

Wyoming Outdoor Council National Audubon Society

Via electronic mail at <https://eplanning.blm.gov/epl-front-office/eplanning/legacyProjectSite.do?methodName=renderLegacyProjectSite&projectId=101174>

October 15, 2018

Annette Treat
BLM Rawlins Field Office
1300 3rd Street
Rawlins, WY 82301

Re:

Comments on the Draft Environmental Impact Statement for the Lost Creek Uranium Mine Modification-Expansion, DOI-BLM-WY-D030-2015-0221-EIS.

Dear Ms. Treat,

Please accept these comments on the proposed Lost Creek Uranium Mine modification-expansion Draft Environmental Impact Statement (DEIS), submitted by Wyoming Outdoor Council and the National Audubon Society.

The National Audubon Society's mission is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity.

Founded in 1967, the Wyoming Outdoor Council is the state's oldest and largest independent conservation organization. Its mission is to protect Wyoming's environment and quality of life for present and future generations.

According to the DEIS, impacts to Greater sage-grouse from the existing project are "moderate," and impacts from the modification-expansion would remain moderate. The DEIS notes potential short-term and long-term impacts to approximately 1415 acres of potential habitat for Greater sage-grouse. These impacts would include direct impacts from loss of nesting/broodrearing/wintering habitat; increased predation from raptors; exposure to toxic chemicals, noise, and displacement; and potential impacts from 850 feet of overhead powerline. The DEIS also describes cumulative impacts as "moderate."

I. ISSUES OF CONCERN

We have several concerns with the proposed action's potential impacts to Greater sage-grouse, including the DEIS's inaccurate description of the affected environment based on BLM's incorrect application of the DDCT, unaddressed impacts from increased ambient noise levels, and inadequate consideration of cumulative impacts. We are also concerned by the lack of compensatory mitigation for existing impacts as required by the Sage Grouse Executive Order (SGEO) and attached Wyoming's Greater sage-grouse Core Area Protection Strategy (Protection Strategy), inadequate mitigation for new potential impacts from the proposed expansion and modification of the Lost Creek ISR project, and the unclear Adaptive Management Plan the DEIS proposes, which is based on admittedly insufficient data.

The project area is located within a BLM Priority Habitat Management Area (PHMA) as delineated by the 2015 Approved Resource Management Plan Amendments (ARMPA), and within the Greater South Pass Greater sage-grouse core population area, per the Protection Strategy. Since publication of the BLM Lost Creek EIS, the Protection Strategy has been updated by Wyoming Executive Order 2015-4 (SGEO). DEIS at 1-5. BLM must comply with the Protection Strategy as updated by the SGEO, and has failed to do so in this DEIS.

Wyoming's Department of Environmental Quality (DEQ) has permitting authority for the project. Per the SGEO, the state authorizes new development or land uses within Core Population Areas only when the project can comply with the stipulations set forth in the SGEO or when it can be demonstrated that the activity will not cause declines in the Greater sage-grouse population. BLM also has permitting authority per FLPMA and regulations at 43 C.F.R. 3809. BLM's permitting decision must comply with the agency's 2015 ARMPA. Here, the existing project has already admittedly caused moderate impacts to sage-grouse, and evidence suggests that the proposed modification-expansion will exacerbate those impacts.

A. BLM's DEIS Fails to Accurately Describe the Affected Environment

1. BLM incorrectly applied the DDCT such that interstitial impacts were ignored, and the affected area was misidentified

BLM's application of the Density Disturbance Calculation Tool (DDCT) was conducted incorrectly. As a result, the DEIS underestimated the affected area, a mistake that has implications for the Protection Strategy's surface disturbance stipulation for Core habitat. The DDCT establishes a 4 mile radius around active leks to capture 75% of sage-grouse use around each lek. Portions not in designated core area are then removed from consideration. When the assessment area is established, activities are evaluated in the context of maximum allowable disturbance of suitable Greater sage-grouse habitat within the DDCT assessment area. Here, because the DDCT was misapplied, the maximum allowable disturbance evaluation on which BLM predicated its mitigation measures is flawed.

The DEIS describes the project's footprint, but does not evaluate disturbance. The proposed project's disturbance would extend beyond the footprint, and because of the shape of the footprint, may stop birds from using the interior portions of areas surrounding disturbance. The project map indicates that BLM has not included interstitial polygons between development, nor between the existing 2012 disturbance area and proposed modification disturbance area, in its calculation of total disturbance area. Portions of the project area excluded from analysis would be rendered completely unsuitable for sage-grouse habitat if the proposed expansion-modification proceeds. The SGEO addresses why *disturbance* must be assessed, not just the project footprint:

There may be additional suitable habitat considered disturbed between two or more long term (greater than 1 year) anthropogenic disturbance activities if the activities are located such that Greater sage-grouse use of the suitable habitat between these activities is significantly reduced due to the close proximity (less than 1.2 miles apart, 0.6 mile from each activity) and resulting cumulative effects of these large scale activities. Exceptions may be provided. EO 2015-4 Attachment B at 5.

In Core Population Areas, the SGEO and Protection Strategy expressly limit surface disturbance to 5% of suitable Greater sage-grouse habitat per an average of 640 acres (32 acres per 640) over the entire DDCT assessment area. The "primary focus" of this surface disturbance analysis, per the SGEO, "should be on protection of suitable habitats and minimizing habitat fragmentation." *Id.* If the DDCT had been correctly applied to include the acreage from interstitial polygons, it is likely that surface disturbance would have exceeded the 5% threshold. We recommend reapplication of the DDCT to include the affected interstitial areas, in order to ensure compliance with the Protection Strategy's stipulations for surface disturbance in Core habitat.

2. Impacts from increased ambient noise levels have not been appropriately addressed

BLM's DEIS does not accurately describe ambient noise levels at the project site, in violation of the SGEO, Protection Strategy, and ARMPA. The Protection Strategy and ARMPA provide that noise levels, either individual or cumulative, should not exceed 10 decibels (as measured by L₅₀) above baseline noise at the perimeter of a lek from 6:00pm to 8:00am during the breeding season (March 1 to May 15). EO 2015-4 Attachment B at 8. The DEIS purports to comply with this standard at Appendix A-18. In its discussion of noise impacts, BLM claims that "background noise levels range between 30 and 35 dBA," such that noise levels less than 40 dBA would be permissible during breeding season during the established hours. *Id.*

These reported background noise levels are inconsistent with recent studies indicating ambient noise levels of 14.2 dBA (L₉₀) and 15.4 dBA (L₅₀) in Wyoming sage habitats, threatening increased adverse impacts to sage-grouse.¹ The L₅₀ measurement of 15.4 dBA reflects ambient noise levels in typical Wyoming sage-grouse habitat with some audible anthropogenic sounds. Importantly, sound levels recorded in the study were frequently close to the lower limit, or "noise floor" of the monitoring equipment used (13.5 dBA), such that actual

¹ Ambrose, S., C. Florian, and J. MacDonald. 2014a. Ambient Sound Levels in Sage Habitats in Wyoming, April 2014. Unpublished report to Wyoming Department of Game and Fish, Cheyenne, WY.

background noise was lower than reported. When more sensitive microphones were used, they detected L₉₀ and L₅₀ levels of 7.2 and 14 dBA respectively in Wyoming sagebrush habitat, further suggesting sound levels in undeveloped areas are actually lower than the study indicates.

The DEIS states that “Due to the remoteness of the project area, low population density of the surrounding area, and lack of noise generated from the primary land uses ... existing noise levels are generally low, notwithstanding prolonged periods of moderate to high noise levels caused by wind.” Nonetheless, the DEIS reports background noise levels between 30 and 35 dBA explaining that “wind speed plays a major role in ambient noise levels, which range from less than 40 dBA in calm to relatively calm conditions to 60-90 dBA in windy or gusty conditions.”

These reported levels suggest monitoring errors. Several factors, alone or combination, can lead to flawed studies. First, monitoring equipment must be sensitive enough to accurately record background noise levels. BLM’s 2012 FEIS for the Lost Creek ISR describes using Sper Scientific Sound Meter 840005 microphones to take field measurements for ambient noise levels in 2007. Lost Creek FEIS at 3.11-1. As the FEIS describes, these microphones only accurately measure noise between 40 and 80 dBA to within 3 dBA. The 2007 study indicated background noise levels below 40 dBA when conditions were calm, peaking at 94dBA in high winds. The DEIS for the expansion-modification cites these numbers at 3-57. When sound levels close to the noise floor of monitoring equipment (i.e. within 10 dBA of the noise floor) are recorded, the recorded levels will be inaccurate and lower than reported. BLM must use appropriate equipment to obtain valid results. Second, the DEIS gives no indication of the height of the monitoring equipment during the ambient noise studies. Microphone height should be at 12” to approximate the ear height of Greater sage-grouse and to reduce the impact of wind, which can artificially inflate background noise levels. During periods of high winds, microphones at higher heights will record higher noise levels. Third, American National Standards Institute (ANSI) standards require that windspeed data be collected at the measurement location, and that 1-second wind speed data be matched with 1-second dB data, and when winds exceed 5m/s for each second, those data should not be used in analysis. If wind speeds were recorded off site, for instance relying on wind speed data from nearby airports, those data do not meet ANSI standards and are not appropriate when correcting for wind speeds greater than 5 m/s. Finally, ambient noise levels should not be recorded during hours of operation, so that truck traffic and other industrial noise do not artificially inflate background noise levels.

BLM acknowledges that “noise from construction activities would... deter wildlife from the project area” and that “increased human-caused noise and activity may reduce lek attendance, which could reduce the Greater sage-grouse population.” DEIS at 4-5, 4-35. However, by using flawed studies to justify inaccurate ambient noise level measurements, BLM has grossly underestimated potential noise impacts. Recent studies have confirmed the impacts of anthropogenic noise on sage-grouse experimentally by introducing recordings of industrial noise to undisturbed leks, and found immediate and sustained decline in lek attendance compared to control leks, along with increased stress hormones and altered behaviors in the leks with noise playback.² Recent research in the Pinedale Anticline supports these findings, indicating dBA

² Blickley, J. L. (2012). The effects of anthropogenic noise on lek attendance, communication and behavior in greater sage-grouse (*Centrocercus urophasianus*). Department in Evolution and Ecology, University of California,

sound levels at leks are strongly associated with declining trends. On the Pinedale Anticline Project Area, the average percent change in grouse counts at leks was -69% when L₅₀ dBA was greater than 26. Where noise levels were below 26 dBA, the average percent change was -29%. These data suggest that at L₅₀ sound levels greater than 26dBA, negative impacts to sage-grouse from anthropogenic noise accelerate.³

The best available science suggests that the best management strategy is not to exceed 10 dBA over background noise levels, and not to exceed an L₅₀ of 26 dBA. Ambrose et al. recommend keeping noise levels below 10 dBA over background at all hours rather than just lekking hours.⁴ Outside the lekking period, noise may impact foraging, roosting, nesting, and brood-rearing. A standard protocol should be developed for establishing background noise levels and for monitoring. We suggest a statewide presumption of ambient noise levels at 16 dBA based on the best available science, and ensuring that noise levels do not exceed 26dBA during lekking hours, which is a 10 dBA increase over background noise as mandated by the Protection Strategy and the ARMPA. This presumption would decrease cost to industry by eliminating the need for baseline measurements and reduce the risk of inaccurate measurements from flawed studies. Outside of lekking hours, reasonable efforts should be made to keep noise levels as close to these limits as possible. Compliance should be monitored with equipment capable of accurately measuring background noise levels, at a microphone height of 12", during lekking hours, during the breeding season, for a minimum of 7 days. Sounds of strutting birds should not be considered background noise. Measurement methods should follow published ANSI standards. A 2014 study conducted by Hayden-Wing Associates at the request of WGFD and the Petroleum Association of Wyoming (PAW) echoes the need for a clear protocol. That study notes that "noise levels were close to the floor of our microphones (<17.5 dBA), suggesting that actual sound levels were lower than what our SLMs reported," that microphone height has an impact on noise measurements," that "ANSI standards do recommend placing microphone height in response to what is being measured," and suggests "a protocol that promotes standards for replication is needed."⁵ To comply with the Protection Strategy and the ARMPA, BLM must accurately record ambient noise levels and accurately monitor compliance to ensure the prescribed standards are met.

Davis, CA. Ph. D. Thesis. 126 pp.; Blickley, J. L., et al. (2012a). "Experimental Evidence for the Effects of Chronic Anthropogenic Noise on Abundance of Greater Sage-Grouse at Leks." *Conservation Biology* 26(3): 461-471; Blickley, J. L., et al. (2012b). "Experimental chronic noise exposure is related to elevated fecal corticosteroid metabolites in greater male sage-grouse (*Centrocercus urophasianus*)." *PLoS ONE* 7(11): e50462. *PLoS ONE* 7(11): e50462. doi:50410.51371/journal.pone.0050462.

³ Ambrose, S., C. Florian, and J. MacDonald. 2014b. Sound Levels at Greater Sage-grouse Leks in the Pinedale Anticline Project Area, WY, April 2013-2014. Unpublished report to Wyoming Department of Game and Fish, Cheyenne WY.

⁴ Ambrose et al. Sound Levels in Sagebrush in Wyoming, and Acoustic Impacts to Greater Sage-grouse. April 2014 Presentation to SGIT.

⁵ Noise Monitoring in the Pinedale and Jeffery City Area (2014). Hayden-Wing Associates LLC. Prepared for Wyoming Game and Fish Department.

3. BLM has not adequately considered cumulative impacts

BLM's analysis of cumulative impacts to Greater sage-grouse is fundamentally flawed, and inaccurately describes the scope of cumulative impacts. NEPA requires federal agencies to consider the incremental impacts of federal action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts may result from individually minor, but collectively significant actions. 40 C.F.R. § 1508.7.

BLM's DEIS describes cumulative impacts to sage-grouse as "moderate," based on more general cumulative impacts to terrestrial ecology. These terrestrial impacts would affect sage-grouse "due to loss, alteration, or incremental fragmentation of habitat; various stresses associated with human disturbance; and direct or indirect mortalities." DEIS at 5-8. This cursory evaluation of cumulative impacts to sage grouse, two sentences tucked in a three-paragraph discussion on terrestrial ecology, does not fulfill NEPA's mandate. BLM has acknowledged existing moderate impacts, promises impacts will remain moderate based on an unwritten adaptive management plan despite admittedly insufficient data, and alleges cumulative impacts will be moderate as well without explaining how the agency came to that conclusion. These assertions are dubious at best, especially in the context of the improperly conducted DDCT analysis which underestimates the project's disturbance area.

B. BLM Must Require Compensatory Mitigation for Existing Impacts to Comply with the 2015 Sage Grouse Executive Order and Wyoming Greater Sage-grouse Core Area Protection Strategy

In order to comply with the SGEO, Protection Strategy, and ARMPA the operator must provide compensatory mitigation for existing "moderate" impacts from the Lost Creek ISR project, before proceeding with expansion. If compensatory mitigation is insufficient, DEQ and BLM should deny the permit for expansion-modification. The SGEO mandates that Wyoming regulatory agencies and departments, expressly including the permitting agency - DEQ, "shall prioritize the maintenance and enhancement of Greater sage-grouse habitats and populations inside the Core Population Areas, connectivity areas, and winter concentration areas identified in Attachment A, Figure 1." EO 2015-4 at 5. Further,

The State of Wyoming shall continue to monitor and document Greater sage-grouse populations and development activities *to ensure that permitted activities under this authority do not result in negative impacts to Greater sage-grouse outside cyclical trends.*" *Id.* at 6 (emphasis added).

To implement this goal, the Protection Strategy prescribes a mitigation hierarchy of avoidance, minimization, and compensation. "Preferred development plans avoid negative impacts in Core Population Areas." When development is allowed in Core, "*all reasonable options* are pursued to minimize impacting additional suitable habitat and/or maintaining impacts below identifiable thresholds *to the greatest extent possible.*" These impacts are limited to less than 5% surface disturbance using the DDCT. Finally, compensatory mitigation is available as a last resort. Compensation requires that "rigorous standards" be developed, and that "performance standards

(e.g. net benefit to Greater sage-grouse), monitoring requirements, and adaptive management plans should *explicitly link* landscape conservation actions to Core Population Areas... and statewide landscape conservation objectives for Greater sage-grouse." *Id.*, Attachment A at 6 (emphasis added). BLM's EIS unambiguously recognizes that "any state agency action related to the project would be subject to the strategies outlined in the Executive Order." DEIS at 1-5. BLM's 2015 ARMPA echoes the SGEO's mitigation hierarchy stating that, "When necessary, offsite compensatory mitigation will be applied consistent with Wyoming's Core Area Strategy." Approved Resource Management Plan Amendment for Greater Sage-grouse, BLM WY State Office (September 2015) at 26. Within PHMA, the ARMPA provides that "The BLM will implement actions to achieve the goal of net conservation gain consistent with the Wyoming Strategy (EO2015-4) that includes 'compensatory mitigation as a strategy that should be used when avoidance and minimization are inadequate to protect Core Population Area Greater sage-grouse.'" *Id.* at 35. The SGEO and Protection Strategy establish a strong mandate for sage-grouse conservation - no negative impacts outside of cyclical trends. Despite this strong language, which BLM agrees governs the project, annual wildlife reports provided by the applicant show negative trends in sage-grouse starting in 2012 to 2013. *Id.* at 3-44. These trends indicate that the current mitigation measures required by BLM are not working, and need to be updated to comply with the SGEO's framework. According to BLM, the data "suggests that trends in the number of males counted on the Affected Leaks are responding negatively to activities at the Lost Creek ISR Project." In NRC's 2012 Lost Creek SEIS, impacts to sage-grouse were identified as "moderate." *Id.* at 4-36. BLM claims potential impacts from the proposed expansion would remain "moderate," while at the same time the agency concedes:

Potential direct impacts to Greater sage-grouse would include loss of nesting/broodrearing/wintering habitat, decreased population productivity due to impacts to nesting/broodrearing habitat, increased predation due to increased roosting sites for raptors on power poles and other structures, mortality due to exposure from toxic chemicals, and displacement of birds into adjacent areas. Increased human-caused noise and activity may reduce lek attendance, which could reduce the Greater sage-grouse population. The Proposed Action would increase the disturbance to Greater sage-grouse habitat by approximately 1,415 acres and reduce the disturbance distance to five historical leks (three lek complexes) within the Greater sage-grouse Total Affected Area (table 4.8-1). *Id.* at 4-35.

BLM dismisses the data on negative trends saying, "a longer period of time may be required to establish useable long-term trends" and assures the public that the operator's to be determined adaptive management plan (discussed in detail below) will effectively mitigate new impacts so that they remain moderate. *Id.* at 3-44, 4-36. What this analysis ignores, even if the TBD adaptive management plan is presumed effective, is that moderate impacts to sage-grouse populations within Core habitat are not consistent with the SGEO's mandate.

Existing impacts from the initial project are already "moderate," and BLM's DEIS claims, at best, that impacts will remain "moderate." This is unacceptable under the SGEO and Protection Strategy framework. To comply with that framework, the operator must provide compensatory mitigation for existing impacts before the permitting agency can consider an expansion of the project. The State of Wyoming must ensure negative impacts do not exceed

cyclical trends, before permitting development in Core. This issue is complicated by BLM's recent instruction memorandum, IM 2018-093, which disclaims the agency's authority to require compensatory mitigation from public land users. *See generally* IM 2018-093, BLM Office of Law Enforcement and Security (July 24, 2018). In the absence of federal authority, the burden rests on the state to require compensatory mitigation. Without compensation for existing impacts, the expansion must not proceed. Project expansion on top of existing moderate impacts would violate the letter and the spirit of Wyoming's SGEO and Protection Strategy.

C. BLM Must Require Robust Mitigation for Any Future Development

If the operator adequately compensates for existing impacts and the expansion-modification is allowed to proceed, BLM must require robust mitigation measures for anticipated impacts that "explicitly link" to the SGEO framework to ensure compliance with the SGEO and Protection Strategy. Strong mitigation is particularly important because the best available data suggests an existing population level decline in the project area.

BLM's DEIS frequently claims that there is insufficient data to determine whether a population level decline is occurring, and whether it is attributable to the Lost Creek project. For instance, the DEIS states "The result of current monitoring has not provided definitive data regarding the level of effects of ISR activities on Greater sage-grouse" DEIS at 4-36. Despite this admittedly insufficient data, BLM intends to let the expansion advance without fully comprehending existing impacts, let alone potential future impacts. In the absence of sufficient data BLM should wait for better science and develop stronger monitoring and mitigation measures, rather than using ignorance to justify continued development in the face of disturbing trends.

If the data is indeed insufficient, we recommend waiting for 2018 data to help clarify sage-grouse population trends. We also recommend consultation with the Sage Grouse Implementation Team (SGIT), the leading experts on the SGEO and Protection Strategy, in order to understand the implications of these trends and proactively mitigate impacts. Finally, we recommend a strong monitoring and mitigation plan based on the best available science to ensure no negative impacts to Greater sage-grouse occur outside of cyclical trends, as the SGEO requires. An adaptive management plan may be part of an effective mitigation strategy but must be clearly delineated in advance as discussed below. In the light of the best available data, relying on an undeveloped plan to mitigate existing and future population level impacts is simply unacceptable.

Additionally, BLM should consider the best available science on Greater sage-grouse winter habitats when establishing monitoring and mitigation procedures. A 2016 study on the efficacy of Wyoming's Core Area policy, conducted within the Greater South Pass Core Area, found that "use of winter habitats occurred over a longer period than current Core Area winter timing stipulations and a substantial amount of winter habitat outside of Core Areas was used by individuals that bred in Core Areas, particularly in smaller Core Areas."⁶ Protecting winter

⁶ Smith et. al. "Does Wyoming's Core Area Policy Protect Winter Habitats for Greater Sage-Grouse?" 58 *Environmental Management* 585-596, 585 (Sep. 24, 2016).

habitat for sage-grouse is particularly important in the Greater South Pass Core Area because the region is the largest Core Area in Wyoming and "likely contains a significant portion of winter habitat for sage-grouse that occupy that region during breeding seasons."⁷ The study suggests that the current Protection Strategy is not adequately meeting winter requirements for sage-grouse because it focuses exclusively on breeding habitat. BLM should identify and protect winter habitat in the project area, applying scientifically based timing stipulations as necessary to prevent negative impacts to sage-grouse outside of cyclical trends.

D. The Operator Must Adhere to a Clearly Established Adaptive Management Plan Based on the Best Available Science

BLM relies on the operator's yet to be formulated adaptive management plan to mitigate potential population level impacts to sage-grouse. For example, the DEIS states, "the Applicant would implement an adaptive management plan to address potential threats to Greater sage-grouse populations within the area of impact of the project in the event that population declines are noted on Affected Leaks." DEIS at 4-33. However, the DEIS continues to say "the result of current monitoring has not provided definitive data regarding the level of effects of ISR activities on Greater sage-grouse. As such, the adaptive management plan has not been formulated." *Id.* at 4-35. BLM's assurances that the plan is a "primary topic" of annual meetings between BLM, WGFD, and the applicant do not inspire confidence. *Id.* This laissez-faire approach to mitigation violates NEPA, flies in the face of adaptive management principles, and cannot be used to justify project expansion in the context of uncertain information on population decline.

NEPA requires a full disclosure of impacts and informed decision making by federal agencies. NEPA's core function is to promote "a fully informed and well-considered agency decision" *Vermont Yankee Nuclear Power Corp. v. Natural Resources Council*, 43 U.S. 519, 558 (1978). When an agency lacks information concerning "reasonably foreseeable significant adverse effects" the agency must obtain that information if costs are not exorbitant. 40 C.F.R. § 1502.22; *Roberston v. Methow Valley*, 490 U.S. 332, 354-56 (1989). Adaptive management is a tool that can be used to address uncertainty, but is only appropriate when applied methodically in instances of high controllability.

BLM's knowledge resource center provides a 2014 presentation entitled "Effective Adaptive Management" wherein Matt Peterson of AECOM discusses "good examples" of adaptive management and contrasts them with "bad examples" that violate NEPA.⁸ The proposed adaptive management plan for Lost Creek is a textbook example of bad adaptive management that fails to meet NEPA's requirements. Good adaptive management that complies with NEPA has clear thresholds, indicators, and triggers, outlining "if-then" scenarios for management. Bad attempts at adaptive management offer mere lip service, telling the public "trust us, we'll do the right thing, we have a great toolbox, we will monitor the situation, we will develop great mitigation when we implement the project." Peterson, *Effective Adaptive Management*, BLM (2014). As Peterson explains, "These approaches do not provide a plan or a basis for defensible impacts under NEPA... Adaptive Management is not an excuse to not have a

⁷ *Id.* at 593.

⁸ Presentation available online at <https://www.ntc.blm.gov/krc/viewresource.php?courseID=787>

plan." *Id.* Interior's own guidelines reiterate the point saying "adaptive management is not possible if objectives are not identified," "adaptive management cannot proceed without the predictions generated by models," "in the absence of targeted monitoring it is not possible to reduce uncertainty and improve management," and "adaptive management should not proceed absent full compliance with the relevant laws, regulations, and authorities." Adaptive Management Technical Guide, DOI (2009) at iv.

Interior's guidance documents recommend applying the "SMART" criteria to ensure there are "clear, measurable, and agreed-upon management objectives to guide decision making and evaluate management effectiveness over time." *Id.* at 24. The SMART criteria explain that "to be useful for decision making and evaluation, objectives need to exhibit the following technical features:" Specific, Measurable, Achievable, Results-oriented, Time-fixed. *Id.* The Technical Guide elaborates on each principle and discusses how to apply the SMART criteria to Adaptive Management. We recommend that any Adaptive Management Plan apply the SMART criteria and the best available science to develop clear thresholds, indicators, and triggers based on "if-then" scenarios. Vague assurance that an appropriate plan will be developed at an uncertain future date is not Adaptive Management and cannot be used to justify expansion of the Lost Creek ISR project.

For the reasons discussed above, Wyoming Outdoor Council and the National Audubon Society have serious concerns about the Lost Creek ISR Modification-Expansion's impacts to Greater sage-grouse, and look forward to reviewing a revised or supplemental DEIS that addresses the serious deficiencies identified within the DEIS. To remedy these issues and comply with the law BLM should reapply the DDCT to correct for the identified errors, reevaluate impacts from noise based on either an accurate assessment of background noise levels or a scientifically defensible presumption of those levels, require compensatory mitigation for existing impacts and robust monitoring and mitigation for reasonably foreseeable impacts, and establish a coherent adaptive management plan based on SMART principles and DOI guidelines before any modification or expansion is approved.

Sincerely,



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