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Comments-intermtn-caribou-targhee-montpelier@fs.fed.us

Re: Comments on DEIS Crow Creek Pipeline Project

The following comments are submitted on behalf of Yellowstone to Uintas Connection and Western Watersheds Project. Both are 501c3 public interest organizations whose staff and members have and will continue to recreate in and work to protect the integrity of habitat for fish and wildlife in this region. We are concerned about the loss of integrity of the regionally significant wildlife corridor that connects the Greater Yellowstone Ecosystem and Northern Rockies to the Uinta Wilderness and Southern Rockies. This habitat continues to be fragmented by human activities while the agencies charged with managing this area fail to address this fragmentation or correct any aspect of it. Yellowstone to Uintas Connection is headquartered in Mendon, Utah with a satellite office at Kiesha's Preserve near Paris, Idaho. Western Watersheds Project is headquartered in Hailey, Idaho with a second office in Boise, Idaho.

Overall, this DEIS disclaims impacts to wildlife or corridor integrity by setting up a straw man then using that as a basis for its conclusions leading to the project going ahead as planned. The DEIS is merely a document directed at supporting an action already planned. This straw man is essentially restated as saying even though habitat will be altered and animals killed, there is habitat elsewhere and populations will remain unharmed. But, the DEIS does nothing to quantify this other habitat and its quality to function as a corridor or to support populations of fish and wildlife.

1. Alternatives

The National Environmental Policy Act (NEPA) requires federal agencies to take a "hard look." The DEIS provides insufficient alternatives to meet NEPA's "hard look" requirement. The ones selected for analysis are virtually identical and are insufficient to avoid or minimize significant impacts. Thus, there is no reasonable range of alternatives. Lower Valley Energy (LVE) purchases and delivers by truck Liquified Natural Gas (LNG) to Afton, Wyoming from non-LVE sources in Evanston and LaBarge, Wyoming. The DEIS (1-1) claims that, this gas delivery is "often unreliable" as supplier plant operational problems can last from a few days to a week. The simple solution is to ensure there is adequate central storage in Afton to supply the needs during these "operational" problem periods. This would eliminate any wetland crossings and further fragmentation of habitat in the CNF and the regionally significant wildlife corridor. It is unacceptable that an alternative such as increased storage at Afton was not considered.

a. The EIS must analyze increasing storage at Afton to ensure these "unreliable" periods are covered with sufficient supplies and address predicted long term demand.
b. The EIS must analyze a wildlife-protection alternative that fully avoids, minimizes, and mitigates significant impacts to wildlife and wildlife habitat.

c. The EIS must analyze an alternative that reduces air quality and climate change impacts by reducing the number of LVE customers that use LNG or natural gas and increasing the number of customers that use renewable energy from its current levels. (LVE has a renewable energy program.)

2. Mitigation Not Adequate

The proposed pipeline's 20-foot ROW across 20 miles of the Caribous National Forest (CNF) would cross four to five Inventoried Roadless Areas (IRAs) and depart from road corridors due to *"terrain limitations, stream environments, or practicality (shorter route, less disturbance)"*. (DEIS ES-I, 3-12). It is also noted that a construction ROW of 50 feet will be used. (DEIS 1). While the DEIS claims that there will be no blading or clearing of ground for travel purposes, it is unclear how this is possible for construction with a 48" deep pipeline. This would require trenching and removal and displacement of soils and vegetation. While the DEIS (ES-ii) notes annual inspections will occur, how are these to be done, is LVE walking the pipeline? Does this mean leaks can occur and not be found for up to a year? How are the inspections carried out? How are leaks detected? In the event of maintenance travel along the pipeline or cross-country access from the nearest road, how is this to be done without creating a clear path for vehicles and equipment to travel? While it is stated that restoration of disturbed areas will occur and that some tree removal would be necessary in the IRAs, this indicates a cleared path. (DEIS ES-i). See the photo (Figure 1) of a pipeline on Kiesha's Preserve two years after the trenching and backfilling were completed. Seeding has occurred and sagebrush is returning, but it remains most like a road in appearance. There is no guarantee that restoration will eliminate visible impacts as stated. (DEIS ES-iii). Further, inspection and maintenance of the pipeline will perpetuate the visible impacts. Other pipelines in SE Idaho and Northern Utah cross the same type of terrain and remain visible forever. See Figures 2 and 3 showing the Ruby Pipeline constructed ca 2011 near Mantua. Utah and an unidentified pipeline of greater than 20 years age near Mink Creek, Idaho.

Figure 1. Pipeline route at Kiesha's Preserve at two years

Figure 2. Ruby Pipeline near Mantua, Utah at about six years

Figure 3. Unidentified pipeline near Mink Creek, Idaho at greater than 20 years.

Construction of the pipeline will disturb soils approximately 48 inches in depth. (DEIS ES-iv). The loss of ground covering and stabilizing vegetation combined with attempted restoration in the presence of livestock grazing appears a recipe for failure. Are shrubs and trees to be replanted?

How are livestock to be controlled to allow the restoration to recover? What is the timeframe for restoration to be effective? How many access points from roads, atv trails (legal and illegal) are there and how will access be denied? What about winter use by snowmobiles? This seems an invitation for high marking and travel along a new and open trail. The DEIS (1-9) cites the CTNF Revised Travel Plan as restricting travel to designated routes forest wide. Currently there is no enforcement of either summer or winter travel by ohvs within the CTNF and the CTNF has not identified the extent of illegal or unauthorized trails. Y2U is well aware of this fact as we work with the CTNF to close illegal trails and dispersed campsites. There is no budget for closing these or for that matter, mapping them. How will Forest Service ensure that this new route will not become another illegal trail?

3. Regionally Significant Wildlife Corridor

The Forest Service should provide a map and analysis of the corridor addressing habitat fragmentation and the presence of Core, Corridor, Lynx Analysis Units (including the LAUs proposed, but omitted from the 2003 RFP and an analysis of their condition then and current conditions), security areas, summer and winter range, roadless Areas, wilderness Areas, NRAs, areas closed to livestock grazing, and Goshawk home ranges. This project proposes to further fragment roadless areas and security habitat, summer and winter range just along the pipeline route, but the analysis in the DEIS lacks context and consideration of these important habitats listed above. Winter use should be closed or severely limited in this Corridor, so that lynx, wolverine and other far-ranging species (elk, deer, bighorn sheep) have an opportunity to migrate and have security cover during all seasons. The Forest Service can also use its Prohibition Authority (36 CFR 261) to regulate noise and other activities detrimental to wildlife such as hunting, trapping or harassing wildlife.

A search of the DEIS found no reference to OMRD or road density but claims it will limit access to the pipeline. We know that closures are limited in effectiveness and the Forest Service avoids documenting its inability to manage ohv use. The USU Institute for Outdoor Recreation and Tourism has conducted studies showing that nearly 40% of riders admit going off legal trails on their last ride[1]. The Forest Service published a Technical Report in 2005 (RWU – 2905) that recognized there is a lack of evidence that educational programs lead to behavioral changes in motorized users. The analysis must provide evidence that any proposed mitigation and enforcement efforts will be effective for those alternatives that allow any level of use by these machines. Here in SE Idaho, we have measured sound levels on a Forest access road and within the Forest of over 100 dB from atvs, dirt bikes, snowmobiles, and pickup trucks with modified exhausts. The background level is below 40 dB.

The analysis in the DEIS does not provide mapping or analysis showing how this level of sound fragments these important habitat areas, corridors, security areas, or IRAs. Open and closed roads and trails, plus illegally created and used trails, as well as the pipeline route, must be mapped and sound contours plotted showing the distance and areal effects on wildlife security areas and "quiet" users who may be attempting to escape the noise and commotion of society and enjoy these IRAs.

[1] http://extension.usu.edu/iort/htm/professional

Surgeon General William H. Stewart stated that, *"Calling noise a nuisance is like calling smog an inconvenience."*[2, 3, 4, 5, 6] Loud noise, even within established health guidelines, can lead us to feel tense, angry, frustrated, annoyed and prone to violence in addition to contributing to hearing loss. In the period between 1982 and 2000, the incidence of measurable hearing loss increased by 15 to 60%, depending on the age group. In 1999, the U.S. Census Bureau rated noise as the single biggest neighborhood problem among those surveyed. More than one in ten people cited traffic noise as of concern and nearly half of those said they had considered moving as a way of escaping such noise[7]. The EPA has found that 20% of those surveyed are "highly annoyed" when sound levels reach 55 decibels[8]. Federal regulations for highways dictate that if a new or expanded road will yield noise levels of 67 decibels or higher, efforts must be made to bring about a substantial reduction in noise levels [9]. This is ignored in the current project analysis.

"The project would cross six management prescription areas: Prescription 2.1.2 (b) – Visual Quality Maintenance; Prescription 2.7.1 (d) – Elk and Deer Winter Range, Critical; Prescription 2.7.2 (d) – Elk and Deer Winter Range; Prescription 2.8.3 – Aquatic Influence Zones; Prescription 3.1 (e) – Nonmotorized Recreation and Wildlife Security; and Prescription 6.2 (b) – Rangeland Vegetation Management (Figure 1.6-1; USFS 2003a). Prescription 8.1(b) – Concentrated Development Areas." (DEIS 1-7). The intent is to *"change the existing prescription and establish a utility corridor for this project."* (DEIS 1-9). So, more fragmentation of elk and deer winter range, nonmotorized and wildlife security areas will occur, while the CTNF does not analyze the current status of these already fragmented prescriptions by mines, timber projects, other transmission corridors, roads and trails, both legal and illegal, and other surface disturbing activities. We could find no analysis of all the activities fragmenting habitat in the regional corridor cited in the Forest Plan. (CFP FEIS Volume IV D-5):

> The Wasatch-Cache National Forest in Utah looked at a north-south corridor passing through the Forest. They used McNab et al (1994) to identify Province M331 "Southern Rocky Mountain Steppe" as a main north-south corridor (Williams, Forest Biologist pers. Comm.). Part of this province (M331) passes through part of the Caribou NF (**in the Caribou/Webster/Preuss subsections**). This same area has been mapped as part of the Greater Yellowstone Ecosystem and was included in Ruediger's "IGBC Wildlife Habitat Linkages" map.

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[2] "How Loud is Your House?," *CBC Marketplace*, Nov. 7, 2001, www.cbc.ca

[3] Howard Frumkin, "Beyond Toxicity: Human Health and the Natural Environment," *American Journal of Preventive Medicine* 20, no. 3 (April 2001): 234–240

[4] Christine Gorman, "Stressed Out Kids;" *Time*, December 25, 2000

[5] Noise Center of the League "Noise & Health Fact Sheet," (New York and Florida: League for the Hard of Hearing), www.lhh.org/noise/facts/health.htm

[6] "Sound, Sight & Solitude" *Leadership Bulletin from Early Childhood Connection* (a publication of the Early Childhood Music and Movement Association) 7, no. 1 (Fall 2001).

[7] Jim Louderback, "A Sound Solution," *USA Weekend*, October 19, 2003

[8] Environmental Protection Agency, press release, April 2, 1974; see also EPA website, www.epa.gov/history/topics/noise/01.htm.

[9] www.fhwa.dot.gov/environment/htnoise.htm

For example, migration corridors were discussed in the FEIS for the CNF RFP (FEIS Volume IV D-6) along with an analysis of effects, linkage habitats and factors to consider, particularly maintaining large intact blocks of habitat, areas with low road densities (D-4 to 5). The Preuss Range area was described as having OMRD of 1.2 miles/sq mile with the Diamond Block at 1.4 (FEIS D-29). Yet, the Webster/Preuss Range was rated high for grizzly bear, wolf, wolverine and lynx due to low road densities (D-30). These road density levels need re-evaluation and determination of effects on security habitats.

Map 13 (FEIS D-140) depicts wolverine observations and wildlife security areas. Areas near the pipeline route such as Diamond and Preuss are low in security areas compared to the Caribou Block. It is noted that winter security is even more limited as only 3 percent of the Forest is closed to winter motorized use. (D-141).

This all demands that the entire Caribou and Diamond Mountain Blocks be analyzed for current levels of habitat fragmentation from all causes. Recent decisions in the CNF have allowed additional ohv trails in the Caribou Block and expanded phosphate mining in the Diamond Block. When the Soda Allotment EA provided its analysis of the corridor, the excuse that highway 89 was a "barrier" was used to discount the value of the habitat in SE Idaho. But this increases the importance of this habitat. Now comes a pipeline corridor to provide additional disruption. The Forest Service needs to do a quantitative cumulative effects analysis on this Regionally Significant Wildlife Corridor and these Blocks, not just a 0.5 mile corridor along the pipeline route. It should include in this analysis all disturbances past and present as well as future proposed actions. For example, it should include at a minimum mining, haul roads, timber projects, roads, trails both motorized and non-motorized, whether shown on the Travel Plan as OMRD, illegal trails, temporary roads, other pipeline and transmission lines, buildings, areas open and closed to snowmobiles and other human occupied facilities that induce human activities into the Corridor. All these are pathways into areas that could be security or migration areas, but there is no mapping or analysis to show the extent.

In addition, the Forest Service must initiate Section 7 consultation with U.S. Fish and Wildlife Service regarding threatened, endangered, and candidate wildlife species and describe the consultation in the EIS. It is unclear from the DEIS whether actual consultation has taken place or whether the Forest Service is attempting to substitute conversations with FWS that are not specific to this project. See, for example, DEIS, 3-80. Species for which consultation must be initiated include Canada lynx and North American wolverine, which the Project's Wildlife Technical Report acknowledges have potential to occur in the Project Study Area. (Wildlife Technical Report, 9.)

4. Safety and Wildlife Losses

The DEIS (1-4) claims a benefit of the pipeline is *"increased safety on highways due to fewer hours on the highway for trucks hauling LNG."* Natural Gas Pipeline accidents were not analyzed. There were no statistics showing that the trucking was causing accidents. What is the basis of this claimed benefit? How many years, how many deliveries and how many resulting accidents have occurred? This was not answered. The National Transportation Board has a website with 130 reports of pipeline incidents. One most recent was characterized as follows:

> On September 13, 2018, about 4:00 p.m. eastern daylight time, a series of explosions and fires occurred after high-pressure natural gas was released into a low-pressure gas distribution system in the northeast region of the Merrimack Valley in the state of Massachusetts.1 (See figure 1.) The distribution system was owned and operated by Columbia Gas of Massachusetts (Columbia Gas), a subsidiary of NiSource. The system over-pressure damaged 131 structures, including at least 5 homes that were destroyed in the city of Lawrence and the towns of Andover and North Andover. Most of the damage was a result of structure fires ignited by gas-fueled appliances. Several structures were destroyed by natural gas explosions. One person was killed and at least 21 individuals, including 2 firefighters, were transported to the hospital. Seven other firefighters received minor injuries.[10]

Another rationale supporting the pipeline as opposed to trucking the LNG is collision with wildlife being prevented. The DEIS (3-102) notes that there have been *"a total of six reported accidents involving the trucks used to transport the LNG, all of which involved wildlife (e.g.deer) collisions."* We don't know how many years this represents or how many trips are involved, but expect it is over a long period of years and a large number of deliveries and return trips. The construction of the pipeline will involve much truck traffic as well. It is difficult to estimate the number of animal collisions that will occur, but more importantly is how many wildlife will be killed by the construction. The DEIS does admit that smaller, less mobile wildlife will be killed (DEIS 3-72). In the same section of the DEIS, it is stated that wildlife will be displaced into adjacent areas and the effect will be negligible, given that the amount of habitat disturbed is small relative to what is available, and these habitats are common in the area. This is typical of the DEIS to make general statements that are unsupported by analysis, then claim there is no effect. Doesn't competition result in losses and reduced populations? For example, the pipeline goes thru deer and elk winter and summer range and security areas.

5. Climate Change

Climate Change was briefly addressed in the DEIS (3-6) mainly related to the number of truck trips to deliver LNG vs those for construction. There should be more to the story than this. For example, the pipeline is justified as needed due to potential population increase and an increased customer base for LVE. (DEIS 1-1). According to its website, LVE began supplying natural gas in 1996 with 2500 customers and today has a customer base of 5000. The pipeline is a 12-inch diameter high pressure gas line. The website also promotes green power from wind,

[10] https://www.ntsb.gov/investigations/AccidentReports/Pages/PLD18MR003-preliminary-report.aspx

hydro and solar. A proper analysis would determine the capacity of gas delivery from the new pipeline relative to current delivery by truck and calculate the GHG emissions and air quality impacts for both, as well as indirect emissions and impacts.

In addition, the pipeline's potential growth-inducing impacts must be analyzed in the EIS. The DEIS states, "The reduced transportation costs of LNG to Afton, as well as a reduced potential for disruption of service would likely reduce costs to consumers, increase the stability of the system, and increase property values." (DEIS, 3-8). What are the potential impacts of this change, including but not limited to, increasing business and residential customers' use of fossil fuels and increased population and business development? How would increased property values affect low-income residents and businesses?

A further, and often overlooked aspect has to do with the Forest Services' obligation to consider other factors such as connectivity of habitats. Construction of the pipeline further fragments already fragmented habitats and corridors for lynx, wolverine, deer, elk, grizzly bears, bighorn sheep and other wildlife. It is necessary to provide analysis, standards, mitigations and other on-ground measures such as road crossings, overpasses, road closures, closure of areas to ohvs/snowmobiles, and limiting noise levels to enable these and other animals that rely on migration to be allowed to do so. For example, since climate change is such a central part of the wolverine's fate as evidenced in the cited court ruling and papers below, the Forest Service should address its own Roadmap to address climate change. Recognizing the current and coming changes to climate with longer, drier periods and drought, the Forest Service has implemented a Roadmap to address climate change[11]. This roadmap provides guidance to the agency, including, but not limited to:

- Assess vulnerability of species and ecosystems to climate change
- Restore resilience
- Promote carbon sequestration
- Connect habitats, restore important corridors for fish and wildlife, decrease fragmentation and remove impediments to species migration.

To date, in project after project, we have not seen the Forest Service cite or adhere to these principles in any project EA or EIS. This project is no exception.

In addition, the National Fish, Wildlife and Plants Climate Adaptation Strategy proposed by the Fish and Wildlife Service, NOAA Fisheries and the American Fish and Wildlife Association describes climate change effects and emphasizes conservation of habitats and reduction of non-climate stressors to help fish and wildlife adapt.[12] The Forest Service must address conservation of habitats and reduction of non-climate stressors such as the habitat degradation and loss of carbon storage from livestock grazing and timber projects, including soil loss, plant communities shifting to increasers or weeds, in order to help fish and wildlife adapt in accordance with the National Fish, Wildlife and Plants Climate Adaptation Strategy. Instead, the CTNF announces and approves project after project that further destroys habitat, carbon storage and

[11] USDA. 2010. National Roadmap for Responding to Climate Change. 30p. www.fs.fed.us/climatechange/pdf/roadmap.pdf
[12] https://www.wildlifeadaptationstrategy.gov/

connectivity with no complete analysis of cumulative effects and no actions to recover lost habitats and connectivity.

6. Canada Lynx

All Forest Sensitive, MIS and TE species must be analyzed to ensure compliance with NFMA, NEPA, ESA and other applicable regulations regarding capability, suitability of habitats and viability of populations. Past timber harvest activities, roads, mining and related activities (ohv use, including closed roads and trails illegally used) and the other fragmenting actions must be analyzed in the context of the importance of habitat connectivity. The DEIS (3-79) notes that the Montpelier Ranger District is potential linkage habitat. Yet, impacts are assumed to be negligible (DEIS 3-89). The CNF RFP EIS (D-49) notes there have been 35 observations of lynx in the Caribou Targhee NF. This is not a "hard look" under NEPA. Where, when and in what habitats were these observations? How would these places be characterized by habitat parameters?

The Forest Service provides a map of historic lynx distribution showing that the CTNF has historically been used by Canada lynx. Areas such as the CTNF are considered a peripheral and linkage area[13]. The Biological Assessment[14] for Canada lynx documents the importance of peripheral areas as:

> *Peripheral populations may contain valuable genetic, physiological or behavioral adaptations that are unique to their ecological success. Because suitable habitats in areas where populations act as metapopulations are spatially separated, the persistence of a metapopulation is dependent on the efficiency and success of dispersing animals in reaching isolated patches of suitable habitat. When patches are fragmented and connections between patches do not exist, recolonization becomes problematic and the metapopulation may be unable to persist, even though patches of suitable habitat remain (Meffe and Carroll 1997[15]). Additional fragmentation and isolation of suitable habitat occurring as a result of land management activities can not only affect small isolated habitat patches supporting smaller populations but also large contiguous patches supporting higher population levels.*

Ruggierio et al (1999)[16] also discuss the effects of fragmentation on competition with lynx by other carnivores and the loss of connectivity. The Forest Service map of historic lynx distribution for 1842 - 1998 is shown in the referenced link and in Figure 4.[17] This reveals the historical areas used and the pattern of connectivity, which clearly connects Colorado populations to the Greater Yellowstone Ecosystem.

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[13] USDA Forest Service. 2007. Final Environmental Impact Statement Northern Rockies Lynx Managemen t Direction National Forests in Montana, and parts of Idaho, Wyoming and Utah. Figure 1-1.
[14] USDA Forest Service 1999. Biological Assessment of the Effects of National Forest Land and Resource Management Plans and Bureau of Land Management Land Use Plans on Canada Lynx. 149p.
[15] Meffe GK, Carroll CR (1997) Principles of conservation biology. Sinauer, Sunderland, Massachusetts
[16] Ruggerio, L.F., Aubry, K.B., Buskirk, S.W., Koehler, G.M., Krebs, C.J., McKelvey, K.S., Squires, J.R. (Eds.), Ecology and Conservation of Lynx in the United States. University of Colorado Press, Boulder, CO.
[17] http://www.fs.usda.gov/detail/r1/landmanagement/resourcemanagement/?cid=stelprdb5160688

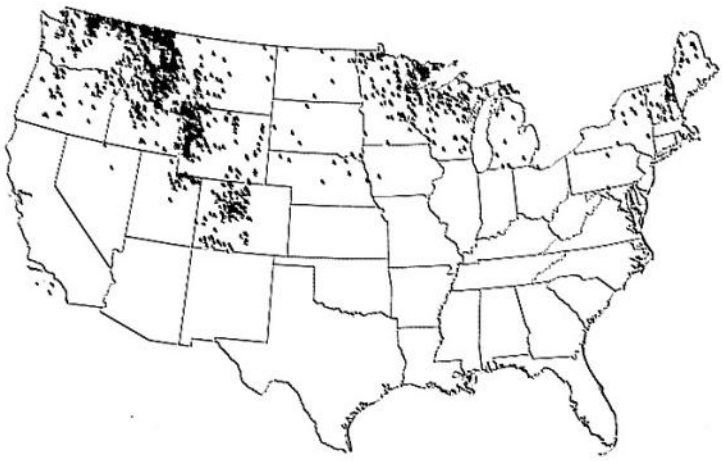

Figure 4. Historical distribution of Canada lynx

More recently, the Colorado Division of Wildlife tracked radio-collared lynx released in Colorado. The tracked lynx show a similar pattern of use in the map below (Figure 5).[18] These maps show the migration path (corridor) and that lynx have been using SE Idaho. This demonstrates that this peripheral area could be a core area if it and its connections were left un-fragmented by roads, mining, ohv and snowmobile use throughout the area, timber harvest and other pervasive human activities. An important consideration for lynx aside from the roads and habitat fragmentation by logging, timber and mining projects is the loss of prey base, particularly snowshoe hare, that are no doubt affected by the massive removal of herbaceous vegetation by livestock.

7. Wolverine

Recently, a US District Court ruling remanded the USFWS Withdrawal of its Proposed Rule to list the distinct population segment of the North American wolverine occurring in the contiguous United States as a threatened species under the Endangered Species Act for further consideration.[19] The ruling reviewed the science relating to the selection of denning sites in combination with snow presence during the

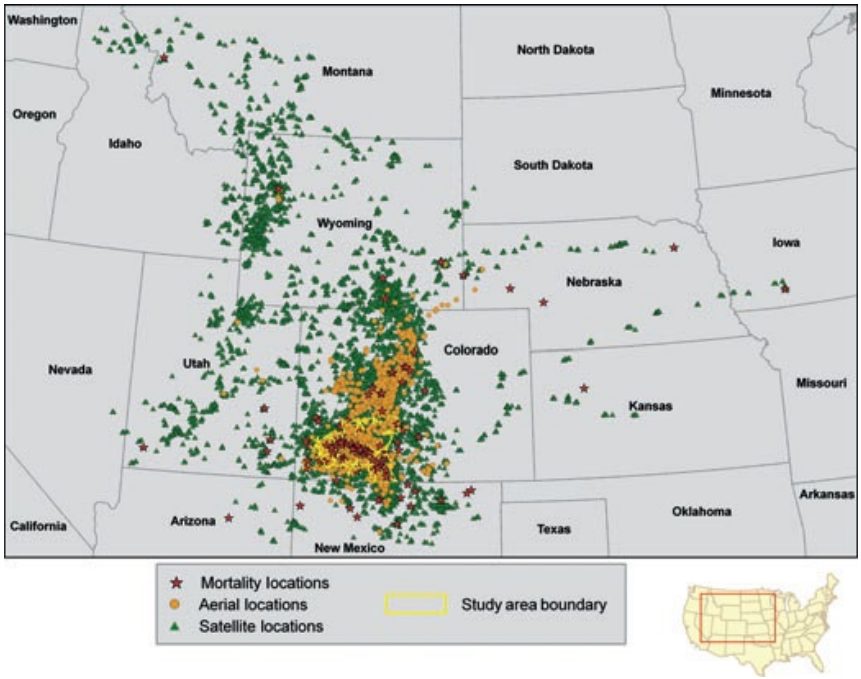

Figure 5. CDW tracking of released Canada lynx.

[18] Devineau P, Shenk TM, White GC, Doherty Jr PM, Kahn RH. 2010. Evaluating the Canada lynx reintroduction programme in Colorado: patterns in mortality. Journal of Applied Ecology. doi: 10.1111/j.1365-2664.2010.01805.x 8 p.

[19] US District Court for the District of Montana, Missoula Division. April 4, 2016. Defenders of Wildlife v US DOI. CV 14-246-M-DLC

natal period and recent analyses of potential climate change effects to snow pack that indicate a severe reduction in snow cover during this century with negative implications to wolverine populations. This alone should result in greater protections and reduction of fragmentation in areas historically used by Wolverine.

The ruling also emphasized that populations in the US, which exist as meta-populations ***"require some level of regular or intermittent migration and gene flow among subpopulations, in which individual subpopulations support one-another by providing genetic and demographic enrichment through mutual exchange of individuals."*** If connectivity is lost, ***"an entire meta-population may be jeopardized due to subpopulations becoming unable to persist in the face of inbreeding or demographic and environmental stochasticity."***

The study by Copeland, 2010[20], cited in the ruling, analyzed spring snow cover to determine overlap with known den sites, finding 97.9% overlap. They concluded that if reductions in snow cover continue to occur, *"habitat conditions for the wolverine along the southern extent of its circumboreal range will likely be diminished through reductions in the size of habitat patches and an associated loss of connectivity, leading to a reduction of occupied habitat in a significant portion of the species range."* A second analysis by McKelvey, 2011[21] used Global Climate Models to predict the change in distribution of persistent spring snow cover so that *"for conservation planning, predicting the future extent and distribution of persistent spring snow cover can help identify likely areas of range loss and persistence, and resulting patterns of connectivity."*

McKelvey concluded that they expect*, "the geographic extent and connective of suitable wolverine habitat in western North America to decline with continued global warming"* and that ***"conservation efforts should focus on maintaining wolverine populations in the largest remaining areas of contiguous habitat and, to the extent possible, facilitating connectivity among habitat patches."***

In its Proposed Rule, the FWS accepted these studies as the best available science with climate change as the driving factor. Other threats were considered of lower priority in comparison, ***"however, cumulatively they could become significant when working in concert with climate change if they further suppress an already stressed population."*** The FWS noted harvest, demographic stochasticity and loss of genetic diversity as these secondary factors, but avoided mention of habitat integrity and fragmentation by roads, infrastructure and human activity or loss of prey base due to depletion of herbaceous plant communities and cover by livestock grazing.

Robert Inman, PhD, a biologist and Director of the Greater Yellowstone Wolverine Program at the Hornocker Institute/Wildlife Society noted that the FWS singled out a particular activity, fur trapping, that can cause mortality, while ignoring the full range of human activities such as road

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[20] Copeland, J. P.; McKelvey, K. S.; Aubry, K. B.; Landa, A.; Persson, J.; Inman, R. M.; Krebs, J.; Lofroth, E.; Golden, H.; Squires, J. R.; Magoun, A.; Schwartz, M. K.; Wilmot, J.; Copeland, C. L.; Yates, R. E.; Kojola, I.; May, R. 2010. The bioclimatic envelope of the wolverine (Gulo gulo): do climatic constraints limit its geographic distribution? Canadian Journal of Zoology. 88: 233-246.

[21] McKelvey et al. 2011. Climate change predicted to shift wolverine distributions, connectivity, and dispersal corridors. Ecological Applications, 21(8), 2011, pp. 2882–2897.

kill, before records were kept. So delineating habitat based on these records can understate actual range for wolverines. He also provides evidence that wolverines can den in areas lacking the presumed snow cover and that conditions suitable for competing for food are also a limiting factor. He further argues that road density was found to be a factor in an earlier telemetry-based habitat analysis, particularly at higher elevations. Wolverines were observed to avoid or alter their travel when encountering housing developments and traffic, infrastructure, or transportation that can affect mortality.[22] He also pointed out the extensive trapping that occurred in the US prior to records of wolverine. This may have eliminated them from large areas of former range and is not represented in current mapping.

So, while the Fish and Wildlife Service emphasizes the role of connectivity and genetic exchange in maintaining meta-populations and genetic diversity, it avoids the identification of the connections vital to maintenance and recovery of species. See Figure 6 which is a map of the FWS modeled wolverine habitat.[23] This map shows wolverine habitat areas in Montana, Idaho, Utah and Wyoming but provides no indication of travel corridors that wolverine might use to connect these. This map shows the areas in Northern Utah and Idaho with sufficient snow cover and connecting these "dots" would likely lead to a connectivity pattern similar to that of Canada lynx, discussed previously. Clearly, the CTNF and UWCNF provide these high elevation snow habitats. They constitute the most likely migration pathway for wolverine and lynx. Recently, a wolverine was documented in the Uinta Mountains in northern Utah and one was killed on a highway in Rich County, Utah near Bear Lake, further testimony to their attempts to occupy these areas.

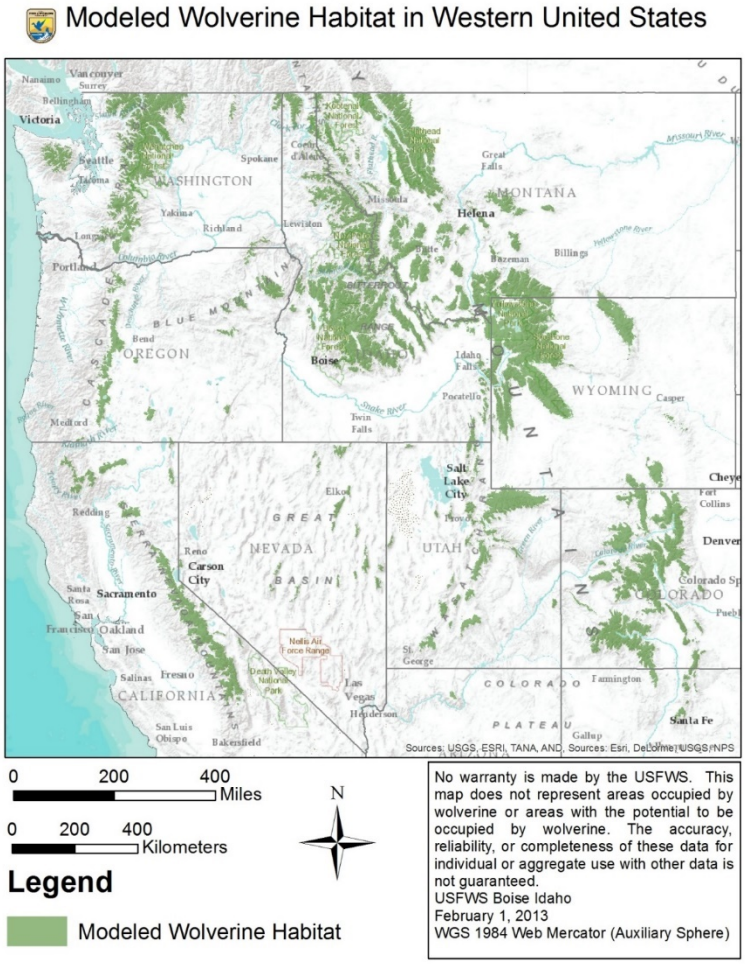

Figure 6. Fish and Wildlife Service Modeled Wolverine Habitat

[22] Review of the United States Fish and Wildlife Service's Proposed Rule to List Wolverines as a Threatened Species in the Contiguous United States, May 2013

[23] https://www.fws.gov/mountain-prairie/es/species/mammals/wolverine/02012013ModeledWolverineHabitatMap%20.jpg.pdf

8. Big Game

The DEIS (3-73) dismisses impacts to summer and winter range as negligible "given the amount of habitat available to wildlife outside the proposed disturbance area.." Yet those habitats "outside" are not analyzed for current conditions and this projects' cumulative effects, which are much greater than the small area described in the DEIS. There are important wildlife corridors, connections, summer and winter range for deer and elk in the region. This was recognized in the Caribou National Forest Revised Forest Plan. That RFP contains prescriptions identifying winter range for elk and deer and emphasizes the value of roadless areas and low road densities for elk security cover. It identifies an elk summer area in the TinCup area of the Caribou Range and emphasizes the need for migration between that summer area and winter range (RFP FEIS Appendix D-6):

> *A map of migration corridors in Brown (1981) indicates that elk in his study moved from Fall Creek down along Iowa Creek and into the head of Tincup Creek and into Trail Creek. Another group of elk used the area to the west of Caribou Mountain and moved into the head of Tincup Creek. Other areas are used for seasonal migration corridors such as movement of mule deer from the Aspen Range east to winter range on Soda Springs Hills (BLM and private).*

The CNF RFP lays out a process for assessing connectivity (RFP FEIS Appendix D-4). That process includes: assessing historic patterns of vegetation and connectivity; assess current patterns and relative connectivity including human disturbance and barriers; compare historic and current patterns and relative connectivity to determine if animal movement opportunities have been significantly interrupted; consider measures to restore these. Nothing in the DEIS has attempted to analyze these factors.

9. Sage Grouse

The DEIS notes the release of the *"Final Idaho and Southwestern Montana Sub-Regional Greater Sage-Grouse Land Use Plan Amendment and EIS."* It notes that consequent to this plan, approximately three miles of the Proposed Action would cross through IHMA areas. (DEIS 3-84). Impacts to sage grouse are dismissed as "minor" while it is also stated that "No leks are known to occur near the study area." (DEIS 3-91). However, the Wildlife Technical Report states that there are leks near the project route near Montpelier, but it does not disclose how many leks or how close to the pipeline route they are. (Wildlife Technical Report, 22.) The DEIS also contains no discussion of conservation or recovery efforts in the area by private landowners, Idaho Department of Fish and Game, or other agencies. These deficiencies make it impossible for the public or Forest Service to conduct an informed assessment of how potential development might affect recovery efforts for the Eastern Idaho greater sage-grouse population.

Eastern Idaho greater sage-grouse are notoriously understudied. In 2012, the U.S. Fish and Wildlife Service convened a "Conservation Objectives Team" of Service and state representatives with expertise in greater sage-grouse science and conservation.[24] In 2013, that body issued a Conservation Objectives Team Report (COT Report) evaluating the threats to the

[24] The Conservation Objectives Team Report is available at https://www.fws.gov/greatersagegrouse/documents/COT-Report-with-Dear-Interested-Reader-Letter.pdf.

species and recommending conservation measures. The COT Report described the East- Central Idaho sage-grouse population as "isolated/small size" and "high risk" with a "low probability of persistence" (COT Report, 22, 76-77). Such a greater sage-grouse population is nevertheless valuable because it helps ensure the species continues to exist by contributing to its redundancy, representation, and resilience. (COT Report, 12). Preserving peripheral populations is essential to arresting the decline of greater sage-grouse toward extinction and Endangered Species Act listing. (COT Report, 12-13).

The COT Report further stated:

> [L]ittle information is available on [East Central Idaho] sage-grouse populations other than some limited location and attendance data on a few leks. No lek routes have been established within this area that would allow consistent monitoring of sage-grouse populations. This lack of data is largely due to very difficult access in most years during winter and spring.
> COT Report at 76.

This paucity of information about the East-Central Idaho/East Idaho Uplands population of sage-grouse is well known to resource managers. This pipeline may also affect greater sage-grouse populations in Wyoming and Utah that cross into Idaho, and the pipeline's impacts on Wyoming and Utah sage-grouse are not analyzed in the DEIS. For example, the COT Report states that Wyoming's Star Valley/State Line subpopulation includes two Idaho leks (COT Report, 67).

We note and have commented on other actions in this area of the CNF that it was originally determined by DOI to be priority habitat. (See Appendix). That appears to have been lost in the EIS process leading to the Land Use Plan. In the Rasmussen Mine EIS, sage grouse habitat was considered "marginal" without any analysis of habitat quality or fragmentation. Figure 7 shows the pipeline routes and sage grouse leks. This figure shows that many leks in the area are of undetermined status, meaning no monitoring has been conducted in recent years. Several are shown as unoccupied. Interestingly these occur in the phosphate mining region. Others are shown as occupied.

The National Technical Team Report provides analysis and recommendations that should be included in the analysis for this pipeline project.[25] Some of these include delineating the types and areas disturbed for leks and nesting areas from industrial development. For example, a 4 mile radius from the disturbance is recommended, while citing a Wyoming study showing impacts up to 11 miles. If one placed these buffers around the leks shown in Figure 7, it would increase the area of analysis. Some additional points made in the NTT include the causes of decline and their mechanisms, the need for habitat restoration and monitoring. We do not recall seeing any population trend data for leks in the SE Idaho area in development proposals from the Caribou Targhee National Forest. Listed below are NTT recommended steps:

[25] Sage-grouse National Technical Team. 2011. A Report on National Greater Sage-Grouse Conservation Measures. 74p.

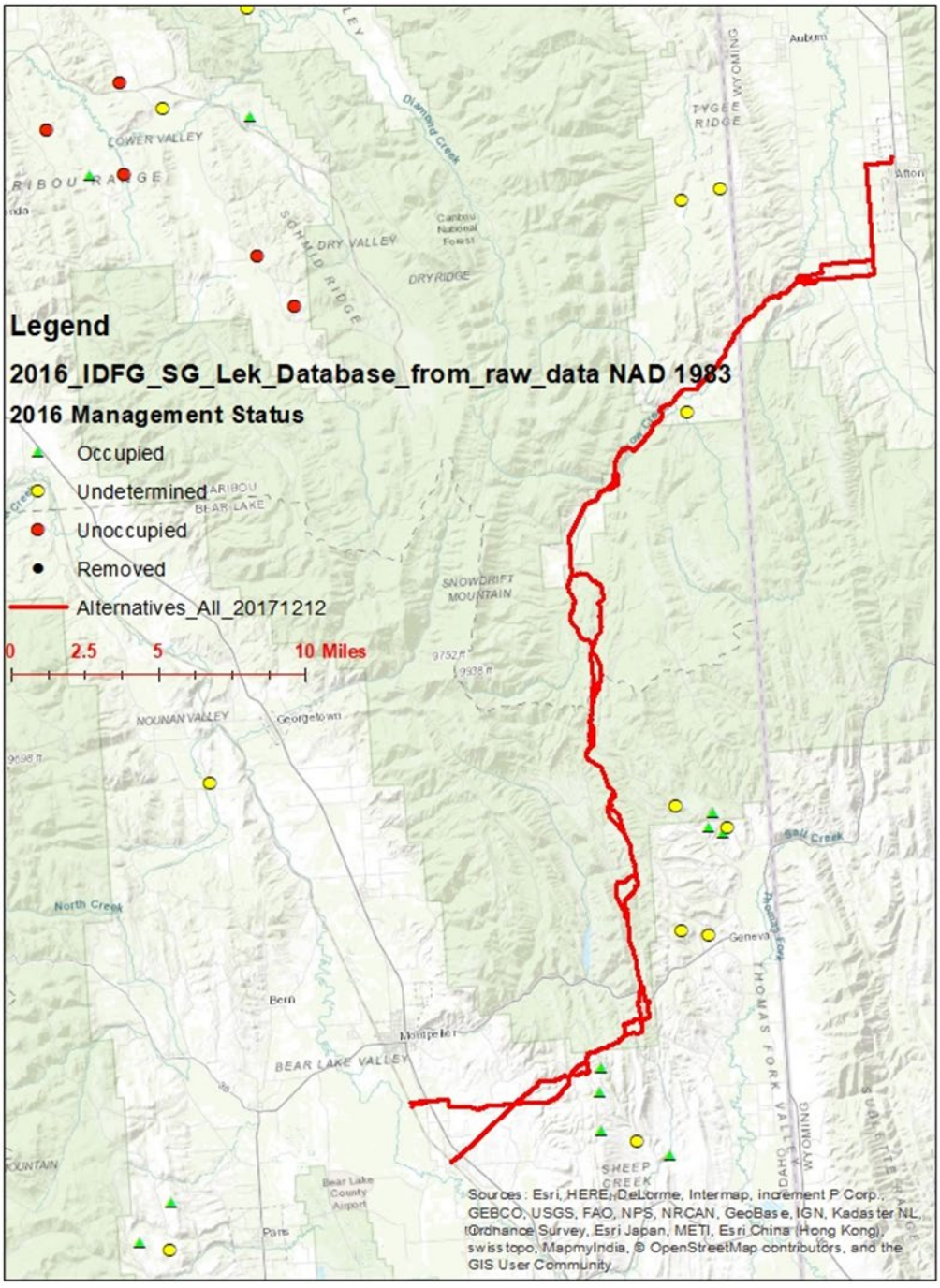

Figure 7. Pipeline route and sage grouse leks

- Prioritize restoration in seasonal habitats limiting sage grouse distribution and abundance
- Include habitat parameters (cover and height of sagebrush, grasses and forbs) recommended by Connelly et al. (2000) and compare to ecological potential using NRCS Ecological Site Descriptions
- Use native seeds and restore to ecological potential as the highest priority for restoration efforts
- Design management of livestock grazing and travel management to achieve or maintain conditions to benefit sage grouse
- Conduct population monitoring (lek counts) led by State wildlife agencies even though these have been challenged as inconsistently conducted and biased. However, lek counts appear the best available information on populations over time. Use standardized methodology.
- At landscape level, track percent of sagebrush cover and maturity of stands
- Collect quantitative habitat data (nesting, brood rearing, winter)
- Coordinate with State and Federal monitoring protocols.

It is time the CTNF began applying these principles and provided the public with a comprehensive analysis that at minimum includes the principles laid out above. The trend in populations of sage grouse at these leks should be analyzed and correlated with mining, road activity, transmission lines, pipelines and other habitat fragmenting activities to determine when leks were abandoned or population declines were occurring, if and how it relates to the time frame of these human activities. The role of livestock grazing, timber projects, vegetation treatments should also be incorporated.

10. BMPs

BMPs are relied upon to mitigate many aspects of this proposed project. Yet, are BMPs effective? Ziemer and Lisle (1993) indicated that there are no reliable data showing that BMP's are cumulatively effective in protecting aquatic resources. [26] Espinosa et al (1997) provided evidence from case histories in granitic watersheds in Idaho that BMP's thoroughly failed to cumulatively protect salmonid habitats and streams from severe damage from roads and logging. [27] In analyses of case histories of resource degradation by stereotypical land management (logging, grazing, mining, roads) several researchers have concluded that BMP's actually increase watershed and stream damage because they encourage heavy levels of resource extraction under the false premise that resources can be protected by BMP's. (Stanford and Ward, 1993[28], Rhodes et al, 1994[29], Espinosa et al, 1997). Stanford and Ward (1993) termed this phenomenon the "illusion of technique".

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[26] Ziemer, R.R., and Lisle, T.E., 1993. Evaluating sediment production by activities related to forest uses--A Northwest Perspective. Proceedings: Technical Workshop on Sediments, Feb., 1992, Corvallis, Oregon. pp. 71-74.
[27] Espinosa, F.A., Rhodes, J.J. and McCullough, D.A. 1997. The failure of existing plans to protect salmon habitat on the Clearwater National Forest in Idaho. J. Env. Management 49(2):205-230.
[28] Stanford, J.A., and Ward, J.V., 1992. Management of aquatic resources in large catchments: Recognizing interactions between ecosystem connectivity and environmental disturbance. Watershed Management: Balancing Sustainability and Environmental Change, pp. 91-124, Springer Verlag, New York.
[29] Rhodes, J.J., Espinosa, F.A., and Huntington, C., in process. Watershed and Aquatic Habitat Response to the 95-96 Storm and Flood in the Tucannon Basin, Washington and the Lochsa Basin, Idaho. Final Report to Bonneville Power Administration, Portland, Or.

A monitoring plan should be detailed providing quantitative data to determine the effectiveness of these proposed BMPs. The project impacts should be analyzed in the absence of these BMPs so the public understands the outcome with and without to be compared to monitoring conducted during and after the project construction.

Thank you for this opportunity to comment on the proposed Crow Creek Pipeline's DEIS. We respectfully request to be notified of future public comment and objection opportunities related to it, as well as the Forest Service's decision, per 40 CFR 1506.6.

Sincerely,

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Appendix – Sage Grouse

The 2015 Approved Resource Management Plan Amendment is under litigation for, among other things, failure to *"adopt consistent, enforceable, science-based conservation measures needed to redress major threats to sage grouse, notable impacts from energy and mineral development, infrastructure and livestock grazing."*

Figure A-1 was taken from the complaint and shows historical sage grouse habitat including the SE Idaho area. Figure A-2 was taken from an initial analysis of priority areas and connectivity by the Department of Interior.

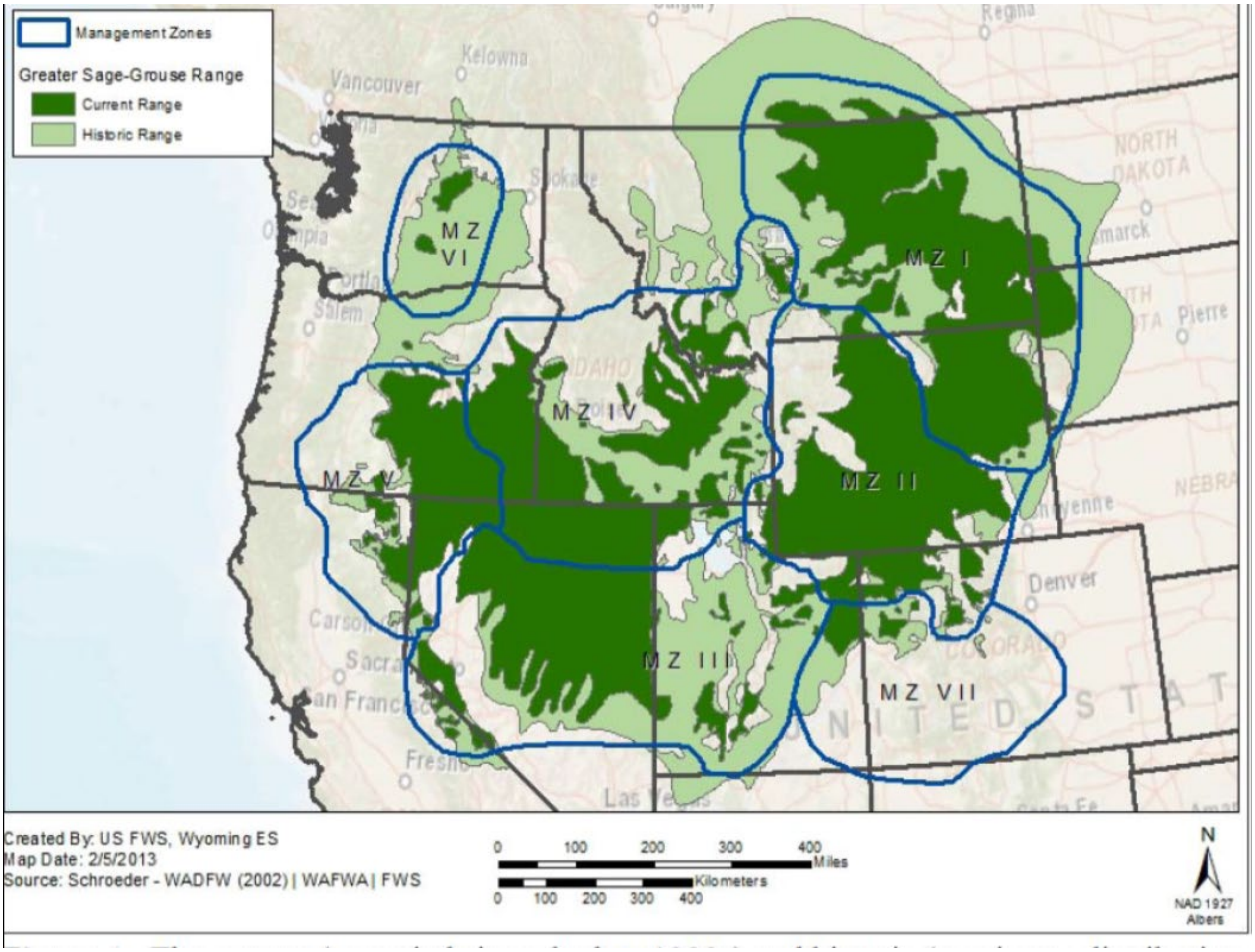

Figure A-1. The current (occupied since the late 1990s) and historic (maximum distribution from the 1800s to early 1990s) range of the greater sage-grouse (Schroeder et al. 2004)

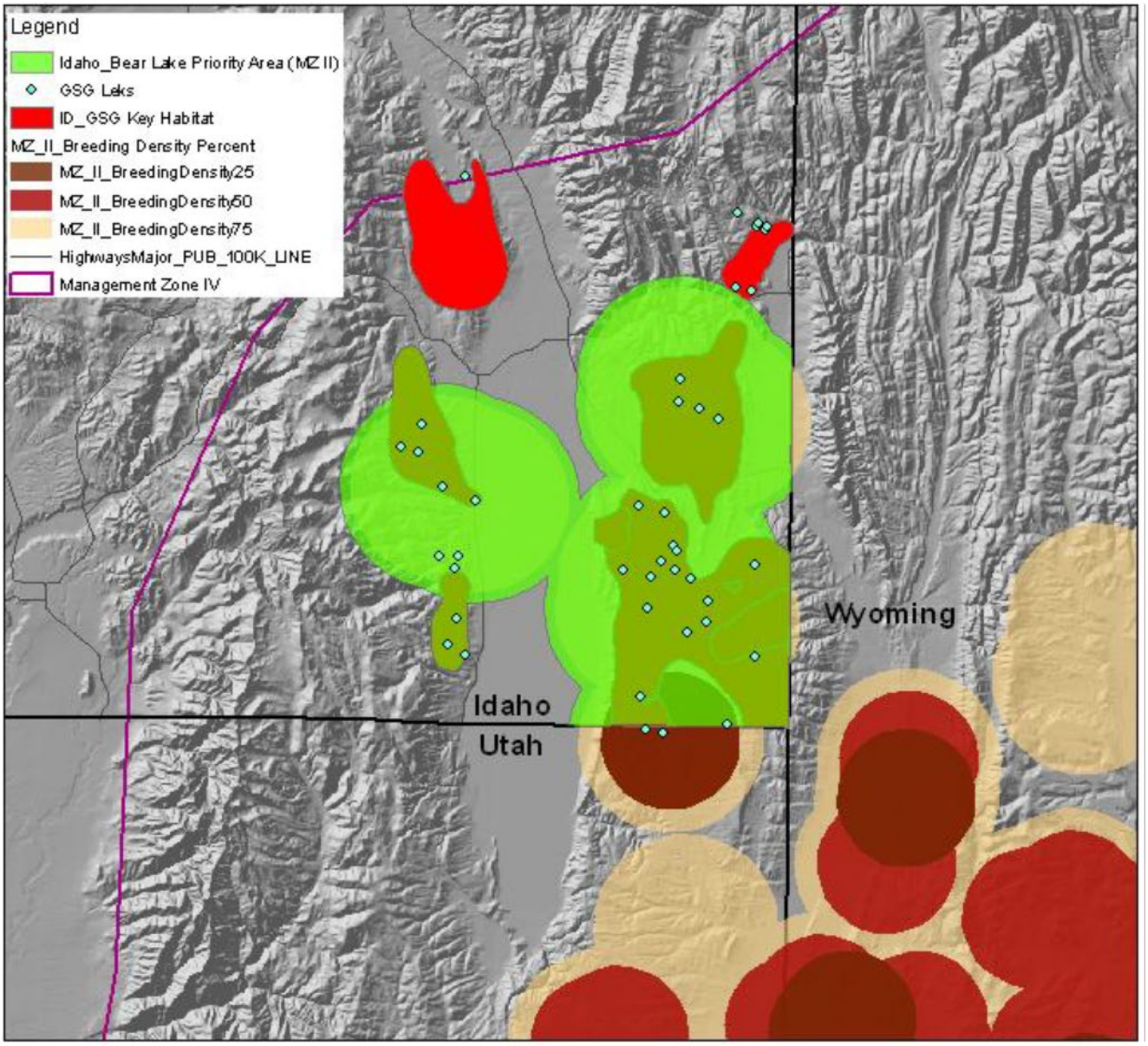

Figure A-2. Shows connection from SE Idaho in Bear Lake Plateau to Utah. [Figure 11. Bear Lake Plateau area (MZ II). Sage-grouse Priority Area (PA) for Idaho is represented by the bright green polygon. Note the 2010 Idaho Key Habitat polygons (shaded red) that are encompassed within the green PA polygon. The colored circles represent Breeding Bird Density results (Doherty et al. 2010: for Management Zone II: 25% BBD (dark red), 50% (red), and 75% (light brown).]