



Miles City Field Office Draft Resource Management Plan and Environmental Impact Statement	
Sage-Grouse Conservation Issue	Miles City FO Draft RMP/EIS (Preferred Alternative E)
Priority Sage-Grouse Habitat	
<p>Greater Sage-grouse are a landscape species (Connelly et al. 2011a). Migratory populations have large annual ranges that can encompass >2,700 km² (1,042 mi²/667,184 ac) (Knick and Connelly 2011, <i>citing</i> Dalke et al. 1963; Schroeder et al. 1999; Leonard et al. 2000) (the species may use up to 2,500 mi² per population (Rich and Altman 2001)). Large-bodied birds are generally more strongly affected by habitat loss and fragmentation (Winter et al. 2006). Although conclusive data on minimum patch size is unavailable (Connelly et al. 2011a), conserving large expanses of sagebrush steppe is the highest priority to conserve sage-grouse (Aldridge et al. 2008; Connelly et al. 2011b; <i>see</i> Manier et al. 2013: 25-26).</p> <p>Sage-grouse conservation plans should designate and manage large areas of priority sage-grouse habitat to conserve the species. Priority habitat is generally defined as “having the highest conservation value to maintaining sustainable Greater Sage-grouse populations” (BLM Memo 2010-071) and should include all active sage-grouse leks, and brood-rearing, transitional and winter habitats. “Priority habitat will be areas of high quality habitat supporting important sage-grouse populations, including those populations that are vulnerable to localized extirpation but necessary to maintain range-wide connectivity and genetic diversity” (BLM Memo 2010-071).</p>	<p>The preferred alternative would designate 792,000 acres of BLM surface estate and 1,403,000 oil/gas acres as protection priority habitat (2-41 – 2-42, Table 2-1).¹ The priority habitat areas do not include all of the MFWP core area habitat. Alternative B would designate much larger priority habitat areas: 1,067,000 acres surface estate, 2,077,000 oil/gas acres (2-41 – 2-42).</p>
<p>Prohibit new surface disturbance in priority sage-grouse habitat. Where new disturbance cannot be avoided (e.g., due to valid existing rights), (A) minimize impacts by limiting preexisting and permitted disturbance to one instance per section of sage-grouse habitat regardless of ownership, (B) with less than three percent surface disturbance per section or priority area (SGNTT 2011: 8; Knick et al. 2013). Disturbances include but are not limited to highways, roads, transmission lines, substations, wind turbines, oil and gas wells, heavily grazed areas, range developments, pipelines, landfills, mines, and vegetation treatments that reduce sagebrush cover. (C) Where possible, buffer active sage-grouse leks against surface disturbance or occupancy by 4 miles² (SGNTT 2011: 23).</p>	<p>New surface disturbance could be permitted in protection priority areas under the preferred alternative. <u>Unleased fluid minerals</u>: oil and gas leasing (2-52, Action 37; 2-5) and geothermal leasing (2-48, Action 3) would be offered; best management practices (BMP), if applied, might reduce threats to sage-grouse. New <u>rights-of-way</u> would generally be “avoided” in priority habitat areas (2-122, Action 9; Map 40). <u>Travel Management</u>: motorized travel limited to existing roads and trails, until travel planning either designates or closes routes (2-48, Action 7) (although new road construction could be permitted, 2-48, Action 10). <u>Renewable energy</u> rights-of-way would be “avoided” in priority habitat (2-117, Action 6; Map 34). <u>Locatable mineral</u> entry would continue to be allowed on lands open to mineral location (2-52, Action 37). <u>Coal</u> mining would be acceptable for further lease consideration in the planning area (2-81). (A) Some development may be limited to one instance per section, depending on which BMPs are applied at the project level, and whether they are</p>

¹ It is unclear whether the 792,000 acres of protection priority habitat areas for sage-grouse are included in the 1,403,000 “oil and gas acres” under Alternative E (2-41 – 2-42, Table 2-1). It is also unclear how the totals for priority habitat areas and general habitat areas under Alternative E in Table 2-1 equate to the totals in Table 4-88 (4-273) and Table 4-90 (2-74) (e.g., 830,000 surface acres priority habitat, 1,600,000 surface acres general habitat).

² Smaller sage-grouse lek buffers may be justified where research demonstrates that most sage-grouse nests (i.e., > 90 percent) would be protected by the smaller buffer (see, e.g., Conservation Plan for Greater Sage-Grouse in Utah, unpublished: 9), although the impacts from continued and future land use (pursuant to valid existing rights) in nesting habitat would still advise adopting larger 4-mile lek buffers to conserve the species.

	applied. (B) The preferred alternative does not set caps on disturbance in priority habitat; varying disturbance caps are included in BMPs; a three percent disturbance cap may be applied for some development and land uses, depending on which BMPs are applied at the project level, and whether they are applied. (C) A four mile buffer may be applied to some development in priority habitat, depending on which BMPs are applied at the project level, and whether they are applied.
Identify ³ and protect sage-grouse winter habitat (Braun et al. 2005, <i>citing</i> Connelly et al. 2000 and others; Moynahan et al. 2007).	The preferred alternative does not identify or specially protect sage-grouse winter habitat; ⁴ stipulations to protect winter habitat may be required as conditions of approval for fluid minerals development, <i>if reasonable</i> (2-50, Action 28); other alternatives would require power lines to be buried in winter habitat (2-47, Action 7); BMPs may protect winter habitat, if applied at the project level.
Manage or restore sage-grouse habitat so that at least 70 percent of the land cover is sagebrush sufficient to meet sage-grouse needs ⁵ (SGNTT 2011: 7; Knick et al. 2013 ⁶).	Manage or restore protection priority areas so that at least 70 percent of the land cover provides adequate sagebrush habitat to meet sage-grouse needs (2-47, Objective 5).
<i>Restoration Sage-Grouse Habitat</i>	
Designate restoration sage-grouse habitat to focus habitat restoration efforts to extend sage-grouse habitat and mitigate for future loss of priority habitat (BLM Memo MT-2010-017). Restoration habitat may be degraded or fragmented habitat that is currently unoccupied by sage-grouse, but might be useful to the species if restored to its potential natural community. Restoration habitat should be identified in management planning based on its importance to sage-grouse and the likelihood of successfully restoring sagebrush communities (Meinke et al. 2009; Wisdom et al. 2005a). Effective restoration requires a regional approach (e.g., sub/regional EISs) that identifies appropriate options across the landscape (Pyke 2011). Passive restoration should be prioritized over active restoration methods in these areas.	The preferred alternative would designate 101,300 acres of BLM surface estate, and 128,900 oil/gas acres as restoration areas (2-42 – 2-43, Table 2-1). (These areas were identified by MWFP as sage-grouse core area habitat). The plan would also establish a source population area (8,000 acres BLM surface, 8,000 acres oil/gas) in the Cedar Creek Anticline (2-43, Table 2-1). Fluid minerals development would be allowed with CSU stipulation in restoration areas, and with a NSO stipulation in the source population area (2-55 – 2-56, Action 4). Habitat compensation would not be required (2-58, Action 1).
<i>Specially Designated Sage-Grouse Habitat</i>	
Designate a subset of sage-grouse priority habitat areas as sagebrush reserves (e.g., Areas of Critical Environmental Concern (Bureau of Land Management), Zoological Areas (Forest Service), ⁸ research natural areas (Bureau of Land Management, Forest Service), or national wildlife refuges (Fish and Wildlife Service), etc.) to be specially managed refugia for sage-grouse and other sagebrush-dependent species. ⁹ Sagebrush reserves should encompass centers of sage-grouse abundance on the landscape and protect a sufficiently large proportion of habitat in each planning area to	The BLM administers 2,759,155 acres of surface estate in the Miles City Field Office, including 2,430,000 acres of sage-grouse habitat. The Miles City Field Office analyzed, but declined to designate an ACEC for sage-grouse ranging from 1,067,000 acres (WildEarth Guardians et al.) to 1,300,000 acres (Alternative B).

³ Failure to map sage-grouse winter habitat could be grounds for remanding an RMP/EIS back to BLM to address the omission. WWP v. Salazar, 4:08-CV-516BLW, Slip Op. at 3.

⁴ The preferred alternative would specially manage millions of acres of big game (elk and mule deer) crucial winter habitat (2-30, Action 9).

⁵ While \geq 70 percent of land cover is sagebrush, the remainder of the landscape should be other natural habitats or areas that could be restored to sagebrush steppe.

⁶ Seventy-nine percent of the area within 5 km of active sage-grouse leks was in sagebrush cover.

⁷ *See also* Karl and Sadowski (2005): 15.

⁸ The Sage-Grouse Recovery Alternative referred to specially designated areas on Forest Service lands as “Sagebrush Conservation Areas,” p. 30 (www.sagebrushsea.org/pdf/Sage-Grouse_Recovery_Alternative.pdf).

⁹ More than 350 species of conservation concern occur in sagebrush steppe (Wisdom et al. 2005a: 21 and App. 2).

sustain biological processes, recover species and mitigate for the systematic effects of climate change, invasion by nonnative plants and unnatural fire. ¹⁰ Sagebrush reserves should offer additional conservation benefits for sage-grouse and other sagebrush-dependent species over priority habitat. They may be withdrawn from locatable and leasable minerals development (43 U.S.C. § 1714); closed to new surface disturbance; and prioritized for grazing permit retirement and removal of infrastructure (unnecessary oil and gas equipment, roads, range developments, fencing, etc.).			
Fluid Minerals Development (unleased)			
	NTT Report Recommendations	Sage-Grouse Ecology	Miles City FO Draft RMP/EIS (Preferred Alternative E)
Lek Buffers	No surface occupancy throughout priority habitat; exceptions may be considered if a 4-mile no surface occupancy buffer is applied, and if an entire lease is within priority habitat, then a limitation of one well-pad per section might be applied.	Development negatively affects sage-grouse 1.9 miles from occupied leks (Holloran 2005). Most sage-grouse hens nest within 4 miles of leks (Moynahan 2004; Holloran and Anderson 2005). Effects of drilling on sage-grouse were noticeable out to 12.4 miles from leks (Taylor et al. 2012; Taylor et al. 2013).	A 4-mile buffer may be applied in protection priority habitat, depending on which BMPs are applied at the project level, and whether they are applied.
Density	Limit disturbance to 1 well per 640 acres.	Maximum development density of 1 well per 640 acres to 1 well per 699 acres (Holloran 2005; Doherty et al. 2010a; Doherty 2008).	Development may be limited to 1 well per 640 acres, depending on which BMPs are applied at the project level, and whether they are applied.
Disturbance	Surface disturbance may not exceed 3 percent per 640 acres or project area (exceptions may be considered in limited circumstances).	Ninety-nine percent of active sage-grouse leks are in landscapes with less than 3 percent disturbance within 5 km of the lek (Knick et al. 2013).	Surface disturbance may be limited to 3 percent per section, depending on which BMPs are applied at the project level, and whether they are applied.
Winter Habitat	No surface occupancy in winter habitat during any time of the year; exceptions may be considered if a 4-mile no surface occupancy buffer is applied, and if an entire lease is within priority habitat, then a limitation of one well site per section might be applied.	No surface disturbance in or adjacent to winter habitat any time of year (Walker 2008).	BMPs may protect winter habitat, if they are applied at the project level.
Livestock Grazing			
For range management, sage-grouse habitat objectives should be based on, in priority order, potential natural community within the applicable Ecological Site Description, Connelly et al. (2000: 977, Table 3), or other objectives that have been demonstrated to be associated with increasing sage-grouse populations. Utilization levels should not exceed 25 percent annually on uplands, meadows, flood plains and riparian habitat (Holecheck et al. 2010). Habitat objectives should be applied to all sage-grouse habitat areas.		Objectives for grazing management in the DRMP/EIS are not based on potential natural community within the applicable Ecological Site Description or Connelly et al. (2000); none of the BMPs are based on these objectives either. Grazing management in protection priority habitat may be modified where livestock were demonstrated to adversely affect sage-grouse or their habitat. Grazing utilization levels are not prescribed in the DRMP/EIS; utilization level is briefly	

¹⁰ See Sage-Grouse Recovery Alternative for criteria for designating sagebrush reserves, p. 50 (www.sagebrushsea.org/pdf/Sage-Grouse_Recovery_Alternative.pdf).

<p>Management plans should:</p> <ol style="list-style-type: none"> 1. Maintain ≥ 18 cm average grass height in nesting and brood-rearing habitat (Connelly et al. 2000; Braun et al. 2005). 2. Control livestock grazing to avoid contributing to the spread of cheatgrass (<i>Bromus tectorum</i>) (Reisner et al. 2013). 3. Facilitate voluntary grazing permit retirement in sage-grouse priority habitat (<i>see</i> SGNTT 2011: 17). 	<p>mentioned in sage-grouse BMPs (without indicting a specific level). (1) No specific standard for grass height is included in the plan, although BMPs may achieve the objective, if applied. (2) While the DRMP/EIS acknowledges that “excessive grazing” can increase cheatgrass abundance in sagebrush steppe (3-77), it does not proscribe grazing where cheatgrass occurs in sage-grouse habitat. (3) The preferred alternative would retire certain grazing allotments that failed to meet Standards for Rangeland Management and were making no progress to achieve standards within 5 years of the initial determination (2-40, Action 3). Allotments wholly within protection priority habitat would be considered for retirement where the permittee voluntarily relinquished their grazing preference to the agency.</p>
<p>Climate Change Effects</p>	
<p>Account for the effects of climate change in management planning (Secretarial Order 3289, 02-22-2010; CEQ Memo, 02-18-2010 (draft)). Climate change is a recognized threat to sage-grouse (Connelly et al. 2011b: 556, Table 24.2; Blomberg et al. 2012; van Kooten et al. 2007) that is also predicted to have deleterious impacts on sagebrush steppe (Schlaepfer et al. 2012; Neilson et al. 2005). Most climate change simulations predict sagebrush steppe will contract as mean temperatures increase and the frost line shifts northward (Blomberg et al. 2012; Neilson et al. 2005). In the worst case scenario, sagebrush species are simulated to contract to just 20 percent of current distribution (Wisdom et al. 2005b: 206, <i>citing</i> Neilson et al. 2005). The largest remaining areas will be in southern Wyoming and in the gap between the northern and central Rocky Mountains, followed by areas along the northern edge of the Snake River Plateau and small patches in Washington, Oregon and Nevada (<i>see</i> Miller et al. 2011: 181, Fig. 10.19). Sagebrush steppe may also shift northward in response to increased temperatures (Schlaepfer et al. 2012; Shafer et al. 2001).</p> <p>Measures for ameliorating the effects of climate change on species and landscapes include increasing the size and number of protected areas, maintaining and enhancing connectivity between protected areas, and identifying and protecting areas likely to retain suitable climate/habitat conditions in the future (even if not currently occupied by the species of concern). Management should also repulse invasive species, sustain ecosystem processes and functions, and restore degraded habitat to enhance ecosystem resilience to climate change (Chester et al. 2012; NFWPCAS 2012).</p>	<p>The Miles City DRMP/EIS acknowledges that climate change poses a challenge to resource management planning (1-6) and notes that “sensitive species in the planning area, such as sage-grouse, which are already stressed by declining habitat, increased development, and other factors, could experience additional pressures because of climate change” (3-9; 4-166). Climate change is expected to increase the vulnerability of ecosystems to invasive species in the planning area (3-51), alter wildfire regimes (3-87), and otherwise affect ecosystem function. The plan recognizes that management direction is needed to achieve desired future condition of existing species and ecosystems (1-12), yet some management prescriptions that would increase ecosystem resilience, such as requiring habitat compensation to mitigate for activities that degrade sage-grouse habitat, are not required under the preferred alternative (4-41; 2-58, Table 2-1).</p>
<p>Wind Energy Development</p>	
<p>Prohibit wind energy development in priority sage-grouse habitat (Jones 2012; SGNTT 2011: 12). If development is permitted, locate turbines and infrastructure at least four miles from sage-grouse leks (Manville 2004; Jones 2012); do not site wind energy development in or adjacent to sage-grouse wintering areas.</p>	<p>Surface-disturbing activities (including rights-of-way) “avoided” (2-51, Action 37) in sage-grouse priority habitat areas. “Avoidance areas” are areas with sensitive resource values in which rights-of-way would be strongly discouraged (GLO-3). Wind energy development could be sited in priority protection areas in some circumstances (4-332 – 4-333).</p>

<i>Bureau of Land Management Sensitive Species Management</i>	
Greater sage-grouse are a candidate species for listing under the Endangered Species Act (ESA) and a designated Bureau of Land Management “sensitive species” across their range. BLM policy directs that actions authorized, funded or implemented by BLM do not contribute to the need to list a candidate species under the ESA (BLM WO IM 97-118; BLM Manual 6840). “As a federal agency, the BLM is obligated to develop and implement a strategy to avoid having its management activities contribute to the need to list greater sage-grouse under the [Endangered Species Act] (Lander RMP/FEIS: 1282). This includes “[p]rioritizing Bureau sensitive species and their habitats for conservation action based on considerations such as human and financial resource availability, immediacy of threats and relationship to other BLM priority programs and activities (BLM Manual 6840.2(C)(5)).	Sage-grouse populations may continue to decline under the preferred alternative and/or may persist at a “reduced level” (4-176). The smaller protection priority and restoration habitat areas (4-175); foreseeable energy development on all land ownerships (4-175); inadequate energy development prescriptions for general habitat areas (4-175); potential effects of West Nile virus (4-176); existing development in restoration habitat and source population areas (4-176); and development activities in adjacent states are likely to contribute to continued sage-grouse population declines and extirpation.
<i>Sage-Grouse Recovery Alternative</i>	
Conservation organizations submitted the Sage-Grouse Recovery Alternative as a complete alternative to be analyzed and considered in management plans affecting sage-grouse in accordance with the National Environmental Policy Act (42 U.S.C. §§ 4321- 4347). The recovery alternative seeks to maintain and increase sage-grouse abundance and distribution by conserving, enhancing and restoring sagebrush steppe. It is comprehensive, reasonable and feasible to implement, and prescribes scientifically valid conservation measures to provide the best opportunity to conserve and recover sage-grouse.	The DRMP/EIS declined to separately analyze the Sage-Grouse Recovery Alternative, contending that components of the recovery alternative were substantially considered in the range of other alternatives analyzed in the DRMP/EIS. The plan also indicates that sage-grouse best management practices appended to the DRMP/EIS include management prescriptions similar to those in the recovery alternative (2-9).

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