



WESTERN RESOURCE
ADVOCATES



January 20, 2012

Transmitted via BLM_WY_LRMP_WYMail@blm.gov

BLM Lander Field Office
Attn: RMP Project Manager
1335 Main St.
Lander, WY 82520

Re: **Comments on the Draft Environmental Impact Statement
BLM Lander Field Office Resource Management Plan Revision**

Dear BLM Project Team:

Please accept these comments from the National Audubon Society and Audubon Wyoming (Audubon) and Western Resource Advocates (WRA) regarding the Lander Draft Resource Management Plan (DRMP) and Draft Environmental Impact Statement (DEIS) for future management of public lands in the Lander Field Office (FO) area. Audubon and WRA each have long histories of constructive participation in Bureau of Land Management (BLM) and other public lands planning and decision-making in Wyoming, including the Lander FO. We appreciate 1) BLM's stewardship commitment in the context of its multiple-use and sustained-yield mission regarding the DRMP and DEIS, and 2) BLM's efforts to incorporate the best available science to inform planning decisions regarding sensitive wildlife resources and habitat in the face of mounting threats to species, including the Greater sage-grouse and raptor populations.

Introduction

These comments are supplemented by the attached Expert Comments of Alison Holloran, Director of Science for Audubon Rocky Mountain Region, regarding the Lander RMP revision. The Holloran Expert Comments emphasize the critical importance of Greater sage-grouse habitat in the FO and the need for strong science-based management decisions. The Comments conclude that "sage-grouse protection should be the *primary concern* of the Lander RMP due to the extent of important habitat within this planning area." While we recognize other statutory mandates and policy guidance

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BLM Lander Field Office
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January 13, 2012

Re: Expert Comments of Alison Holloran, Director of Science, regarding Lander RMP revision

Dear Ms. Yannone:

I appreciate the opportunity to share my professional experience in avian biology and management, with the goal of improving the outcome of the Lander RMP revision. As an 11-year employee of Audubon, I oversee issues related to a variety of avian species in the rocky mountain region, specializing in the unique sagebrush steppe ecosystem. Prior to working for Audubon as Director of Science, I received my Master of Science degree in Wildlife Management from the University of Wyoming's Cooperative Fish and Wildlife Research Unit. My intensive field experience and subsequent analysis resulted in reporting some of the first documented adverse effects of oil and gas development on Greater Sage-grouse as growth of the Pinedale Anticline occurred on critical sage-grouse habitat.

Overall, Audubon strongly advises that the BLM, when reviewing and updating the Lander RMP, adhere to their science-based commitment, echoed in the U.S. Fish and Wildlife Service's (USFWS) 12-month Findings, to protect important sage-grouse habitat. This commitment should not only apply to renewable energy development, which is anticipated to have major impacts on the sagebrush ecosystem, but also on traditional fossil fuels. I am encouraged by the recent National Greater Sage-grouse Conservation Measures Report produced by the Sage-grouse National Technical Team (December 2011)¹ as these sage-grouse experts further support the negative impacts of energy development on sage-grouse populations. Based on my educational and professional experience with these sagebrush obligates, I strongly encourage adherence to the management suggestions made within this report to the greatest extent possible.

The Lander Field Office contains extensive amounts of sage-grouse core area, a testament to the value of this sagebrush habitat for current populations of grouse. Per grouse density maps, habitat located south of Lander contains some of the densest populations of Greater Sage-grouse in the state of Wyoming. Reflecting the importance of this planning area, I was involved in the designation of Ninemile Draw as an Important Bird Area (IBA). Within the BLM's own draft RMP, this IBA is referenced because the area south of Hudson is a Greater Sage-grouse stronghold for breeding populations in western North America and contributes to the conservation of the species. Other IBAs within the planning area include Sweetwater River, Red Desert, and Red Canyon Ranch. I understand that Audubon's formal comments

¹ *"Negative responses of sage-grouse to energy development were consistent among studies regardless of whether they examined lek dynamics or demographic rates of specific cohorts within populations."*

will include greater detail about these IBAs. Of particular importance, I draw your attention to the fact that core area (Greater South Pass), overlaps all of these IBAs.

Energy development should not be permitted in these IBAs, to the greatest extent possible, especially where core areas overlap. I argue for this because research has shown that grouse will most likely experience population-level effects due to disturbance, habitat fragmentation and direct habitat loss. With landscape species such as Greater Sage-grouse, cumulative impacts must be considered, not only within the immediate area but also in adjacent habitats. Because areas immediately outside the designated core areas are often heavily developed for oil and gas (i.e. Pinedale Anticline, Jonah Field and Atlantic Rim), with more development anticipated in the future (i.e Normally-Pressured Lance Project and Gun Barrel, Madden, and Iron Horse Projects, Continental Divide –Creston Project) the core areas within the Lander RMP are even more critical to existing sage-grouse population's landscape scale use of the habitat.

Also of great concern in any development scenario is the colonization by invasive, non-native species. I encourage the Lander Field Office personnel to take aggressive proactive measures to avoid the further spread of invasive species as they dramatically degrade the quality of habitat for a wide range of wildlife, including sage-grouse. In the sagebrush-steppe community, the biggest threat is the invasion of cheatgrass (*Bromus tectorum*). Even assuming re-vegetation was successful, there is an increased risk of predation on ground nests by newly accommodated synanthropic predators. Red Fox and other opportunistic predators will benefit from an open corridor, putting sagebrush obligate species at further risk. The introduction of aggressive fauna and flora invasive species are often linked to human disturbances, such as new roads and construction of facilities associated with these proposed parcel sales and later development. New ground disturbances should be minimized to the greatest extent possible, especially during wet periods, and rapid reclamation be made mandatory.

Because of the impending status review by the U.S. Fish & Wildlife Service in 2015 and the BLM's commendable efforts through the National Greater Sage-Grouse Planning Strategy, sage-grouse protection should be the *primary concern* of the Lander RMP due to the extent of important habitat within this planning area. The proactive efforts of Wyoming to identify core areas provide land managers the unique opportunity to spatially prioritize habitats for protection, which includes identification of areas inappropriate for energy development or otherwise requiring strong protective measures. The revision of the Lander RMP should recognize that future energy development and associated infrastructure is not appropriate in particular locations within this Field Office because of the magnitude of impact on sage-grouse. Finally, I again encourage the review of the Sage-grouse National Technical Team's report, which includes the recommended goal to "maintain and/or increase sage-grouse abundance and distribution by conserving, enhancing or restoring the sagebrush ecosystem upon which populations depend in cooperation with other conservation partners."

Should you have any additional questions, especially pertaining to Important Bird Areas, please do not hesitate to contact me at aholloran@audubon.org.

Sincerely,



Alison Holloran
Director of Science – Rocky Mountain Region

governing these planning decisions, BLM's willingness to implement this recommendation for the Lander RMP, and the success of its efforts, are crucial regarding the recovery prospects for this iconic species in North America. Audubon and WRA are committed to work with BLM to meet the challenge.

The Lander field office planning area contains some of the best Greater sage-grouse habitat within the species 11 state range (Connelly et al. 2004). To further support the importance of this planning area to grouse, approximately 72 percent of the Lander planning area has been designated by the State of Wyoming as Greater sage-grouse Core Area pursuant to the Wyoming Core Area Strategy. Based on 2010 data, there are 167 documented leks in the planning area, of which 142 occur on BLM-administered land. Despite high abundance, maintaining healthy populations depends upon effective conservation. The RMP revision provides a timely opportunity for the BLM to ensure continued high density of breeding birds through protection of important breeding, nesting, brood-rearing, and winter habitats. We support BLM's statement that "management actions that conserve, protect, and maintain habitat for Greater sage-grouse are a priority in this (core) area." DRMP/DEIS at 865. Where some impacts to lesser quality habitats are inevitable, we urge BLM to strive to work with users, permittees and other stakeholders to pursue mitigation strategies designed to result in *no net loss or positive environmental benefits* for priority habitats and species.

Unlike many sagebrush obligate species, there is a plethora of recent sage-grouse research available to guide management on public lands. Sound conservation actions on behalf of sage-grouse will also benefit a wide variety of additional wildlife species, including many of BLM's special status species. Most of the best available science regarding Greater sage-grouse management and conservation was considered in the recently published document titled "A Report on National Greater Sage-Grouse Conservation Measures" and produced by the Sage-grouse National Technical Team. The recommendations in the new Report should inform sage-grouse management decisions in the RMP/EIS. See http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/im_attachments/2012.Par.52415.File.dat/IM%202012-044%20Att%201.pdf.

While oil and gas development was identified as the primary threat to sage-grouse in the Western Association of Fish and Wildlife Agencies' designated Management Zone II, which includes the Lander field office, the U.S. Fish & Wildlife Service (USFWS) determined invasive species, wildfires, infrastructure development, and livestock grazing also are major contributors to population declines across the eastern range. Because the RMP will guide management over the next 15-20 years, our comments also address the rapidly growing field of wind energy development, related transmission, and the additional threats identified by the USFWS. Our focus is primarily centered on Greater sage-grouse and, to a lesser degree, raptors.

Comments below are presented in three categories. First, we provide information on Audubon's Important Bird Areas (IBA) Program and the provisions in the draft RMP that relate to protection of these areas within the Lander FO. The four designated IBAs are: Ninemile Draw, Sweetwater River, Red Desert, and Desert Canyon. Second, we address Alternatives B and D presented in DRMP/DEIS, both of which include measures we strongly support or oppose. These measures pertain to fencing, riparian areas, protective sage-grouse and raptor stipulations, Areas of Critical Environmental Concern (ACEC), wind development, right-of-way corridors, and oil and gas development. Third,

we discuss the context of the Lander RMP in light of adjacent lands, non-BLM lands, ongoing federal and private planning and recovery efforts, and the need for landscape-scale approaches that consider direct, indirect and cumulative impacts to biological resources.

I. IMPORTANT BIRD AREAS

About the Program

Important Bird Areas, or IBAs, are distinct priority areas that provide essential habitat for one or more species of bird – with a special emphasis on threatened, restricted-range and biome-restricted species. The Important Bird Areas Program is Audubon’s lead conservation initiative because the most severe threats to bird populations are habitat-based. IBAs include sites for breeding, wintering, and/or migrating birds. IBAs may be a few acres or thousands of acres, but usually are discrete sites that stand out from the surrounding landscape.

As the U.S. partner in an international program, Audubon is responsible for identifying and working to conserve a network of Important Bird Areas throughout the country. Each individual IBA is tied to a global network of IBAs with international importance for bird populations and habitat. A central goal of the IBA program is to identify, monitor and protect a global network of IBAs for the conservation of the world's birds and other biodiversity. Adding to the credibility of the unique importance of these habitats for birds, designation of these areas is based on independent review by a panel of nationally recognized bird experts.

The IBA criteria are internationally agreed, standardized, quantitative and scientifically defensible. Ideally, each IBA should be large enough to support self-sustaining populations of as many as possible of the key bird species for which it was identified or, in the case of migrants, fulfill their requirements for the duration of their presence. By definition, an IBA is an internationally agreed priority for conservation action.

Birds are shown to be effective indicators of biodiversity in other animal groups and plant communities – especially when used to define a set of sites for conservation. So although the IBA network is defined by its bird fauna, the conservation of these sites will ensure the survival of a correspondingly large number of other animals and plants. As the emphasis moves from site identification to site monitoring and protection, the IBA Program is thus making a major contribution to global biodiversity conservation. Accordingly, management decisions for these areas in the Lander RMP are of heightened significance, especially as we aspire to meet the biodiversity challenges posed by climate change.

Effective conservation of IBAs can make a major contribution to wider landscape or habitat protection. As islands of rich ecological complexity in a landscape that is increasingly simplified and vulnerable to man-made perturbations, remaining semi-natural habitats at key sites can make an inordinate contribution to mediating the natural cycles of water, carbon, nitrogen, oxygen and other substances through the environment, filtering, buffering, purifying, storing and replenishing the resources and ecological processes that make life possible. A healthy environment is good for both birds and people.

In terms of mainstream market economics, because IBAs are recognized world-wide, they attract interest from birdwatchers, conservationists and planners. They become travel destinations and targets for eco-tourism projects and scientific study.

Wyoming has a total of 48 Important Bird Areas, four of which are located within the Lander FO boundary. Management decisions and direction in the revised RMP should take into account the location of IBAs, applying appropriate protections to ensure the continued conservation value of these habitats. This is especially important given the range-wide population declines documented for songbirds that breed within sagebrush steppe habitats, likely due to widespread habitat loss and alteration (Sauer et al. 2008).

Ninemile Draw IBA

Land ownership for the almost 202,000 acre Ninemile Draw IBA is primarily BLM (88%), and to a lesser degree Department of Defense and Wyoming State Lands. The site was nominated and accepted based on the high conservation priority species (mainly sagebrush obligate species) using the area and significant concentration of sage-grouse breeding and nesting sites, as noted in the DEIS. The IBA contains 21 known sage-grouse leks and provides wintering, breeding, nesting, and early brood rearing habitat for the sage-grouse.

The BLM, Wyoming Game and Fish Department (WGFD), and the University of Wyoming's Cooperative Fish & Wildlife Research Unit have marked and monitored sage-grouse in the area since spring, 2001. The monitoring effort established that sage-grouse from a large portion of central Wyoming migrate to Ninemile Draw in mid-October each year. After early brood rearing, the birds return to summer habitats near Crooks Mountain and along the Sweetwater River (as far as 65 miles from the leks within Ninemile IBA). In addition to radio telemetry data, WGFD has intensively monitored leks in the area since 1994. Ninemile Draw IBA includes sage-grouse core area as well as some of the highest abundance population centers of breeding birds. (Doherty et al. 2010).

The area also provides important seasonal habitats for other sagebrush obligate birds such as Brewer's Sparrow, Vesper Sparrow, and Sage Thrasher. Recent peer-reviewed research conducted in Sublette County, Wyoming found that regional declines of some songbird species, especially sagebrush-obligates like Brewer's Sparrow and Vesper Sparrow, appear to be compounded by increased energy development (Gilbert and Chalfoun 2011). Results such as these further support the efforts to provide meaningful protection to identified important habitats such as the Ninemile Draw IBA.

Our primary management concern pertains to the Designated Development Areas (DDA), which overlaps the Ninemile Draw IBA. We request that the DDA's boundary be reconfigured to avoid this important IBA.

Sweetwater River IBA

The Sweetwater River project area is approximately 10,000 acres, divided into five distinct areas. The site includes an uninterrupted stretch of the Sweetwater River in Central Wyoming, attracting migrating birds. Land ownership is a mix of state, federal and private. The site includes approximately five miles of river owned by The Nature Conservancy, six miles of BLM ownership (designated a wilderness study area – Sweetwater Canyon), and five miles of private ownership. The private ownership was donated as a conservation easement.

The site is made up primarily of lowland riparian habitat (80%) with some sagebrush shrublands (20%) comprising the remainder of the habitat. The site is particularly important as it acts as a magnet for migrating birds. The project area includes dense willow and shrub riparian habitats and many braided channels of the Sweetwater River. The Project area is used primarily for livestock/agriculture (50%) and nature and wildlife conservation (50%). Avian species of interest include: American White Pelican, Rock Wren, Northern Harrier, American Avocet, Swainson's Hawk, Wilson's Phalarope, Golden Eagle, Common Poorwill, Prairie Falcon, Say's Phoebe, Sage Thrasher, Versper Sparrow, Mountain Plover, Northern Rough-winger Swallow, Clark's Nutcracker, and Greater sage-grouse.

Greater South Pass Core Area overlaps the entire IBA. Furthermore, the Sage-grouse Reference and Education Area (Alternative D) overlaps this IBA, as does South Pass Historical Landscape ACEC (Alternative D). While sage-grouse leks have not been documented specifically within the narrow boundary of the IBA (which is not surprising given the riparian characteristics), high density breeding areas do overlap a majority of the IBA (Doherty et al. 2010). Because this IBA includes riparian-wetland areas, it likely serves as a critical component of brood-rearing habitat for Greater sage-grouse because it provides needed forbs and insects necessary for chick survival, and is thus utilized by many of the hens nesting around nearby leks.

Management concerns include riparian areas, grazing, fence management, and invasive species. See below for detailed recommendations.

Red Desert IBA

Wyoming's largest IBA, approximately 4.5 million acres, straddles the boundaries of the Lander, Rock Springs, and Rawlins BLM field offices. Land ownership is primarily BLM and to a lesser degree Wyoming State Lands. This large expanse of relatively intact sagebrush habitat provides important breeding, foraging, nesting, wintering, or migratory stop-over habitat for sagebrush obligate avian species (Greater sage-grouse, Sage Thrasher, Sage Sparrow, and Brewer's Sparrow), as well as providing extensive documented nesting sites for variety of raptors (Ferruginous Hawk, Golden Eagle, Red-Tailed Hawk, Prairie Falcon, Burrowing Owl). Numerous other avian species can be found in sagebrush habitat and/or among the diverse micro-habitats of the "sky islands" of buttes, hills, mountains, ridges, and pinnacles throughout the Red Desert.

The area is primarily made up of sagebrush-grasslands and shrub-steppe habitats, with some aspen pockets, spring/seeps, cliff/rock, and conifer habitats. In addition, the IBA is punctuated with springs and seeps, stands of limber pine and aspen with an understory of deciduous shrubs (e.g. chokecherry, antelope bitterbrush), sand dunes with their own component of unique dune vegetation (e.g. desert begonia, vetch), seasonal wetlands, and "dunal ponds" in spring (seasonal ponds created by melting snow drifts that are buried and insulated under the sand). This is the largest unfenced region in the continental U.S. Over 365,000 acres qualify for wilderness designation.

Greater South Pass Core Area overlaps a majority of the IBA (approximately 75%), especially the portion within the Lander field office. High density breeding areas overlap a significant portion of the IBA. (Doherty et al. 2010). Furthermore, the Sage-grouse Reference and Education Area (Alternative D) is adjacent to this IBA and South Pass Historical Landscape ACEC (Alternative D) overlaps the northern border. Green

Mountain ACEC (Alternative D) is located entirely within the Red Desert IBA. Due to the size of the IBA and the variety of habitat types, the IBA contains numerous sage-grouse leks.

Management concerns include oil and gas development, grazing, wind development, and invasive species. Detailed recommendations are set forth below.

Red Canyon Ranch IBA

Red Canyon Ranch IBA is located just south of the town of Lander. Land ownership for the 35,000 acre IBA is a combination of private, federal, and Wyoming State Lands. The private landowner is The Nature Conservancy (TNC). TNC's Red Canyon Ranch is a working ranch where TNC employs specially designed management practices to demonstrate how ranching and conservation can go together. Management of the ranch and surrounding area is guided by a Coordinated Resource Management team including federal and state agencies, ranchers, and community members. The ranch runs from the Red Canyon Rim (just west of Hwy 287) to extensive spreads of rangeland and forest in the Shoshone National Forest. TNC has undertaken extensive riparian restoration and monitoring of rare plants, progressive "pulsed" grazing management and irrigation improvements.

This IBA was nominated and approved based on the presence of endangered, threatened, and/or species of special concern, other high conservation priority species, and rare, unique or representative habitat. The area has a large elevation range, providing for diverse habitats. The site includes an extensive spread of rangeland (sagebrush/grasslands), extensive riparian corridors (10-15%), and some forest (aspen = 10% and conifer = 10%). The most dominant habitat type is sagebrush shrubland (60%).

The IBA includes a great deal of water and riparian zones along the Red Canyon, Barrett, Snow, Deep, and Cherry Creeks and the Little Popo Agie River. Many of the Species of Concern designated by Partners In Flight inhabit the area such as: Sandhill Crane, Northern Goshawk, Broad-tailed Hummingbird, Rufous Hummingbird, Blue Grouse, Greater Sage-grouse, Black-Billed Cuckoo, Rough-Wing Swallow, Warbling Vireo, Green-tailed Towhee, Vesper Sparrow, Brewer's Sparrow, Say's Phoebe, Dusky Flycatcher, Willow Flycatcher, Mountain Bluebird, Rock Wren, Lazuli Bunting, and Bullock's Oriole.

This IBA includes lowland riparian-wetland areas that likely serve as a critical component of brood-rearing habitat for Greater sage-grouse because it provides needed forbs and insects necessary for chick survival, thus utilized by many of the hens nesting around nearby leks.

Red Canyon ACEC (Alternative D) encompasses almost the entire eastern half of the IBA, while Twin Creek ACEC (Alternative D) overlaps the southeastern corner. Greater South Pass Core Area overlaps the eastern third of the IBA, as does moderately high density breeding areas, though to a lesser degree. (Doherty et al. 2010).

Management concerns include grazing, wind development, and invasive species. Detailed recommendations are presented below.

II. DISCUSSION ON ALTERNATIVES

General Concerns

Sage-Grouse Core Areas

The Lander field office staff should be commended on their thoughtful development of alternatives, especially given the often challenging situation of managing conflicting resources. Audubon Wyoming has been deeply involved in the development of the Core strategy as a member of the Governor's Sage-grouse Implementation Team (SGIT). Audubon's goal, aligned with the SGIT, was to find ways to effectively conserve Greater sage-grouse and thereby avoiding the need to federally list the bird. The development of the core areas was used to identify the highest density of Wyoming's known population and to focus the strongest protection measures in these critical areas.

While we acknowledge that much of the area closed to oil and gas leasing in Alternative B has low to no potential for oil and gas and that the provisions provided for in Alternative B are generally more protective for grouse than those outlined in Alternative D, we recognize that the Core strategy provides for permitting some development in less critical habitat. However, any such development and permitting must be conditioned on imposing adequate mandatory protective stipulations designed to ensure that the populations will survive and be minimally impacted (see discussion on ¼ mile buffer in Alternative D). These stipulations and other measures must be informed by the new Technical Team Report and ongoing range-wide planning processes.

Given the overlap with Important Bird Areas and sage-grouse core areas, we are supportive of Record #4050, that states "The Dubois, Red Canyon, Lander Slope, Green Mountain and Sweetwater River areas are priorities for management of fish and wildlife and their habitat." DRMP/DEIS at 97.

Soil Disturbing and Disruptive Activities

We support efforts to reduce soil disturbing and disruptive activities because of the potential for erosion, impacts to vegetation including introduction of invasive species, fragmentation of habitat, impacts to water resources, and potential loss of sagebrush. Depending on the disturbance type and time-frame, sage-grouse may avoid the area, have lower productivity or reduced fitness, become more vulnerable to predation, or cause disruption in breeding or brood-rearing activities. Monitoring and adaptive management will be important to success where disturbance occurs, as well as management decisions directing such disturbance away from priority habitats.

Fences

Fencing can be an obstacle or potential hazard to special status wildlife species by concentrating livestock, adversely impacting vegetation and fragmenting habitat. In relation to sage-grouse, mortality is increased due to greater perching opportunities for avian predators and collision risk during flight. A 2009 WGFD report examined sage-grouse mortalities near Farson and found that sage-grouse fence diverters reduced sage-grouse fatalities by 61 percent. (Christiansen 2009). Record #4083, applicable to all alternatives, states that BLM will "increase the visibility of existing fences to reduce hazards to flying Greater sage-grouse." DRMP/DEIS at 104. BLM should specifically require that priority stretches of existing fences, especially those in proximity to leks, will be identified for use of sage-grouse fence diverters/markers to prevent collisions. If new rangeland fences are deemed absolutely necessary after public comment and other-

agency consultation regarding wildlife concerns, sage-grouse fence diverters/markers should be required to reduce collisions and grouse mortality.

Wind Development

Wyoming Executive Order 2011-5 states: “Wind development is not recommended in sage-grouse core areas, but will be reevaluated on a continuous basis as new science, information and data emerges.” In a July 2009 letter to WGFD officials, USFWS stated that wind energy development in Wyoming’s core sage grouse habitat areas, even for research purposes, would “negate the usefulness of the core area concept” and would bring into question whether adequate regulatory mechanisms are in place in the state to protect the species. Therefore, Record #4060 needs to be corrected. DRMP/DEIS at 100. All alternatives should follow the USFWS wind development recommendation to avoid core areas. Wind projects are long-term surface disturbances with significant capital costs. Based on existing science and biological recommendations, considering wind development in core areas would be an unproductive use of the time and resources for practically all stakeholders – including wind developers, agency officials, conservation professionals, livestock users, and others.

Subject to the precautionary principle, this provision could be rephrased for Alternative D, such that wind energy development is excluded from core areas unless peer-reviewed and definitive scientific research establishes that wind energy development does not adversely affect Greater sage-grouse. Even then, BLM must proceed with the utmost caution and only after full consultation and public involvement. The presumption must be to avoid core areas. Wind energy exclusion and avoidance areas (see Map 65 and Map 100) appear to correspond with sage-grouse core areas, further suggesting that Record #4060 should be corrected. Due to the impacts to raptor populations, we encourage strict exclusion language for raptor concentration areas (as noted in Alternative B of Record #4060). Outside sage-grouse core areas, BLM should avoid siting new temporary meteorological (met) towers near leks and other important sage-grouse habitat. Where wind turbines or met towers are considered appropriate and properly sited, guy wires should be marked with recommended bird deterrent devices and other state-of-the-art best practices applied to minimize impacts.

Land Tenure

Both alternatives B and D include provisions outlining land available for land tenure adjustments. We strongly encourage maintaining as many acres as possible in public ownership, especially in areas containing habitat for special status wildlife. Disposal of federal land by sale, exchange, or other method could potentially fragment contiguous habitat blocks and the corridors between them. Retaining important wildlife habitat, such as sage-grouse core and non-core habitat, in federal ownership improves management flexibility. Land tenure decisions should be informed by the need to consolidate ownership and conservation management of large tracts of relatively undisturbed landscapes, targeting sensitive habitat for sage-grouse, raptors and other priority species and ecosystems.

Alternatives B and D are addressed in more detail below.

Alternative B

Infrastructure: Fences and Roads

BLM should adopt the provision which avoids construction of new infrastructure (such as fencing) and instead focuses on livestock grazing management throughout seasons of use and lower forage utilization. Record #6066 indicates that this alternative would involve the removal or modification of existing fences and cattleguards (and/or modified) when and where opportunities exist. DRMP/DEIS at 143. Conservation is best served by protecting and enhancing habitat.

We also support adopting Alternative B's approach to systematically inventory and close unnecessary roads and trails, and prescribe rehabilitation for them to benefit wildlife habitat. This action will help to reduce wildlife disturbances, erosion problems, and potentially reduce the spread of invasive species. However, the DEIS notes that "simply closing an eroding road without alleviating soil compaction and reseeding can be successful in some cases and very unsuccessful in others, leading to more adverse impacts from INNS invasion." DRMP/DEIS at 749. We also recognize the BLM's staff and resource limitations. A combination of protection (no new infrastructure), especially in relatively undeveloped areas, and rehabilitation will best achieve habitat goals.

Riparian-Wetland Habitats

The protection of natural functions in riparian-wetland areas is more appropriately addressed in this alternative. As noted in the DEIS, riparian-wetland communities make up less than 3 percent of the BLM-administered surface in the planning area, but their value is inversely proportional to their physical extent. These communities support the greatest diversity of plant and animal life of all habitat types. DRMP/DEIS at 343 and 351. Actions that improve riparian-wetlands improve habitats for special status wildlife species, especially increasing the quantity and quality of riparian-wetland vegetation and insects. Riparian-wetland areas are a component of brood-rearing habitat for Greater sage-grouse because they provide needed forbs and insects necessary for chick survival.

Alternative B's prohibition of surface disturbing activities within 1,329 feet (0.25 mile) of surface water, riparian-wetland areas, playas, and 100-year floodplains where mapped (except for areas of high and moderate oil and gas potential) provides important protections for this habitat type. Alternative D's prohibition within 500 feet is inadequate and could result in erosion and alteration of the important riparian habitat, as well as potentially inadequate protections for special status amphibians and their habitats. One quarter mile or 1,329 feet should be the standard in the final RMP.

Grazing

Under Alternative B, we are supportive of light livestock grazing levels in areas typically preferred, such as riparian-wetland areas, adjacent upland areas, and around salt and mineral supplements and water troughs and developments. We support the Alternative B provision to prohibit salt or mineral supplements within 0.5 mile of riparian-wetland habitats to prevent livestock congregation at water sources. Alternative B also prohibits the placement of salt or mineral supplements within 0.6 mile of Greater sage-grouse leks. All these provisions would serve to protect important sage-grouse habitats (foraging area, breeding area, nesting area) from livestock trampling and the impacts of heavy plant utilization.

Soils & Reclamation

We support avoiding surface disturbance on slopes greater than 15% (Alternative D manages these with Category 2 restrictions) and the more stringent reclamation

standards (rather than case-by-case basis). Requiring minimum density herbage cover of 70 percent of the native background vegetation to achieve final stabilization objectives will help to reduce invasive species, and provide important cover for sage-grouse.

Right-of-Ways

The establishment of ROW corridors, similar to the Designated Development Areas in Alternative D, would allow major ROWs to remain in areas of existing disturbance to the greatest extent possible. We also support co-locating communication facilities with existing sites to reduce new ground disturbances. Reducing the number and size of disturbances would reduce habitat loss and fragmentation, maintain habitat connectivity, and ensure large patches of habitat are available for Greater sage-grouse. DRMP/DEIS at 881-882.

Alternative B designates three utility corridors encompassing 15,364 acres in the planning area, with corridor widths ranging from 400 feet near National Historic Trails to a minimum of 3,500 feet in the national energy corridor. Concentrating ROWs in corridors would result in beneficial impacts by reducing the amount of new surface disturbance in habitats and limiting the amount of new surface disturbance in previously undisturbed and unfragmented habitats. DRMP/DEIS at 887. Care must be taken to ensure that each proposed ROW project is informed by adequate site-specific impacts analysis including cumulative impacts of multiple lines and current information on habitat and other ecological values. Utility corridor designation needs to be a closely scrutinized, and decisions should be based on the best scientific information available at the time an activity is proposed, as well as public comment. Habitat, ecological and biological priorities should guide designations on public lands, especially in habitats such as the sensitive and vital sage-brush ecosystems in the FO.

Powerlines

We strongly support Alternative B's requirement of anti-perching devices on all new overhead powerlines in Greater sage-grouse, white-tailed prairie dog, mountain plover, and pygmy rabbit habitats to reduce predation from raptors. In addition, the BLM will work with ROW holders to identify conflict areas and get anti-perching devices installed on existing overhead powerlines in these same habitats. DRMP/DEIS at 882. Because approximately 74-80% of sage-grouse females nest within 4 miles of leks (Moynahan 2004, Holloran and Anderson 2005), this measure will help reduce predatory pressures on nesting and foraging grouse. We recommend deterrent devices on H-frame structures because recent research indicates they are effective tools in reducing perch use of such structures (Lammers and Collopy 2007, Slater and Smith 2010).

Alternative B also prohibits new permanent structures taller than 12 feet within 1 mile of occupied nesting habitat. We support this provision as a means to prevent area avoidance by sage-grouse. These powerline provisions should all be incorporated into BLM's final decision.

ACECs

The 24,860 acre Green Mountain ACEC proposed in Alternative B should be adopted rather than the 21,389 acre ACEC proposed in Alternative D. The Green Mountain ACEC includes Greater sage-grouse Core Area, a concentration of raptor nests, and other valuable wildlife and plant communities. Given the threats this area faces related to recent increased interest in mining and oil and gas development, BLM should designate the larger ACEC to fully protect the relevance and important values in the

Green Mountain area. The larger ACEC would also further conservation of the Red Desert IBA and its flora and fauna.

Alternative D

Designated Development Areas

The identification of Designated Development Areas (DDA), established for purpose of facilitating intensive oil and gas exploration, development, and production, allows for clear future management. However, 1) reclamation in these areas should be more stringent than proposed in Appendix D, and 2) any exceptions considered for new leases should be clearly explained and carefully scrutinized with public involvement.

The westernmost DDA overlaps the important Ninemile Important Bird Area, designated an IBA specifically because of the significant concentration of sage-grouse breeding and nesting sites. A large number of sage-grouse from central Wyoming have been documented migrating to this IBA in mid-October. Intensive development, as is the purpose of these areas, will damage habitat and cause dramatic declines in sage-grouse. The importance of this area to such a high profile species warrants review of this DDA. BLM should either dramatically reduce the size or completely eliminate this DDA.

Operations and Management Phases

We particularly appreciate provisions that extend seasonal wildlife protections to identified operations and maintenance (O&M) activities in non-Designated Development Areas, if those activities are identified as detrimental to wildlife. Record #4056, DRMP/DEIS at 98. As noted in the DEIS, this action “would not preclude development or limit the number of wells and would result in no more adverse impacts than management under Alternative A, which does not have timing limitations on O&M.” DRMP/DEIS at 649. Extending seasonal protections beyond the development/construction period, which is often short in comparison, will be extremely beneficial to wildlife during the sensitive winter and nesting periods. We strongly encourage BLM to implement this provision.

However, we respectfully request clarification. Alternative B extends seasonal protections for big game crucial winter range, elk winter range, and raptor nesting, and seasonal protections (timing limitations) for special status species (Greater sage-grouse and mountain plover) to the O&M activities for developed projects if the activities would be detrimental to wildlife. DRMP/DEIS at 818. This includes activities like hydraulic fracturing, other oil and gas operations resulting in vehicular access and associated wildlife disturbances, powerline reconstruction, range improvement and road maintenance. As recognized by the DEIS, these activities can “stress and disturb wildlife during the sensitive winter and nesting periods due to the time it takes to complete the work, the level of noise generated, and the presence of people and equipment. It is expected that project O&M activities would result in both short-term adverse impacts related to animal displacement and long-term adverse impacts if the level of activity results in area avoidance or loss of nests or young.” DRMP/DEIS at 818. If Record #4096 for Alternative D, as discussed above, does not currently apply to *all* the species listed here and for *all* the example activities, we request that the record be amended to include them to further the conservation benefits.

Protective Stipulations: 0.25 Mile Buffer in Non-Core

The DEIS notes that grouse populations in areas of extensive energy development, including fields near Lysite, Moneta, and below Beaver Rim in the Wind River Basin, have not seen the same degrees of growth as other parts of the Lander field office. DRMP/DEIS at 370. Furthermore, the DEIS recognizes that the 0.25 protective buffer does not provide adequate protection for nesting Greater sage-grouse. DRMP/DEIS at 370. Therefore, we were shocked to learn that this Alternative continues to propose the use of a 0.25 mile no surface occupancy buffer around Greater sage-grouse leks in non-core areas.

While we recognize that the goal in non-core areas is to sustain lek persistence over the long term, with sufficient proportions of sage-grouse populations to maintain connectivity and movements, the 0.25 mile buffer is an inadequate protective measure to maintain lek activity (Holloran 2005, Walker et al. 2007). Especially in an area that contains such large numbers of grouse, we strongly encourage use of at least a 0.6 mile buffer in non-core areas. We request that this stipulation be applied within the DDA as well. The benefits of this more conservative approach can be far-reaching. The DEIS noted that expansion of the Greater sage-grouse buffer to 0.6 miles under Alternative B would result in moderate to major beneficial impacts to riparian-wetland areas because there would be no degradation of riparian-wetland resources from surface disturbance. DRMP/DEIS at 766.

Protective Seasonal Stipulations

Record #4095, for Alternative D, prohibits surface-disturbing and/or disruptive activities from March 1 to July 15. This change from March 15 is beneficial to sage-grouse.

Record #4096, for Alternative D, prohibits disruptive activities between 6 p.m. and 8 a.m. from March 1 to May 15. It is our understanding that the purpose is to protect nesting females and early brood rearing, both of which are critical periods for sage-grouse. However, most hens are still sitting on nests on May 15, which is the last day of recommended protections from disruptive activities. In fact, peak hatch generally occurs in early June and is followed by early brood rearing, which also occurs near nesting habitat. Therefore, seasonal protections should be extended until July 15 to be meaningful and maintain healthy future populations.

Both are also beneficial in that they limit surface disturbance during a time that is ideal for the introduction of invasive species in soils that are wet in the spring. This is especially important since the areas in question are near leks, to which sage-grouse show incredible fidelity.

Soils & Reclamation

We are concerned that soil-disturbing activities are allowed in areas with low reclamation potential (LRP), on a project-by-project basis, in Alternative D. We request more information as to the distribution of these LRP areas. Their location in relation to critical wildlife habitat (especially sage-grouse) and the extensiveness of these areas will influence whether the more conservative Alternative B approach is more appropriate. However, recognition must be made by the BLM that reclaiming or recovering sagebrush habitats is extremely challenging.

Efforts should be directed towards improving our ability to effectively reclaim degraded habitat, which requires gathering site-specific baseline (pre-treatment) data to adequately evaluate success. Reclamation should be mandatory subject to strict

monitoring and enforcement. Managers must recognize that methods for achieving success vary by region and are site-specific. Monitoring results should be maintained in a single database to improve our understanding and enhance effectiveness. In addition, a process should be established to identify and address failed reclamation projects. Expertise from the University of Wyoming should be accessed to improve short-, medium- and long-term results. Successful reclamation of surface disturbance is necessary to establish connectivity within previously fragmented habitats and to achieve and maintain ecosystem function. DRMP/DEIS at 864. Failed reclamation can have far-reaching consequences and is unacceptable.

Invasive Species

Because of the aggressive nature of invasive species, such as cheatgrass, we do not support the low flexibility for treatment of invasive species proposed in Alternative B. Managers should be permitted to use chemical treatments in extreme conditions, as noted for Alternative D, understanding that prevention is the most effective approach. The value of avoiding unnecessary soil disturbances and implementing aggressive reclamation where needed cannot be emphasized enough. The use of chemical treatments should be minimally used and only after careful and thorough consideration of potential impacts to existing resources (plant, wildlife, water sources, etc). For example, the DEIS notes that broad-spectrum insecticides should not be used in grouse brood-rearing areas because of the adverse impacts to non-targeted insects that are critical to young grouse. DRMP/DEIS at 865.

ACECs

Alternative D would incorporate the old South Pass Historic Mining Area ACEC and additional nearby lands into a new ACEC, South Pass Historical Landscape ACEC, for protection from potentially adverse mining impacts. While this ACEC would be managed for the protection and recreational uses of the historic resources within the broad South Pass area, we anticipate there to be benefits to wildlife and two IBAs which overlap this ACEC – Sweetwater River and the Red Desert. Furthermore, sage-grouse management protections through overlapping core area will also be beneficial.

Instead of the large sage-grouse ACEC (Government Draw/Upper Sweetwater Sage-Grouse) proposed in Alternative B, the Government Draw/Upper Sweetwater Sage-Grouse Reference and Education Area in Alternative D would prohibit or severely limit surface disturbance. BLM should designate the Alternative D ACEC and the accompanying smaller ACEC, the Twin Creek ACEC.

Eagles, Hawks, and Raptors

Alternative D proposes prohibiting surface-disturbing activities within 1 mile of Bald Eagle nests, ¾ mile of all active raptor nests, and 1 mile for Ferruginous Hawk nests.

While we support the distance listed for Bald Eagles and Ferruginous Hawks, we recommend changes to the remaining listing. Raptor migration counts and Christmas Bird Counts have indicated a decline in Golden Eagle populations in western North America since the 1980s, especially in recent decades (Farmer et al. 2007). Golden Eagle populations are being closely examined by USFWS not only because their populations are unknown but also because of their sensitivity to disturbance. Especially in light of USFWS currently authorizing take permits only under “no net loss” requirements, surface-disturbing activities should be prohibited within 1 mile of Golden Eagle nests. This 1 mile distance should also be applied to active raptor nests.

Furthermore, we recommend not limiting stipulations to active nests because inactive nest still identify areas containing quality combinations of nesting and foraging habitats that should be protected for use by future nesting raptors.

III. CONTEXT OF THE LANDER RMP

The attached Holloran Expert Comments generally support and underline the analysis and recommendations set forth above. BLM is aware that the fate of the Greater sage-grouse, obligate species, and the sagebrush ecosystem hang in the balance of ongoing planning efforts by BLM and other federal, state, public, NGO and private stakeholders. Halloran emphasizes the importance of sage-grouse populations and habitat within the Lander FO as well as adjacent populations and habitat, in the context of threats stemming from energy development and other impacts. She articulates the need for conservation measures to protect the IBAs identified in these comments.

Regarding the potential for direct, indirect and cumulative impacts to habitat and populations, BLM must strive to fully consider all current and reasonably foreseeable impacts. Landscape-scale planning across jurisdictional and other boundaries will be needed to achieve recovery goals. BLM's analysis should be informed by the recent federal court ruling regarding BLM's Pinedale RMP and the Greater sage-grouse. Western Watersheds Project v. Salazar, Case No. 4:08-CV-516-BLW, 2012 WL 32714 (D. Idaho 2011). This decision remanded the Pinedale RMP for violations of NEPA and FLPMA regarding analysis of energy development and other activities. The decision is a wake-up call that past management measures have failed to stem negative trends for the sage-grouse and its habitat, and the need for strong mandatory policies based on the best available science. The Lander RMP offers the opportunity to turn the tide and get it right, and we look forward to working with BLM on the path to recovery.

Decisions made between now and the release of the Record of Decision approving the final RMP and FEIS are of great importance, as are decisions made before final range-wide policies are finalized. BLM should strive for maximum conservation in the short-term by following the precautionary principle. When in doubt, it should err on the side of protecting habitat and populations that might play a role in long-term recovery to increase the prospects for success. This applies especially to not offering new fluid mineral leases or other energy development approvals in sage-grouse habitat. Short-term decisions should be informed by Instruction Memorandum No. 2012-043, Greater Sage-Grouse Interim Management Policies and Procedures. As Halloran's Expert Comments state, both the USFWS 12-month Findings and the National Technical Team's recommendations should guide BLM's science-based commitment to habitat conservation.

Finally, to inform interim and long-term management decisions, we are attaching a copy of an August 21, 2011 letter to Secretary Salazar regarding the conservation community's interest in range-wide conservation of the Greater sage-grouse. The letter advances constructive, specific recommendations in light of the "urgent need to develop and implement substantive conservation measures between now and 2015, when the U.S. Fish and Wildlife Service (USFWS) will reconsider the status of the bird." Forthcoming scoping comments on BLM range-wide sage-grouse planning efforts will also be relevant to the Lander RMP, and we will share a copy of such comments when they are submitted.

Conclusion

Audubon and WRA appreciate the opportunity to comment on the DRMP/DEIS and look forward to working constructively with BLM and other stakeholders to conserve the vast biological resources in the Lander FO at this crucial point in time and over the coming decades.

Sincerely,



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Attachments to WRA & Audubon Comments:

Expert Comments of Alison Holloran, Director of Science – Audubon Rocky Mountain Region

August 27, 2011 letter to Interior Secretary Ken Salazar, re: Conservation community's interest in range-wide conservation of Greater sage-grouse

AUDUBON WYOMING * NEVADA WILDERNESS PROJECT
THE WILDERNESS SOCIETY * WYOMING OUTDOOR COUNCIL
NATIONAL WILDLIFE FEDERATION * OREGON NATURAL DESERT ASSOCIATION
THE WILD UTAH PROJECT * AUDUBON SOCIETY OF PORTLAND
NATIONAL AUDUBON SOCIETY * AUDUBON CALIFORNIA * AUDUBON COLORADO
SPOKANE AUDUBON SOCIETY * WESTERN RESOURCE ADVOCATES
ROCKY MOUNTAIN WILD * MONTANA AUDUBON * AUDUBON SOCIETY OF NEVADA
IDAHO CONSERVATION LEAGUE * COLORADO ENVIRONMENTAL COALITION

August 27, 2011

Secretary Ken Salazar
 United States Secretary of the Interior
 Department of the Interior
 1849 C Street, N.W.
 Washington DC 20240

Via U.S. Postal and email (exsec@ios.doi.gov)

Re: Conservation community's interest in range-wide conservation of Greater Sage-Grouse

Dear Secretary Salazar,

We are a consortium of conservation organizations that is interested in establishing effective, proactive management actions, long-term habitat protections and funding mechanisms that will bolster sage-grouse populations and eliminate the need to federally list this iconic species. On behalf of our organizations and our concerned members across the region, we appreciate Interior's recent efforts to coordinate resources and develop strategies for sage-grouse conservation. Two things are clear: 1) past efforts have failed to sufficiently conserve sage-grouse and their habitat, resulting in the 2010 finding that listing the Greater Sage-Grouse is "warranted but precluded"; and 2) there is an urgent need to develop and implement substantive conservation measures between now and 2015, when the U.S. Fish and Wildlife Service (USFWS) will reconsider the status of the bird.

We are encouraged by the Bureau of Land Management's (BLM) announcement of a regional strategy that focuses on the conservation of sage-grouse and the protection of their habitat. This strategy, which includes both short-term and long-term approaches, must result in the **consistent application of adequate regulatory mechanisms that are scientifically defensible**. Given the expanse of sage-grouse habitat managed by the BLM and the short timeline proposed for this regional planning effort, inconsistent application of regulatory protections within states and across the sage-grouse's range could be detrimental to sage-grouse conservation efforts.

As our nation's energy demands fuel the continued push for development on western lands, we are concerned that BLM field offices will continue to make decisions that could further degrade remaining sage-grouse crucial habitat. We ask that the agency follow the precautionary principle of **developing conservative interim guidelines** for all field offices that clearly specify actions that are appropriate and inappropriate in sage-grouse habitat. Furthermore, **decisions that could**

push the species closer to a full listing should be avoided. Pending final decisions on RMP amendments and the regional planning process, BLM *must at least preserve or improve the status quo of habitat conditions for sage-grouse* -- to avoid dooming conservation efforts from the start.

High priority areas for conservation and restoration **should be designated by BLM's planning process across the range as core areas.** Management actions within these core areas should focus on maintaining and enhancing grouse habitats and viable populations. **However, populations that are small and isolated** (such as along the periphery of their range or on seasonal habitats) **must also be included in the planning process and given special management considerations.**

We applaud recognition by the BLM of the urgency for rapid and meaningful, landscape scale sage-grouse conservation actions. However, effectiveness and public support should not be undermined by the urgent need for such action. The composition of the planning teams needs to be carefully considered. The National Technical team should be composed of sage-grouse and sagebrush experts, including state game and fish agency personnel, who provide recommendations based on peer-reviewed science. **The Policy, Regional, and State teams should include broad stakeholder involvement, including representatives from the conservation community.** Careful consideration of team compositions and processes used will be essential for ensuring credibility and public support. As this planning effort moves forward at a rapid pace, communication with the public will be critical. Thus, **elements of a successful strategy should include** 1) sustained outreach to stakeholders (including but not limited to public comment under the National Environmental Policy Act); 2) the adoption and implementation of new policies; 3) rigorous monitoring and adaptive management; and 4) enforcement. For specifics, we feel at a minimum the Department should undertake the attached guidelines (*see Appendix*) to ensure that the Greater Sage-grouse is not federally listed and adequate guidance for managers is in place.

Finally, we hope that as the BLM proceeds in its regional conservation efforts, the **process will be open and transparent.** We recognize that because of the large range occupied by sage-grouse, all stakeholders have an interest in seeing this effort be successful. Success will depend on BLM-wide and interagency commitments, using MOUs or other appropriate means, to ensure requisite conservation measures are adopted as federal policy. Our organizations look forward to remaining engaged and providing assistance as the BLM develops its regional sage-grouse conservation strategy.

Sincerely,



Brian Rutledge
Executive Director/ VP Intermountain West
Audubon Wyoming

On behalf of:

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Conservation Director
Nevada Wilderness Project

Mike Chiropolos
Lands Program Director
Western Resource Advocates

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Cc:

U.S. Department of Interior

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David Hayes, DOI Deputy Secretary
Michael Bean, DOI Counselor to Assistant Secretary for Fish and Wildlife and Parks
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U.S. Fish & Wildlife Service *(continued)*

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Alexandra Pitts, USFWS Deputy Regional Director Pacific Southwest Region (Region 8)
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APPENDIX

Incorporating science-based conservation measures is a critical *first* step in conserving the necessary habitat to preclude the need to list the Greater Sage-Grouse. Goals should include *adequate minimum standards across the region and landscape-scale management strategies*, which states or field offices should seek to exceed where conditions are appropriate. The following guidelines concerning management of sagebrush habitat and sage-grouse should be considered the *minimum* needed to ensure adequate regulatory mechanisms are in place -- one of the concerns specified in the USFWS' March 2010 Finding.

- The interim guidelines, programmatic EISs, and RMP amendments should ensure that each BLM field office manages sagebrush and sage-grouse in a **consistent manner**.
- The National **Technical Team**, composed of sage-grouse and sagebrush experts, **should consider existing state and federal resources and significantly improve upon these by incorporating the latest scientific information**. Understanding the failures of these well-intentioned efforts will help the BLM develop its new regional strategy, which should include range-wide prescriptions, restrictions, and stipulations developed by the national technical committee.
- **State game and fish agency personnel provide extensive local knowledge**. We encourage coordination with state agencies, which may provide the best information on local sage-grouse populations and help ensure management consistency within each state. As species managers, they should be full partners in the regional planning process and implementation.
- As planning moves forward, **sufficient funding must be secured not only to meet the immediate needs of this range-wide strategy but also to ensure long-term success**. A consistent and long-term commitment must be made to ensure species maintenance and recovery. Efforts should be focused not only on core populations, which will require monitoring to determine successes and address failures, but also on smaller critical populations located in the periphery of the range.
- **Core areas** delineate high priority areas for sage-grouse conservation and restoration and thus **should be** designated by **BLM's planning process**. The Sage-Grouse Breeding Density Map, spearheaded by the BLM, is the first cooperative federal-state-private effort that looks at sage-grouse densities in a consistent manner across the West. This tool provides a peer-reviewed, scientifically defensible foundation for important range-wide focal areas having high densities of Greater Sage-Grouse, thus allowing for the establishment of priority conservation areas range-wide.
 - **Development should be avoided in core areas, unless it can be demonstrated that the activity will not cause declines in sage-grouse populations**. Stipulations, based on best available science, should be applied as a means to minimize impacts.
 - BLM should **conduct an inventory of each core area – documenting vegetation, land ownership, existing disturbances, etc.** This knowledge is critical for establishing baseline data and enabling effective review of proposed actions.
 - Particular sage-grouse core areas should be designated as **Areas of Critical Environmental Concern** (ACEC – 43 U.S.C. 1702). This would allow for special management to protect and prevent irreparable damage to important wildlife habitat. This type of progressive and sound management would protect high quality sage-grouse habitat, sage-grouse populations, and the several hundred other species that depend on sagebrush habitats.
- In addition to core areas, managers should concentrate on protecting **important seasonal habitat** for sage-grouse and recognize the value of **connectivity** to maintaining genetic viability. Additional effort is needed to identify these areas and to collect baseline data

(both on the species and the existing land use pressures). With compromised populations or during extreme weather conditions, these habitats become even more critical.

- **Development activities should generally be directed to already-disturbed areas (avoiding intact habitat)**, in areas with the fewest environmental impacts, and be subject to science-based project design and stipulations that minimize impacts to sage-grouse. Energy development activities should be located as close to target human population centers as possible.
- **Energy Development**
 - **Identify areas not available for leasing or exclusion areas** (oil and gas leasing, wind energy development, solar, geothermal, transmission) to maintain quality habitat for sage-grouse. All alternatives except no-action should propose designating enough lands in such areas to ensure conservation of the species. Excluding priority sage-grouse habitat from energy development projects will allow land managers to take meaningful conservation actions. As recognized by IM 2010-071, the Mineral Leasing Act vests absolute discretion in the Secretary over mineral leasing decisions. The same legal authority extends to renewable energy and transmission projects
 - **Refrain from leasing inside core areas unless those leases contain appropriate, science-based stipulations that have been demonstrated to adequately protect sage-grouse populations and habitat from the impacts of development.** We are concerned that the BLM's reliance on conditions of approval (COA) as a surrogate for appropriate lease stipulations could lead to legal challenges, particularly in instances where such COAs are applied on a broad scale. We believe a more prudent approach is to defer all leasing within core habitat **until the RMP amendments incorporating new science-based stipulations have been completed.**
 - **Consider lease deferral for small parcels of known important sage-grouse habitat**, such as wintering habitat, breeding grounds or leks, nesting, and brood-rearing habitat. These areas can be extremely important to specific populations of sage-grouse during critical times of the year, especially if they are experiencing population pressures in surrounding areas.
 - Sagebrush landscapes, upon which sage-grouse depend, consist of few naturally occurring vertical structures. Therefore, **vertical structures** (such as *transmission lines, wind turbines, meteorological towers, and fences*) are **problematic for sage-grouse and their use should be avoided in important habitats.** Impacts to sage-grouse include *direct mortality* from collisions and *indirect impacts*, such as avoidance of an area, habitat disruption/degradation/fragmentation, reduced nesting/breeding density, habitat loss (abandonment, unsuitability), mortality from avian and synanthropic predators (i.e., predators that live near and benefit from an association with humans), and behavioral effects. These impacts can be avoided or reduced, however, with proper siting, operation and mitigation. Important habitat, such as core areas and critical seasonal habitats, should be avoided until research on the impact of vertical structures is completed and means for effectively minimizing these impacts are identified.
 - Avoid siting new temporary meteorological (met) towers near leks and other important sage-grouse habitat. Where wind turbines or met towers are considered appropriate, guy wires should be marked with recommended bird deterrent devices.
 - **Route transmission projects** to avoid priority sage-grouse habitats.
 - **Limit the density of cumulative disturbances** on the landscape to a scientifically-justifiable threshold of impacts, especially in all nesting, early brood rearing and winter habitats.
 - **Identify areas containing large, contiguous unleased Federal minerals.** These areas, especially in important sage-grouse habitat, should remain unleased and

undeveloped. Criteria for determining size of area needed for sustaining sage-grouse populations should be based on best available science and take into account current site-specific conditions (e.g. size and movement patterns of existing sage-grouse populations, surrounding landscape pressures) and recommendations of qualified biologists.

- **Close important habitat to future leasing when existing leases in sage-grouse habitat expire.**
- Base management on defensible and current science where leasing is permitted. **Effective best management practices (BMPs) and new stipulations**, based on best available science, need to be included in the amended RMPs and applied uniformly to all ground-disturbing activities across the region. Existing stipulations that have no scientific merit, such as providing only a 0.25 mile buffer around leks, should not be used. Enforceable BMPs should be applied at the initiation of projects, at the exploratory/planning stage, and throughout production.
- Where leasing is permitted, implement **site-specific conditions of approval**, that include location, design and timing of operations to avoid, minimize and mitigate impacts at all phases of development.
- **Grazing**
 - Facilitate and promote **voluntary permit retirement range-wide** and within individual RMP amendments for *sage-grouse habitat areas identified as incompatible with grazing*.
 - Where livestock-related activities occur, develop appropriate standards to maintain a healthy rangeland. **Grazing management practices and/or facilities** (such as fences and water development) should occur in a manner that maintains or promotes the physical and biological conditions necessary to sustain healthy sage-grouse populations. Grass banking and herd reductions should be considered in certain situations. Monitoring should allow for identification of disruption to sage-grouse populations and impacts to native vegetation and soil stability. Adaptive management should be addressed early and used to avoid negative impacts to sage-grouse populations.
- **Fences**
 - Carefully evaluate new fences for sage-grouse collision risks and site fences in locations away from leks, nesting areas, ridge tops etc.
 - Require an equal amount of fence removal if new fence is approved within sage-grouse habitat.
 - Identify priority areas for flagging or marking existing fences to avoid collisions and recommend the use of sage-grouse fence diverters in these areas.
- **Climate Change**
 - The increase of severe droughts throughout the West, associated with climate change, will exacerbate fire frequency and intensity in the sagebrush ecosystem. Managers and researchers also predict that cheatgrass and other harmful invasive species will increase, further degrading the sagebrush steppe. These threats, acting independently and synergistically, are predicted to cause a 30-80% reduction of sagebrush habitat, depending on the extent of green-house gas emissions. A warming climate will make it more challenging to restore degraded habitat and plan for habitat connectivity amongst grouse populations. Therefore, on-the-ground implications of a warming climate must be incorporated in all of the strategies used to secure a sustainable future for this species.

- **West Nile virus**
 - West Nile Virus can have deleterious impacts on small and isolated populations of sage-grouse. **Limit man-made water developments** in mosquito breeding areas in sage-grouse habitat. Where this cannot be avoided, design water developments to inhibit growth of mosquitoes by reducing shallow stagnant water, sedimentation and vegetation growth. Focus on controlling mosquito populations in close proximity to sage-grouse leks rather than endorsing a broad use of adulticides.
- **Invasive species**
 - **Invasive species** are problematic for both native species and domestic livestock. The biggest threat to the sagebrush-steppe community, in addition to the slow regeneration of sagebrush, is the invasion of **cheatgrass** (*Bromus tectorum*). Cheatgrass has the potential to completely alter the ecosystem it invades, increase fire frequency, and prevent the establishment of sagebrush and native grass and forb understory. Activities that introduce and spread invasive species must be addressed and mitigated. Additionally, projects that use other non-natives such as crested wheatgrass to control faster-spreading species such as cheatgrass and medusahead, must be conducted very carefully and have long-term plans in place for eventual sagebrush and native grass restoration.
- **Fire**
 - The presence of fire on the landscape has a large impact on the probability of lek abandonment (Knick and Hanser 2009). Managers who use fire as a treatment for juniper control, invasive species and overall ecosystem health will need to have standards in place to determine where and when different types of fire management, such as broadcast burning, jackpot burning, spot treatments, are and are not appropriate in sage grouse habitat.
- **Project Analysis**
 - For the purpose of **effects analysis for a proposed action**, a sage-grouse habitat evaluation shall extend, at minimum, *out to 4 miles* from relatively small individual proposed actions and shall extend, at minimum, out 11 miles from the project boundary for large-scale proposed actions. This reflects the most current research that shows impacts to Greater Sage-Grouse leks from energy development are discernable out to a minimum of four miles (Holloran 2005, Walker et al. 2007, Walker 2008) and that 11 miles encompasses a significant portion of the seasonal habitats that will be affected. However, the scale of annual habitat needed is likely to be site dependent. Given that these data were based on research conducted in Wyoming, the area may need to be adjusted for site-specific conditions.
 - BLM should have a **standard review process for parcels proposed for development** (including fossil fuel, renewable, transmission, livestock management, water development), thus providing upfront clarity and certainty for all stakeholders. The process should incorporate: 1) participation by qualified sage-grouse biologists; 2) site-specific analysis including field visits to inform decisions; 3) projects impacting core areas should be postponed until the necessary stipulations can be added to the RMP governing the area.
 - **Comprehensive cumulative impact analysis will be key to sage-grouse conservation in the face of multiple threats.** Management decisions should be based on an evaluation of cumulative impacts *over a landscape*. Not only does this refer to the many types of energy development but also to other land use pressures, including efforts to manage other species/suppress undesirables. An example includes spraying diflubenzuron, carbaryl, and possibly malathion on sage-grouse habitat for grasshopper/mormon cricket suppression. This particular action leads to

wide scale reduction in insect numbers, an important food source for juvenile sage-grouse, thus leading to negative population level impacts.

- **Habitat Improvement, Reclamation and Restoration**
 - Sage-grouse populations are dependent upon healthy sagebrush. So called “**habitat improvement**” projects (e.g. mechanical sagebrush treatments) can be detrimental to sagebrush obligate species, such as sage-grouse. Scientifically defensible research is needed to **determine which activities are beneficial**. This information should be *maintained in a single database*.
 - Reclaiming or recovering sagebrush habitats is extremely challenging. Efforts should be directed towards **improving our ability to effectively reclaim degraded habitat**, which requires gathering site-specific baseline (pre-treatment) data to adequately evaluate success. **Reclamation should be mandatory** and managers must recognize that **methods for achieving success vary by region and are site-specific**. Reclamation efforts should be *monitored* and *results maintained in a single database* to improve our understanding and effectiveness. In addition, a process should be established to identify and address failed reclamation projects.
 - As the large landscapes required to sustain grouse populations become further fragmented by the **increasing frequency of wildfires, focus on restoration will become more important**. Sage-grouse have evolved in habitat that has extremely infrequent wildfires, enabling them to benefit from mature sagebrush stands. Habitat fragmentation and alteration due to fire may influence distribution (including lek abandonment) or migratory patterns. We suggest that a funded program be dedicated to identifying sagebrush landscapes at risk and that field offices be prepared with a response plan to avoid the conversion of compromised landscapes to invasive species following fires.
- **Mitigation**
 - **Mitigation**, to be meaningful in sage-grouse habitat, *must* create a *net increase* in sage-grouse habitat and be a *net benefit* to the local population.
- **Federal Ownership**
 - BLM should set forth a policy to retain important (core and non-core) **sage-grouse habitat in federal ownership**.
- **Terminology**
 - We urge BLM to develop a **formal set of definitions** for frequently used language to avoid inconsistent use of terminology, such as “suitable habitat” and “functional habitat.” A glossary of terms, to be used throughout the interim guidelines and planning process, would help to ensure a uniform understanding of expected outcomes. Furthermore, we suggest BLM establish a general policy that if a parcel is located within a designated core area, it is presumed to contain (or be within) suitable sage-grouse habitat.
- **Monitoring and Adaptive Management**
 - Implementation of an effective monitoring and adaptive management process with performance based standards for each RMP is critical to the success of this effort. In addition to developing management prescriptions for sage-grouse, the technical committee should recommend triggers for adaptive management throughout the range and clearly specify the consequences that will result if triggers are reached. Triggers could include sage-grouse population target ranges, target levels of survival and recruitment in particular areas, measures of the cumulative level of surface disturbance and well density in core areas etc. Consequences that would result if triggers are reached would include increases in protective measures. Monitoring should be required and adequately funded.