Submitted electronically via BLM_ID_LavaRidge@blm.gov

Prairie Falcon Audubon Society

October 20, 2021

BLM Shoshone Field Office
Attn: Kasey Prestwich
400 West F Street
Shoshone, ID 83352

RE: Lava Ridge Wind Energy EIS Scoping

Dear Mr. Prestwich,

Thank you for the opportunity to provide comments during the scoping period of the Lava Ridge Wind Energy Project ("project") Environmental Impact Statement (EIS). Idaho Wildlife Federation, National Audubon Society/Audubon Rockies, High Desert Pointing Dog Club, Idaho State Bowhunters, and Prairie Falcon Audubon ("groups") appreciate the time and effort that

agency staff has put forth in these early stages of the National Environmental Policy Act (NEPA) process.

Idaho Wildlife Federation is Idaho's oldest statewide conservation organization, founded by sportsmen and women in 1936. Today, we represent a nonpartisan voice of 28 affiliate organizations with 45,000 affiliate members and individual supporters who desire to sustain and enhance Idaho's fish and wildlife, conserve their habitat, and maximize sporting opportunity for current and future generations. Our efforts advance "made in Idaho" solutions to the modern challenges of wildlife management.

National Audubon Society has worked to protect birds and their habitat on public lands for over 110 years. Audubon Rockies, a regional office of National Audubon Society, works with partners across the West on various avian issues, notably Greater Sage-grouse. Audubon has over 6,300 active members and six independent Audubon chapters in Idaho. Our dedicated staff use science, advocacy, education, and on-the-ground projects/knowledge to solve today's conservation challenges.

The High Desert Pointing Dog Club, based in South Central Idaho, was established as a group of hunters who wanted to work and train their pointing dogs during the off season. The club promotes the responsible training and use of pointing dogs in the sport of upland bird hunting in order to enjoy the sport to its highest potential.

The Idaho State Bowhunters, Inc. is a non-profit organization of sportsmen and women, and affiliated bowhunting clubs dedicated to protect and improve Idaho's wildlife heritage of bowhunting for present and future generations.

Prairie Falcon Audubon is an independent Audubon chapter, based out of Twin Falls, which serves south-central Idaho. Their mission is to conserve and conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity. PFA engages its members and partners with other organizations through regular program meetings, field excursions, bird census and monitoring activities, newsletters, and cooperative volunteer projects.

Wind energy is the fastest growing source of electricity worldwide, having grown 23-fold in the past two decades[1]. Development of wind power offers promise of contributing to renewable energy portfolios to reduce greenhouse gas emissions from carbon-based sources, which contribute to accelerating climate change[2]. Increased interest in renewable energy development represents an exciting shift in the United States and may be critical in energy independence into the future, while diversifying western economies.

That said, renewable energy development is not appropriate everywhere on our public lands and siting must take equally into account the need to protect important environmental, scenic, cultural, and biological resources. Energy generation should occur foremost in areas already

[1] https://wildlife.org/tws2020-pronghorn-responses-to-wind-turbines-vary/
[2] Arnett et al. 2007, https://wildlife.org/wp-content/uploads/2014/05/Wind07-2.pdf

disturbed, in areas with the fewest environmental impacts, as close to the target load centers as possible, and in a manner that reduces impacts to the area's natural resources.. In order to minimize impacts associated with this proposed project, please consider our comments on the scoping document below.

I. The EIS must document and analyze effects of the proposed project in its entirety on big game species, considering both construction and operation periods. The BLM must develop and consider alternatives that minimize or avoid negative impacts on these species.

Big game are culturally and economically important to Idaho's citizens and communities. Ungulates such as pronghorn, mule deer, and elk travel great distances to reach favorable summer and winter ranges, often traveling upwards of 100 miles. Large, intact, and unfragmented habitats are required in order to successfully complete this wide range of movement and migration. The Lava Ridge project area overlays general and winter habitat for these species. Impacts to these species and the landscapes utilized by these species at critical times must be analyzed and made available for public comment/understanding during this review process, not only in regards to project construction but also during operation.

Habitat loss and fragmentation are among the most influential factors affecting species distribution and population viability[3]. Worldwide, energy development projects are quickly converting native habitats into roads, well pads, pipelines, wind turbines, solar installations and other infrastructure associated with energy production[4]. Research assessing the impacts of energy development to ungulate populations has focused largely on impacts of oil and natural gas, which has found responses to include avoidance and altered movement patterns[5].

It remains largely unknown whether impacts to ungulates in general, and pronghorn in particular, associated with oil and gas development are comparable with other forms of development[6]. However, both wind energy and oil and gas development result in increased human activity during construction and production phases. Traditional energy generation and wind energy developments have similar infrastructure densities and direct habitat loss per unit area, yet the potential impacts to ungulate behavior in response to wind infrastructure remains unclear[7].

There also seems be a perception that ungulates adapt to altered landscapes and acclimate to energy infrastructure. National Environmental Policy Act (NEPA) assessments often assume displacement of ungulates is short term, and once the production phase is initiated, behavioral impacts attenuate or cease[8]. However, in one study in western Wyoming, mule deer did not habituate to disturbance and continued to avoid energy infrastructure after fifteen years of

[3] Sawyer et al. 2017, https://onlinelibrary.wiley.com/doi/full/10.1111/gcb.13711
[4] Ibid.
[5] Smith et al. 2020, http://www.uwyo.edu/esm/faculty-and-staff/beck/_files/docs/publications/smith-et-al-2020-rem.pdf
[6] Northup and Wittemyer. 2013, https://onlinelibrary.wiley.com/doi/epdf/10.1111/ele.12009
[7] Smith et al. 2020, http://www.uwyo.edu/esm/faculty-and-staff/beck/_files/docs/publications/smith-et-al-2020-rem.pdf

[8] Ibid.

development[9]. In the study, mule deer abundance declined by 36% during the development period, despite aggressive onsite mitigation efforts and a 45% reduction in deer harvest. Similarly, studies of mule deer and elk in Oregon suggest that habitat selection and movements may be altered by roads, primarily because of the associated human activities[10]. Long-term avoidance behavior in historic winter range is problematic because indirect habitat loss reduces the size of winter range available for mule deer-habitat that would otherwise be used is functionally unavailable[11]. Important mule deer winter range includes areas that reduces the rate of energy loss by providing shallow snow, adequate food resources, security cover, and thermal environments[12]. Winter survival primarily depends on accumulating body reserves prior to winter and selecting landscapes that provide adequate forage and protection from weather and predators[13]. Winter range is often geographically restricted, so that habitat loss cannot be offset by simple range expansion. Thus, when habitat is lost directly through conversion to infrastructure and additionally through behavioral avoidance, carrying capacity is also reduced[14].

As interest in wind development has increased in sagebrush country, so has interest in understanding potential impacts to pronghorn. Taylor et al. (2016) found that proximity to a wind facility did not affect winter survival of pronghorn, but it did change patterns of space use by females[15]. This latter piece is important given that populations are driven by females and their ability to reproduce sufficient young at or above replacement levels. Thus, special consideration must be given when contemplating further development to landscapes used by pronghorn during winter as they are already predisposed to high mortality rates on winter range due to harsh environmental conditions and high energy demands[16]. Exposure to further disturbance during this already risky timeframe – such as being pushed to use of lower quality habitat - may impact survival and overall health of these populations[17].

The health of Southern Idaho's ungulate herds relies on the conservation of sagebrush integrity and the connectivity to winter range. Secretarial Order 3362 *Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors* directs the Department of Interior, in partnership with the state of Idaho, to improve the quality of big-game winter range and migration corridor habitat.

We encourage the BLM, in coordination with Idaho Department of Fish & Game (IDFG) to analyze wildlife movement and migrations that occur within and adjacent to the project area, and produce comprehensive maps on these findings to be included in the project record. If these findings indicate an overlap of the project area in functionally available winter range, alternatives

[9] Ibid.
[10] Arnett et al. 2007, https://wildlife.org/wp-content/uploads/2014/05/Wind07-2.pdf
[11] Smith et al. 2020, http://www.uwyo.edu/esm/faculty-and-staff/beck/_files/docs/publications/smith-et-al-2020-rem.pdf
[12] Smith 2011, https://scholarworks.umt.edu/cgi/viewcontent.cgi?article=2211&context=etd
[13] Ibid.
[14] Smith et al. 2020, http://www.uwyo.edu/esm/faculty-and-staff/beck/_files/docs/publications/smith-et-al-2020-rem.pdf
[15] Taylor et al. 2016, https://www.sciencedirect.com/science/article/abs/pii/S1550742415001542
[16] Smith et al. 2020, http://www.uwyo.edu/esm/faculty-and-staff/beck/_files/docs/publications/smith-et-al-2020-rem.pdf
[17] Taylor 2014, https://tethys.pnnl.gov/publications/pronghorn-antilocapra-americana-response-wind-energy-development-winter-range-south

that minimize impacts to these areas or avoid them altogether must be developed and considered. This information gap is necessary to close for a decision that minimizes impacts to our state's cherished ungulate species and is supported by the best available science.

II. The EIS must analyze cumulative impacts to Greater Sage-grouse and develop alternatives that minimize or avoid activities that would threaten populations on a short, mid, and long term timescale.

Greater Sage-grouse are considered an indicator of the integrity of sagebrush ecosystems, as well as an umbrella species for the protection of other sagebrush-obligate or semi-obligate species given their near complete dependence on sagebrush ecosystems throughout their life history[18]. Sage-grouse have been identified as a species of conservation concern by the Western Association of Fish and Wildlife Agencies in 1953, and have risen to priority level for many state and federal agencies, mostly over concerns that the species might be listed for federal protection under the Endangered Species Act.

In March 2021, U.S. Geological Survey (USGS) researchers released a scientific report that provides one of the most comprehensive population trend modeling efforts ever undertaken for the species[19]. The report describes an overall decline in the number of sage-grouse across the majority of their range, something previous studies have shown as well. Since 1965, sage-grouse populations have declined 80.7% range-wide (~3% decline per year), including areas where the decline has not been as severe. Since 2002, range-wide populations have declined 37%. Furthermore, 78% of leks have a greater than 50% probability of extirpation in the next 56 years.

Idaho is no exception in exhibiting declining grouse populations. The state continues to have declining trajectory from peak counts in 2016, with 2019 appearing to be a nadir and stronger declines occurring north of the Snake River[20].

[18] Knick and Connelly. 2011, http://www.jstor.org/stable/10.1525/j.ctt1ppq0j
[19] Coates et al. 2021, https://pubs.er.usgs.gov/publication/ofr20201154
[20] https://idfg.idaho.gov/press/hunters-can-weigh-proposed-2020-fall-sage-grouse-hunting-season

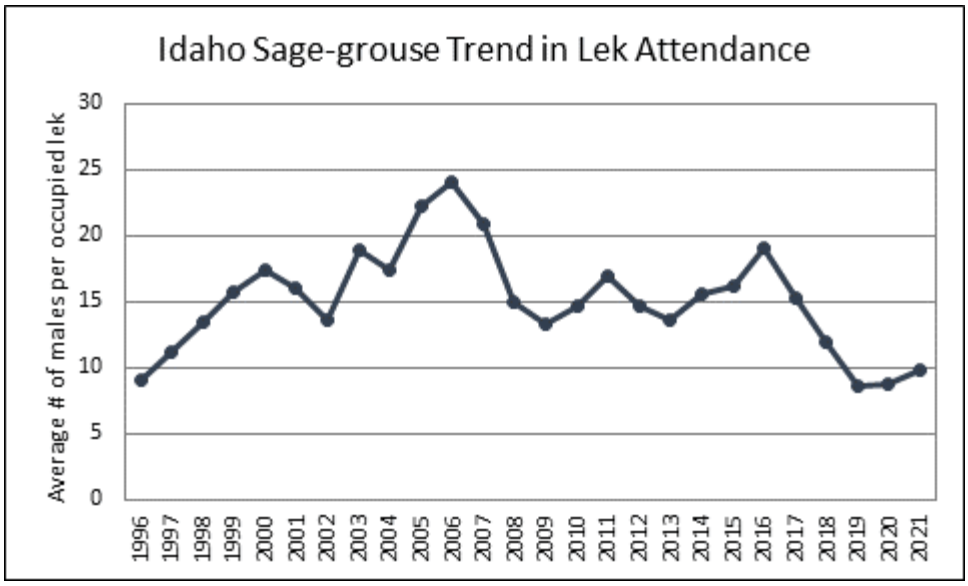

Figure 1. The average number of male Greater Sage-grouse counted on Idaho breekd-ground leks, reported on an annual basis 1996-2021. (Idaho Department of Fish and Game)

Range-wide sage-grouse population declines should be taken in consideration with the Western Association of Fish and Wildlife Agencies-led '*Sagebrush Conservation Strategy – Challenges to Sagebrush Conservation.*' This document provides a thorough and credible overview and assessment of the challenges facing land managers and landowners in conserving sagebrush ecosystems[21]. Thus extra caution should be taken in the management of their sagebrush habitat, as habitat quality and quantity directly influence grouse populations.

The collective influence of human activity on the landscape has been associated with negative trends in sage-grouse lek counts and population persistence[22]. Research has been conducted on impacts to sage-grouse from oil and gas development, but less information is available about the effects of renewable energy development on sage-grouse. Infrastructure associated with energy development requires direct removal of vegetation and could result in direct impacts associated with vehicle traffic, human activity, and noise pollution that would continue for the life of the project[23].

Buffers between project developments and sage-grouse leks and key habitats are the best way to prevent impacts from occurring, and are well supported by peer-reviewed science. The relative probability of Greater Sage-grouse selecting brood-rearing and summer habitats decreased as percentage of surface disturbance associated with wind facility infrastructure increased[24]. Furthermore, researchers found that sage-grouse nest and brood failures increased with proximity to wind-energy infrastructure – specifically a linear decline of 7.1% in nest failure and 38% in brood failure with each 1-km (0.6-mi) increase in distance from wind energy infrastructure[25].

[21] Remington et al. 2021, https://pubs.er.usgs.gov/publication/ofr20201125
[22] Manier et al. 2014, https://pubs.usgs.gov/of/2014/1239/pdf/ofr2014-1239.pdf
[23] Coates et al. 2021, https://pubs.er.usgs.gov/publication/ofr20201154
[24] LeBeau et al. 2017, https://doi.org/10.1002/jwmg.21231
[25] LeBeau et al. 2014, https://doi.org/10.1002/jwmg.679, as cited in Manier et al. 2014.

Studies suggest that an 8-km (5-mi) protection area centered on an active lek location should encompass the seasonal movements and habitat use of 90-95 percent of sage-grouse associated with the lek [26]. Sage-grouse female survival did not vary in relation to wind-energy infrastructure though lek counts were not affected until 3-years post-development[27]. At that point, counts decreased by 56% at leks near (<1.5 km; 0.9 mi) the wind farm compared to those farther away (>1.5 km; 0.9 mi)[28]. Such lag effects have also been observed in response to oil and gas development, where declines were not observed until 4 years after construction[29].

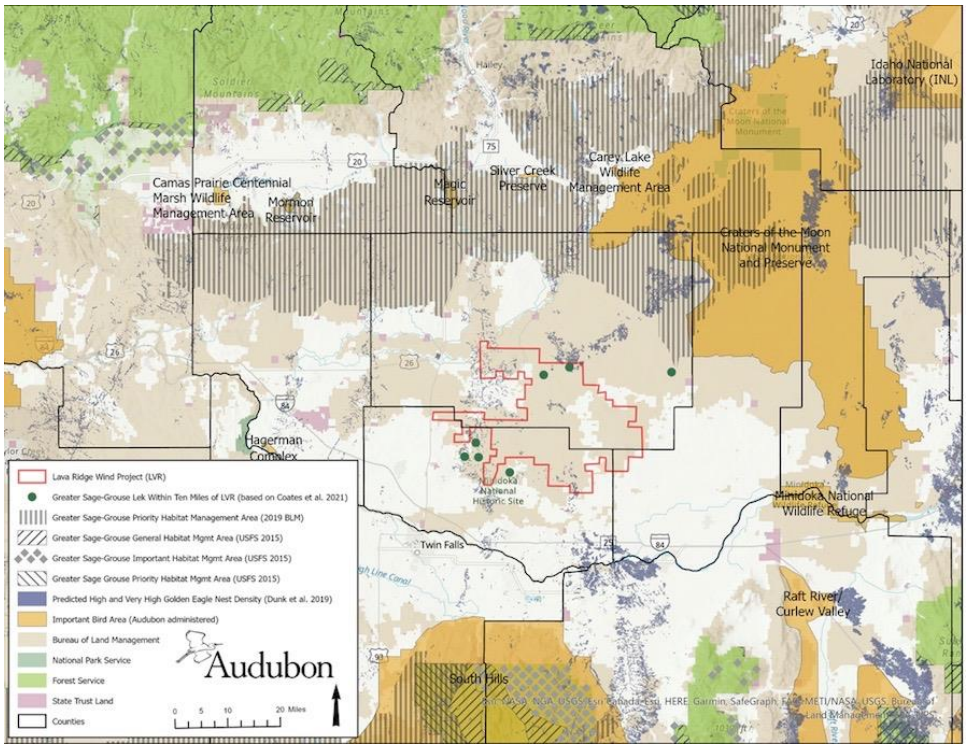

Figure 2. Greater Sage-grouse leks and habitat designations, predicted Golden Eagle nest densities, and land ownership in relation to proposed Lava Ridge wind project area.

Closer examination of Appendix 4 of the USGS report suggests there are a handful of leks within 10 miles of the proposed project area, including several within the boundary[30]. Based on this report, Figure 2 was created to illustrate the approximate lek locations in relation to the project boundary. This figure also reflects designated grouse habitat types on public lands in the general area. Finally, of relevance to later discussion, it shows predicted high and very high Golden Eagle nest densities[31] and Audubon's designated Important Bird Areas[32].

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[26] Coates et al. 2013, https://doi.org/10.1002/jwmg.618 as cited in Manier et al. 2014, https://pubs.usgs.gov/of/2014/1239/pdf/ofr2014-1239.pdf

[27] LeBeau et al. 2014, https://doi.org/10.1002/jwmg.679.

[28] LeBeau et al. 2017, https://doi.org/10.1002/wsb.725

[29] Naugle, D.E., Doherty, K.E., Walker, B.L., Copeland, H.E., Holloran, M.J., and Tack, J.D., 2011, Sage-grouse and cumulative impacts of energy development, chap. 4 of Naugle, D.E., ed., Energy development and wildlife conservation in western North America: Washington, D.C., Island Press, p. 55–70.

[30] Coates et al. 2021 (Figure 4.33, p.161), https://pubs.er.usgs.gov/publication/ofr20201154

[31] Dunk et al. 2019, https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0223143

[32] About the Important Bird Area program, https://nationalaudubon.box.com/s/whbn52mddx31tjajqvlcko34u5kr86sf

Conversations with BLM staff indicate the project will consider sage-grouse lek avoidance buffers (3.1-mile buffer from each active lek) established by the 2015 Greater Sage Grouse Approved Resource Management Plan Amendment. We encourage the BLM to develop and analyze alternatives with lek buffers ranging from of a minimum of 3.1 miles up to 5 miles from active leks to fully understand what is most effective to minimize disturbances across the landscape. Given the scale of the proposed project and the unknowns around long-term impacts of wind development on the species, we believe developing these alternatives is a careful and considerate approach.

There have been several significant policy changes and/or reinstatement of previous policies that apply to the BLM projects since the release of the scoping document and open public comment period. Our organizations expect the BLM to integrate these policy changes into Lava Ridge's NEPA process and develop alternatives that reflect these changes. Specifically, we look to the BLM to follow mitigation guidance set by Instruction Memorandum (IM) No. 2021-046 *Reinstating the Bureau of Land Management (BLM) Manual Section (MS-1794) and Handbook (H-1794-1) on Mitigation.* The IM provides policies to:

1) Implement consistent principles and procedures for mitigation in the BLM's authorization of public land uses;
2) Apply *mitigation* to address reasonably foreseeable impacts to resources (and their values, services, and/or functions) from public land uses; and
3) Follow the *mitigation hierarchy by first avoiding damage to the public lands and resources; second, minimizing damage that cannot be avoided; and third, compensating for any residual impacts to important, scarce, or sensitive resources or resources protected by law.(Emphasis added)*[33]

The IM directs the BLM to implement mitigation through a landscape-scale approach, utilize best management practices, maintain durability for mitigation measures, monitor mitigation measures for compliance and effectiveness, and adaptively manage mitigation measures. We encourage the BLM and MVE to engage with IDFG and the public to identify areas within the project where damage to public lands and resources (more specifically, sage-grouse, big game habitat) can be avoided and/or minimized. If determined to be unavoidable, we expect the BLM provide ample justification and then to outline plans for compensation for these sensitive resources with durable conservation actions elsewhere.

Reversing the decline in sage-grouse populations that has occurred over the past 50 years will require significant investments in core/priority habitats as well as general habitat to avoid a patchwork of habitat effectiveness. Our organizations appreciate the level of concern that Magic Valley Energy (MVE) has displayed in public meetings on the project location as it relates to sage-grouse. The proposed project location was selected, in part, due to the "absence of land use constraints such as wildlife management areas, areas of critical environmental concern (ACEC)…roadless areas, and other restrictive land use designations." While we appreciate both MVE and the BLM's efforts to minimize impacts to sensitive wildlife species, our organizations have initial concerns that this rationale for project location only focuses on the immediate and short-term conditions. Making decisions based only on current conditions may preclude future

[33] https://www.blm.gov/policy/im-2021-046.

restoration or conservation actions within the proposed project location that may be necessary to prevent sage-grouse population declines and from once again being a candidate for listing under the Endangered Species Act (ESA). We encourage the BLM to analyze short, mid, and long-term impacts to sage-grouse within the Idaho Desert Conservation Area as a whole; the proposed project area may become increasingly important for the species persistence as the sagebrush ecosystem continues to be compromised in quantity and quality across the West.

III. The EIS must analyze impacts to raptors, notably Ferruginous Hawks and Golden Eagles. Siting should endeavor to avoid areas near nests and key areas of attraction.

Golden Eagles and Ferruginous Hawks are both listed as Species of Greatest Conservation Need in the Idaho State Wildlife Action Plan, Tier 2 category – meaning they are species with longer-term vulnerabilities or patterns suggesting management intervention is needed[34]. In addition, Golden Eagles are federally protected under the Bald and Golden Eagle Act (BGEPA), which endeavors to achieve and maintain stable or increasing breeding populations of bald and golden eagles. BGEPA prohibits the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit(16 U.S.C. 668(a); 50 CFR 22). "Take" includes pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb (16 U.S.C. 668c; 50 CFR 22.3).

The above should be taken into consideration because both species are a large-ranging avian predators of conservation concern throughout their North American range. Not only are both species in decline, but there is increasing concern due to current and future projections of mortality risk and habitat loss from anthropogenic sources. Among these human-caused sources is collision with wind turbines. In a recent USGS and Oklahoma State University study, 14 raptors were evaluated to determine how they were impacted by collisions with wind turbines[35]. Of the five with the highest potential for population-level impacts were Golden Eagle and Ferruginous Hawks.

Wind development projects can displace raptors from otherwise suitable habitat, and are a significant source of mortality when placed in areas with high raptor concentrations[36]. Risk increases when paired with some fitness benefit to the individual - such proximity to food resources, roosting, and nest sites. This level of mortality is of particular concern for long-lived vertebrates, such as hawks and eagles, because even a relatively minor increase in adult mortality (3–5%) can lead to significant population declines[37].

While our organizations look forward to reviewing the avian surveys and associated analyses in the Draft EIS, we do caution that initial review of eBird predicts medium-high median annual abundance for both Golden Eagles and Ferruginous Hawks in the area. In addition, using nest site models developed by Dunk et al. (2019)[38], which have direct application to perform risk

[34] https://idfg.idaho.gov/swap
[35] Diffendorfer et al. 2021, https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecs2.3531
[36] Garvin et al. 2011, https://besjournals.onlinelibrary.wiley.com/doi/10.1111/j.1365-2664.2010.01912.x
[37] Whitfield 2004. https://www.sciencedirect.com/science/article/abs/pii/S0006320703004786?via%3Dihub
[38] Dunk et al. 2019, https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0223143

analyses for wind projects, there is a high golden eagle predicted nest density in the project area and surrounding areas – see Figure 2.

The BLM and MVE should proactively identify high risk areas, taking into account topography, and keep turbines and associated infrastructure away from these. Analyses for these far-ranging avian predators should extend beyond the project boundary, and take into account high risk areas in adjacent areas – as these could potentially bring these birds into conflict with turbines. These are key ways to minimize hawk and eagle mortality and displacement. Work in Wyoming, by researchers Tack and Fedy (2015)[39] may serve as a valuable model to replicate, as would resources developed by the American Wind Wildlife Institute[40]. And finally, a report was prepared by Olendorff et al. (1989) and published by the Raptor Research Foundation[41]. This report, *Raptor Habitat Management Under the U.S. Bureau of Land Management Multiple-Use Mandate*, describes 223 Key Raptor Areas – areas with unusually high nesting populations, contain important raptor migration points, or where wintering raptors congregate. While dated many raptors continue to use historic nesting/congregation points. This report should be reviewed to determine if there's an overlap of the proposed project (or surrounding area) with KRA #87 and take this information into account to avoid impacts.

IV. The EIS should include analysis of threat of invasive annual grasses and strategies to minimize these.

Human influences such as invasive species, altered wildfire regimes, and natural disasters are negatively affecting our native plant communities and the many species that depend upon them, including previously referenced wildlife species. Invasive species pose an enormous environmental challenge to western states and territories. Left unchecked, invasive species permanently alter ecosystems and negatively impact the native species and local economies that depend upon them[42]. Thus, invasive plant species act as one of the most significant change agents at landscape scales – especially in the Great Basin portion of the West.

Of specific concern is cheatgrass (*Bromus tectorum*). When an ecosystem transitions from sagebrush dominated to cheatgrass-dominated landscapes, fire-return intervals shorten from as long as a 100 or more years to as little as 3 to 5 years[43]. Just 1% of cheatgrass on the landscape doubles the risk of wildfire[44]. In areas with intense and frequent fires, nutrient recharge back into the system can be lost, and loss of sagebrush has become detrimental. In recent decades, these characteristic fire frequency and behavior caused by the influx of invasive annual grasses (notably cheatgrass) has become the largest threat to western sagebrush landscapes[45]. The National Interagency Fire Center has been tracking acres burned in Greater Sage-grouse habitat annually. For 2016-2020, among the 11 states where sage-grouse are found, sage-grouse habitat

[39] Take and Fedy 2015, https://doi.org/10.1371/journal.pone.0134781
[40] https://awwi.org/
[41] ISBN 0-935868-43-7
[42] https://westgov.org/images/editor/WGA_Top_50_Invasive_Species.pdf
[43] Remington et al. 2021, https://pubs.er.usgs.gov/publication/ofr20201125
[44] Bradley et al. 2018, https://link.springer.com/article/10.1007/s10530-017-1641-8
[45] Remington et al. 2021, https://pubs.er.usgs.gov/publication/ofr20201125

in Idaho comprised approximately 20% of the fires (1.3 million acres), reflecting how large of a problem this is in Idaho[46].

Science shows that invasive species control is more effective and cost-efficient when done early, before infestations become widespread, and when management responses are informed by what's going on in the surrounding landscape. Management actions must be prioritized, focused, and implemented in a collaborative manner to ensure the greatest conservation and restoration benefits[47]. Among these partners should be County Cooperative Weed Management Areas, to prevent the introduction, reproduction, and spread of invasive nonnative plants. The "Cheatgrass Challenge" is an example of a partnership of public and private agencies developing strategies to battle cheatgrass. This Idaho-focused effort should be considered as this project proceeds, as the partners have also compiled a strong suite of resources that can be used to proactively address this threat[48]. Among these is the 'Rangeland Analysis Platform' that can be used by the project developer to map rangeland threats and implement a proactive strategy for addressing them.

V. The EIS must disclose direct and indirect impacts to sporting opportunity and the Region's outdoor recreation economy.

Hunting, angling, and wildlife-watching play a pivotal role in Idaho's social and economic strength. In 2016, Idaho's BLM lands saw 466,155 fishing visits, 296,596 hunting visits, and 193,571 wildlife-watching visits, generating $295 million in sales, $15 million in state and local tax revenue, and $18 million in federal tax revenue, while supporting over 2,550 jobs[49]. There is a strong correlation between Idaho's strong hunting, fishing, and wildlife watching economies and vast unfragmented landscapes.

These public lands are tremendously important for Idaho sportsmen/women and recreational enthusiasts, as well as our diverse wildlife. Our organizations are concerned that the proposed project may cause a loss of quality outdoor experiences and opportunity for sportsmen/women in Idaho, both directly and indirectly. The project area lies within IDFG Game Management Unit (GMU) 53, where hunters have the opportunity to pursue game with short-range weapons as well as a unique, long archery season from August 30-December 19. Additionally, up to 120 tags have been permitted in IDFG's Zone 4B for hunters and falconers to pursue sage-grouse. This landscape offers a substantial amount of big game as well as upland bird and game hunting opportunity close to the Magic Valley region.

GMU 53 encompasses 1,176,418 acres, with BLM-managed land totaling 329,397 acres, or 28% of the total acreage. 64% of the land within the GMU lies under private ownership, and over half of the unit is irrigated farmland. The Lava Ridge Wind Project is proposed to have a footprint over 73,000 acres on an extensive tract of BLM-managed land, with up to 400 wind turbines and 381 miles of access roads constructed. This level of disturbance over the total footprint of the project is significant and may wipe out 22% of the total huntable BLM-lands within GMU 53.

[46] Personal communication with NIFC, https://www.nifc.gov/fireandsagegrouse/
[47] Remington et al. 2021, https://pubs.er.usgs.gov/publication/ofr20201125
[48] https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/id/newsroom/?cid=nrcseprd1534028
[49] https://www.pewtrusts.org/-/media/assets/2018/09/economiccontributionsrecreationblm_idaho_v1.pdf

Given the significant road network proposed with the project, the BLM must consider the compounding effects of pioneered roads and trails from user-created and off highway vehicle (OHV) use stemming off of the 381-mile road network. Route densities can be an indicator of recreation-induced big game disturbance, displacement, and habitat loss causing adverse population-level impacts. Increased route densities will decrease habitat effectiveness (due to fragmentation, introduction of invasive annual grasses, etc.) and shrink available security habitat and, essentially, is a form of habitat loss for big game species. Increased pressure and disturbance from human activity on big game species will inevitably lead to a reduction in hunter opportunity. Given the absence of a travel management plan for the BLM-lands in focus, we are concerned that the road network and user-created routes from the road network will only increase these disturbances, permanently displace wildlife species, and reduce hunter opportunity in the future.

A loss in functional habitat for ungulates on BLM-managed land will also cause unavoidable conflicts with private landowners and agricultural producers. GMU 53 cannot support many deer without unacceptable conflicts with agriculture, with depredation complaints already common[50]. IDFG has documented more than 3,000 mule deer moving into GMU 53 during the harsh winter of 1985-1986, resulting in 54 depredation complaints. The Department has also documented a substantial number of deer-vehicle collisions when mule deer move down into GMU 53 to escape harsh winter years.

We collectively urges the BLM to disclose direct and indirect impacts to sporting opportunity and the region's outdoor recreation economy.

VI. Unnecessary fences should be identified and removed. Where deemed critical, fence design, location, and construction should be done in a wildlife-friendly manner.

Where fences are deemed critical within the proposed project area , the BLM should require fences associated with the project to be constructed using wildlife-friendly fence designs, with special design consideration towards pronghorn, mule deer, sage-grouse, and other bird species. Fences can cause direct impacts (injury or mortality from fence collision) or indirect effects (create unintended hazards and barriers for wildlife, from big game to birds, blocking daily wildlife movements, seasonal migrations, and access to forage and water) [51]. Avian Species of Greatest Conservation Need that are more vulnerable to fence collision and entanglement include Greater Sage-grouse, Ferruginous Hawk, Golden Eagle, Burrowing Owl, and Short-Eared Owl[52]. Big game species that are most well-known for their challenges with fences are mule deer, pronghorn and elk.

Siting and designing fence structures to be wildlife-friendly has been proven to reduce negative interactions for wildlife species. Fences pose particular collision hazards to Greater Sage-Grouse when located <2 km from known leks, where fence segments lack wooden fence posts, and

[50] https://collaboration.idfg.idaho.gov/WildlifeTechnicalReports/Mule%20Deer%20Statewide%202011.pdf
[51] https://westernlandowners.org/wp-content/uploads/2017/09/A-Wyoming-Landowners-Handbook-to-Fences-and-Wildlife_2nd-Edition_-lo-res.pdf
[52] https://idfg.idaho.gov/swap

where fence segments exceed 4 m (13.1 ft)[53]. Research on sage-grouse has shown that fence markers can reduce fence collisions by 70% to more than 80%[54]. Wildlife-friendly fences can also be constructed to be compatible with livestock needs. To mitigate the impacts of newly constructed fences, unnecessary fences (or other structures) within or adjacent to the project area should be identified and removed. This proactive effort will help minimize the risks on the landscape to birds and big game.

Our organizations once again thanks the Bureau of Land Management for the opportunity to provide comments during the Lava Ridge Wind Project scoping period. We look forward to providing additional comments and resources to the agency throughout the NEPA process.

Respectfully,

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[53] Stevens et al. 2012, http://www.sagegrouseinitiative.com/wp-content/uploads/2013/07/Stevens_Marking-ReduceCollisions-2.pdf.

[54] https://westernlandowners.org/wp-content/uploads/2017/09/A-Wyoming-Landowners-Handbook-to-Fences-and-Wildlife_2nd-Edition_-lo-res.pdf