he above regulations for this species, or the

monitored results. Therefore we are unable to evaluate the effectiveness of these regulations for the protection of sage grouse and their habitats on BLM lands.”

Western Watersheds Project v. U.S. Forest Service, CV-06-277-E-BLM, at 33 (D. Idaho, Dec. 4, 2007). Clearly the BLM must provide for enhanced protections beyond its standard measures, which the scientific research increasingly shows are ineffective and which as the court has determined are not documented to be effective in any event.

4. Pygmy Rabbits

It is apparent that the northern part of the MAA is important habitat for pygmy rabbits and is a concentration area for them. Page 3-61. Given this importance, the BLM should focus management attention on this species in this area. One means to do this is the alternative discussed above wherein leases in the northern portion of the MAA with contiguous BLM holdings would be suspended until leases in the checkerboard have been developed and reclaimed.

As noted above, absent protection of this sort, impacts under some of the alternatives to the pygmy rabbit could reach the “high” level and possibly even the “extreme” level. Table 4-11. As a BLM sensitive species, BLM must avoid impacts of this magnitude so as to meet its obligation to “include specific habitat and population management objectives designed for conservation” and “management strategies necessary to meet those objectives.”¹⁰ The BLM should especially avoid disturbance in sand dune areas because such disturbance “may rarely be fully reclaimed to the original vegetative composition and structure” and consequently disturbance in these areas will be a “long-term impact” to the rabbit. Page 4-55. This is essential if the BLM is to meet its obligations to adopt specific objectives and management strategies for the conservation of the pygmy rabbit, that is measures that obviate the need to list it as a BLM sensitive species must be pursued.

We would note that just as has occurred for the sage grouse, the Federal government’s decision under this administration to not pursue full consideration of listing the pygmy rabbit under the ESA has been overturned by a Federal District Court and remanded to the Fish and Wildlife Service for reconsideration. Thus, the BLM should recognize the potential handwriting on the wall and take active, concrete steps to protect this species, which will likely soon be required pursuant to the ESA and which are already required under the BLM’s sensitive species manual. Otherwise the BLM will be looking at having to update its MAA NEPA analysis in the relatively near future.

¹⁰ The term “conservation” is defined in BLM’s special status species manual and specifically with respect to special status species (as opposed to ESA listed species) it means “to use, and the use of, methods and procedures such that there is no longer any threat to their continued existence or need for continued listing as a special status species.”

5. Native Sensitive Fish Species

At least two BLM sensitive fish species have been documented to occur in the MAA. The roundtail chub and bluehead sucker have been documented in the Blacks Fork River. Pages 3-62 to 3-63. Given this known occurrence and their status as BLM sensitive species, the BLM should take affirmative steps to protect these species.

As noted several times above, as BLM sensitive species, the BLM is obligated under its manual provisions to “include specific habitat and population management objectives designed for conservation” of the roundtail chub and bluehead sucker and it must develop “management strategies necessary to meet those objectives.” It must seek the conservation of these species, which as defined in the BLM manual means that it must use any and all means necessary such that “there is no longer any threat to their continued existence or need for continued listing as a special status species.” While we recognize that the prohibition on development within 500 feet of streams would do much to protect these species, page 4-59, we feel that the alternative approach we have discussed above—not pursuing development within one mile of river and road corridors until development is complete and reclaimed elsewhere—would do far more to protect these species. Such affirmative protective steps are needed given that the roundtail chub and bluehead sucker are known to occur in the MAA; their presence is not speculative.

6. Native Sensitive Amphibians

A number of BLM sensitive amphibian species are documented to occur in the MAA. These include the northern leopard frog, boreal chorus frog, and great basin spadefoot. Page 3-62. Again, despite any protections offered by the prohibition on development within 500 feet of streams, we believe the alternative we have offered of not allowing development within one mile of corridors until development is complete elsewhere would be an important and useful addition to these protections. At a minimum the wetlands where the presence of these species has been documented should receive specific protection from development.

7. Colorado River Fish Species

The BLM states that if water depletions over 100 acre-feet per year occur consultation with the Fish and Wildlife Service would occur relative to the four severely imperiled species of fish that live downstream in the Colorado River drainage (the Colorado pikeminnow, humpback chub, bonytail chub, and razorback sucker). Page 4-51. BLM predicts that more than 100 acre-feet of annual water depletions will occur. Page 4-25. It predicts that there will be 374 acre-feet of depletions under the proposed action. Id. Given that these levels of depletions will require “depletion fees” to be paid to the recovery fund that has been established by the Fish and Wildlife Service to restore habitat for these species, the BLM should commit in the Moxa Arch EIS record of decision to imposing a certain “depletion fee” payable to the Fish and Wildlife Service fund prior to BLM granting any Application for Permit to Drill (APD).

The problem is this: no one well will likely ever trigger a need to pay the depletion fee because depletions will be well below 100 acre-feet (each wells depletes about 2.0 acre-feet of water, page 4-25). Yet there is no doubt that the overall project will deplete far more water than is required to trigger the need to pay depletion fees (Alternative C would deplete approximately 10,300 acre-feet, a very large amount that likely not only means depletion fees must be paid, but individual project consultation is required). Consequently, the BLM should commit to the payment of depletions fees as part of its record of decision for the Moxa Arch EIS. So, for example, if the adopted action would deplete 4000 acre-feet of water, if the current depletion fee is \$ 10.00 per acre-foot, and if 2000 wells could be drilled under the preferred alternative, the BLM should commit to a requirement that each well approved will be required to pay \$ 20.00 into the depletion fund before the well will be approved (4000 X \$ 10.00 divided by 2000). Lacking a provision such as this there is a very real chance that individual well permitting will avoid any clear accounting for the enormous water depletions that will occur due to this project, and thus further threaten these severely imperiled species.

8. Big Game

BLM is apparently well aware of the existence and apparently the location of migration corridors in the MAA that are used by pronghorn and moose. Pages 4-46 and 4-47 (stating there are 12 pronghorn migration/movement routes in the area and four moose migration/movement corridors have been mapped). Given this documented occurrence of a critical habitat feature, the BLM should take active steps to protect these corridors. At a minimum, it should commit to abiding by and implementing the provisions in the Wyoming Game and Fish Department's Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats report. Accordingly, the BLM should provide in the record of decision for the Moxa Arch infill development that there will be no further development in narrow migration corridors (< 0.5 miles width) and that development in broader corridors will be avoided. In these broader corridors well field density should not exceed 4 wells per section, under the terms of the Game and Fish Department policy. Fences, expansive developments and other impediments to movement should not be permitted. As discussed above, there is not doubt that BLM has more than sufficient retained rights to require these measures. At a minimum, the BLM should provide a map of where these know migration corridors are so that the public can be fully informed as to their location and significance.

In addition, it appears that about the only protection for big game that will routinely be required is the standard prohibition on drilling wells between November 15 and April 30 in crucial winter ranges. Even these minimal limitations could be waived or excepted. A few other mitigation measures are "proposed" but it is not clear they would in any way be mandatory. Page 4-49. The BLM should go beyond these limited mitigation steps.

It is well established by the research of Hall Sawyer on the Pinedale Anticline (this is research the Kemmerer Field Office should be well aware of and have access to since BLM partially funds Mr. Sawyer's research) that the standard timing limitation

stipulation on winter drilling is not enough to protect mule deer. Even when this prohibition is in place, precipitous declines in mule deer populations can occur; such declines are well documented on the Pinedale Anticline.

It is sometimes claimed that Mr. Sawyer's research indicates that the winter drilling prohibitions should be abandoned, but this is not what Mr. Sawyer's research has concluded at all. In fact, as stated in the 2005 annual report, in gas fields where well densities range from 4 to 16 pads per section, "the number of producing well pads and associated human activity may negate the potential effectiveness of timing restrictions on drilling activities as a means to reduce disturbance to wintering deer. Reducing disturbance to wintering mule deer may require restrictions or approaches that minimize the level of human activity during both production and development phases of wells." (emphasis added). Given these scientific findings, the BLM should go beyond the standard limitation on winter drilling in crucial winter ranges and fully adopt the full suite of provisions in the Wyoming Game and Fish Department's Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats report as part of its record of decision for the Moxa Arch project. As discussed above, there is no doubt that BLM has more than sufficient authority, and in fact a legal obligation, to do this even in areas that have been leased.

B. Reclamation In The Moxa Arch Area is Not Working So The BLM Must Take Additional Steps To Ensure Successful Reclamation Before Allowing Increased Development.

Repeatedly in the Moxa Arch Draft EIS the BLM states that existing reclamation efforts are not working. See, e.g., pages 3-39, 3-52, 3-57, 4-21, 4-22, 4-23, 4-32, 4-34, 4-35, and 4-55. These problems are especially severe in sand dune areas, steep slopes, "badland" soils, and saline/sodic bottomlands. BLM recognizes these soils have "poor" or "limited" reclamation potential and that they constitute 31 percent of the MAA. Page 3-25 (Table 3-11). Shrub habitats, especially sagebrush habitats, cannot be reclaimed for at least two generations, rather they are converted to grasslands, page 4-32, which if nothing else have little value to sage grouse. Shrubs are unlikely to be restored until about 30 years after the life of the project, which is at least 50 years.

Given these severe problems the BLM must clearly "do something different" than what it is doing now with respect to reclamation. Yet it is not clear what if anything will be done differently. It appears that BLM's primary plan with respect to reclamation is to establish a plan to develop a plan. Pages 2-5 to 2-8, A-3 to A-5.. Many if not all of the mitigation measures in Appendix A "may" be applied or are "recommended" but nothing more. Pages A-5 and A-7. It is especially troubling that even the reclamation measures in Appendix E are only "recommended." Pages A-7 and A-9. It is not clear that any reclamation measures in the Moxa Arch Draft EIS are actually required despite the failures of existing reclamation. Techniques to reduce disturbance only "could" be "selected" by operators and the operators "should" evaluate technologies like mat drilling. Pages 4-35 and 4-36.

These uncertain, discretionary measures that again amount to little more than a plan to develop a plan do not meet BLM's obligation to take any action necessary to prevent unnecessary or undue degradation of the public lands, 43 U.S.C. § 1732(b), especially in light of the widespread and acknowledged failure of current reclamation efforts. The BLM must take defined, affirmative steps to increase the success of reclamation otherwise it cannot continue to permit oil and gas development in the MAA as it has in the past, and certainly not on the scale it is proposing to do in the future. One such step might be to replicate the provision in Alternative B that active, unreclaimed surface disturbance cannot exceed a specified acreage for all alternatives and especially BLM's ultimate preferred alternative. Other steps that could be taken would be to take the numerous discretionary measures that would reduce disturbance and make them mandatory: directional drilling, the use of mat drilling, etc. We would note that many of the soils with limited or poor reclamation potential are in the northern BLM contiguous land holding area or within about one-mile of the corridors we have asked be excluded from development until other portions of the MAA are developed and reclaimed. Map 3-5.

Furthermore, we believe the following means to improve the effectiveness of reclamation should be considered and implemented by the BLM. The most crucial need with respect to reclamation in many circumstances is the restoration of native shrub habitat. That is, in most circumstances restoration of functional sagebrush habitat should be required and ensured. Appendix E 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, and it should be made mandatory, not discretionary or subject to some future development on some unknown timeline, with unknown standards. Without restoration of the native shrub (sagebrush) habitat it is unlikely that many of the environmental values and services of the MAA can be restored.

At least two recent BLM analyses establish what we believe are relevant provisions relative to reclamation, and we ask that the BLM consider these in the Moxa Arch EIS. On Otero Mesa in New Mexico (The ROD is available at http://www.nm.blm.gov/lcfo/white_sands_rmpa_eis/docs/PRINTABLEROD-LCFO-FINAL_text.pdf) the BLM recognizes that reclamation has two purposes: "to *stabilize the surface* against the long-term effects of erosion" and "to return the site to a productive post-operations *use that reflects the pre-disturbance conditions.*" ROD, p. 13. The reclamation standard, also set out at page 13, states:

Reclamation will be considered successful when healthy, mature perennials are established with a composition and density that *closely approximates the surrounding vegetation* as prescribed by the BLM, and the reclamation area is free of noxious weeds. All operations are covered by a bond as required by 43 CFR 3104.1.

This ROD also sets out additional standards, such that:

Revegetation success will be evaluated using performance-based standards. Parameters will include the percent basal cover of *mature approved species as compared to an adjacent undisturbed area*. Operators will be required to use *any means necessary* to achieve acceptable revegetation *including irrigation* if rainfall during the growing season proves insufficient.

The RMP for the Little Snake, Colorado, Field Office also includes certain reclamation criteria that set out specific criteria and reclamation techniques that can be applied to the Moxa Arch EIS. The reclamation standards are set out in Appendix O (available at http://www.co.blm.gov/lra/rmp/documents/AppO_LSDEIS_Surface_Reclamation.pdf). This RMP recognizes that

Reclamation will ensure surface and subsurface stability, growth of a self-regenerating permanent vegetative cover, and compatibility with post disturbance land use. The vegetation will be diverse and of the same seasonal growth as adjoining vegetation.

The specific metrics provided are also instructive:

The following definitions and measurements will be used to accomplish and determine if reclamation has been achieved:

- Permanent vegetative cover will be accomplished if the basal cover of perennial species, preferably native, adapted to the area, is at least *90 percent of the basal cover of the undisturbed vegetation of adjoining land* or the potential basal cover as defined in the Natural Resource Conservation Service Ecological Site(s) for the area. In addition, some presence of a desirable woody species is required.
- *Appropriate diversity* will be accomplished if at least two perennial genera and three perennial species adapted to the area make up the basal cover of the reclaimed area in precipitation zones 13 inches or less and three perennial genera and four perennial species in precipitation zones greater than 13 inches. One species will not make up more than 50 percent of the perennial vegetation by basal cover.
- *Plant communities* that are self-regenerating and adapted to the area will be evident if the community is in good vigor, there is evidence of successful reproduction, and the species are those commonly used and accepted in the area.
- Surface stability will be accomplished if soil movement, as measured by deposits around obstacles, depths of truncated areas, and height of pedestalling is not greater than 0.3 of an inch and if erosion channels (rills, gullies, etc.) are less than 1 inch in depth and at intervals greater than 10 feet.

We would appreciate BLM's consideration of these reclamation standards from the Otero Mesa and Little Snake analyses that are excerpted above for application to the MAA.

C. BLM Has Failed To Present And Discuss The Full Environmental Consequences Of Drilling The Thousands Of Wells That Are Proposed, Often Considering Only The Gross Acreage Of Disturbance.

As noted above with respect to the limitation under Alternative B that unreclaimed acreage not exceed 10,921 acres, considering and presenting the environmental impacts of the Moxa Arch project only in the context of the gross acreage of disturbance is inadequate. Yet time and time again, with respect to many environmental resources and values, including but not limited to soils, vegetation, and wildlife, the BLM presents environmental impacts only in the context of the gross acres that are predicted to be disturbed. Yet as noted above, this limited concept of environmental impacts totally fails to recognize or analyze many impacts. Viewsheds will be marred for a generation or more, noise and activity at the wells will continually disturb wildlife, air pollutants will be continuously emitted, roads will spill sediment, etc., etc. The linear miles of streams impacted are not considered. These and many other impacts are captured only in the most limited way or not at all by only considering the gross acres disturbed.

Perhaps most significantly, this approach entirely fails to recognize or analyze the impacts of habitat fragmentation. Consequently it makes it difficult if not impossible to consider and recognize possible mitigation measures, let alone seek to implement them. Included as Exhibit 10 are the comments of The Wilderness Society regarding road densities and habitat fragmentation that were submitted as comments for the Pinedale draft resource management plan. We ask that those comments be considered fully with respect to the Moxa Arch EIS. The points made in those comments are almost entirely “transferable” to the MAA. Certainly the research and principles discussed in these comments could inform a much more thorough and informed discussion of road density and habitat fragmentation impacts, and as a result of that allow for much better provisions for reducing these impacts. We also ask that the information in Exhibit 11 be considered with respect to habitat fragmentation management, and specifically ask that the BLM consider application of the roadless volume (RV) metric identified in this report to the MAA. Data applicable to Lincoln, Uinta, and Sweetwater Counties can be found in the report.

Additionally, considering impacts framed only in terms of the acreage of disturbance entirely fails to capture what may be the most important human concept of the area, reaction to it, and concerns regarding it: what is the nature of the MAA. The BLM should make some presentation of impacts in this simple framework. Will the landscape under an alternative remain similar to what is currently present (often vast wide open spaces with wells scattered here and there) or will it be radically transformed (into an overwhelmingly industrialized petro-chemical complex such as is found in the Pinedale Anticline and Jonah fields)? The Moxa Arch EIS should make some attempt to present and discuss this picture. Without it, the EIS is little more than a “wonky” exercise discussing the number of acres of sand dune soils that are impacted and the number of days when impacts to air quality exceed one deciview that does little to

convey what is really of significance and concern to most people, the underlying nature of the area. How will the MAA area look and feel after 1800 additional wells are constructed compared to the look and feel now?

D. Impacts On Global Climate Change Must Be Considered.

As currently written, the Moxa Arch Draft EIS addresses the related questions of global warming, climate change and carbon dioxide (CO₂) emissions little or not at all. This should be corrected and this increasingly important issue should be fully evaluated. We would note that BLM is under direction from the Secretary of the Interior to “consider and analyze potential climate change impacts” when developing resource use projects. Exhibit 12 (letter from the Secretary of the Interior). This directive applies specifically to oil and gas development activities. And of course, NEPA requires that BLM consider all environmentally significant issues, and there is no doubt that global warming is such an issue. See Massachusetts v. Environmental Protection Agency, 549 U.S. ___ (2007) (U.S. Supreme Court determines that climate change is a real, significant issue that must be fully considered). Scientists have recently begun to state even more strongly than they have in the past the need for prompt action to deal with climate change, in the wake of the most recent reports of the Intergovernmental Panel on Climate Change. Exhibit 13.

At a minimum the BLM should provide an estimate of the quantity of CO₂ emissions that will be generated by activities on BLM lands and identify means to reduce those emissions. At least as importantly and perhaps more importantly, the BLM should identify the quantity of methane (CH₄) that will be emitted as a result of oil and gas development activities and identify means to reduce those emissions. Methane of course is a far more “powerful” greenhouse gas than is carbon dioxide.

E. Noise Issues.

BLM’s stated level of significance for noise impacts is 55 dBA. Pages 4-29 to 4-30. Noises at this level from flaring and drilling would occur to a distance of at least 3500 feet from the source of the noise. Pages 3-32, 4-30.

Despite this stated significance level and consequent basis for analysis, the BLM recognizes that sage grouse and raptors are sensitive to noise that is above 49 dBA. Pages 4-30, 4-40. This is especially true at night. Pages 4-39 (Table 4-7), 4-40.

Given that impacts to native non-game birds occur at lower noise levels than BLM’s recognized 55 dBA significance level, BLM should redefine its stated significance level and analyze noise impacts from the standpoint of noise that exceeds 49 dBA. How far from a noise source do noise impacts exceed 49 dBA?; undoubtedly it is farther than 3500 feet, perhaps considerably. This is necessary to fully understand what the impacts to birds, some of them BLM sensitive species where BLM has affirmative obligations, might be. The BLM acknowledges that “noise disturbances within 200 meters [656 feet] may affect sage grouse lek attendance” and that “[n]oise from

continuous or frequent traffic can disturb leks within two miles of roads and may reduce the number of active leks as far as four to five miles from the source.” Page 3-33. Given this, the BLM must fully consider noise impacts at the 49 dBA level, and use that as the measure of significance.

Given these potentially severe impacts, the BLM should fully consider mitigation options that might keep noise levels below 49 dBA, or at least reduce noise as much as possible. As things stand now, any mitigation of noise impacts appears to be entirely discretionary and non-binding. Noise reduction techniques “should” be evaluated at the APD stage and field automation “should” be applied to decrease traffic even though one operator (BP) has shown that remote monitoring of wells could reduce field visits by 50 percent. Page 4-31. These provisions should be made mandatory in the Moxa Arch project record of decision. At a minimum, the BLM should consider stricter limitations on noise during the night since it has been shown birds are most sensitive to noise at that time.

F. Cultural Resource Issues.

“Numerous significant archeological sites from all prehistoric periods and nationally significant historic sites have been found in the MAA.” Page 3-70. Highly sensitive archeological locales “are prevalent in areas where aeolian [sic] and alluvial sediments have aggraded.” Page 3-71. Clearly the MAA is an area where there are significant cultural resources and the BLM should seek to fully protect these resources. Sand dune areas are especially significant, and given the problems in reclaiming these areas discussed above, this is additional reason to strongly limit and regulate development in sand dune areas.

Mitigation of impacts to cultural resources would apparently be primarily accomplished through management of national historic trails having a high level of integrity as VRM Class II areas and application of a ¼ mile buffer around other trail segments. Page 4-64. Other mitigation specified in Appendix A is only “recommended.” Page A-7. Given the recognized particular significance of Aeolian and alluvial sediments as locations of highly sensitive archeological resources, the BLM should consider the resources likely to be found in these areas more fully, and more importantly focus specific mitigation measures on these areas. For example, it might be appropriate to prohibit development in these areas until a cultural resources survey has been done.

G. Visual Resource Issues

Visual Resource Management (VRM) Classifications are presented in Map 3-16 in the Moxa Arch Draft EIS. We would note that virtually all of the Class II landscapes are located in the northern part of the MAA and along the U.S. 30/Hams Fork River corridor. As we have discussed above, we call on BLM to consider alternatives, or a single alternative, that would lend special protection to these two areas. The high degree of visual quality in these areas emphasizes the appropriateness of doing this, and in fact, in our view, the requirement to do so in order to have a reasonable range of alternatives

considered in the Moxa Arch EIS. Similarly, much of the VRM Class III landscapes occur in these two areas.

In Class II areas, the BLM must “retain the existing character of the landscape.” In Class III areas, the “level of change to the landscape should be moderate,” and management activities “should not dominate the view of the casual observer.” The BLM recognizes that it must require that projects “conform to the objectives and characteristics of the classification, or the project will be modified to meet the class objective.” Page 3-97. Despite this, it is not clear that the proposed mitigation would meet this requirement. Efforts would be made to screen activities, page 4-97, but it is not explicitly clear that BLM would insist on mitigation sufficient to ensure the objectives for the VRM classification were not violated. The BLM should revise the discussion on page 4-97 to ensure there is no question the BLM will require the MAA development to “conform” with the established VRM, otherwise the development will be “modified” in whatever way is necessary—including denial of the development request—to ensure such conformance. We would note that the alternatives we have advocated in these comments would avoid many of these problems because they would postpone development in these visually sensitive areas while not precluding development elsewhere.

H. Air Quality Issues

It is apparent from the air quality analysis in the Moxa Arch Draft EIS that several criteria air pollutants will be nearing the National Ambient Air Quality Standard (NAAQS) for the pollutant. For example, PM_{2.5} and PM₁₀ will be very near the NAAQS. Pages 4-10, C-14 (Table 3-3), C-16 (Table 3-4). Likewise, we would note that ozone levels will be very near the NAAQS. Pages 4-12 (Table 4-1), C-152 (Table 5-4). And of course, the EPA has recently lowered the PM_{2.5} NAAQS and likely will reduce the ozone NAAQS this spring.

Given this, we believe it is incumbent on the BLM to discuss the significance of reaching levels very near these legally binding limits. We see no such discussion in the Moxa Arch Draft EIS; all that is apparent are statements that the NAAQS will not be exceeded, end of discussion. But that is not the end of the discussion and the BLM should recognize this. Nearing the NAAQS has tremendous practical implications for future development—or the lack of it—in western Wyoming. Given the near exceedance of the ozone and PM NAAQS, could a new trona processing plant be built in the future? Could coal mining at the Peabody coal mine in Kemmerer be expanded? Could the Naughton Power Plant add or upgrade generating units, even natural gas or IGCC units? Will new oil and gas fields be precluded? Could these kinds of projects be built without pollution offsets being required? The BLM should recognize that these kinds of issues are implicated by the fact that air pollution will be nearing the NAAQS for several pollutants (and quite likely exceeding the NAAQS for ozone under EPA’s new standard). BLM is making decisions about what kind of development is appropriate and desired—oil and gas development—and perhaps what types of development or options will be limited or disallowed in the future. It is making decisions that affect land use

development, priorities, and options. Given the importance and wide sweep of this issue, the BLM must consider it and discuss it in the Moxa Arch EIS.

With respect to mitigation of air pollution impacts, it appears that the only statement the BLM makes in this regard is that “operators should phase in cleaner drilling rigs and equipment to reduce the emissions from oil and gas development activities.” Page 4-13. This is far too minimal to be credible. It certainly shows no effort to pursue fulfillment of the goals and objectives of NEPA, as required by the CEQ regulations. See, e.g., 40 C.F.R. § 1500.2(f). We believe that the BLM should adopt the following mitigation measure. The BLM should commit to asking and encouraging the Wyoming Department of Environmental Quality (DEQ) to apply the air pollution control standards currently applicable in the Jonah and Pinedale Anticline fields to the Moxa Arch field. As the BLM is aware, the DEQ requires best available control technology (BACT) to be applied to emissions from oil and gas development throughout the state, but it has stricter requirements that apply to the Jonah and Pinedale Anticline fields.¹¹ See <http://deq.state.wy.us/aqd/oilgas.asp>. In developing the new guidance for BACT applicable to oil and gas development, which was adopted by the DEQ in September 2007, the DEQ initially planned to require the provisions applicable to Jonah and the Pinedale Anticline for all “concentrated development areas” in the state, which certainly would have included Moxa Arch. In the end, the DEQ decided not to extend the heightened requirements beyond the Jonah and Pinedale Anticline Fields at this time, but it also made it clear that it intended to move in this direction in the future, the option definitely was not off the table. Consequently, if the BLM were to approach the DEQ and ask that these requirements be extended to Moxa Arch, there is a significant possibility that it would agree to do so. Given the BLM’s obligations under NEPA to pursue the objectives of NEPA—such as attaining the widest range of beneficial uses “without degradation, risk to health or safety, or other undesirable and unintended consequences, 42 U.S.C. § 4331(b)(3)—this is a very reasonable and practical mitigation measure that the BLM should commit to pursuing in the Moxa Arch EIS as a means to mitigate air pollution impacts.

Related to the need for a more thorough consideration of mitigation options and pursuit of such is the following. The Moxa Arch project will lead to impairment of visibility in the Bridger Wilderness Area Class I area. Apparently the one deciview significance standard would be exceeded on one to twenty three days per year. Page 4-12. Such impairment is of course contrary to the goals of the Clean Air Act, which states that natural visibility conditions should be maintained in these areas. 42 U.S.C. § 7491(a)(1). For the Pinedale Anticline project about fifty miles north of the Moxa Arch project the BLM has stated that the goal—in accordance with the dictates of the Clean Air Act—is zero days per year of visibility impairment greater than one deciview. Draft Supplemental Environmental Impact Statement for the Pinedale Anticline Oil and Gas Exploration and Development Project at 4-74. In order to accomplish this, if initial mitigation is not successful in meeting this goal, the BLM, the EPA and DEQ will ensure this goal is met “using any and all available means.” Id. at 4-75. The BLM should adopt

¹¹ The DEQ is also moving toward regulation of emissions from drill rigs in the Pinedale and Jonah fields, and this could be an option in the Moxa Arch field as well.

like goals and mitigation measures for the Moxa Arch project. It should establish a goal of zero days of visibility impairment caused by the project in Class I areas and commit to taking whatever steps are needed to meet this goal. It makes little sense to have one BLM Field Office making such commitments while another does not, especially since the same Class I area—the Bridger Wilderness Area—is primarily at issue. The method advocated above—encouraging the DEQ to extend elevated pollution control requirements applicable in the Pinedale Anticline and Jonah fields to the Moxa Arch field would be one such method of achieving this goal.

With respect to visibility impacts, the BLM really needs to find a way to simplify this analysis and discussion. As it stands now it is hopelessly confusing to the point of being of no use to public understanding of impacts to visibility. This is because the BLM uses five separate visibility assessment methods. Page 4-8. The use of the 0.5 and 1.0 deciview significance standards further exacerbates this problem. The effect of this is to create a pile of tables that goes on page after page (See Appendix C) that may be of some interest to modeling experts, but which are of no assistance to public understanding or appreciation of visibility impacts. All they do is create needless bulk and confusion. See 40 C.F.R. §§ 1500.4, 1502.2(a) (prohibiting undue encyclopedic analysis in an EIS). The BLM simply must correct this problem if the public and other agencies—including the BLM—are going to be able to fully understand visibility impacts. This may well require the BLM and/or other agencies to compromise in terms of their preferred, “right” modeling switches and other technical issues, but such a change is of small consequence if the result is a clearer, more understandable document that is consequently more useful for decision-making. Thus, the BLM should commit to eliminating this repetitive, confusing, and totally unhelpful analysis in the final EIS and replacing it with clear, succinct statements of what the visibility impacts will be.

I. Mitigation Must be Specified (BLM Must Regulate Operations)

Throughout the Moxa Arch Draft EIS the BLM states that mitigation measures “could” be required, “should” be implemented, “would help” to mitigate impacts, and that mitigation is “proposed.” Pages 4-35, 4-36, 4-43, 4-49. The operators “would commit” to doing certain things, certain Best Management Practices “may” be applied, and certain mitigation measures are “recommended.” Pages A4-A6. BLM recognizes that a number of these measures “would reduce impacts to sensitive species.” Page 4-59. Yet it does not make them mandatory or certain of application.

This widespread mention of uncertain and non-mandatory mitigation measures must be corrected in order to meet BLM’s legal obligations. These measures should be made mandatory, with application to occur at the leasing stage as stipulations and/or the APD stage as conditions of approval. As discussed throughout these comments in some detail, the BLM must “regulate” oil and gas development under the terms of the Federal Onshore Oil and Gas Leasing Reform Act, and it has many legal obligations making application of these mitigation measures mandatory, not discretionary, tentative or uncertain. These legal obligations range from the requirement to prevent unnecessary or undue degradation of the public lands to the requirements of the BLM’s sensitive species

manual, to the requirements of the Clean Air Act and Clean Water Act. The LBM must recognize and ensure compliance with these mandatory obligations.

Given this, measures such as those specified on page 4-59—including the installation of anti-perching devices, implementation of noise reduction techniques, and the use of directional drilling—should be made mandatory not uncertain. Application of these measures as standard practices would greatly reduce the impacts of the Moxa Arch project while still allowing for the production of oil and gas, thus meeting the BLM’s stated purpose and need for the project, as well as the goals of NEPA (and many other laws), which are just as binding on the BLM and which constitute additional, unstated, purposes and needs. We recognize that in some cases directional drilling may not be useable in a certain area, or that burying pipelines may not be technically feasible, but issues like this are easily dealt with through site-specific analysis and conditioning. But the starting proposition should be that these kinds of measures will be uniformly applied throughout the MAA, and be mandatory.

Thank you for considering these comments and we look forward to remaining involved in the development of the Moxa Arch project.

Sincerely,

Bruce Pendery
Wyoming Outdoor Council

And on Behalf of:

Lloyd Dorsey
Greater Yellowstone Coalition

Jonathan Ratner
Western Watersheds Project

Amy Mall
Natural Resources Defense Council

Suzanne Lewis
Biodiversity Conservation Alliance