

IV. THREATS AND CONSERVATION EFFORT SUMMARIES

The following is a discussion of BLM programs and conservation efforts that may influence the threats and issues discussed by FWS in the 90-Day Finding and listed in section 4(a) of the ESA. This section provides a discussion of the program status, elements of the program that may generate the threat, and conservation measures that are planned and/or being implemented now and into the future. A comprehensive discussion of the regulatory mechanisms, administrative processes of BLM programs, and conservation measures implemented for sage-grouse conservation is found in Chapters II and III of this report.

Factor A: Present or Threatened Destruction, Modification, or Curtailment of Habitat or Range

FWS Determination. Substantial information is available indicating that previous and ongoing habitat loss, degradation, and fragmentation within the remaining habitats are factors that may threaten the continued existence of the greater sage-grouse.

Synopsis. Specific issues discussed in the 90-day Finding related to the destruction, modification, or curtailment of habitat or range that may be germane to BLM-administered public land include those listed below.

Issue 1. Permanent conversion of sagebrush to agricultural lands.

BLM no longer converts sagebrush communities to agricultural lands; therefore, the Agency does not contribute to this threat to sage-grouse. Prior to FLPMA, BLM was governed by numerous statutes, many of which transferred public lands for conversion to agriculture (from sagebrush). FLPMA repealed those laws and now requires BLM to retain public lands in Federal ownership, with minor exceptions (see Land Tenure section as follows for circumstances under which BLM disposes of public lands and measures to protect sagebrush habitat). Furthermore, before BLM takes any action on public lands, it must, in accordance with FLPMA and other authorities and processes, ensure that sage-grouse and sagebrush habitat is conserved (as discussed in Chapter IV, Factor D).

Lands and Realty

Land Tenure

Program Status. Land tenure decisions identify lands for retention, proposed disposal, or acquisition. Section 102(a)(1) of FLPMA requires that BLM-administered lands be retained in Federal ownership unless BLM determines through the land use planning process that disposal of a particular parcel will serve the national interest (43 U.S.C. 1701). Lands identified as important for

resource values, including sage-grouse habitat values, would generally not be classified as available or suitable for disposal under other disposal authorities. There may be exceptions where scattered Federal land ownership does not allow for effective management. In those cases, lands are identified for exchange to create blocks of manageable habitat in support of cooperative conservation efforts (BLM land exchange projects in the State of Washington to block up key sage-grouse habitat, for example).

Program Element Generating Threat. BLM may receive proposals for exchange or sale of BLM lands that could result in converting sagebrush to agricultural or other uses. While proposals that result in a net loss of sagebrush habitat are rare, there may be situations where it is in the national interest to dispose of some parcels of BLM land containing sagebrush habitats. Those could potentially be converted to agricultural or other uses under private ownership.

Ongoing Conservation Measures. Lands important for specific resource values, including important sage-grouse habitat values, are typically not identified as suitable for disposal under the land sale criteria addressed in Section 203 of FLPMA. Classification procedures outlined in 43 CFR 2400 would also indicate that lands identified as important for resource values, including sage-grouse habitat values, would not be available or suitable for disposal under other land disposal authorities.

All land disposal actions are analyzed through the NEPA processes unless national legislation explicitly exempts such disposals from NEPA analysis. Land tenure goals for public lands managed by BLM often encourage opportunities to consolidate or acquire sage-grouse habitat or reduce sagebrush habitat fragmentation. Ongoing participation in sage-grouse conservation planning and coordination with partners helps BLM identify important sage-grouse habitats and opportunities to adjust Federal ownership patterns to benefit sage-grouse, and thus influences future land tenure actions.

The 6840 Special Status Species Manual directs BLM to maintain ownership of all habitat essential for the survival and recovery of any listed species, including habitat that was used historically and has retained its potential to sustain listed species. Determinations related to essential habitat are generally made by the local BLM wildlife biologist based on habitat characteristics and limiting factors, in consultation with other wildlife agency professionals and scientists familiar with the area. Per the 6840 Manual, the level of protection for sensitive species shall be at the minimum, the level afforded Federal candidates.

In Fiscal Year 2003, 3,737 acres of public land were sold and 440 acres were disposed of under the authority of the Desert Land Entry Act. (This is a fraction [less than 0.00001 percent] of BLM-administered sagebrush habitat). Most of this acreage did not involve sagebrush habitat. Recent land sales in the Las

Vegas, Nevada area, under the authority of the Southern Nevada Public Land Management Act, were also outside the range of sage-grouse.

The BLM is currently developing Land and Water Conservation Fund project proposals for the Fiscal Year 2006 budget. Guidance for submissions of Land and Water Conservation Fund project proposals for Fiscal Year 2006 included a request to identify projects that would enhance the protection of sage-grouse habitat. From Fiscal Years 2000–2004, BLM acquired approximately 68,171 acres of currently occupied greater sage-grouse habitat in eight states (Table A-29, Appendix A).

Imminent and Future Conservation Measures. BLM has a robust acquisition program that is expected to continue into the future. Sage-grouse habitat will be a priority for future acquisitions. An additional 377,829 acres of currently occupied greater sage-grouse habitat in seven states have been identified by BLM field offices for acquisition (Table A-28, Appendix A). Of those acres, 139,153 acres have been proposed for acquisition in Fiscal Years 2005–2009 (Table A-30, Appendix A).

Conservation Outcome. Occupied sage-grouse habitat is retained in Federal ownership so that sagebrush communities remain intact and of high value to sage-grouse. If some sage-grouse habitat is exchanged or disposed, other lands that are acquired provide a net benefit to sage-grouse because Federal ownership is consolidated into larger blocks and/or sagebrush on acquired lands is protected from activities that destroy habitat. In some cases, acquired lands are restored under Federal management by reestablishing sagebrush, native forbs, and grasses that provide food and cover for sage-grouse.

Issue 2. Conversion resulting from chemical and mechanical treatments.

BLM no longer implements actions that will result in converting sagebrush on a broad-scale basis to other habitat types (also see Issue 3, Vegetation Management). Through the various regulatory mechanisms discussed in Chapter III and Factor D (this chapter), all proposed land management actions are reviewed and analyzed to understand the affects to sensitive species, including sage-grouse. Vegetation Management, as it relates to this issue, is discussed in more detail as follows.

Vegetation Management

Program Status. Vegetation management includes any practices or techniques applied to vegetation for the purpose of altering the structure, density, or composition of species in the plant community. The WAFWA Conservation Assessment (pages 7-28–29) describes vegetation treatments over the past 100 years. The Assessment discusses early treatments designed to “maximize

livestock forage production” and those treatments designed to stabilize soils, combat cheatgrass, and to:

restore a desired plant community, create biological diversity, increase forage or cover for animals, protect buildings and other facilities, manage fuels to reduce wildfire hazard, manage vegetation community structure, rejuvenated decadent vegetation, enhance forage/browse quality, or remove noxious weeds and poisonous plants.

The Assessment concludes with:

Thus, the majority of lands covered by sagebrush will be used and managed for multiple purposes, including livestock grazing, and will be subjected to many forms of habitat manipulations.

Program Element Generating Threat. Although chemical and mechanical treatments are implemented on BLM lands, the objective is to enhance sagebrush habitat, and not result in conversion to other vegetation types. Management guidance followed in the vegetation management program should pose little or no threat to sagebrush health. Treatments and management direction are discussed more thoroughly under Issue 4.

Conservation Measures. As stated above, with rare exception, the BLM is no longer involved in actions that result in converting sagebrush to other habitat types. Through the various regulatory mechanisms discussed in this chapter under Factor D, all land management actions are reviewed through the NEPA process, and effects to sensitive species are analyzed and considered before making a final decision. In addition, recent emphasis has been placed on monitoring the effectiveness of vegetation modification projects in achieving desired habitat objectives over time.

Conservation Outcome. Vegetation treatments using chemical or mechanical methods in sagebrush habitat are implemented to improve the diversity of the native plant community, reduce conifer encroachment, or reduce the risk of a large catastrophic wildfire. Sage-grouse habitat is improved or protected by treatments that reduce exotic species, eliminate trees that serve as raptor perches, enhance the diversity of grasses and forbs for food and cover, and retain adequate sagebrush densities to provide for seasonal habitats (nesting, late brood-rearing, and wintering). Fuel breaks created in large blocks of sagebrush using mechanical methods reduce the likelihood that a large wildfire will eliminate important blocks of sagebrush that provide habitat for sage-grouse.

Issue 3. Large expanses of sagebrush removed and reseeded with non-native grasses.

BLM no longer implements actions that result in removing large expanses of sagebrush and reseeded with non-native grasses. Programs implementing the National Fire Plan and vegetation management activities often involve some

manipulation of sagebrush vegetation associations. These programs are discussed in detail in the following section.

Wildland Fire, Hazardous Fuels, Prescribed Fire, and Emergency Stabilization/Burned Area Rehabilitation

Program Status. In 2000, at the request of the President, the Secretaries of the Department of the Interior and the Department of Agriculture prepared a report recommending a strategy to improve the Agencies' response to severe, ongoing fires, reduce impacts of fires on rural communities and the environment, and ensure sufficient firefighting resources in the future. The report, "Managing the Impacts of Wildfire on Communities and the Environment: A Report to the President in Response to the Wildfires of 2000" along with Appropriations Act language for Fiscal Year 2001, became known as the National Fire Plan. In Fiscal Year 2001, the Secretaries of the Interior and Agriculture joined the governors and other partners in developing the 10-Year Comprehensive Strategy and its subsequent Implementation Plan in 2002. Also in 2001, Federal agencies prepared the report "Review and Update of the 1995 Federal Wildland Fire Management Policy" (*hereafter referred to as the 2001 Federal Fire Policy*).

In August of 2002, the President's Healthy Forests Initiative provided additional tools and emphasis to facilitate decisions and implementation of core components of the National Fire Plan and the 10-Year Comprehensive Strategy. This effort culminated in the enactment of the Healthy Forests Restoration Act of 2003. All the reports, guidance, and legislative assistance are now incorporated under the principles of the National Fire Plan to reduce the devastation of severe wildland fire and improve the health of the Nation's forests and rangelands. BLM implements the National Fire Plan and 10-year Strategy through land use plans, fire management plans, and project-level plans. Sage-grouse habitat needs are addressed during the decision-making process at these three planning levels.

FLPMA provides for protection of public lands and resources from destruction by fire. The 2001 Federal Fire Policy recognizes the role fire plays as a critical natural process. The 2001 policy builds on the 1995 fire policy to include policies recognizing the role of fire in sustaining healthy ecosystems, the restoration and rehabilitation of burned lands, and the importance of sound science in fire management activities.

Program Element Generating Threat. The removal, thinning or breaking up of continuous stands of dense vegetation (which sometimes includes sagebrush) is accomplished to protect communities and natural ecosystems from the threat of large catastrophic wildfires. These treatment sites are sometimes reseeded because of a lack of desirable understory species. Unplanned wildfires often result in the loss of sagebrush on large areas. A portion of these areas are unlikely to recover naturally from fire damage and are rehabilitated by BLM through reseeded of grass, forb, and shrub species. When native plant

materials are unavailable, intermediate steps in site restoration may include the need to establish immediate herbaceous cover to stabilize soils or combat invasive species (such as cheatgrass). Easily established non-native species can aid in the long-term restoration of a site by stabilizing soils, preparing and maintaining the site free of invasive species, such as cheat grass, and retaining future options to restore native species. Such treatments are expected to benefit sage-grouse over the long term through re-establishment of sagebrush associations with more appropriate fire frequencies and greater proportions of native species.

Ongoing Conservation Measures. Emergency stabilization and rehabilitation plans are developed and applied after wildland fire. The objective of the BLM emergency stabilization and rehabilitation program is to mitigate the effects of wildland fire on the soil-vegetation resource in a cost-effective and expeditious manner, and to reduce accelerated wildland fire return intervals resulting from invasion of annual exotic vegetation and noxious weeds. The purpose of emergency stabilization and rehabilitation is to emulate historical or pre-burn ecosystem structure, function (including the re-establishment of the natural fire cycle), diversity, resiliency, and dynamics consistent with approved land management plans. If ecosystem restoration is not feasible, then actions are taken to establish a healthy, stable plant community in which native species are well represented. Individual state Standards for Rangeland Health and Guidelines for Livestock Grazing Management and fire management plans include additional management direction for post-fire rehabilitation.

Assessments of emergency stabilization needs are made within 7 days of fire containment. An interdisciplinary team develops a plan that addresses the emergency stabilization needs of the area. Planned treatments costing less than \$100,000 are submitted to the BLM state office for review and approval, and planned treatments costing more than \$100,000 are reviewed and approved by the Washington, D.C., BLM Office. Emergency stabilization actions must be taken within 1 year following containment of the wildland fire.

Rehabilitation plans developed by interdisciplinary teams are submitted soon after the submission of the emergency stabilization plan and prior to the beginning of the next fiscal year. All rehabilitation plans are reviewed and approved, on a priority basis, by the Washington, D.C., Office. Efforts to improve or repair fire-damaged areas are undertaken within 3 years following containment of the fire. Allowable actions in rehabilitation plans include soil stabilization, seeding and planting, and treatment of invasive species. BLM provides funding for monitoring emergency stabilization and rehabilitation treatment effectiveness for up to 3 years after containment of the wildland fire.

Offices that receive more than two fires each year are encouraged to write a normal fire rehabilitation plan/environmental assessment, a programmatic document developed at the landscape level for a district or field office unit prior to a wildland fire occurrence. After a wildland fire, this plan/EA assists in the timely

preparation of emergency stabilization and rehabilitation plans by providing a pre-analyzed tool box of actions based on the local unit's typical post-fire conditions. A Documentation of NEPA Adequacy worksheet is completed to confirm that the proposed emergency stabilization and rehabilitation treatments are within the scope analyzed in the EA. Decisions about management priorities and objectives, seed mixes, and other appropriate post-wildfire treatments are discussed and analyzed in the programmatic document.

BLM is investing over \$4.6 million in Fiscal Year 2004 in the Native Plant Development Program, Seeds to Success, which benefits sagebrush habitats by collecting and propagating native seed for use in rehabilitation and restoration efforts. The largest project under this program, the Great Basin Native Plant Selection and Increase Project, emphasizes increased production of seed of native forbs important for the restoration of sage-grouse habitat. BLM has identified 25 forb species important to sage-grouse and are in the process of developing better seed sources. The same funding level is requested in the Fiscal Year 2005 budget.

Imminent and Future Conservation Measures. BLM has plans to expand the Native Plant Development Program to increase native seed sources in each of the Western States. Per the National Sage-grouse Strategy (Appendix B1), BLM will revise or develop fire management plans for each state to include sage-grouse habitat management guidance (see Action Item 1.1.6) and incorporate sage-grouse sagebrush conservation measures into all applicable land use plans (see Action Item 4.1.3). The guidance for addressing sagebrush habitat in BLM land use plans (Appendix B2) per Action Item 1.3.1, provides additional direction for establishing goals and objectives for the restoration and rehabilitation of sagebrush habitat.

Guidance for the Management of Sagebrush Plant Communities for Sage-grouse Conservation (Appendix B3), per Action Item 1.4.1, provides interim management recommendations to address sage-grouse conservation while state sage-grouse conservation plans are completed and land use plans are amended. All states and field offices have been directed to utilize the management guidance described in Appendix B3 while more area-specific planning is completed. Suggested Management Practice #22 is

Utilize the Emergency Stabilization and Rehabilitation programs to apply appropriate post-fire wildlife treatments (livestock and/or recreation exclusion, reseeding, erosion control structures, etc.) within sage-grouse habitat. Use of native species is encouraged dependent on costs, availability, and chance for success. Seed mixtures should be designed to reestablish important seasonal habitat components for sage-grouse. Leks should not be reseeded with plants that change the vegetation height previously found on the lek. Forbs should be stressed in early and late brood-rearing areas.

Conservation Outcome. The risk of catastrophic wildfire and subsequent loss of large blocks of sage-grouse habitat are reduced as BLM implements fire management strategies that return sagebrush communities to more resilient

naturalized fire regimes. If stabilization and site rehabilitation are necessary after wildfire in sage-grouse habitat, native seed sources are becoming more available and post-management of other uses on the site (such as grazing) are adequate for healthy restoration. Properly restored sagebrush stands for sage-grouse should have a sufficient understory of diverse native forbs and grasses to provide food and cover for grouse. Monitoring sites after treatment allows BLM to adjust management and reseed if objectives for sage-grouse are not met. Where soils need to be stabilized quickly and native seed sources are not available, non-competitive and often non-reproductive plant species are seeded to prevent long-term damage until native communities are restored.

Vegetation Management

Program Status. The BLM has no active program of sagebrush removal and reseeding with non-native grasses. See Factor A, Issue 2 for the program status and Chapter III(F) for a discussion of the regulations and administration of the vegetation management activities. During 2000–2004, 763,000 acres of BLM land were treated to the benefit of sage-grouse (Table A-10b2, Appendix A).

Program Element Generating Threat. The BLM has no vegetation management program that calls for the conversion of sagebrush habitat into non-native grasses. See the previous discussion under Wildland Fire, Hazardous Fuels, Prescribed Fire, and Emergency Stabilization/Burned Area Rehabilitation for potential concerns (wildfire leading to cheatgrass conversion) that result from cheatgrass invasion following wildfire events.

Conservation Measures. BLM is no longer involved in removing large expanses of sagebrush and reseeding to monocultures of non-native grasses. Through the various regulatory mechanisms discussed under Factor D, all land management actions are reviewed with sensitive species concerns (includes sage-grouse) taken into consideration. BLM is actively engaged in restoring and rehabilitating sagebrush communities using local native plant materials. See page J-23, Appendix J and Appendix D, BLM Idaho State Summary; particularly the Shoshone Restoration Project, Shoshone Field Office, Shoshone, Idaho for an example of reseeding damaged areas with native and introduced species. Drill seeding with a combination of native and introduced grass and forb species was accomplished during the fall there. Sagebrush was aerially applied in the winter after the chemical treatment (applied to reduce cheatgrass), prescribed burning, and drill seeding. Appendix B3 identifies the management practices used to ensure that sagebrush will not be removed and reseeded with nonnative grasses.

Conservation Outcome. Vegetation treatments in sagebrush habitat are implemented to improve the diversity of the native plant community, reduce conifer encroachment, or reduce the risk of a large catastrophic wildfire. Sage-grouse habitat is improved or protected by treatments that reduce exotic species, eliminate trees that serve as raptor perches, enhance the diversity of grasses

and forbs for food and cover, and retain adequate sagebrush densities to provide for seasonal habitats (nesting, late brood-rearing, and wintering). Fuel breaks among large stands of sagebrush reduce the likelihood that a large wildfire will eliminate important blocks of sagebrush that provide habitat for sage-grouse. If stabilization and site rehabilitation are necessary after wildfire in sage-grouse habitat, native seed sources and post-management of other uses on the site (such as grazing) are adequate for healthy restoration. Properly restored sagebrush stands for sage-grouse should have a sufficient understory of diverse native forbs and grasses to provide food and cover for grouse.

Issue 4. Thinning to reduce sagebrush density, altering the structure and composition of the vegetative community.

Over the past 5 years BLM has treated about 1,476,224 acres (or 2.6 percent of BLM-administered acreage or 0.5 percent per year) (Table A-10a1–5, Appendix A) of sagebrush habitat, of which over 763,000 acres (Table A-10b2, Appendix A) were treated specifically to improve sage-grouse habitat objectives. Currently, treatments incorporate provisions for improving sage-grouse habitat requirements (cover and forage). Some field offices have found it appropriate, depending on local conditions, to directly follow the Connelly Guidelines. In other cases, local analysis through the NEPA process developed different project design characteristics (also suggested by the Connelly Guidelines). A discussion of BLM's vegetation management program follows.

Vegetation Management

Program Status. See Factor A, Issues 2 and 3. For a comprehensive discussion about regulations and administrative processes that guide vegetation management activities, refer to Chapter III(F) and Factor D, in this chapter.

Program Element Generating Threat. BLM does reduce sagebrush density in areas targeted to enhance understory grasses and forbs.

Ongoing Conservation Measures. Vegetation management as it relates to sage-grouse, centers on habitat needs for nesting cover, brood-rearing, and winter forage. Quality vegetation for sage-grouse includes a diversity of plant communities (relative to the potential of the site) with appropriate vegetation heights and structure. Appropriate quality habitat for sage-grouse also varies by season. For example, on winter range, sagebrush is the key species upon which to focus management. Sage-grouse prefer big sagebrush stands with plants at least 10 to 12 inches above snow. In the spring, brood-rearing habitat requires understory (with associated insects) and sagebrush overstory.

Vegetation treatments are applied to create a mosaic pattern of grasses and shrub species. This change in the structure (shrub and grass patches) is designed to move land uses (generally livestock grazing) to benefit the health of

the sagebrush community in the area, as well as the sagebrush-dependent species such as sage-grouse.

BLM evaluates the seasonal habitat requirements for sage-grouse (see sage-grouse biology section) before instituting management changes or restoration treatment. Changes in current management or implementation of less intensive treatments, such as thinning sagebrush and changing herbivore use period or intensity to improve understory species vigor, are examples of suggested management practices that will be used to improve seasonal sage-grouse habitat quality.

Leks. Leks are generally open areas with short vegetation, often surrounded by sagebrush stands with good shrub cover (usually Wyoming and mountain big sagebrush) where sage-grouse nesting occurs.

Nesting. Sage-grouse prefer sagebrush for canopy cover and need cover near nests to escape predation. BLM manages for a canopy cover of 15 to 30 percent in areas containing mountain and Wyoming big sage as the dominant brush species, and for grass and forbs (may be a combination of native and introduced species) in nesting areas to provide visual, physical, and scent barriers.

Early Brood-rearing. Concealing vegetative cover is important for broods. Cover species needs, such as sagebrush (as well as other shrub species), grass, and forbs are identified in the NEPA assessment documents to ensure requirements are met for nesting and brood-rearing requirements.

Summer-late Brood-rearing and Fall. Late brood-rearing habitats are less dense than nesting habitats and have a higher proportion of grasses and forbs. Sage-grouse often migrate to higher elevations that receive additional summer moisture, concentrate along riparian areas where succulents are more prevalent, or, where available, utilize hay fields (or other irrigated croplands) adjacent to sagebrush habitats to feed on green vegetation.

Winter Forage Needs. Sage-grouse feed almost exclusively on sagebrush leaves and buds during winter. Sagebrush density can be highly variable on winter habitats, but typically sage-grouse select big sagebrush stands with plants at least 10 to 12 inches above snow (this varies with locale).

Given these sage-grouse habitat needs, conservation strategies in old crested wheatgrass seedings take two approaches. One approach allows the seedings to revert to more natural vegetation over time. The majority of the seeding established in the 1960s have moved from a monoculture of crested wheatgrass to one of vegetative diversity. In these seedings, crested wheatgrass is still prevalent, but sagebrush, native bunchgrasses, forbs, and microbial crusts coming into the site provide the diversity both in structure and composition needed to support sage-grouse. BLM field offices, with input from local partners

(such as state fish and game agencies) identify crested wheatgrass seedings as a way to return to a more natural setting that benefits sage-grouse.

BLM's second approach to dealing with old crested wheatgrass seedings is to mechanically remove the brush overstory to maintain the seedings capacity to support grazing. In doing so, BLM would maintain the seeding and reduce grazing pressure on more critical sage-grouse habitats elsewhere. Application of this treatment is targeted to those areas where local and regional vegetation communities and habitat characteristics can be enhanced. Decisions tied to existing crested wheatgrass seedings (treat or not treat) require the involvement of local partners in the land use planning process and site-specific NEPA assessment, which addresses sensitive species needs (such as sage-grouse).

In the BLM Information Request (Appendix A), states reported that their current land use plans allowed for about 15 million acres of vegetative treatments (biological, chemical, mechanical, prescribed fire, and seeding/planting). In addition, states reported the acres treated in several broad vegetation types—conifer encroachment, annual grasslands, perennial grasslands, and sagebrush/perennial grasslands (see Figure 5 on page 125). In the past 5 years (from 2000 to 2004) states treated approximately 2.6 million acres (17 percent of the allowed amount), about 1.5 million acres benefited sage-grouse (58 percent) (refer to Tables A-10a1–5, A-10c1–5, A-10e1–5, A-10g1–5, Appendix A). The data also shows that there is an estimated 99 million acres of occupied and historically occupied habitat managed by BLM (see Tables A-2b, A-3b, Appendix A).

Per the National Sage-grouse Habitat Conservation Strategy 1.3, (Appendix B1), land use plans deficient of guidance to adequately address sage-grouse needs will be updated. During the interim, planned treatments will follow the suggested management practices described in Appendix B3, Guidance for Management of Sagebrush Plant Communities for Sage-grouse Conservation. Planned treatments in sagebrush habitat will consider sage-grouse seasonal habitats needs when developing strategies and implementing treatments to restore sagebrush habitat.

BLM utilizes its funding to promote cooperative partnerships designed to prevent the spread of weeds at the local and community level. BLM continues to emphasize early detection through inventory and monitoring. Weeds are treated as quickly as possible without regard to jurisdictional boundaries so that the entire source is treated. Current efforts are successfully reducing the net rate of spread.

The vegetation management program includes the Great Basin Restoration Initiative, which began following the devastating 1999 fire season. Two reports, "Out of Ashes, An Opportunity" (1999) which explained the threats and ecological status of the Great Basin, and "The Great Basin: Healing the Land" (2000) which

proposed guiding principles and outlined goals and actions in five key areas to help direct restoration work to improve habitat requirements for sage-grouse. The Great Basin Restoration Initiative team broadly defined restoration as

implementation of a set of actions that promotes plant community diversity and structure that allows plant communities to be more resilient to disturbance and invasive species over the long term.

This definition gives field offices the latitude to conduct a wide range of activities to promote diversity so that plant communities are more resilient and recover more readily from disturbances, such as weed invasion or repeated wildland fires. Use of native plants in restoration projects is emphasized where the seed is available and adapted to the site being restored. Many activities (such as fire rehabilitation, hazardous fuels reduction, implementation of standards and guidelines, and wildlife habitat restoration) currently funded under other programs are included under the umbrella of Great Basin Restoration Initiative. Also see Healthy Forest Initiative and Health Forest Restoration Act, both of which address rangelands and forests. All of these restoration activities contribute to maintaining healthy and diverse vegetation communities

Below are examples of how BLM's vegetation management restoration benefits sage-grouse:

- 1) The removal of juniper from areas where shrub species, with grass understory, once occurred; provides:
 - more vegetation suitable to meet nesting and brood rearing needs;
 - fewer structures for predators to perch and sight from;
 - improved opportunity for springs and seeps, resulting in more succulents last longer into the summer dry season; and
 - Maintains or increases sage-brush species that provide sage-grouse with cover and forage.
- 2) Restoration from cheatgrass to a more fire-resistant species (native and non-native bunch grasses); benefits by:
 - Breaking the fire cycle, which will allow for establishment of important species (sagebrush, forbs, and perennial grasses) for sage-grouse.
- 3) Planting fire resistant species (vegetation species that stay green longer into the dry season), known as "greenstripping", in strips to slow down the spread of wildfire so suppression efforts have a better chance of success; benefits by:

- Protecting native vegetative strongholds from catastrophic wildfire where the potential of the burned area to convert to cheatgrass is high.

Certainty of Implementation. Sufficient certainty of implementation for these immediate and future actions can be judged by accomplishments and ongoing actions that have been described in this section. BLM authorities, procedural requirements, staff expertise, and out-year funding requests are in place to ensure appropriate planning requirements, rangeland health evaluations, and monitoring actions are taken to ensure the impacts of vegetation management and invasive species management are ensuring no loss of sage-grouse habitat. BLM is investing over \$4.6 million in Fiscal Year 2004 in the Native Plant Development Program, Seeds to Success, which benefits sagebrush habitats by collecting and propagating native seed for use in rehabilitation and restoration efforts. Fiscal Year 2005 and out-year budgets include similar budget requests to continue necessary monitoring and proactive management. Continued monitoring of habitats and populations and ongoing and future research on the relationship between development and sage-grouse habitat conditions will give BLM the necessary information to adapt management and reduce threats from habitat loss.

Conservation Designations: National Landscape Conservation System

Program Status. The BLM's NLCS is a national system of BLM-administered public lands where the President or Congress has identified conservation goals to guide multiple use activities. In most cases, these lands are national monuments, national conservation areas, wild and scenic rivers, wilderness areas, and wilderness study areas. Multiple use management of these lands can continue on a case-by-case basis while meeting the legal mandate for conservation. Analysis shows that approximately 10 percent of currently occupied sage-grouse habitat is within NLCS units, most of which is in wilderness study area status pending congressional designation as wilderness. In many cases, the habitats in these NLCS units are in better condition than other areas of the public lands, although a detailed assessment has not yet been completed.

Management plans for individual NLCS units address all aspects of land management, including the manipulation of vegetation to achieve management goals. In all cases, proposed management actions in NLCS units are analyzed through the NEPA process and are in conformance with other laws and regulations, including the ESA. Management actions for most NLCS units are embedded within RMPs for their respective BLM planning areas or have a separate RMP guiding management; all actions have hence undergone NEPA analysis during the RMP process. Some NLCS units, particularly national monuments or national conservation areas, have individual management plans that are analyzed through NEPA procedures. Some surface-disturbing activities

are not appropriate or allowed within NLCS units, thus limiting the threats to sage-grouse and their habitat within these areas.

Program Element Generating Threat. Conservation is the focus of management within the NLCS, and meeting the conservation objective must be demonstrated in management actions. Manipulation of vegetation communities within NLCS units is universally intended to maintain or restore natural ecological communities and balance, including sage-grouse habitats; however, short-term impacts may occur within the unit or nearby. In congressionally-designated wilderness areas, there may be policy limitations on restoration treatments that require surface disturbance (such as brush crushing). In wilderness, a clear and focused objective must be articulated in the NEPA document to identify how wilderness values would be enhanced by the activity—in the case of sage-grouse, how the perpetuation of a sensitive, threatened or endangered species would be benefited by the action. These limitations may prevent or reduce options for treatments to re-create habitat components, the lack of which may be limiting sage-grouse populations, such as understory grasses or forbs as nesting cover or food sources. BLM wilderness study areas have a policy that requires all actions to not impair wilderness values until Congress decides whether or not the areas are designated as wilderness.

Conservation Measures. Participation in sage-grouse conservation planning and coordination with sage-grouse conservation partners and other interests ensures that all proposed actions are consistent with management for sage-grouse conservation. The priority assigned to maintaining the natural ecological values of NLCS units within sage-grouse habitat ensures that their management will benefit sage-grouse and other species of conservation concern that utilize similar habitats.

Conservation Outcome. NLCS units are generally managed to limit surface-disturbing activities and promote conservation of natural plant communities. Vegetation treatments in sagebrush communities within NLCS units are designed to improve the condition of special status species habitat, including sage-grouse habitat, as discussed under Vegetation Management in Chapter III. The method of treatments may be limited in wilderness areas due to constraints on mechanized treatments

Issue 5. Loss of habitat from mining and energy development, urban/suburban development, including construction of infrastructure, predation threats from domestic pets, and associated anthropogenic effects will continue to adversely affect sage-grouse as the human population continues to grow.

BLM lands historically have provided and continue to provide large blocks of habitat necessary for the sage-grouse. BLM-administered lands comprise only 18 percent of the portion of the historic range of the sage-grouse that is no longer

occupied; non-BLM administered lands comprise 82 percent (BLM Information Request 2004) (Table A-3a–c, Appendix A). The recent high value of BLM land sales in the Las Vegas, Nevada, area are atypical of BLM land disposals—the Las Vegas area is also outside of the sagebrush habitat range.

As a multiple use agency, BLM authorizes multiple uses on Federal lands for the good of the nation. The regulatory mechanisms and administrative processes that guide the programs are described in Chapter III and Factor D, this chapter. A discussion about BLM program actions that may cause habitat loss are addressed specific to this issue, and include: Minerals/Energy (i.e., fluids, coal, saleable, non-energy leaseables, and locatables); Recreation (i.e., access management and special use permits); and Realty/Lands (i.e., rights-of-ways).

Minerals/Energy

Fluid Minerals

Program Status. BLM continues to change the way it conducts Fluid Minerals development on the public lands. Impacts to sage-grouse associated with development will be significantly reduced as the newly revised land use plans containing new sage-grouse protection requirements are implemented and BMPs for fluid minerals development are applied to new permits to drill and related development activities. BLM is committed to prevent, minimize, and mitigate adverse impacts such as habitat loss, fragmentation, and degradation resulting from oil and gas development. Practices included as BMPs that will directly benefit sage-grouse are conservation measures to reduce the footprint of roads and well locations, limit seasonal public vehicular access, centralize production facilities, bury flowlines and distribution powerlines in or adjacent to new or existing roads, abate noise, install anti-perching devices, and require more extensive interim and final reclamation of well locations and roads. In many cases, it is anticipated that BMPs will also be retroactively applied to existing wells, access roads, and utilities in older oil and gas fields. A more detailed discussion about the BMPs can be found in Chapter III(B)(1) and at BLM's BMP website: <http://www.blm.gov/nhp/300/wo310/O&G/Ops/operations.html>

To ensure an environmentally sound oil and gas energy development program that mitigates impacts to important resources, such as sage-grouse habitat, BLM initiates a complex planning, environmental review, permitting, and inspection and enforcement process. BLM begins this process long before an oil and gas lease is issued. Through the land use planning process, lands suitable and available for leasing are identified along with stipulations and other forms of mitigation necessary to protect other resources including sage-grouse and sagebrush habitat. At the time exploration and/or development activities are proposed, BLM conducts an onsite evaluation, analyzes the activities through the NEPA process and develops site specific conditions of approval to reduce, mitigate, or eliminate threats to sage-grouse and sagebrush habitat for each of

these actions. BLM then inspects/monitors activities throughout the project and life of the lease. Although interim partial reclamation occurs for each disturbance, after the oil and gas resources are recovered and the wells plugged, final reclamation of any remaining disturbance occurs. In summary, the process includes:

- 1) Land use planning with input from the public and state and Federal wildlife agencies to:
 - a) Determine which lands should or should not be open to leasing.
 - b) Identify protective stipulations such as no surface occupancy or timing limitation stipulations that are applied to future leases to protect species such as the sage-grouse.
- 2) Lease sale, where parcels are reviewed to ensure:
 - a) The appropriate sage-grouse protective stipulation is added to the lease.
 - b) There are no new circumstances that warrant the addition of new or changed sage-grouse stipulations.
- 3) Field development analysis, where development of a new field is:
 - a) Reviewed through the EA or EIS process to once again look at the cumulative impacts of development.
 - b) Address field-wide sage-grouse conservation measures in addition to the lease stipulations.
- 4) APD approval where the oil and gas company's (operator's) drilling permit application is:
 - a) Reviewed through an interdisciplinary team EA process, including the analysis and mitigation recommendations of a local BLM staff wildlife biologist with input or data from the state wildlife agency.
 - b) Inspected on the ground prior to permit approval and discuss with the operator measures that will be required to protect sage-grouse, such as moving the well or delaying drilling.
 - c) Approved subject to attachment to the APD of the conditions of approval to protect sage-grouse.
- 5) Using trained inspectors to:

- a) Inspect the drilling, production, plugging, and reclamation operations to ensure compliance with the environmental protection requirements of the APD.
- b) Pursue enforcement actions where companies have violated the APD conditions.

Note: A more comprehensive explanation of the fluid minerals program can be found in Chapter III(B)(1) and the land use planning process in Chapter II(D).

Program Element Generating Threat. The WAFWA Conservation Assessment describes the ecological influences and pathways that prompt issues related to habitat loss for sage-grouse. These include construction of the well pads, roads, powerlines, facilities, and produced and disposed water. Land use plans and amendments or project/development-specific EISs describe the foreseeable development, anticipated loss of habitat, and cumulative impacts to the environment, including sage-grouse and its habitat.

Ongoing Conservation Measures. *Availability of Lands:* Prior to offering lands for lease the BLM must analyze through the land use planning process (see Chapter II(D)) direct, indirect and cumulative impacts associated with leasing. Through the RMP/EIS analysis, lands important for sage-grouse and sagebrush habitat may be protected through a decision not make those lands available for lease. This removes all levels of threats to the sage-grouse and sagebrush habitat from fluid mineral development.

Special Designation: The RMP/EIS analysis may result in a decision to designate certain lands as an area of critical environmental concern emphasizing the importance of the sage-grouse and sagebrush habitat. The special designation in and of itself does nothing to protect the resource, but stipulations, BMPs and other mitigations developed through the RMP/EIS analysis can afford various levels of protection. Stipulations, BMPs, suggested management practices and other mitigations developed through the RMP/EIS process can be applied to all lands available for lease. The effect and conservation contribution of each is described in the following:

No Surface Occupancy Stipulation: BLM stipulates all known leks through lease stipulations that at a minimum designate an area no surface occupancy within 0.25 miles around a lek. This distance may be modified to include a larger area where the need is demonstrated through the RMP/EIS analysis. Where there are no protective lease stipulations (such as producing leases greater than 40 years old), the BLM can require a minimum protective distance of 0.12 miles through regulation (43 CFR 3101.1-2), but many offices will move a drilling operation farther when it conforms with lease rights and is justified through the site-specific NEPA analysis. No-surface-occupancy stipulations preclude all forms of oil and

gas exploration and development surface-disturbing activities conducted under the lease within the designated area. Responses in the BLM Information Request (Table A-11a2, Appendix A) indicate 106,600 acres of sage-grouse habitat associated with leks are protected by no surface occupancy in the primary oil and gas producing states (those being Colorado, Montana, Utah, and Wyoming). An additional 769,900 acres of sage-grouse habitat not associated with leks are protected directly or indirectly by no surface occupancy in the same primary oil and gas producing states (Table A-11b2, Appendix A).

The no-surface-occupancy stipulation reduces habitat loss and fragmentation, nesting disturbance, human disturbances, and other threats to the sage-grouse and sagebrush habitat to achieve the same effect as no leasing within that area.

Timing Restrictions Stipulation: Seasonal timing restriction stipulations preclude drilling operations during critical time periods such as sage-grouse nesting, brood-rearing, and wintering. BLM attaches timing stipulations to lands available and offered for lease within approximately 2 miles of a lek depending on the requirements of the land use plan. The duration and season of the restriction varies depending on seasonal habitat use by sage-grouse or other species. Over 4.6 million acres associated with leks have timing restrictions that protect sage-grouse populations during development in the primary oil and gas states (Table 13a2). Another 4.7 million acres not associated with leks have been stipulated with timing restrictions (Table A-13b2, Appendix A). Although timing restrictions have no beneficial conservation effects to sagebrush habitat loss or fragmentation, they do benefit sage-grouse directly by precluding activities during the breeding and nesting periods in a much larger area around the lek sites than is protected by the NSO stipulation. This timing protection reduces recruitment losses resulting from surface disturbance activities associated with oil and gas exploration and development during the restricted period.

Conditions of Approval: Conditions of approval are developed through the NEPA process for the proposed action to protect site-specific resources that may be impacted as a result of proposed exploration and development activities that were not addressed in the land use planning process or not known at the time the land use planning occurred. Application of conditions of approval is especially important for older leases that were not stipulated for sage-grouse protection. Regulations (43 CFR 3101.1-2) provide for moving activities a minimum of 200 meters and discontinuing activities for a minimum of 60 days to protect resource values. Although minimal protection in terms of distance and duration, application of these requirements and other BMPs discussed below afford some of the same protections described in the no surface occupancy and timing restriction stipulations discussed above.

Best Management Practices: BLM has a policy (Instruction Memorandum No. WO-2004-194) requiring all field offices to consider, through the NEPA process, the use of “Best Management Practices for Fluid Minerals” that will reduce the

rate of habitat loss, fragmentation, and degradation in all APD approvals and associated rights-of-way. BLM and the Department of the Interior have conducted extensive outreach to industry trade groups and state and local government agency groups. BLM has conducted numerous internal presentations and training sessions on the necessity and use of BMPs in energy and rights-of-way development. In many cases, it is expected BMPs will also be applied retroactively to existing wells, access roads, and utilities in older oil and gas fields. A menu of continually updated BMPs can be found on the web at: <http://www.blm.gov/nhp/300/wo310/O&G/Ops/operations.html>. Refer to the website for examples of BMPs for reducing wildlife habitat fragmentation.

BLM participated with the Western Governors' Association, conservation and environmental groups, industry, landowners, and state and other Federal agencies in the development of the "Coal Bed Methane Best Management Practices Handbook." A copy of the handbook can be found at: <http://www.westgov.org/wga/initiatives/coalbed/>

Examples of BMP conditions of approval BLM uses to reduce sage-grouse habitat loss include:

- Constructing roads to the lowest standard necessary to access the project site to minimize fragmentation and vegetation loss.
- Locating facilities away from important sage-grouse and sagebrush habitat areas to minimize resource loss.
- Requiring interim and final reclamation using native seed to maximize re-establishment of native vegetation to pre-disturbed conditions and minimize opportunity for establishment of invasive weeds. Activities occurring in severely degraded sage-grouse and sagebrush habitat conditions may require reclamation to a standard exceeding current conditions.
- Requiring noise reduction measures, such as use of high efficiency mufflers for engines and other equipment, to minimize impacts to sage-grouse during lek courtship and brood-rearing activities.
- Requiring installation of anti-perching devices on equipment, power poles, communication equipment, etc., to minimize increased opportunities resulting from development actions for raptors to perch and prey on sage-grouse.
- Requiring weed control on surface disturbed areas to minimize opportunity for establishment of invasive weeds and vegetation/habitat loss.
- Requiring burial of powerlines in the road/two track and burial of wellheads to remove raptor perches and minimize increased predation from raptors.

Burial also minimizes long-term vegetation and habitat loss and the number of surface facilities that may lead to collision injuries and mortalities.

- Requiring offsite remote well monitoring to minimize year round human disruption of sage-grouse post-exploration and development of a lease.
- Establishment and enforcement of speed limits on access roads to minimize dust emissions that negatively impact vegetation; noise disruption to sage-grouse by truck traffic; and, injuries and mortalities resulting from sage-grouse/vehicle collisions.
- Institute water management practices to minimize loss of sage-grouse and sagebrush habitat.
- Require wells to be directionally drilled from a centrally located pad and/or production facilities to be centrally located. Both of these requirements result in larger undisturbed areas of sagebrush habitat and reduce the threats to sage-grouse and sagebrush habitats by reducing habitat fragmentation, habitat loss, human disturbances, noise disturbance, collision injury and mortality, dust emission, and weed invasion.

Inventory and Monitoring: Within sage-grouse habitat, the BLM, the state wildlife agency, or a BLM-approved contractor conducts an inventory and/or records search for sage-grouse occurrence prior to APD approval. Monitoring of populations and habitats is initiated after development to determine the effectiveness of stipulations and management practices. Those stipulations and management practices that are not effective in reducing threats to the sage-grouse and sagebrush habitats will be modified through plan maintenance and an adaptive management process. BLM's ability to monitor and adaptively manage through the land use planning process ensures use of the best available science to develop the most effective conservation measures while managing lands for multiple use per requirements of FLPMA.

Compliance: BLM performs periodic surface compliance inspections to ensure that lease stipulations and the conditions of approval attached to the approved APD are implemented. BLM pursues enforcement actions when companies violate lease and/or the APD conditions. Enforcement provisions include; issuing written orders and notices of violations; imposing assessments or civil penalties; ordering a shut-down of operations; attaching the lease bond in order to perform operations in default; lease cancellation; and, barring lessees and operators from holding leases in the future.

Reclamation: BLM requires reclamation of surface disturbances on Federal lands. BLM also emphasizes reclamation of surface disturbances on private surface/Federal mineral lands, but the final decision and standards remains with

the surface owner. Final reclamation is not approved until vegetation cover is established per the seed mixtures and density specified as a condition of approval for each site-specific action. Final reclamation also includes recontouring of all disturbed areas, including access roads, to the original contour or a contour which blends with the surrounding topography. BLM also requires interim reclamation on those portions of producing well locations and access roads not necessary for continued operations soon after a well is put into production. Timely interim and final reclamation is important in reducing the threats to sage-grouse and sagebrush habitats by minimizing the ultimate habitat loss, providing cover to connect functioning habitats until vegetation returns to a fully or near fully functioning condition, minimizes opportunities for invasive weed infestation.

Research: BLM and the Department of Energy contribute funding toward ongoing research into the impact of energy development on sage-grouse and the impact of West Nile Virus on sage-grouse. The preliminary results of the research into the impact of energy development on sage-grouse were presented at the BLM National Fluid Minerals Conference in Cheyenne, Wyoming, on June 24, 2004.

Imminent and Future Conservation Measures. The BLM will continue to evaluate, update, and incorporate BMPs into future permit approvals to reduce the threats to sage-grouse and sagebrush habitat through minimizing habitat loss and fragmentation, human disturbances, predation opportunities, and other impacts from anthropogenic changes resulting from oil and gas exploration and development. BMP information sheets will continually be updated and developed through analysis of best available data and new science to provide further guidance. BLM will incorporate BMP use into the draft, fourth edition update of the “Surface Operating Standards for Oil and Gas Exploration and Development” (known as the “Gold Book”), to be published in early 2005. The Gold Book serves as the surface management operating guide for oil and gas operators on the public land.

BLM land use plans will undergo revision as part of the 10-year planning schedule (Appendix B1 and Appendix I). Through the RMP process and associated EIS analyses BLM will develop stipulations and other forms of mitigations to be implemented through the land use plan and applied to use authorizations for each of the multiple use programs, including the oil and gas program. Future stipulations and mitigations will be based on the best available science and exploration and development methods at the time that land use plan revision occurs. Stipulations and other mitigations developed through the RMP/EIS process will reduce threats to sage-grouse and sagebrush habitat through minimizing habitat loss, habitat fragmentation, human disturbances, predation opportunities, and other impacts from anthropogenic changes resulting from oil and gas exploration and development.

BLM and the Department of Energy will continue to contribute funding toward ongoing research into the impact of energy development on sage-grouse. The Department of Energy is considering increasing sage-grouse-study-related funding levels. Inspections, enforcement, and monitoring will continue.

Certainty of Implementation. Certainty of implementation for these immediate and future actions can be judged by accomplishments and ongoing actions that have been described in this section. BLM authorities, procedural requirements, staff expertise, and out-year funding requests are in place to ensure appropriate planning requirements, permit evaluations, and inspection and enforcement actions to reduce the threats to sage-grouse and sagebrush habitat resulting from impacts of mineral development. In the last several years, the Fluid Minerals Program expended program funds toward research, inventory, and monitoring of sage-grouse or their habitat. Fiscal Year 2005 and out-year budgets for the fluid minerals program include similar budget requests to continue necessary monitoring and proactive management for sage-grouse and sagebrush habitat. State directors and field managers have been instructed to incorporate BMPs per Instruction Memorandum WO-2004-194. Progress in meeting the directive will be evaluated through the quality assurance reviews that are described in Chapter III(B). Incorporation of BMPs into APDs and associated rights-of-ways will reduce site-specific impacts. Updating of land use plans to include sage-grouse leasing stipulations is expected to provide the management direction to reduce or minimize impacts across the much larger range. Continued monitoring of habitats and populations and ongoing and future research on the relationship between oil and gas development activities and sage-grouse and sagebrush habitat conditions will give BLM the necessary information to adjust through adaptive management and further reduce threats to sage-grouse and sagebrush habitats.

Conservation Outcome. Oil and gas operators are continually reclaiming surfaces disturbed by oil and gas exploration and development. In general, only 1 percent of the BLM-administered surface is actually disturbed at any one time.

Oil and gas lease sale decisions are based on an analysis of the direct, indirect, and cumulative impacts of the reasonably foreseeable development scenario on the sagebrush habitat to evaluate potential habitat loss both locally and planning area-wide. As a result of the analysis some areas are closed to leasing. For those areas which are open to leasing, stipulations to mitigate the impacts to the habitat are applied to the lease before the sale. Additional mitigation measures (conditions of approval) or BMPs are applied prior to approving the APD to reduce the number of acres disturbed or reduce disruption by human activities. Compliance inspections for energy development within sage-grouse habitat are a high priority. As cooperatively-funded research and monitoring programs provide new information, managers determine if stipulations and mitigation measure are sufficient to reduce or minimize the impacts to the sage-grouse. When the information indicates that adjustments are necessary to reduce impacts,

additional mitigation measures are development through the NEPA process and land use plan revisions.

Interim reclamation reduces the spread of invasive species and the acreage of disturbance and prepares a site for a speedier recovery. Native seed sources of forbs and grasses preferred by sage-grouse are more readily available because of the Native Materials Development Program. When the energy extraction is exhausted and production is finished, sagebrush sites are reclaimed to sagebrush and other species consistent with the surrounding landscape. Sagebrush stands with diverse forbs and grasses are of high value to sage-grouse.

Coal

Program Status. All Federal lands having potential for coal developments are subject to a review for suitability for coal leasing during the land use planning process (30 U.S.C. 1272(b)). Depending on size, state, and type of authorization, BLM may or may not have the primary oversight authority over coal operation on BLM lands. For large coal mining operations and exploration within an established Surface Mining Control and Reclamation Act (SMCRA) permit, the lead for reclamation standards would fall to the SMCRA authority which is administered by the Office of Surface Mining Reclamation and Enforcement or a delegated state (30 CFR 745) primacy agency. In this situation, BLM functions as a participating agency. Issuance of a SMCRA mining permit is a significant Federal action that requires NEPA and public participation. All concerned Federal and state agencies have a participatory role in this process (30 U.S.C. 1272(e) – Surface Mining Control and Reclamation Act).

The WAFWA Conservation Assessment did not include coal mining in the discussion of land uses and ecological influences.

Program Element Generating Threat. Destruction and loss of habitat from the construction of the mine, associated roads, powerlines and other infrastructure and human presence that disrupts sage-grouse are the program components that potentially pose a threat to sage-grouse.

Ongoing Conservation Measures. A review for suitability for coal leasing can occur during land use planning or prior to lease issuance (30 U.S.C. 1272(b)). There are currently 20 different unsuitability criteria (43 CFR 3461). Unsuitability criterion number 15 (43 CFR 3461.5(o)(1)) provides that

Federal lands which the surface management agency and the state jointly agree are habitat for resident species of fish, wildlife, and plants of high interest to the state and which are essential for maintaining these priority wildlife and plant species shall be considered unsuitable. Examples of such lands which serve a critical function for the species involved include: (i) Active dancing and strutting gourds for sage-grouse . . .

Lands that are unsuitable for coal leasing might be available with stipulation for exploration (43 CFR 3461.4). Lands that are unsuitable for leasing will not be leased. If special needs are identified, mitigation measures are included in a lease stipulation. Reclamation standards for leased lands are under the authority of the Office of Surface Mining Reclamation and Enforcement of the state primacy agency working under the authority of the Office of Surface Mining.

Actions with smaller or more limited disturbance can fall outside of the scope of the SMCRA. This would include a license to mine that covers less than 10 acres and exploration licenses that are outside of an established SMCRA mining permit. Environment standards for exploration within a SMCRA permit are established by the permit itself. BLM will only issue exploration licenses after completion of an environment analysis (43 CFR 3410.2-2(a)). An exploration license will not be issued if it would jeopardize the continued existence of a threatened or endangered species (43 CFR 3410.2-2(a)(2)). All applicable mitigation measures and reclamation standards will be stipulated in the exploration license (43 CFR 3410.2-2(b)). An exploration license must conform to the standards and conditions prescribed by the surface management agency (43 CFR 3410.2-3).

SMCRA (and Office of Surface Mining authority under the Act) requires reclaiming the surface mine to the approximate original contour. Generally, reclamation means restoring the site to a similar pre-mining land use, but exceptions can be made. Some mines have woody shrub (such as sagebrush) replacement requirements built into the permit where woody shrubs existed prior to mining. For example, the Wyoming Department of Environmental Quality, Land Quality Division Coal Rules require that

at least 20 percent of the eligible lands shall be restored to shrub patches supporting an average density of one shrub per square meter . . . For areas containing crucial habitat, designated as such prior to the submittal of a permit application or any subsequent amendment, or critical habitat the Wyoming Game and Fish Department shall be consulted about, and its approval shall be required for, minimum stocking and planting arrangements of shrubs, including species composition.

From 2000–2004, 2,408 acres of expired coal lease surface disturbance have been reclaimed or restored to a condition to benefit sage-grouse (Table A-23b, Appendix A).

Certainty of Implementation. Sufficient certainty of implementation for these immediate and future actions can be judged by accomplishments and ongoing actions described in this section. BLM authorities, procedural requirements, staff expertise, and out-year funding requests are in place to ensure appropriate planning requirements, permit evaluations, and inspection and enforcement actions to reduce the impacts of mineral development on the loss of sage-grouse habitat. BLM has the specific authority to designate lands as unsuitable for coal leasing within the vicinity of sage-grouse leks. BLM also works with the state

mining and wildlife agencies to ensure proper inspection and enforcement by state primacy agencies and that reclamation requirements will meet sage-grouse habitat needs.

Conservation Outcome. New and better information about the distribution and condition of sage-grouse habitat improves as cooperative relationships among BLM, state wildlife agencies, and industry expand and improve sage-grouse inventory and monitoring. Multi-scale sagebrush habitat assessments provide a biological basis for identifying priority sage-grouse habitats such as large, intact native sagebrush stands, moist riparian brood-rearing sites, or crucial winter ranges. When land use plans decisions are made to designate an area as suitable or unsuitable for coal leasing, cumulative impacts analysis combines mid- and broad-scale sagebrush information with data specific to the proposal allowing resources staff to comprehensively evaluate sage-grouse habitat loss within the context of the geographic area and planning area. Areas of primary importance for sage-grouse production (breeding) are classified as unsuitable. Stipulations are applied to an exploration license to avoid disruption during critical periods, such as breeding or wintering. Cooperatively-funded research and monitoring of sage-grouse and its habitat provides new information to help managers determine if stipulations and mitigation are sufficient to reduce or minimize the impact to sage-grouse. When the evidence shows that management adjustments are necessary to reduce impacts to populations and habitats, additional mitigation measures will be added through the NEPA process and land use plan revisions. Reclamation reduces the spread of invasive species and the acreage of disturbance, and prepares a site for a speedier recovery. Native seed sources of forbs and grasses preferred by sage-grouse are more readily available because of the Native Materials Development Program. When coal extraction is exhausted and production is over, sagebrush sites are reclaimed to sagebrush and other species consistent with the surrounding landscape. Sagebrush stands with diverse forbs and grasses are of high value to sage-grouse.

Saleable Minerals

Program Status. Saleable minerals include sand, stone, gravel, clay, and pumice. BLM's authority to dispose of sand, gravel, and other mineral materials that are not subject to mineral leasing or location under the mining laws is the Act of July 31, 1947, as amended (30 U.S.C. 601 et seq.), commonly referred to as the Materials Act. This authority applies to sale and free use of these materials. BLM's authority to allow removal of limited quantities of petrified wood from public lands without charge is section 2 of the Act of September 28, 1962 (Public Law 87-713, 76 Stat. 652).

The WAFWA Conservation Assessment did not include saleable minerals in the discussion of land uses and ecological influences.

Program Element Generating Threat. Destruction and loss of habitat from the construction of the mine, associated roads, powerlines and other infrastructure and human presence that disrupts sage-grouse behavior are the program components that potentially pose a threat to sage-grouse.

Ongoing Conservation Measures. Through the land use planning process, all proposed mineral material disposal areas are evaluated on a broad-scale for known conflicts with other resources to identify major constraints and mitigation in accordance with FLPMA and NEPA.

Contract/Permit Stipulations and Conditions of Approval for Operations

Proposals: Standard terms and conditions provide for further site-specific evaluations of activities. All actual projects involving on-the-ground activity (such as exploration, contracts, permits) are subject to environmental field reviews and analysis (e.g., biological assessments/opinions), applicable levels of environmental analysis under the NEPA (516 DM 1–7; 40 CFR Parts 1500–1508). Mining and reclamation plans are required as needed to address site-specific issues. Financial guarantees are used to ensure performance and reclamation in accordance with the stipulations and conditions of approval.

Monitoring: Either BLM, the state wildlife agency, or a contractor inventory for wildlife occurrence (including sage-grouse and other sensitive species) prior to contract/permit approval. Mineral materials sites are routinely situated to avoid conflicts with sensitive species. Ongoing monitoring would further ensure that any identified conflicts could be remedied.

Certainty of Implementation. Sufficient certainty of implementation for these immediate and future actions can be judged by accomplishments and ongoing actions described in this section. BLM authorities, procedural requirements, staff expertise, and out-year funding requests are in place to ensure appropriate planning requirements, permit evaluations, and inspection and enforcement actions to reduce the impacts of mineral development on the loss of sage-grouse habitat. BLM has permit approval and inspection and enforcement authority for saleable minerals mines. At permitting, BLM has the legal authority to move or deny saleable mining operations or limit their times of use to protect sage-grouse habitat. BLM also has the authority to ensure reclamation plans allow for restoring habitat temporarily lost to mining.

Conservation Outcome. New and better information about the distribution and condition of sage-grouse habitat improves as cooperative relationships among BLM, state wildlife agencies, and industry expand and improve sage-grouse inventory and monitoring. Multi-scale sagebrush habitat assessments provide a biological basis for identifying priority sage-grouse habitats such as large, intact

native sagebrush stands, moist riparian brood-rearing sites, or crucial winter ranges. When land use plans decisions are made to resolve resource conflicts related to saleables, cumulative impacts analysis combines mid- and broad-scale sagebrush information with data specific to the proposal allowing resources staff to comprehensively evaluate sage-grouse habitat loss within the context of the geographic area and planning area. Areas of primary importance for sage-grouse production (breeding) are stipulated to avoid disruption during critical periods such as breeding or wintering. Reclamation reduces the spread of invasive species and the acreage of disturbance and prepares a site for a speedier recovery. Native seed sources of forbs and grasses preferred by sage-grouse are more readily available because of the Native Materials Development Program. When saleable extraction is exhausted and production is over, sagebrush sites are reclaimed to sagebrush and other species consistent with the surrounding landscape. Sagebrush stands with diverse forbs and grasses are of high value to sage-grouse.

Non-energy Leasable Minerals

Program Status. Non-energy leasable minerals include potassium, sodium, phosphate, sulphur, and gilsonite. The regulations at 43 CFR 3592.1(c)(8)(iii) require that a mine plan address the

. . . environmental aspects associated with the proposed mine which includes . . . a description of measures to be taken to prevent . . . damage to fish or wildlife.

The regulations also require the submission of a reclamation schedule and the measures to be taken for reclaiming the surface, including the types and mixtures of species to be planted and the method of planting. The WAFWA Conservation Assessment did not include non-energy leasable minerals in the discussion of land uses and ecological influences.

Program Element Generating Threat. Destruction and loss of habitat from the construction of the mine, associated roads, powerlines and other infrastructure and human presence that disrupts sage-grouse behavior are the program components that potentially pose a threat to sage-grouse.

Ongoing Conservation Measures. Prospecting permits and exploration licenses also receive NEPA review prior to issuance. The regulations at 43 CFR 3505.45 and 43 CFR 3506.11, respectively, require that the exploration plan that accompanies the application for a prospecting permit, or exploration license, contain a section stating what measures will be taken to “prevent . . . damage to fish and wildlife.” The regulations also require a reclamation schedule that includes the measures to be taken for reclaiming the surface and the types, species mixtures, and planting methods of species to be planted.

The regulatory reclamation standards for the non-energy leasable minerals are performance standards, rather than prescriptive standards.

The reclamation standard is developed during the NEPA process and includes input from all members of the interdisciplinary team that prepares the NEPA document or reviews it for the BLM if prepared by a contractor. For the non-energy leasable minerals, the level and types of acceptable plant cover are specified in the stipulations attached to the lease and/or mining/exploration plan approval. From 2000–2004, 6,755 acres associated with non-coal surface disturbance have been reclaimed or restored to a condition to benefit sage-grouse (Table A-24b, Appendix A).

It is BLM policy to conduct a minimum of one compliance inspection quarterly on leases with active operations and at least one compliance inspection annually on leases without active operations.

Certainty of Implementation. Sufficient certainty of implementation for these immediate and future actions can be judged by accomplishments and ongoing actions described in this section. BLM authorities, procedural requirements, staff expertise, and out-year funding requests are in place to ensure appropriate planning requirements, permit evaluations, and inspection and enforcement actions to reduce the impacts of mineral development on the loss of sage-grouse habitat. BLM has permit approval and inspection and enforcement authority for leaseable minerals mines. At permitting, BLM has the legal authority to ensure reclamation plans allow for restoring habitat temporarily lost to mining of leasable minerals.

Conservation Outcomes. Areas of primary importance for sage-grouse production are stipulated, compliant with the NEPA process, to avoid disruption during critical periods such as breeding or wintering. Reclamation reduces the spread of invasive species, reduces the acreage of disturbance, and prepares a site for a speedier recovery. Native seed sources of forbs and grasses preferred by sage-grouse are more readily available because of the Native Materials Development Program. When extraction is exhausted and production is over, sagebrush sites are reclaimed to sagebrush and other species consistent with the surrounding landscape. Sagebrush stands with diverse forbs and grasses are of high value to sage-grouse.

Locatable Minerals

Program Status. Under the General Mining Law of 1872, as amended (30 U.S.C. 22 et seq.), many public lands are open for exploration and development of valuable mineral deposits. Locatable minerals include gold, silver, lead, zinc, and other minerals. Prior to approving mine operations, BLM field office interdisciplinary resource specialists review all mining plans under the NEPA process. Stipulations or mitigation measures are included if applicable, concerning the proposed operation and/or reclamation plan. The plan must also

conform to the current field office resource management plan. An acceptable financial guarantee to cover the actual costs of reclamation must be posted prior to commencing operations. In addition, the operator must also obtain all applicable operating permits prior to commencing.

The WAFWA Conservation Assessment did not include locatable minerals in the discussion of land uses and ecological influences.

Program Element Generating Threat. Destruction and loss of habitat from the construction of the mine, associated roads, powerlines, and other infrastructure and human presence that disrupts sage-grouse behavior are the program components that potentially pose a threat to sage-grouse.

Ongoing Conservation Measures. Plans of operations are processed under the 43 CFR 3809, Surface Management Regulations. These regulations govern locatable mineral exploration and development on public lands. It also gives the Secretary authority to impose terms or conditions necessary to regulate the use of public lands.

Certainty of Implementation. Sufficient certainty of implementation for these immediate and future actions can be judged by accomplishments and ongoing actions described in this section. BLM authorities, procedural requirements, staff expertise, and out-year funding requests are in place to ensure appropriate planning requirements, permit evaluations, and inspection and enforcement actions to reduce the impacts of mineral development on the loss of sage-grouse habitat. BLM has permit approval and inspection and enforcement authority for locatable minerals mines. At the time of permit approval, BLM has the legal authority to ensure reclamation plans allow for restoring habitat temporarily lost to mining of locatable minerals.

Conservation Outcomes. Areas of primary importance for sage-grouse production are stipulated to avoid disruption during critical periods such as breeding or wintering compliant with the NEPA process. Reclamation reduces the spread of invasive species, reduces the acreage of disturbance, and prepares a site for a speedier recovery. Native seed sources of forbs and grasses preferred by sage-grouse are more readily available because of the Native Materials Development Program. When extraction is exhausted and production is over, sagebrush sites are reclaimed to sagebrush and other species consistent with the surrounding landscape. Sagebrush stands with diverse forbs and grasses are of high value to sage-grouse.

Recreation

Access Management

Program Status. In general, the BLM manages motorized and other access on the public lands in accordance with existing law (such as FLPMA and ESA), Executive Orders 11644 (1972) and 11989 (1997), proclamation, regulation (43 CFR 8340, 8342, and 2930), and policy (BLM Manual 8300). In addition, recreation uses of public lands and visitor services provided by BLM must be in conformance with the applicable land use plan for any given area. FLPMA requires that allowable uses and actions be prescribed through land use planning decisions.

Generally, BLM allows use of vehicles and other conveyances on public lands, but in certain circumstances can close an area, such as big game winter range or sage-grouse leks, to all public access for specified periods of time (43 CFR 8364.1). Failure to comply with a closure or restriction order is subject to penalty (43 CFR 8364).

Direction for addressing vehicular access designations in land use planning is in the Recreation section (Appendix C(II)(C)) of the Land Use Planning Handbook (H-1601-1) and it has been clarified in Instruction Memorandum No. 2004-005 (2003). BLM direction is to, at minimum, designate areas in the RMP as open, closed or limited to motorized vehicles and other conveyances, and include a map of area designations.

Wildlife habitat issues can influence designation of areas as closed or with access limited to specified roads and trails. Area, road, and trail designations must be prepared in consultation with biologists and other agency specialists, state and county officials, and the interested public, and be approved through the FLPMA planning and NEPA processes. The planning process prescribes designated routes, area and road or trail seasonal access or vehicle restrictions, management prescriptions, and monitoring to evaluate effectiveness of management actions in achieving the specific resource objectives. Once a decision has been made to permanently close a road or trail, the route may be obliterated and restored.

Program Element Generating Threat. Recreational activity other than hunting and off-highway vehicle use was not discussed in the WAFWA Conservation Assessment. Specific recreation program components that have a potential to affect sage-grouse are public access into sage-grouse habitat causing disturbance and possible avoidance of habitat, and facilitating the spread of invasive plant species through introduction or dispersal of seeds or other propagative plant materials.

Ongoing Conservation Measures. Eighty-eight (or about 81 percent) of the planning areas encompassing currently occupied sage-grouse habitat reported management actions that closed or limited vehicular access on roads and/or trails (see Table A-25a, Appendix A). In the last 5 years, 913 miles of roads or trails were closed or limited to the benefit of sage-grouse (see Table A-25b1,

Appendix A). There may be additional restrictions that have a different primary purpose (for example, big game winter range closures) in these plans that may also indirectly benefit sage-grouse.

In addition to access management through the land use plan, BLM regulations provide that BLM may temporarily or permanently modify recreation use when needed to achieve resource objectives, including the objective to achieve land health standards. In every state, at least one land health standard addresses protection of wildlife habitat. Such a decision would need to be supported by site-specific management analysis. For example, to close an area to motorized recreation when immediate action is needed to protect resources, BLM may issue a decision and make it effective immediately, or on a date specified in the decision and regardless of appeal.

Imminent and Future Conservation Measures. The regulations give the BLM authority to modify travel management decisions at any time, with the supportive rationale to protect or conserve a particular value for emergencies. Within the last several years, BLM has elevated the development of travel management plans to be among the highest priorities of the Bureau. As BLM land use plans undergo updates and revision, off-highway vehicle designations are reviewed and areas are re-designated as open, limited, or closed. The BLM's National Off-highway Vehicle Strategy calls for minimizing unnecessary cross-country travel. The goal is to have the road and trail network identified within 5 years of completion of the land use plan, and address interdisciplinary resource issues including habitat fragmentation.

At the national level, BLM has developed "Guidance for the Management of Sagebrush Plant Communities for Sage-grouse Conservation" (Appendix B3) that applies until BLM state or local-level guidance is developed or until specific sage-grouse conservation measures are incorporated into BLM land use plans. This guidance encourages local managers to restrict vehicle use to established roads and trails or confine use to areas established specifically for off-road use to minimize impacts to areas restored to sagebrush habitat. There is also guidance for protecting sage-grouse leks from disturbance during the mating season and guidance promoting the reclamation of unnecessary or redundant roads. These national guidelines will supplement direction which already exists in land use plans.

Conservation Outcomes. The defined road and trail network will be identified within 5 years of completion of the land use plan per the National Off-highway Vehicle Strategy. New and better information about the distribution and condition of sage-grouse habitat improves as cooperative relationships among BLM, state wildlife agencies, and Federal land user groups expand and improve sage-grouse inventory and monitoring. Multi-scale sagebrush habitat assessments provide a biological basis for identifying priority sage-grouse habitats such as large, intact native sagebrush stands, moist riparian brood-rearing sites, or

crucial winter ranges. When land use plan decisions are made to designate areas open, limited, or closed to off-highway vehicle use, the cumulative impact of the trail network is balanced with sage-grouse habitat needs. Reduced human presence minimizes disruption and possible abandonment of nests. Public education and reclamation of disturbed sites reduces the spread of invasive species and acreage of disturbance. Native seed sources of forbs and grasses preferred by sage-grouse are more readily available because of the Native Materials Development Program. Closed roads are reclaimed to sagebrush sites using native grasses and forbs consistent with the surrounding landscape. Sagebrush stands with diverse forbs and grasses are of high value to sage-grouse.

Special Recreation Use Permits

Program Status. BLM requires that other allowable uses and actions be prescribed through the land use plans. Special recreation use permits for commercial use, competitive events, organized groups, and recreation use in special areas are required and could be amended, modified, or cancelled to ensure that authorized use occurring within the planning area is consistent with the allowable uses and desired outcomes (goals, objectives and standards) of the land use plan (43 CFR 2932.11).

Program Element Generating Threat. Special recreation use permits were not discussed in the WAFWA Conservation Assessment. Special use events attract people and traffic and may cause habitat degradation or avoidance.

Ongoing Conservation Measures. BLM land health regulations provide that BLM may temporarily or permanently modify recreation use authorizations, including special use permits, when needed to achieve land health standards. The authority BLM has to change existing recreation use authorizations is the same for issuing the authorization (43 CFR 2932.11 and Manual/Handbook H-2930-1). In addition, permits are monitored for compliance with stipulations, terms, and conditions of the permit. The level of monitoring is commensurate with the resource values at risk, the permittees' record of compliance, and the ability to obtain monitoring services through other factors. The BLM's capability to monitor terms and conditions may be a factor in deciding whether or not to issue a permit. Failure to comply with the stipulations or conditions of the permit may result in a loss of the permit.

Eighty-six (or about 80 percent) of the planning areas with occupied sage-grouse habitat currently reported restrictions or prohibitions on off-highway vehicle and/or special recreation events primarily to protect sage-grouse habitat (see Table A-26a, Appendix A). In the last 5 years, 185 special events were prohibited or limited to the benefit of sage-grouse (Table A-26b, Appendix A).

Conservation Outcomes. New and better information about the distribution and condition of sage-grouse habitat improves as cooperative relationships among BLM, state wildlife agencies, and Federal land user groups expand and improve sage-grouse inventory and monitoring. Multi-scale sagebrush habitat assessments provide a biological basis for identifying priority sage-grouse habitats such as large, intact native sagebrush stands, moist riparian brood-rearing sites, or crucial winter ranges. Mitigation measures are added to special permits to reduce sage-grouse habitat degradation and disruption to populations. Managed human presence minimizes disruption and possible abandonment of nests. Public education and reclamation of disturbed sites reduces the spread of invasive species and acreage of disturbance. Native seed sources of forbs and grasses preferred by sage-grouse are more readily available because of the Native Materials Development Program. Soil disturbance caused by special permits are reclaimed to sagebrush sites using native grasses and forbs consistent with the surrounding landscape. Sagebrush stands with diverse forbs and grasses are of high value to sage-grouse.

Lands and Realty

Rights-of-Way

Program Status. BLM rights-of-way activities are demand-based, requiring an application from individuals or other entities and a permit granted by BLM. The BLM administers some 85,000 rights-of-way on the public lands, including approximately 23,000 oil and gas pipelines and 12,000 electric transmission systems. Electric transmission, wind energy, telecommunication, fiber optic, water pipeline and road rights-of-way are authorized under FLPMA. Oil and gas pipeline rights-of-way are authorized under the Mineral Leasing Act. Over 5,500 rights-of-way actions are processed annually, including over 1,200 new oil and gas pipeline and electric system rights-of-way applications, with an increase in applications of over 10 percent a year during the last several years. The demand for additional energy and power capacity is expected to increase this workload by as much as 15 to 20 percent per year over the next 5 years.

All decisions to grant rights-of-way are made in compliance with NEPA. Decisions include mitigation measures, standard stipulations, and BMPs specific to the type of facility and the area in which the project will be constructed.

Program Element Generating Threat. The primary threats to sage-grouse associated with this issue are related to direct and indirect effects of uncontrolled recreational access, primarily off-highway vehicle use, that may result from increased use of roads and other infrastructure associated with rights-of-way. Uncontrolled off-highway vehicle use can result in direct disturbance to sage-grouse in any season, and indirectly cause loss and degradation of sage-grouse and sagebrush habitats by introducing or facilitating the spread of invasive plant species.

Ongoing Conservation Measures. BLM includes stipulations in rights-of-way grants for limiting access to linear type rights-of-way, such as pipelines and electricity transmission lines. These stipulations help minimize the potential for off-highway vehicle use along the rights-of-way, provide erosion control, and help limit the spread of invasive and/or noxious weeds. BLM also requires construction areas to be reseeded with vegetation species native to the geographic area, including sagebrush. Supplemental measures may be necessary to maximize opportunities for restoration success.

The Kern River Gas Pipeline Expansion Project, approved in August 2001, is a good example of the types of mitigation and reclamation standards that can be applied during the permitting of a right-of way across BLM-administered lands. In Utah and Wyoming, preliminary record searches and surveys revealed that sections of the proposed pipeline would traverse sage-grouse habitat. As conditions of approval, the proponent agreed to take the following action:

- Construction of the pipeline would occur during June 1 and November 1.
- Preconstruction surveys would be completed in sensitive species habitat (including sage-grouse habitat) to assess the current status of nesting.
- Site-specific measures were to be developed in the vicinity of an active sage-grouse lek such as morning construction restrictions, or restriction or use of certain access roads.
- Reclamation standards would be based on site-specific considerations, including soil and site capabilities and form, composition, and general condition of the adjacent plant communities, and general land use.
- Success of revegetation would be evaluated on parameters including composition, distribution, density and percent cover, and other assigned values.
- Evaluations would be made annually until 80 percent of disturbed sites show successful growth.
- Ground inspections are planned in late June each year to avoid the later part of big game wintering periods and active use of leks by sage-grouse.

In 2003, authorization for 18 miles of new power line construction in the Kemmerer, Wyoming, Field Office included a mitigation to install raptor anti-perch devices on 100% of the structures. The purpose of the devices was to deter raptors and reduce the likelihood that they would increase predation on sage-grouse and other species.

From 2000–2004, 6,617 acres associated with rights-of-way authorizations on BLM land were reclaimed or restored to a condition of benefit to sage-grouse. Designation of rights-of-way exclusion areas in land use plans identifies areas where other resource values dictate that rights-of-way will not be considered. For sage-grouse, these areas can be based on known leks or other essential habitat areas. The designation of rights-of-way avoidance areas defines where rights-of-way will only be permitted if stipulations can be attached to the rights-of-way grant that mitigate potential impacts to sensitive resource values. A sage-grouse stipulation could address protection of leks, requirements to install anti-perching devices on facilities, and strict restoration requirements for disturbed areas. These stipulations are based on site-specific needs or BMPs, or can be pulled from the sage-grouse conservation strategy where applicable.

BLM participation in sage-grouse conservation planning and coordination with partners provides better information and helps BLM identify important sage-grouse habitat.

Conservation Outcomes. Rights-of-way corridors that avoid special status species habitat, including sage-grouse habitat, are identified during the land use planning process. New and better information about the distribution and condition of sage-grouse habitat improves as cooperative relationships among BLM, state wildlife agencies, and industry expand and improve sage-grouse inventory and monitoring. Knowledge of important sage-grouse habitat helps BLM preplan locations for powerlines, pipelines, and roads. Consolidation of rights-of-way reduces the human footprint on the landscape, reducing sage-grouse habitat loss and degradation. Multi-scale sagebrush habitat assessments provide a biological basis for identifying priority sage-grouse habitats, such as large, intact native sagebrush stands, moist riparian brood-rearing sites, or crucial winter ranges. Stipulations are applied to a permit to prohibit surface activity near leks, thereby protecting breeding grounds and nest sites. Additional mitigation measures are applied as stipulations to reduce the amount of acres disturbed or with timing restrictions to reduce disruption by human activities during construction to protect the sage-grouse populations. Compliance inspections are a priority for rights-of-ways for energy development occurring in sage-grouse habitat to make sure that the conditions of approval are met. Cooperatively-funded research and monitoring of sage-grouse and their habitats provide new information to help managers determine if stipulations and mitigation are sufficient to reduce or minimize the impact to sage-grouse. When adjustments are necessary to reduce impacts to populations and habitats, additional mitigation measures are added through the NEPA process and land use plan revisions. Reclamation reduces the spread of invasive species and acreage of disturbance. Native seed sources of forbs and grasses preferred by sage-grouse are more readily available because of the Native Materials Development Program. When the right-of-way is no longer needed, all structures and facilities are removed and the site is reclaimed to sagebrush and other

species consistent with the surrounding landscape. Sagebrush stands reclaimed with diverse forbs and grasses are of high value to sage-grouse.

Issue 6. Interaction of natural and anthropogenic factors; livestock grazing-related issues.

BLM manages grazing on the public lands under a number of laws, regulations, and policies as outlined in Chapter III(D) and Factor D. The regulations state that BLM shall make changes in permitted use as needed to manage, maintain, or improve rangeland productivity; to assist in restoring ecosystems to properly functioning condition; and to conform with land use plans or activity plans, or to comply with the fundamentals of rangeland health and standards and guidelines for livestock grazing (43CFR 4110.3). Changes must be supported by monitoring, field observations, ecological site inventory, or other data acceptable to the authorized officer. Decisions to change or cancel grazing use may be appealed and a stay may be allowed. If a stay is denied, a judicial review may be requested. BLM monitors grazing use through Standards for Rangeland Health which considers sage-grouse and other sensitive species' needs and monitoring associated with management of grazing allotments. As discussed below and in cross-referenced sections that discuss the BLM grazing program, land use planning and the BLM's special status species management policy, BLM takes a number of actions as a result of law and policy that help identify and address the threat of competition for forage.

Grazing

Livestock Grazing

Program Status. The WAFWA Conservation Assessment (page 7-26–35) describes the background of livestock grazing, the laws that were enacted to halt the unregulated grazing of the 1800s, and those laws that authorize BLM to retain public lands and manage them for multiple uses. There is discussion of the history of livestock grazing as a land use, being the most prevalent or most consistent use over the years on the sagebrush biome. In the WAFWA Conservation Assessment there are tables (page 7-111–117) that summarize grazing permits and leases, percent of lands in various seral stages, and lands that have been assessed as to standards established for rangeland health by state.

Program Element Generating Threats. *Competition for Forage.* Habitat degradation caused by overgrazing can result in the loss of habitat important to the long-term persistence of sage-grouse. This can be a result of the numbers of animals (livestock, wild horses and burros, or wildlife) exceeding the capacity of the pasture; improper timing or season of use; and/or inadequate rotation between pastures once utilization standards have been reached.

Capital Improvements (Range Improvements). Water developments, fencing, roundup and holding facilities, and transportation system can also create conditions that are incompatible with sage-grouse needs. For example, although water developments can increase water availability, hazards can be created by the development of areas that previously received light grazing because of the lack of water may now receive heavier browsing by ungulates. Fencing, to meet various management objectives (such as riparian pasture delineation, pasture separation, and habitat exclusions) can also cause unforeseen hazards by creating roosting sites for predators, facilitating the establishment of exotic plant species, and causing death through entanglement. Roads and related facilities are typically fixed on the landscape, but new developments may be authorized.

Ongoing Conservation Measures. *Competition for Forage.* As discussed previously, BLM lands are assessed through the Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration (land health standards). BLM implements standards and guidelines in a variety of ways. For example some standards and guidelines are implemented through design and contract specifications for range improvements. Others are implemented through terms attached to grazing permits and related authorizations for the next grazing year. Failure to comply with such terms could result in a permit being cancelled; grazing systems, stocking levels, or seasons of use being modified; or other changes made. BLM takes action pursuant to subpart 4110 (Qualifications and Preference), 4120 (Grazing Management), 4130 (Authorizing Grazing Use), and 4160 (Administrative Remedies) of the BLM grazing regulations as soon as practicable but not later than the start of the next grazing year upon determining that existing grazing management needs to be modified. *Note: This provision is proposed for change to allow 2 years.*

BLM's most recent data (2004) supplied to the WAFWA team indicates that about 43 percent of all BLM lands (not specific to sage-grouse occupied or historical habitat) have been assessed for rangeland health standards (Table 7.11, WAFWA Conservation Assessment). About 58 percent (40 million acres) of assessed acres are meeting or making significant progress toward meeting standards (Table 7.11, WAFWA Conservation Assessment, compares percentages of acres meeting or not meeting standards against all BLM acres rather than those assessed; acres not assessed may or may not meet rangeland health standards). In addition, BLM has made immediate changes in management (including vegetation treatments) on 22 million acres (87 percent) of the 25 million acres that were not meeting standards as a result of existing livestock grazing. Over time, all BLM-administered lands will be assessed and reassessed, and appropriate management actions taken.

There are 78.3 million acres of occupied sage-grouse habitat, of that, 12.1 million acres (Table A-20b, Appendix A) had livestock management changes made over the past 5 years to benefit sage-grouse (primarily on the timing of use to protect nesting and brood-rearing). This represents about 15 percent of the total occupied habitat.

Of the same 78.3 million acres of occupied habitat, 11.2 million acres (Table A-21b, Appendix A) have changed livestock management to benefit sage-grouse (such as suspended use and rested use). This represents 14 percent of the total occupied landbase. Therefore, of the 78.3 million acres of occupied sage-grouse habitat, 23.3 million acres have changed livestock management to benefit sage-grouse. This is about 30 percent of the occupied habitat on BLM lands.

Examples of conservation efforts (refer to Appendix D for further information on each example).

- 1) Much of the Field Office in BLM's Lower Snake River District is considered a stronghold for the sage-grouse. Over the last 3 years, the field office has completed standards and guideline assessment and determinations for grazing allotments covering nearly 750,000 acres. In addition, livestock grazing has been adjusted so that significant progress is made toward meeting Idaho Standards for Rangeland Health. Adjustments were made by issuing NEPA-compliant grazing decisions, in conformance with 43 CFR 4100 (the regulations addressing grazing administration) and the 1999 Owyhee Resource Management Plan. In completing standards and guideline reviews, Owyhee Field Office considered sage-grouse population and habitat data and made changes to livestock grazing to improve nesting and brood-rearing habitat for nearly 400,000 acres.
- 2) The Vale Field Office in Oregon has been actively changing management of grazing systems since 1989 to improve upland and riparian conditions. Changes occurred as a result of collaborative efforts over several years among BLM, the District grazing advisory board, and the Trout Creek Mountain Working Group.
- 3) The Bishop Field Office Resource Management Plan identifies several management decisions that would affect sage-grouse and habitat quality. Salting and supplemental livestock feeding is prohibited within 0.25 mile of strutting grounds. Conditions of grazing leases also ensure that fences are not located on strutting grounds and that escape ramps are installed in livestock water troughs. Other decisions establish plant community goals for sage-grouse forage and cover requirements and prohibit camping within 0.3 mile of strutting grounds during breeding.
- 4) Utah has a cooperatively-funded range trend monitoring crew that monitors, evaluates, and reports rangeland trends in designated key areas. Areas of declining rangeland trend known to be affecting sage-grouse habitat are identified for corrective action.
- 5) Utah is funding research focusing on the sagebrush die-off in that state to better design appropriate management responses to restore and improve habitat for sage-grouse.

- 6) University of Montana is studying survival, winter habitat use, and nutritional aspects of sagebrush in sage-grouse winter habitats.
- 7) Montana BLM is developing a strategy for implementing the Montana sage-grouse plan, ensuring a consistent process for incorporating sage-grouse conservation into land use plans, and identifying budget justifications.
- 8) All the sage-grouse states have prepared guidance to specifically address sage-grouse and sagebrush habitat in land use plans and activity-level plans and their evaluation. Resource advisory councils have established standards for special status species. Responsively handling the needs of livestock permittees has allowed for cooperative management programs that have all but eliminated incidents of unauthorized burning and herbicide application on BLM lands in Colorado.
- 9) Montana BLM has worked with the state to implement a rest-rotation grazing system on 10 allotments that lie within occupied sage-grouse habitat or other grazing leases purchased by the state.

Capital Improvements. Potential threats posed to sage-grouse as a result of capital improvements, also known as range improvements, are identified early in the planning process for range improvements. As directed by PRIA, an EA is prepared to determine the effect of a range improvement on the environment. The grazing regulations echo this direction by providing that proposed range improvement projects are to be reviewed in accordance with NEPA, 43 CFR 4120.3-1(f). The grazing regulations also provide that range improvements are to be installed, used, maintained, and/or modified or removed in a manner consistent with multiple use management (43 CFR 4120.3-1(a)). For a detailed discussion of the steps BLM takes to assess range improvements and the technical documentation to ensure wildlife concerns are factored into the planning process for range improvements see Chapter II(D). This guidance provides that mitigating measures would be developed to reduce or totally eliminate impacts to special status species (sage-grouse). For a detailed discussion of BLM's special status species management policy, see Chapter II(A)(2) and Appendix F. The special status species management policy directs that BLM special status species will, at a minimum, receive the same protection as candidate species. The protection afforded candidate species provides that:

(c)onsistent with existing laws, the BLM shall implement management plans that conserve candidate species and their habitats and shall ensure that actions authorized, funded, or carried out by the BLM do not contribute to the need for the species to become listed.

BLM Special Status Species Management Manual 6840 states that BLM shall coordinate with FWS or the National Marine Fisheries Service (NMFS) to determine, to the extent practicable, the distribution, population dynamics,

current threats, abundance, and habitat needs for candidate species occurring on BLM-administered lands and to evaluate the significance of those lands or actions undertaken by BLM in maintaining or restoring the species. In the case of BLM-authorized actions that are anticipated to have a significant effect on their status, BLM is to manage the habitat to conserve the species by: ensuring that candidate (special status) species are appropriately considered in land use plans; develop, cooperate with, and implement range-wide or site-specific management plans, conservation strategies, and assessments that include specific habitat and population management objectives designed for conservation, as well as management strategies to meet those objectives; ensure that BLM activities affecting the habitat are carried out in a manner that is consistent with the objectives for managing the species; and to monitor populations and habitats of candidate (special status) species to determine whether management objectives are being met. Finally, BLM is to request technical assistance from the FWS and/or NMFS, and any other qualified sources, on any planned action that may contribute to the need to list a candidate species as threatened or endangered.

Imminent and Future Conservation Measures. BLM will continue ongoing conservation efforts for sage-grouse in 2005 and beyond. The 2005 program is outlined in the President's Budget Justification, and includes a new budget theme for capturing sage-grouse specific projects. Continued monitoring of allotments through use of interdisciplinary teams to define project objectives will ensure maximum benefit to sage-grouse. As an example, about 1,100 water developments have been installed within occupied sage-grouse habitat from 2000–2004 (Appendix A, Table A-22). These water developments are inconsistent with the Connelly Guidelines to manage sage-grouse populations and their habitats. However, the new developments with guzzler or seepage have allowed sage-grouse to expand brood-rearing into areas previously too dry (due to drought). Follow-up monitoring will be necessary to follow trends in numbers and such habitat use.

BLM will continue the ongoing program of land health assessments that establish existing condition of lands grazed under permit or lease. Allotment management plan updates are proposed in key areas, and changes to grazing systems can be expected to continue as data are collected and assessed.

The National Sage-grouse Strategy, Action Item 1.4.3, makes the commitment to funding and developing a technical note that describes BMPs for grazing within sagebrush vegetation types to maintain and enhance quality sage-grouse habitat.

The development of BMPs for grazing within sagebrush vegetation types to maintain and enhance quality sage-grouse habitat is discussed in greater detail in Appendix B1.

Certainty of Implementation. Sufficient certainty of implementation for these immediate and future actions can be judged based on the accomplished and ongoing actions that have been described in this section. BLM authorities, procedural requirements, staff expertise, and out-year funding requests are in place for assessing the remaining rangelands for rangeland health and taking appropriate actions. BLM's target is completion of assessments across all rangelands by 2009. Refer to Appendix C and D for state summaries of standards and guidelines that concern sagebrush habitat and specific requirements and standards for sage-grouse. Sufficient certainty of effectiveness can be judged by the years of experience BLM has in conducting rangeland assessments and the monitoring and adaptive management described in the examples. The National Sage-grouse Strategy, Action Item 1.4.3, commits to funding and developing a technical note that describes BMPs for grazing within sagebrush vegetation types to maintain and enhance quality sage-grouse habitat, contributing to the certainty that the conservation efforts undertaken by BLM effectively reduce the threats.

Conservation Outcomes. By 2009, all rangelands are evaluated to determine if land health standards are met. Most of the sagebrush communities that meet standards for upland vegetation, riparian areas, and water quality also meet the standard for sage-grouse and provide suitable seasonal habitats. An assessment process for the standard for special status species and their habitats, which includes sage-grouse, will be consistently applied to sagebrush habitats important to sage-grouse by 2006. When a watershed, allotment, or pasture is not meeting health standards and livestock are determined to be the cause, corrective action will be taken to move the condition toward achieving all standards, including one for sage-grouse habitat. Actions taken may include vegetation treatments or changes in livestock management. The following are examples of how livestock management can and has improved pre-nesting and nesting cover and brood-rearing needs:

- 1) Delay grazing in nesting habitat during late March through early June.
- 2) Use grazing systems that promote forb and grass production; this can be a deferred, rotation, rest-rotation, high intensity-short duration, two-crop short rotation, other systems, or the current system.
- 3) Use grazing systems that do not place the livestock in the same pasture at the same time of year, every year, especially spring pastures.
- 4) Use stocking levels that stabilize or increase native perennial grass cover and reduce disturbance to soil crusts.
- 5) Design grazing systems to maintain or improve the quality of summer brood habitat for grouse within the context of multiple use. Hot season use by large herbivores of pastures with riparian areas should be designed to help

accomplish the on-site objectives of a variety of multiple uses on those riparian areas, including sage-grouse habitat requirements. On western rangelands, especially those areas with narrow riparian corridors with steep side-hills, livestock and wild horse grazing season and duration of use must be carefully managed to accomplish these multiple use objectives.

Through the NEPA process, projects in sagebrush habitat are designed to improve the health of sagebrush communities for the benefit of sage-grouse and associated species. A healthy sagebrush community for sage-grouse has a sufficient understory of diverse native forbs and grasses to provide food and cover for sage-grouse. Sage-grouse habitat assessments are repeated periodically to monitor change and determine if the treatment meets objectives for sage-grouse. Cooperative conservation partnerships will develop innovative solutions and techniques for the conservation of sage-grouse habitat through grazing management. Workgroups in sage-grouse states are developing sage-grouse conservation strategies and implementing conservation projects. Water developments placed in sage-grouse habitat contribute positively to sage-grouse well-being because they are placed away from important habitat areas, do not dry up natural springs, and better distributes grazing to maintain diverse plant communities and residual cover. Older developments that pose a hazard or risk to sage-grouse are modified to meet land health standards.

Issue 6a. Excessive grazing by wildlife.

BLM manages wildlife habitat on the public lands. Refer to Chapter III(A)(3) in this document to find a comprehensive discussion about the regulations and administrative authorities for this program. The flexibility to enact habitat actions or modify numbers will be coordinated with the state agencies to ensure attainment of both agencies' goals and objectives.

Wildlife Grazing

Program Status. Mule deer, elk, and pronghorn are important big game species for management consideration by BLM when establishing grazing systems and making forage allocations. Sagebrush is very important for mule deer and elk in many parts of the assessment area, and may suffer damage from over-browsing. The WAFWA Conservation Assessment provides some evidence that mule deer population changes may be related to declining sagebrush densities; however, there is also evidence that suggests drought may be a significant contributing factor. BLM cooperates with state wildlife agencies in identifying forage and habitat needs for these species. State fish and wildlife agencies manage big game populations on BLM-administered lands through BLM national policies that recognize state responsibility for management of resident species. A state/Federal partnership is essential for species-habitat management programs. Some BLM plans identify important habitat for these species and consider big game food and habitat needs in forage allocations. In other cases, range health

monitoring that indicates healthy or improving range conditions is indirectly used as a guideline that forage needs of big game species are adequate.

Program Element Generating Threats. Competition for forage with livestock, horses and burros: If stocking levels of animals exceed the vegetative capacity of the landscape, degradation of habitat can occur.

Habitat Improvement. Restoration or improvements designed to benefit certain species of wildlife may conflict with habitat requirements of sage-grouse.

Ongoing Conservation Measures. Big game impacts on sagebrush habitat are addressed in the NEPA process and/or are evaluated during range health assessments. Establishment of standards reflects all known uses of forage (AMLs, livestock, and wildlife), to ensure the sustainability of the ecosystem. Specific projects designed to improve wildlife habitat are evaluated through EAs to ensure projects that are designed to benefit one species does not conflict with the needs of another. Habitat management objectives are coordinated with state fish and wildlife agencies to ensure actions are consistent with herd management goals and objectives established by the state.

Example of Conservation Efforts. In 1992, the Lower Boxelder allotment was identified in the Little Snake Resource Management Plan in Colorado as a conflict area between deer and elk and livestock (see page J-2, Appendix J). A coordinated RMP was developed in an effort to resolve the identified conflict. The plan put in place a rotational/deferred grazing system which provided some very positive results in a short time, including improvement of plant vigor. Although the Landscape Health Assessment for the Axial Basin watershed is scheduled for 2006, current observations of vegetative health, wildlife numbers, and livestock use indicate positive trends. The initial coordinated RMP was designed to address forage use conflicts on big game winter range, as the projects were implemented these brush management actions were also designed to take into consideration the sage-grouse habitat with emphasis on protection and enhancement of lek and brood-rearing areas. Grasses and forbs have responded well from the brush management treatments. Some regeneration of young sagebrush plants is evident as well as other shrubs, including winterfat on some areas. Adequate mature sagebrush stands for sage-grouse nesting have been protected. Monitoring of sage-grouse habitat and populations shows an increasing trend, despite several low water and drought years. Table 3 on page 79 shows this trend data.

Imminent and Future Conservation Measures. BLM will continue evaluating environmental impacts of habitat restoration projects through the NEPA process. Where conflicts with sage-grouse occur, sage-grouse objectives will take priority. BLM will continue to coordinate habitat actions with the state agencies to ensure attainment of both agencies' goals and objectives.

Certainty of Implementation. Sufficient certainty of implementation for these immediate and future actions is based on the accomplished and ongoing actions that have been described in this section. BLM authorities, procedural requirements, staff expertise, and out-year funding requests are in place for assessing the remaining rangelands for rangeland health and taking appropriate actions. BLM's target is completion of assessments across all rangelands by 2009. Sufficient certainty of effectiveness can be judged by the years of experience BLM has in conducting rangeland assessments and the monitoring and adaptive management described in the examples. The National Sage-grouse Strategy, Action Item 1.4.3, commits to funding and developing a technical note that describes BMPs for grazing within sagebrush vegetation types to maintain and enhance quality sage-grouse habitat. Action Item 3.1.1-3 identifies and reaffirms the commitment to develop and expand partnerships with the state game and fish agencies and others. Strategy 2.2 describes BLM's commitment to continued monitoring and research. All goals show that there is a certainty that the conservation efforts undertaken by BLM effectively reduce the threats.

Conservation Outcomes. By 2009, all rangelands are evaluated to determine if land health standards are met. Most of the sagebrush communities that meet standards for upland vegetation, riparian areas, and water quality also meet the standard for sage-grouse and provide suitable seasonal habitats. An assessment process for the standard for special status species and their habitats, which includes sage-grouse, will be consistently applied to sagebrush habitats important to sage-grouse by 2006. When a watershed, allotment, or pasture is not meeting land health standards an interdisciplinary team determines the cause. After close coordination with the state wildlife agency, corrective action will be taken to move the condition toward achieving all standards, including one for sage-grouse habitat. Actions may include vegetation treatments, changes in livestock management, or reductions in wildlife populations. Through the NEPA process, projects in sagebrush habitat are designed to improve the health of sagebrush communities for the benefit of sage-grouse and other associated species. A healthy sagebrush community for sage-grouse equates to a mosaic of sagebrush canopy densities intermixed with diverse and productive understory vegetation consisting of forbs for sage-grouse food and grasses for nesting and cover. Sage-grouse habitat assessments are repeated periodically to monitor change and determine if the treatment meets objectives for sage-grouse.

Issue 7. Excessive grazing by wild horses.

BLM manages wild horses and burros under the authority of FLPMA and the Wild Free-Roaming Horse and Burro Act of 1971. The objective of the applicable regulations, found at 43 CFR 4700, is to manage wild horses and burros as an integral part of the natural system on public lands under the principle of multiple use; protection of wild horses and burros from unauthorized capture, branding,

harassment or death; and humane care and treatment of wild horses and burros (43 CFR 4700.0-2). The policy of BLM, set forth in regulation, is to manage wild horses and burros as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habits. Management activities affecting wild horses and burros, including the establishment of herd management areas, are developed through the land use planning process (43 CFR 4710.1). Herd management areas are established through land use planning and associated NEPA processes. In delineating each herd management area, the authorized officer considers the public lands and undergoes land health assessments. Management is subject to relevant BLM policies, such as the special status species management policy. For more detailed information on BLM's land use planning and associated NEPA process, land health standards, and BLM's Special Status Species Management Policy, see Chapter II.

Wild Horse and Burro

Program Status. The BLM has established the appropriate management level of wild horses and burros on 155 of 206 herd management areas and will have the remainder established by the end of Fiscal Year 2005. There are approximately 36,000 wild horses on the public land in these herd management areas (Rawson, J., 2003; *personal communication*). About 37 percent of the 155 herd management areas exceed approved animal numbers.

Program Element Generating Threats. *Competition for Forage:* Herds that exceed appropriate management levels for their herd management area can cause degradation on the landscape. Bureau priority is to reduce the numbers of animals to levels that will provide for a balance of uses, including the conservation of Bureau sensitive species. Gathers to reduce numbers can occur year-round. An interdisciplinary team sets appropriate management levels during the planning process consistent with desired goals associated to sensitive species. The same type of team conducts monitoring to evaluate how the goals are being met. When changes are needed to meet land health standards, an adjustment would be made under the NEPA process.

Capital Improvements: Generally, existing facilities are used to trap, gather, and haul horses from herd management areas. If new gather areas are required, environmental effects of gathers are evaluated on a site-specific basis under an annual EA.

Ongoing Conservation Measures. Land health assessments identified under the threat of livestock grazing are also used in establishing AMLs for herd management areas.

Of the 108 land use plans, amendments, and other programmatic guidance documents covering wild horses and burros within occupied sage-grouse habitat, 65 were not applicable, and 35 percent of those applicable contain stipulations and prohibitions that provide direct benefits to sage-grouse and its habitat (Tables A11c-1, A12c-1, A13c-1, and A14c1, Appendix A). Examples include timing restrictions, controlled surface use, and noise limitations that apply to activities that are conducted in management of the wild horses and burros (such as gathers, census, and monitoring).

Based on these plans, and implementation of AMLs, 63 percent of the 155 herd management areas are at or below approved animal numbers. Table 7.17 on page 7-121 of the WAFWA Conservation Assessment provides a state-by-state breakdown of AML numbers. Please note this table is generated from 2003 data, and BLM numbers have been updated (Rawson, J., 2003; *personal communication*).

Examples of conservation measures. In the Ely Field Office, there are eight allotments that comprise about 820,000 acres (see page J-52, Appendix J). Monitoring indicated that the area was significantly overstocked with respect to both livestock and wild horses. In 1994 a decision set an AML for wild horses (commensurate with the available habitat) which was a 69 percent reduction in existing numbers. Currently, the herd is 40 to 50 percent below AML. Monitoring of the allotments show sage-grouse leks (strutting grounds) counts are in an upward trend since the implementation of the reduction. There are 23 documented leks in this area. The 2004 breeding season for sage-grouse saw numbers of birds up 75 to 100 percent on some leks. One lek that has not been determined to be active since 1982 was active this year (refer to Appendix D under BLM Nevada State Summary).

Imminent and Future Conservation Measures. EAs are completed prior to horse/burro gathers to ensure the impact from the activity is minimized, and appropriate locations for gather/coral sites are utilized. Typically, existing infrastructure is used, so no new develop is needed. The same gathering sites are typically used from one year to the next. If new sites are required, sites that are already impacted are used. Timing is evaluated to ensure activities are not occurring proximate to important sage-grouse occupied habitat.

BLM will continue developing and implementing AMLs. The redistribution of BLM funds in Fiscal Year 2004 (approved reprogramming requests) to supply the financial resources to get herd management areas to AML should improve the vegetative communities and watersheds and improve the capability of the land to provide optimum habitat for sage-grouse.

BLM plans to continue with ongoing conservation efforts in 2005 and beyond. The 2005 wild horse and burro program is outlined in the President's Budget Justification. A reprogramming request allows continued monitoring of

allotments, and use of interdisciplinary teams to define project objectives that ensure maximum benefit to the species.

Certainty of Implementation. Sufficient certainty of implementation for these immediate and future actions is based on the accomplished and ongoing actions that have been described in this section. BLM authorities, procedural requirements, staff expertise, and out-year funding requests are in place for assessing the rangelands for rangeland health and taking appropriate actions. BLM's target is completion of assessments across all rangelands by 2009. Refer to Appendices C and D which describe state rangeland health standards and special standards, such as Nevada's standards for assessing rangeland health. Sufficient certainty of effectiveness can be judged by the years of experience BLM has in conducting rangeland assessments and the monitoring and adaptive management described in the examples. The National Sage-grouse Strategy, Action Item 1.4.3 commits to funding and developing a technical note that describes BMPs for grazing within sagebrush vegetation types to maintain and enhance quality sage-grouse habitat, contributing to the certainty that the conservation efforts undertaken by BLM effectively reduce the threats.

Conservation Outcome. Reprioritized budgets will aid in reducing wild horses to appropriate management levels in herd management areas. Sagebrush habitats that provide habitat for sage-grouse will improve as vegetative communities recover from over-grazing by horses. Plant diversity increases providing more succulent forbs for food for sage-grouse and taller grasses for nesting and cover. Sagebrush regeneration increases because fewer young sagebrush shoots are grazed and fewer sagebrush plants are trampled and killed. Late brood-rearing sites increase for juvenile sage-grouse as riparian areas and springs improve.

Issue 8. Fire related issues, including wildfire and prescribed fire.

Fire management, including prescribed fires, follows conditions and procedures mandated in various regulations as outlined in Chapter III(D) and Factor D, of this chapter. Wildland fire is managed using guidance from the National Fire Plan, the 2001 Federal Fire Policy, land use plans and fire management plans; and the rehabilitation of burned areas is guided by a new Departmental Manual supported by an "Interagency Emergency Stabilization and Rehabilitation Handbook". The actions and measures implemented through the Wildland Fire, Hazardous Fuels, Prescribed Fire, and Emergency Stabilization/Burned Area Rehabilitation program are discussed under this issue.

Wildland Fire, Hazardous Fuels, Prescribed Fire, and Emergency Stabilization/Burned Area Rehabilitation

Program Status. See Factor A, Issue 3. Fire management, including prescribed fires, follows conditions and procedures mandated in various regulatory mechanisms outlined in Chapter III(D). Prescribed fire and suppression of wildfires are managed through programmatic guidance in land

use plans and fire management plans that address specific objectives, guidance, and constraints in a geographic area or at a watershed scale. Wildland fire suppression actions, priorities, and the appropriate level of attack are guided by the fire management plan in accordance with preplanned resource objectives. Fuel management is also guided by the fire management plan with the objective of reducing the threat of large catastrophic fires. The rehabilitation of burned areas is guided by land use plans and a new Departmental Manual supported by an “Interagency Emergency Stabilization and Rehabilitation Handbook”.

Program Element Generating Threat. The sagebrush steppe ecosystem is highly variable and occurs at low- to high-elevations with a corresponding change in resilience to disturbance. Low elevation communities, where precipitation is unpredictable, have suffered invasion by exotic species and demonstrate little resilience to fire. Higher elevation communities receive more precipitation, tend to have deeper soils, are more productive, and generally exhibit greater resiliency to disturbance.

Ongoing Conservation Measures. Prior to the mid-1980s, sagebrush-steppe ecosystems were managed primarily for forage production and fire was used as a tool to convert communities from shrub- to grass-dominated landscapes. Current management philosophy emphasizes the naturalization of fire regimes in the restoration of systems and processes. Fire and fuels management includes vegetation community restoration through use of fire and non-fire tools.

Likewise, prior to the mid-1980s, wildlife habitat management focused on specific sites that offered attributes or habitat values over time. The philosophy was that proper management could guarantee that the condition of habitat would remain static. Current management philosophies recognize more dynamic systems across larger landscapes, like watersheds or eco-units. Land managers accept that naturally occurring vegetation succession and disturbance will influence habitat conditions as old and regenerated stands rotate throughout the landscape. Restoration efforts now focus on establishing resilient, naturally maintaining systems.

BLM has been working cooperatively with state agencies to map key sage-grouse habitats (such as seasonal habitats, strongholds, linkage areas). As these maps are completed, they can be incorporated into fire management plans so that important sage-grouse areas receive higher priority when decisions are made about the appropriate suppression response to ignitions. In another mapping project, the Department of the Interior and the FS, in partnership with The Nature Conservancy, are working on a Landscape Fire and Resource Management Planning Tools Project (known as “LANDFIRE”) that will define fire regimes, fuels condition classifications, and fire risk. Its products will enable managers to better determine fire risks and set rangeland health objectives at the watershed level. This information will be used with other inventory data to identify sage-grouse and sagebrush management objectives and subsequent fire

management actions to reduce future threats to sage-grouse and sagebrush habitats and restore natural fire regimes.

Criteria for making decisions to suppress a wildfire or to manage a wildfire for resource benefit are established by the direction outlined in fire management plans. Naturally-ignited fire may be managed to benefit resource values in accordance with preplanned conditions and objectives, or the fire may be suppressed consistent with suppression objectives identified in the fire management plans. Initial attack activities are also guided by any constraints identified in the fire management plans. For example, a wildfire occurring in an area of sagebrush with conifer encroachment may be allowed to burn if predetermined weather and fuel conditions exist.

If fires escape initial attack, a resource advisor (a wildlife biologist or natural resource specialist) may be assigned to provide specific information for protecting or enhancing sage-grouse habitat, and ensure that resource constraints are clearly understood. The resource advisor can work with fire suppression personnel to retain unburned areas, including interior islands and patches of sagebrush, unless there are compelling safety, private property, resource protection, or control objectives at risk. In crucial sage-grouse habitats identified in land and fire management plans, the resource advisor can also work with fire personnel to minimize burnout operations in areas where there are no threats to human life, private property or other important resources.

Where wildfires are being managed for resource benefit (as opposed to being aggressively suppressed) resource specialists work with fire personnel to evaluate impacts on sage-grouse and sagebrush habitats to ensure that habitat that is suitable for sage-grouse is not unintentionally burned. In this process, they consider the interval since the last fire, fire size and past plant community response to burning to ensure that species that would be detrimental to a site and to sage-grouse habitat do not unintentionally become established. This is particularly important in areas where invasive annual species such as cheat grass may dominate a site following burning.

BLM has entered into assistance agreements with state and local fire organizations to maximize suppression effectiveness. Consequently, achieving suppression objectives is a multi-agency effort which ensures protection of sage-grouse habitat to the maximum extent possible. Based on these joint efforts, BLM has been successful in containing over 97 percent of all wildland fires during the initial attack stage.

Wildland fire management activities and funding are not limited to suppression, but are also directed to proactive fuels management (vegetation) to reduce the threat of large catastrophic fires and promote healthy functioning ecosystems. Over the past 5 years, 2.5 million acres have been treated to benefit sage-grouse

through a combination of fire, biological, chemical, mechanical, and reseeding treatments (Tables A-10a1-5; A-10c1-5; A-10e1-5; A-10g1-5, Appendix A).

Fuels treatment projects are established at strategic locations to minimize the size of wildfires and limit further loss of sagebrush. Fuels treatments may include the use of greenstrips (strips of fire resistant vegetation) to help reduce the spread of wildfires into sagebrush communities. The Wyoming Sagebrush Fuel Breaks projects in the Three Rivers Resource Area and Lakeview Resource Area in eastern Oregon (see page J-61, Appendix J) are examples of BLM projects that protect important sagebrush stands by treating strips of sagebrush to slow the spread of fires and allow more time for fire crews to access remote areas. The objective is to reduce the possibility of catastrophic wildlife on almost 1 million acres of native sagebrush habitat.

Other habitat restoration projects target areas where conifers have encroached upon sage-grouse habitat. Areas of dense conifers (pinyon pine, juniper, ponderosa pine, and Douglas fir) are treated by burning, cutting or chaining to reestablish sagebrush plant communities (prescribed fire may not be appropriate on some sites due to the lack of understory or heavy woody fuel loads). Sites selected for cutting or chaining have relatively young trees and should have evidence of past sagebrush plant communities as evidenced by residual native plants or soils that support a rangeland, not a woodland ecological site. Cutting and chaining may occur as a single treatment or a preparatory treatment for prescribed burning. Post-treatment seeding will generally be required in areas where residual, herbaceous vegetation is inadequate to recover once the conifer competition is removed.

Project plans for fire and resource management are developed by an interdisciplinary team to guide specific on-the-ground projects, such as mechanical fuel reduction projects, prescribed burns, or emergency stabilization/rehabilitation treatments. These projects are implemented to achieve objectives identified in land use plans and other activity plans including fire management plans. Through the NEPA process, applicable constraints and management practices are identified and applied. The WAFWA (Connelly et al. 2004) guidelines are sometimes the basis for the BMPs, as in many planning areas in Idaho.

After a wildland fire event, an interdisciplinary team evaluates and develops appropriate burned area emergency stabilization and rehabilitation plans to mitigate adverse fire effects (see Factor A, Issue 3). Burned area emergency stabilization and rehabilitation plans in sagebrush steppe habitats focus on restoration of vegetation community structure and function based on pre-fire conditions. BLM is investing approximately \$4.6 million in the Native Plant Development Program (BLM 2005 Budget Request). As of Fiscal Year 2004, BLM has initiated implementation and monitoring of 216 emergency treatments and 138 rehabilitation treatments (BLM 2005 Budget Request). BLM

expenditures for emergency stabilization and rehabilitation in Fiscal Year 2004 are expected to be in excess of \$20 million. BLM's 3-year total is expected to top \$70 million (see Table 5).

Table 5.—Total acreage for emergency stabilization and rehabilitation from Fiscal Years 2002–2004

Fiscal year	Cost	Acres ¹	Includes acres monitored
2002	\$31,336,131	3,986,947	Yes
2003	\$20,655,788	2,284,834	Yes
2004	\$20,000,000 ²	1,600,000 ²	Yes
Totals	\$71,991,919	7,771,781	

¹ Acres are total rehabilitation acres of which approximately 90 percent includes sagebrush habitat.
² Predicted cost and acres.
Source: *Public Land Statistics*

Imminent and Future Conservation Measures. Currently, all BLM fire management plans are being converted to a new interagency format. During this conversion process fire management objectives are being reviewed and modified to ensure they reflect resource objectives. This conversion process is another opportunity to incorporate objectives for sage-grouse and sagebrush habitats and it is scheduled to be completed by September 30, 2004.

Per the National Sage-grouse Strategy (Appendix B1, Action Item 1.1.6) fire management plans will be developed or revised to include sage-grouse habitat management guidance. In the meantime, states are completing state-led sage-grouse plans and incorporating management guidance into land use plans, suggested management practices are recommended as described in Appendix B3, Action Item 1.4.1. The BLM Sage-grouse Land Use Plan Guidance (Appendix B2, Action Item 1.3.1) is also available to field offices to use during the planning process.

A fire planning and budgeting tool, the Fire Program Analysis system, is being jointly developed by the Department of the Interior and FS to better utilize fire science and statistical analysis in implementing cost-effective fire management programs. The first module will be ready for implementation in Fiscal Year 2005 and will determine optimal staff and equipment levels to prepare for wildfires based on local fire occurrence, fuels, burning conditions, and values to be protected. The system is based on the concept that suppression resources will be directed to areas of highest suppression priority if there are shortages of staff and equipment. It will allow managers to determine optimum suppression organizations (i.e., the number and type of fire crews and fire engines) at different funding levels, thereby allowing for maximum protection of priority areas (which could include sage-grouse or sagebrush habitats).

Over 2 million acres of shrublands have been identified for restoration or enhancement in current land use plans. An additional 1.2 million acres of shrublands encroached by pinyon-juniper woodlands have been identified for

restoration. A total of 65 RMPs in occupied sage-grouse habitat are currently under revision or planned for revision. Acres identified as needing vegetative treatments to improve sagebrush habitats, rehabilitate annual grasslands, and treat invasive juniper woodlands will increase dramatically through these new plans.

The Fiscal Year 2005 budget for the Department of the Interior fire management agencies requests an \$8 million increase to monitor fuel treatment projects (BLM 2005 Budget Request). Although this funding will be used primarily to monitor the effectiveness of fuel reduction treatments in reducing the threat of wildfires to communities, a portion will be used to monitor the effectiveness of fuels treatments in protecting critical native plant communities, such as sagebrush habitat important to sage-grouse. An increase of \$4 million is also being requested in Fiscal Year 2005 in the land use planning sub-activity to monitor plan implementation and resource conditions in cooperation with collaborators. These increases, if funded, will provide additional capability to monitor whether sage-grouse and sagebrush habitat objectives are being met, such as achieving a certain percentage cover of sagebrush on important habitat areas or providing a certain level of forb production on brood-rearing areas. If objectives are not being met within anticipated timeframes, planning decisions or implementation actions can be adjusted appropriately.

Conservation Outcome. The risk of catastrophic wildfire and subsequent loss of large blocks of sage-grouse habitat are reduced as BLM implements fire management strategies that return sagebrush communities to more resilient naturalized fire regimes. Wildfires are suppressed in sage-grouse habitat unless human health and safety are at risk. Early initial attack effectively reduces the fire size and reduces losses of sage-grouse habitat. During multiple ignitions, a resource advisor with knowledge of sage-grouse habitat is available to advise crews so that fire camps or suppression activities do not harm sage-grouse or their habitat. If stabilization and site rehabilitation are necessary after a wildfire in sage-grouse habitat, appropriate native seed sources are becoming more available and post-management of other uses on the site (such as grazing) are adequate for healthy restoration. Properly restored sagebrush stands for sage-grouse should have a sufficient understory of diverse native forbs and grasses to provide food and cover for grouse. Monitoring sites after treatment allows BLM to adjust management and reseed if objectives for sage-grouse are not met. Where soils need to be stabilized quickly and native seed sources are not available, non-competitive and often non-reproductive plant species are seeded to prevent long-term damage until the native community is restored. Fire effective in treating vegetation in sagebrush habitats to improve the diversity of the native plant community, reduce conifer encroachment, or reduce the risk of a large catastrophic wildfire. Sage-grouse habitat is improved or protected by treatments that reduce exotic species, eliminate trees that serve as raptor perches, enhance the diversity of grasses and forbs for food and hiding cover, and retain adequate sagebrush canopy for seasonal habitats (nesting, late

brood-rearing, and wintering). Fuel breaks created in strategic places among large stands of sagebrush reduce the likelihood that a large wildfire will eliminate important blocks of sagebrush that provide habitat for sage-grouse. New techniques to manage and restore sagebrush habitat for associated species like sage-grouse are continually perfected as the sagebrush technical team coordinates priorities for sagebrush management research.

Issue 9. Invasive species.

An invasive species is defined as a species that is non-native to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health (Executive Order 13112, signed by President Clinton 1999). Invasive plants are impacting a wide range of habitats used by sage-grouse and these species are not restricted to just invasive annual grasses such as cheatgrass or medusahead (WAFWA Conservation Assessment, page 7-107, Table 7.5). Sheley and Petroff (1999) list 29 species of rangeland weeds.

Programs that often contribute to the spread or control of invasive species are discussed in more detail and include fluid minerals, recreation access management, fire/fuels, and vegetation management.

Program Status. BLM is involved in an active cooperative weed management program that includes treatment and education/outreach programs targeted at public land users. In the last 3 years, BLM has contributed \$3.8 million toward cooperative weed projects

Regulatory authorities and administrative processes that guide the management of invasive species, including cheatgrass and conifer invasion, are addressed in Chapter III(F). Various authorities previously cited guide and direct BLM actions, including Executive Order 13112 on Invasive species and The Federal Noxious Weed Act of 1974.

Program Element Generating Threat. The structure of plant communities is altered when invasive species replace other plant species within a community. The following is one example but similar problems can occur for all the other invasive species that carry traits which allow them to take over sites.

Invasive annual grasses are an excellent example of the structural changes that can occur in a plant community (i.e. cheatgrass).

- Invasion of cheatgrass provides a continuous fuel source for fires.
- Most sagebrush species are intolerant of fire and are killed.

- The presence of cheatgrass in the community functions as a highly competitive plant making it difficult for other species to establish.
- Native plants die at the site, and if they are not replaced, they may eventually be eliminated from the site.
- Community structural changes may occur.
- The loss of sagebrush may eliminate the woody plant component from the community for a longer time than it would if the herbaceous understory consisted of native perennial bunchgrasses and forbs rather than cheatgrass.
- Another aspect of structural change can occur below ground with changes in the forms or amounts of nutrients. The roots contain fewer structural cells and decompose more quickly than woody plant roots. This changes the distribution of organic matter in the soil and concentrates it closer to the surface (Norton, *in press*).

Another threat is the change of the functional relationships among organisms that take place when a diverse native plant system transitions into one dominated by an invasive plant. Using cheatgrass as the example once again::

- Shifts can result in reduced water infiltration in some soils.
- The loss of interspaces changes the temporal availability of water and may impact nutrients as well.
- Stands of cheatgrass reduce growth of native perennial plants as a response to significant reduction in water availability and native plant water content.

Ongoing Conservation Measures. In the last 3 years (2002–2004) the weed management program has aggressively participated in implementing projects in cooperative partnerships that provide benefits to sage-grouse. On average, BLM spends \$1.25 million per year on over 200 projects (Table A-16-1–3, Appendix A).

During 2003, BLM inventoried 9,688,043 acres for noxious weeds, treated 297,723 acres, and evaluated/monitored 476,912 acres.

BLM is an active participant in the National Sage-grouse Strategy for Invasive Plant Management. In that effort it outlines the national effort made to Prevent, Control, and Restore lands.

BLM is actively engaged in restoring and rehabilitating sagebrush communities using local native plant materials (see page J-23, Appendix J and Appendix D under BLM Idaho State Summary; particularly the Shoshone Restoration Project, Shoshone Field Office, Shoshone, Idaho, for an example of reseeding damaged areas with native and introduced species). Drill seeding of a combination of native and introduced grass and forbs species was done in a fall treatment. Sagebrush was aerially applied in the winter after the chemical, prescribed burning, and drill seedlings were completed.

Certainty of Implementation. Sufficient certainty of implementation for these immediate and future actions is based on the accomplished and ongoing actions that have been described in this section. BLM authorities, procedural requirements, staff expertise, and out-year funding requests are in place for assessing the remaining rangelands for rangeland health and taking appropriate actions described in the examples. The National Sage-grouse Strategy, and BLM Sage-grouse Guidance commits to funding and developing sagebrush vegetation types to maintain and enhance quality sage-grouse habitat, contributing to the certainty that the conservation efforts undertaken by BLM effectively reduce the threats.

Conservation Outcomes. Cooperative weed management continues to stem the spread of invasive species and subsequent degradation of sage-grouse habitats. Treatments in sage-grouse habitat are localized so that important native forbs are not eliminated by the application of broad leaf herbicides. Public education and proactive weed control increases the partnerships and funding sources so that more sagebrush acres can be treated. When restoration efforts are needed, a sufficient supply of native materials is available through the Native Plant Development Program.

Minerals/Energy

Fluid Minerals

Program Status. See Factor A, Issue 5 for a description of the program status. A full discussion about the regulations and administrative processes guiding the oil and gas program are found in Chapter III(B)(1).

Program Element Generating Threat. Construction associated with development disturbs soils and increases susceptibility to invasive species. Equipment, vehicles, and humans transport seed sources into previously undisturbed sites.

Ongoing Conservation Measures. About 64 percent of land use plans or other programmatic guidance that addresses sage-grouse habitat needs require the treatment of noxious weeds on all surface-disturbed acres (Table A-9, Appendix A). With few exceptions, new permits associated with development (energy, rights-of-way, and mining, for example) contain a noxious weed control provision, condition of approval, or stipulation as a condition of operating on the public lands.

Conditions of Approval: Conditions may be added during APD permitting to address the spread of invasive species. For example:

- Conditions may require operators to treat weeds on expanded areas adjacent to disturbed sites.
- Interim reclamation of ongoing operations is required.
- Washing of equipment before construction may be required.

Best Management Practices are described in Issue 5.

Imminent and Future Conservation Measures. Compliance and enforcement monitoring will be evaluated so any management adjustments can be made.

Conservation Outcome. Native sagebrush habitat is protected from the spread of invasive species during energy development by treating disturbed sites, seeding bare soils, and washing heavy equipment before moving to a new location. Sage-grouse benefit when the spread of introduced species is minimized or eliminated.

Recreation

Access management

Program Status. See Factor A, Issue 5 for a discussion of program status

Program Element Generating Threat. Vehicles and humans transport seed sources onto native rangeland, introducing or facilitating the spread of noxious and/or invasive plant species.

Ongoing Conservation Measures. See Factor A, Issue 5 for a discussion of commonly used conservation measures. BLM has an active cooperative weed management program. In the last 3 years, BLM has contributed \$3.8 million toward cooperative weed projects including education and outreach programs targeted at recreation users of public lands.

Conservation Outcome. Cooperative weed management continues to stem the spread of invasive species and slow down the degradation of sage-grouse habitats. Decisions made to close or limit off-highway vehicle use reduces the spread of invasives into previously undisturbed sage-grouse habitat. Treatments in sage-grouse habitat are localized so that important native forbs are not eliminated by the application of broad leaf herbicides. Public education and proactive weed control increases the partnerships and funding sources so that more sagebrush acres can be treated. When restoration efforts are needed, a sufficient supply of native materials is available through the Native Plant Development Program.

Wildland Fire, Hazardous Fuels, Prescribed Fire, and Emergency Stabilization/Burned Area Rehabilitation

Program Status. See Factor A, Issue 3.

Program Element Generating Threat. Increased fire occurrence and intensity have made sites more vulnerable to the invasion of exotic species and noxious weeds. This conversion accounts for substantial losses of sagebrush habitats within the past 50 to 100 years.

Conversely, decreases in natural fire frequency in the sagebrush/pinyon-juniper interface are another factor contributing to loss of sage-brush communities and displacement of native herbaceous understory with nonnative annuals. The WAFWA Conservation Assessment, pages 7-8 and 7-13, states:

The area of pinyon-juniper woodlands has increased approximately 10-fold since the late 1800's in the Great Basin. Moreover, these woodlands are capable of expanding over a far greater area . . . Almost 60% of sagebrush in Eastern Great Basin is at low risk to displacement by pinyon-juniper. Another 35% of the sagebrush in Eastern Great Basin is at high risk to displacement by pinyon-juniper.

Ongoing Conservation Measures. See Factor A, Issue 8. The conservation measures described in Issues 3 and 8 are relevant to the actions and processes used to address invasive species such as cheatgrass and conifer encroachment into sagebrush habitats.

Imminent and Future Conservation Measures. Nationally, 2 million acres of shrublands are identified as needing some restoration or treatment of fuels to reduce the possibility of catastrophic wildfire. Projects focus on restoration and diversification of sagebrush steppe habitats, including conversion of annual exotic grasslands to functional sagebrush communities.

BLM is currently tracking 216 emergency stabilization plans/treatments and 138 rehabilitation plans/treatments. BLM expenditures for emergency stabilization

and rehabilitation in Fiscal Year 2004 are expected to be in excess of \$20 million. BLM's 3-year total is expected to top \$70 million.

BLM is also investing over \$4.6 million in Fiscal Year 2004 (and will continue this level in Fiscal Year 2005) in the Native Plant Development Program which benefits sagebrush habitats by collecting and developing native seed for use in rehabilitation and restoration efforts. The largest project under this program, the Great Basin Native Plant Selection and Increase Project, emphasizes increased production of seed of native forbs important for the restoration of sage-grouse habitat. BLM has identified and is in the process of developing 25 forb species that are important components of sage-grouse habitat.

Conservation Outcome. The naturalization of fire regimes through fire management planning reduces encroachment by conifer into sage-grouse habitat and reduces the invasion of cheatgrass into sagebrush sites that provide habitat for sage-grouse. Sage-grouse habitat is improved or protected by treatments that reduce exotic species, eliminate trees that serve as raptor perches, enhance the diversity of grasses and forbs for food and cover, and retain sagebrush canopy to provide for seasonal habitats (nesting, late brood-rearing, and wintering). Fuel breaks created among large stands of sagebrush reduce the likelihood that a large wildfire will eliminate important blocks of sagebrush that provide habitat for sage-grouse. New techniques to manage and restore sagebrush habitat for associated species like sage-grouse are continually perfected as the sagebrush technical team coordinates priorities for sagebrush management research. If stabilization and site rehabilitation are necessary after a wildfire occurs in sage-grouse habitat, appropriate native seed sources are becoming more available and post-management of other uses on the site (such as grazing) are adequate for healthy restoration. Properly restored sagebrush stands for sage-grouse should have a sufficient understory of diverse native forbs and grasses to provide food and cover for grouse. Monitoring sites post treatment allows BLM to adjust management and reseed if objectives for sage-grouse are not met. Where soils need to be stabilized quickly and native seed sources are not available, non-competitive and often non-reproductive plant species are seeded to prevent long-term damage until native community is restored.

Vegetation Management

Program Status. See Factor A, Issues 2 and 3.

Program Element Generating Threat. Ground disturbing activities associated with vegetative treatments can carry a risk of increasing invasive species. This could be directly caused by exposing bare soil to windblown seeds, inappropriate

seed mixes of desired species (too high of weed content in seed mixes), or the failure of seedlings to establish the desirable species.

Ongoing Conservation Measures. BLM has an active invasive weed control and eradication program. About 64 percent of land use plans or other programmatic guidance that addresses sage-grouse habitat needs require the treatment of noxious weeds on all surface-disturbed acres (Table A-9, Appendix A).

The Great Basin Restoration Initiative was established in 1999 to guide and direct restoration work across the Great Basin. The Initiative endeavors to (1) maintain landscapes (especially native plant communities) and dependent species where healthy land exists, (2) restore degraded landscapes to improve land health and reduce invasive species, and (3) sustain long-term multiple use. From its inception, the Initiative has been widely supported and counts among its partners multiple government agencies, universities, and non-governmental organizations.

Many of the land use plans, amendments, and other programmatic guidance documents contain stipulations and prohibitions that provide benefits to sage-grouse and its habitat. Some examples include timing restrictions, controlled surface use, and noise limitations that apply to the activities that are conducted in management of the invasive species/weed management program.

In the last 3 years (2002–2004) the weed management program has aggressively participated in implementing projects in partnership that are benefiting sage-grouse. On an average, BLM has spent \$1.25 million per year on 210 projects (Table A-16-1–3, Appendix A).

During 2003, BLM inventoried 9,688,043 acres for noxious weeds, treated 297,723 acres, and evaluated/monitored 476,912 acres.

Conservation Outcome. Cooperative weed management continues to stem the spread of invasive species and slow down the degradation of sage-grouse habitats. Treatments that occur in sage-grouse habitat are localized so that important native forbs are not eliminated by the application of broad leaf herbicides. Public education and proactive weed control increases the partnerships and funding sources so that more sagebrush can be treated. Sufficient supplies of native materials are available through the Native Plant Development Program for restoration. Sage-grouse habitat is improved or protected by treatments that reduce exotic species, eliminate trees that serve as raptor perches, enhance the diversity of grasses and forbs for food and cover, and retain sagebrush canopy to provide for seasonal habitats (nesting, late brood-rearing, and wintering). Fuel breaks created among large stands of sagebrush reduce the likelihood that a large wildfire will eliminate important blocks of sagebrush that provide habitat for sage-grouse. New techniques to

manage and restore sagebrush habitat for associated species like sage-grouse are continually perfected as the sagebrush technical team coordinates priorities for sagebrush management research. If stabilization and site rehabilitation are necessary after a wildfire occurs in sage-grouse habitat, appropriate native seed sources are available and post-management of other uses on the site (such as grazing) are adequate for healthy restoration. Properly restored sagebrush stands for sage-grouse should have a sufficient understory of diverse native forbs and grasses to provide food and cover for grouse. Monitoring sites post treatment allows BLM to adjust management and reseed if objectives for sage-grouse are not met.

Issue 10. Habitat fragmentation associated with BLM program activities; fences, powerlines, and roads as a direct mortality source for sage-grouse.

Whenever large block of habitat are broken into smaller parcels, the character of the habitat changes and species associated with large block may be affected. BLM authorizes many uses on Federal land if the action serves the national interest. Using the laws, regulations and administrative processes, BLM can avoid, reduce or mitigate some of the impacts from activities or structure placed on the landscape. There are also management practices available to reduce direct mortality to sage-grouse caused by fences, roads and powerlines. The following programs that may contribute to fragmentation and mortality are discussed for this issue: recreation (access management), rights of ways, fluid minerals, and grazing.

Recreation

Access Management

Program Status. In general, the BLM manages motorized and other access on the public lands in accordance with existing law (such as FLPMA and ESA), Executive Orders 11644 (1972) and 11989 (1997), proclamation, regulation (43 CFR 8340, 8342, and 2930), and policy (BLM Manual 8300). In addition, recreation uses of public lands and visitor services provided by BLM must be in conformance with the applicable land use plan for any given area. FLPMA requires that allowable uses and actions be prescribed through land use planning decisions.

Program Element Generating Threat. The primary threats to sage-grouse associated with this issue relate to habitat fragmentation associated with outdated off-highway vehicle designations and direct mortality of sage-grouse caused by collisions with vehicles. Older land use plans have not incorporated travel management plans and/or a lack of sufficient resources may limit BLM's ability to enforce off-highway vehicle closures in sage-grouse habitat.

Ongoing Conservation Measures. As BLM land use plans are being updated, off-highway vehicle designations are being reviewed and areas are being redesignated as open, limited, or closed. The BLM's National Off-highway Vehicle Strategy calls for minimizing unnecessary cross-country travel. The goal is to have the road and trail network identified within 5 years of completion of the land use plan, and address interdisciplinary resource issues including habitat fragmentation. This road and trail analysis is completed with full public involvement and interdisciplinary review pursuant to NEPA. Ongoing BLM participation in sage-grouse conservation planning and coordination with sage-grouse conservation partners and other interests will ensure that off-highway vehicle designations are consistent with management for sage-grouse conservation.

In addition, seasonal closures for the protection of wildlife habitat are applied to the limited off-highway vehicle use designation when applicable. BLM is focusing off-highway vehicle closure enforcement efforts on the highest priority areas during times of expected peak activity, and in coordination with other appropriate agencies.

Imminent and Future Conservation Measures. BLM is working with its National Science and Technology Center to establish more consistency between the road and trail inventory and geographic information system mapping for land use planning. BLM is also incorporating revised procedures for comprehensive travel management in BLM Land Use Planning Handbook (H-1601-1) to improve management and minimize impacts to other resource values, including habitat for sage-grouse.

Conservation Outcome. The road and trail network is identified within 5 years of completion of the land use plan per the National Off-highway Vehicle Strategy. New and better information about the distribution and condition of sage-grouse habitat improves as cooperative relationships among BLM, state wildlife agencies, and Federal land user groups expand and improve sage-grouse inventory and monitoring. Multi-scale sagebrush habitat assessments provide a biological basis for identifying priority sage-grouse habitats such as large, intact native sagebrush stands, moist riparian brood-rearing sites, or crucial winter ranges. When land use plan decisions are made to designate areas open, limited, or closed to off-highway vehicle use, the cumulative impact of the trail network is balanced with sage-grouse habitat needs. Reduced human presence minimizes disruption and possible abandonment of nests. Public education and reclamation of disturbed sites reduces the spread of invasive species and acreage of disturbance. Native seed sources of forbs and grasses preferred by sage-grouse are more readily available because of the Native Materials Development Program. Closed roads are reclaimed to sagebrush using native grasses and forbs consistent with the surrounding landscape. Sagebrush stands with diverse forbs and grasses are of high value to sage-grouse.

Lands and Realty

Rights-of-Way

Program Status. BLM rights-of-way activities are demand-based, requiring an application from individuals or other entities and a permit granted by BLM. The BLM administers some 85,000 rights-of-way on the public lands, including approximately 23,000 oil and gas pipelines and 12,000 electric transmission systems. Electric transmission, wind energy, telecommunication, fiber optic, water pipeline and road rights-of-way are authorized under FLPMA. Oil and gas pipeline rights-of-way are authorized under the Mineral Leasing Act. Over 5,500 rights-of-way actions are processed annually, including over 1,200 new oil and gas pipeline and electric system rights-of-way applications, with an increase in applications of over 10 percent a year during the last several years. The demand for additional energy and power capacity is expected to increase this workload by as much as 15 to 20 percent per year over the next 5 years.

All decisions to grant rights-of-way are made in compliance with NEPA. Decisions include mitigation measures, standard stipulations, and BMPs specific to the type of facility and the area in which the project will be constructed.

Program Element Generating Threat. The primary threats to sage-grouse associated with this issue are habitat fragmentation due to rights-of-way authorizations in occupied sage-grouse habitat or direct mortality of sage-grouse from collisions with vehicles or power lines.

Ongoing Conservation Measures. Powerlines and roads on public lands are authorized by BLM rights-of-way authorizations. When an application is submitted for a rights-of-way on or across public lands, BLM prepares a NEPA analysis and consults with the FWS, as appropriate. If BLM decides to authorize the rights-of-way, the rights-of-way grant will be prepared incorporating the mitigation measures identified in the NEPA document along with standard stipulations and BMPs specific to the type of road and/or facility and the area in which the project will be constructed.

Wildlife issues, such as habitat fragmentation, are identified and evaluated through the NEPA process prior to permit or project approval. BLM has recently developed and implemented BMPs for minimizing wildlife habitat fragmentation associated with energy development. The incorporation of appropriate fluid minerals and related rights-of-way BMPs is now Bureau policy (Instruction Memorandum No. WO-2004-194). A menu of BMPs is maintained and continually updated on the following BLM website:

<http://www.blm.gov/nhp/300/wo310/O&G/Ops/operations.html>

Stipulations in many cases include protection of leks, restoration requirements for disturbed areas, and other sage-grouse mitigation measures. In addition, rights-of-way corridors designated through the BLM land use planning process are considered for those areas that are determined to have the least effect on those other values after a thorough analysis of direct, indirect, and cumulative impacts to other resource values. The designation of rights-of-way corridors reduces the potential fragmentation of sensitive habitat that a proliferation of rights-of-way could cause.

Imminent and Future Conservation Measures. Designation of rights-of-way exclusion areas in land use plans identifies areas where other resource values dictate that rights-of-way will not be considered. In the case of sage-grouse, for example, these areas can be based on known leks or other essential habitat areas. The designation of rights-of-way avoidance areas defines areas where rights-of-way will only be permitted if stipulations that mitigate potential impacts to sensitive resource values can be attached to the rights-of-way grant.

Participation in sage-grouse conservation planning and coordination partners is a means to gather better information and identify important sage-grouse areas.

Conservation Outcome. Rights-of-way corridors that avoid special status species habitat, including sage-grouse habitat, are identified during the land use planning process. New and better information about the distribution and condition of sage-grouse habitat improves as cooperative relationships among BLM, state wildlife agencies, and industry expand and improve sage-grouse inventory and monitoring. Knowledge of important sage-grouse habitat helps preplan locations for powerlines, pipelines, and roads. Consolidation reduces the human footprint on the landscape, consequently reducing sage-grouse habitat loss and degradation. Multi-scale sagebrush habitat assessments provide a biological basis for identifying priority sage-grouse habitats such as large, intact native sagebrush stands, moist riparian brood-rearing sites, or crucial winter ranges. Stipulations are applied to a permit to prohibit surface activity near leks, thereby protecting breeding grounds and nest sites within 0.25 miles. Additional mitigation measures are applied as conditions of approval to reduce the amount of acres disturbed or timing restrictions to reduce disruption by human activities protect sage-grouse within a specified distance from a lek (generally 2 miles). Compliance inspections for conditions of approval are a priority for energy development rights-of-ways in sage-grouse habitat. Cooperatively-funded research and monitoring of sage-grouse and their habitats provide new information to help managers determine if stipulations and mitigation are sufficient to reduce or minimize the impact to sage-grouse. When adjustments are necessary to reduce impacts to populations and habitats, additional mitigation measures are added through the NEPA process and land use plan revisions. Reclamation reduces the spread of invasive species and reduces the acreage of disturbance. Native seed sources of forbs and grasses preferred by sage-grouse are more readily available because of the Native Materials

Development Program. When the right-of-way is no longer needed, all structures and facilities are removed and the site is reclaimed to sagebrush and other species consistent with the surrounding landscape. Sagebrush stands reclaimed with diverse forbs and grasses are of high value to sage-grouse.

Minerals/Energy

Fluid Minerals

Program Status. See Factor A, Issue 5, for a description of the program status. A full discussion about the regulations and administrative processes guiding the oil and gas program are found in Chapter III(B)(1).

Program Element Generating Threat. The WAFWA Conservation Assessment provided the best information available about the amount of sagebrush habitat potentially influenced by wells, pipelines, and roads. Large block of sagebrush habitat may become fragmented into smaller blocks and sage-grouse mortality may increase from collisions with vehicles and powerlines. According to the Assessment, 28 percent of sagebrush habitat may be fragmented by energy development. It is estimated that less than 1 percent of surface acres managed by the BLM has undergone soil disturbance for oil and gas development and most has been or will be reclaimed. Oil and gas development and related fragmentation does not cause extirpation of sage-grouse, but does reduce the population (Braun et al. 2002).

Ongoing Conservation Measures. *No Surface Occupancy:* Areas of no development around a lek are commonly 0.25 miles where there are protective lease stipulations in place, depending on the requirements of the land use plan. Where there are no protective lease stipulations, the minimum protective distance is 0.12 miles, but many offices will move a drilling operation farther away. For example, under conditions of approval at the APD approval stage, the Kremmling, Colorado, field office will sometimes move an operation 0.5 miles from a lek. Responses in the BLM Information Request indicate 106,600 acres of sage-grouse habitat associated with leks are protected by no surface occupancy in the primary oil and gas producing states (those being Colorado, Montana, Utah, and Wyoming). An additional 769,900 acres of sage-grouse habitat not associated with leks are protected directly or indirectly by no surface occupancy in the same primary oil and gas producing states. By excluding activity and development in these areas, respective blocks of sage-grouse habitat will not be further fragmented by energy program activity.

Conditions of approval are placed on the APD and ancillary facilities, such as roads, to protect sensitive resource values. With the landowner's concurrence, BLM's surface protection requirements can also be applied to operations on private surface. In general, actions that are expected to have a "significant" impact are analyzed through the EIS process. Actions not expected to have a "significant" impact are analyzed through the EA process. Mitigation measures

carried through to the decision document become conditions of approval to the approved APD. Actions adequately addressed in an existing EIS or EA may be evaluated in the Documentation of NEPA Adequacy process.

Examples of conditions of approval to avoid undue fragmentation include:

- Locating facilities away from sensitive resource areas (maintains large areas of uninterrupted habitat);
- native seed requirements or specified seed mixes (helps ensure restoration of a continuum of sage-grouse habitat);
- buried powerlines and wellheads (minimizes raptor perches and sage-grouse avoidance);
- low standard roads and two-track access to well sites (minimizes road size and vegetation loss);
- designated travel and utility corridors (minimizes road network and vegetation loss);
- seasonal limitations of public access (minimizes human activities during critical periods); and
- centralized production facilities (minimizes disruption of sage-grouse by truck traffic and direct sage-grouse losses from vehicle collisions).

Examples of conditions of approval to avoid direct mortality include:

- Speed limits applied to access roads (minimizes collisions with sage-grouse);
- seasonal limitations of public access (minimizes collisions with sage-grouse);
- centralized production facilities (minimizes collisions with sage-grouse);
- buried utilities (minimizes raptor predation and minimizes sage-grouse collision with utilities);
- locating facilities away from sensitive resource areas (minimizes collisions with sage-grouse); and

- seasonal limitations on dogs and guns by oil and gas field workers (minimizes predation by dogs and out-of-season hunting).

Best Management Practices: See Issue 5, Conservation Measures subheading.

Imminent and Future Conservation Measures. The BLM will continue to evaluate, update, and incorporate BMPs into lease and permit approvals. BMP information sheets will be developed to provide further guidance. BLM will incorporate BMPs into the draft, fourth edition update of the “Surface Operating Standards for Oil and Gas Exploration and Development” (known as the “Gold Book”), to be published in early 2005. The Gold Book serves as the surface management operating guide for oil and gas operators on the public land.

Outdated BLM land use plans will undergo revision as resources become available. During the planning process, lease decisions, stipulations, and programmatic guidance will be modified as necessary to address sage-grouse protective measures related to energy development.

The BLM National Science and Technology Center has initiated an analysis of greater sage-grouse regional habitat connectivity. Results are expected to allow for:

- Identification of regional core habitat blocks;
- identification of regional key landscape connections (linkages);
- a regional framework within which to develop and coordinate land use planning, conservation planning, and other activities; and
- long-term monitoring of changes in regional core habitat blocks and linkages over time to detect trends.

Certainty of Implementation. Sufficient certainty of implementation for these immediate and future actions can be judged by accomplishments and ongoing actions described in this section. BLM authorities, procedural requirements, staff expertise, and out-year funding requests are in place to ensure appropriate planning requirements, permit evaluations, and inspection and enforcement actions to reduce the impacts of mineral development on the fragmentation of sage-grouse habitat. In the last several years, the fluid minerals program expended program funds toward research, inventory, and monitoring of sage-grouse or their habitat. Fiscal Year 2005 and out-year budgets include similar budget requests to continue necessary monitoring and proactive management. State directors and field managers have been instructed to incorporate BMPs per Instruction Memorandum WO-2004-194. Progress in meeting the directive will be evaluated through the quality assurance reviews that are described in Issue 5. Incorporation of BMPs into APDs and associated rights-of-ways, and updating of

land use plans to include sage-grouse leasing stipulations, is expected to provide the management direction to reduce or minimize impacts. Continued monitoring of habitats and populations and ongoing and future research on the relationship between development and sage-grouse habitat conditions will give BLM the necessary information to adapt management and reduce threats from habitat fragmentation.

Conservation Outcome. Oil and gas development across much of the range of occupied sage-grouse habitat remains low and relatively stable. In eastern Montana, Wyoming, Colorado, and eastern Utah where higher levels of energy development occur, updated programmatic management guidance and constraints reduce the human footprint and subsequent impacts to sage-grouse and their habitat. New and better information about the distribution and condition of sage-grouse habitat improves as cooperative relationships among BLM, state wildlife agencies, and industry expand and improve sage-grouse inventory and monitoring. Multi-scale sagebrush habitat assessments provide a biological basis for identifying priority sage-grouse habitats, such as large, intact native sagebrush stands, moist riparian brood-rearing sites, or crucial winter ranges. When land use plans decisions are made to open areas for leasing, cumulative impacts analysis combines mid- and broad-scale sagebrush information with an estimate of reasonable foreseeable energy development to comprehensively evaluate habitat loss within the context of the geographic area and planning area. Stipulations are applied to a lease before sale to prohibit surface activity near leks, thereby protecting breeding grounds and nest sites within 0.25 miles. Any timing restrictions that protect the sage-grouse populations from disruption by human activities within a specified distance from a lek (generally 2 miles) are also applied to the lease before sale. Additional mitigation measures or BMPs to reduce direct mortality of birds, the amount of acres disturbed, and disruption by human activities are added when the permit to drill is authorized. Compliance inspections for conditions of approval are a priority for energy development in sage-grouse habitat. Cooperatively-funded research and monitoring of sage-grouse and their habitats provide new information to help managers determine if stipulations and mitigation are sufficient to reduce or minimize the impact to sage-grouse. When adjustments are necessary to reduce impacts to populations and habitats, additional mitigation measures are added through the NEPA process and land use plan revisions. If energy development is authorized without sufficient mitigation to reduce habitat loss and disruption to sage-grouse, off-site mitigation is pursued to protect, restore, or enhance sage-grouse habitat near the project area. Interim reclamation reduces the spread of invasive species and acreage of disturbance and prepares a site for a speedier recovery. Native seed sources of forbs and grasses preferred by sage-grouse are more readily available because of the Native Materials Development Program. When the energy extraction is exhausted and production is finished, sagebrush sites are reclaimed to sagebrush and other species consistent with the surrounding landscape. Sagebrush stands with diverse forbs and grasses are of high value to sage-grouse.

Grazing

Program status: See Factor A Issue 6, for a description of the program status.

Program Element Generating Threat. Fencing constructed to meet various management objectives (such as riparian pasture delineation, pasture separation, and habitat exclusions) can create roosting sites for predators, lead to exotic species establishment, and cause direct mortality to sage-grouse through entanglement.

Ongoing Conservation Measures. Fence proposals undergo an interdisciplinary review through the NEPA process. Often the purpose of fencing is to manage livestock distribution and improve the overall health of the rangelands. BMPs are used to avoid ridge tops, important wildlife habitats, and other negative impacts to resources.

Imminent and Future Conservation Measures. The National Sage-grouse Strategy, Action Item 1.4.3, makes the commitment to funding and developing a technical note that describes BMPs for grazing within sagebrush vegetation types to maintain and enhance quality sage-grouse habitat. Fence design and location will be addressed in the BMPs.

Conservation Outcome. Fences are located away from sage-grouse leks and migration routes to avoid direct mortality by entanglement or collisions.

Factor B: Over-utilization for Commercial, Recreational, Scientific, or Educational Purposes

Synopsis of Factor B. Specific issues discussed in the 90-day Finding related to overutilization for commercial, recreational, scientific, or educational purposes. Threats that may be germane to BLM-administered public lands include:

- Overhunting (access-related);
- synergistic effects of hunting and habitat degradation; and
- public viewing of strutting sage-grouse during the breeding season.

Issue 1. Effects of utilization of the greater sage-grouse, including hunting.

Hunting is regulated and permitted by individual states. Permits are required from BLM only when the use is commercial (guided hunting, for example). BLM cooperates with states if access-related issues arise and when commercial guiding on public lands is proposed. Where excess viewing disturbs sage-grouse, BLM may restrict public access or redirect viewing to other leks. BLM has also consulted with state wildlife agencies on proposed hunting regulations,

and on commercial permits for guided hunting, to help ensure the populations are healthy enough to sustain hunting.

Recreation

Program status. Hunting is regulated and permitted by individual states. Permits are required from BLM only when the use is commercial (e.g., guided hunting). BLM cooperates with states if access-related issues arise and when commercial guiding on public lands is proposed. Where excess viewing disturbs sage-grouse, BLM may restrict public access or redirect viewing to other leks.

Program Element Generating Threat. Concentrating hunters into geographic areas may increase hunting pressure and harvest rates surpassing the 10 percent maximum recommended level as described in the WAFWA guidelines. Providing and encouraging lek viewing on BLM-administered lands may impact sage-grouse breeding.

Specific issues discussed in the 90-day Finding related to overutilization for commercial, recreational, scientific, or educational purposes that may be germane to BLM-administered public lands include:

- Overhunting (access-related);
- synergistic effects of hunting and habitat degradation; and
- public viewing of strutting sage-grouse during the breeding season.

Ongoing Conservation Measures. BLM consults with state wildlife agencies on proposed hunting regulations and commercial permits for guided hunting to make sure the permit will not put undue pressure on sage-grouse populations.

Conservation Outcome. In cooperation with the state wildlife agency, hunting access and hunting permits are managed to achieve harvest levels within the biological constraints of the local sage-grouse populations.

Factor C: Disease or Predation

FWS Determination. There is apparently no substantial information available at this time to indicate that disease or predation are factors that may threaten the continued existence of the greater sage-grouse. FWS will continue to monitor sage-grouse reaction to West Nile Virus as the virus becomes more prevalent across the species' range.

Synopsis. Specific issues discussed by FWS in the 90-day Finding related to disease or predation that may be germane to BLM-administered public lands include the following.

Issue 1. Predation.

The BLM uses the most current, scientifically-credible information available for all resources when preparing NEPA and other analyses, and will continue to do so, including information related to predators and disease as they may affect greater sage-grouse (see planning considerations under Factor A). BLM's Sage-grouse Guidance provides suggested management practices for reducing predation of sage-grouse. USDA-Animal and Plant Health Inspection Service manages animal damage control on public lands.

Minerals/Energy

Fluid Minerals

Program Status. See Factor A, Issue 5, for a description of the program status. A full discussion about the regulations and administrative processes guiding the oil and gas program are found in Chapter III(B)(1).

Program Element Generating Threat. Roads, facilities, and powerlines, and human presence may enhance habitat for sage-grouse predators, increase adult and juvenile mortality, and decrease nest success.

Ongoing Conservation Measures. *No surface occupancy:* The stipulated areas of no development are commonly 0.25 miles around a lek, depending on the requirements of the land use plan. Responses in the BLM Information Request (Table A-11a2, Appendix A) indicate 106,600 acres of sage-grouse habitat associated with leks are protected by no surface occupancy in the primary oil and gas producing states (those being Colorado, Montana, Utah, and Wyoming). An additional 769,900 acres of sage-grouse habitat not associated with leks are protected directly or indirectly by no surface occupancy in the same primary oil and gas producing states (Table A-11b2, Appendix A). Important nesting habitats are protected from habitat disturbance with no surface occupancy protection in areas near and surrounding leks.

Conditions of Approval: Older leases that were not stipulated for sage-grouse protection may receive additional protection measure through the permit to drill. Field office managers have the authority to attach protective conditions of approval to the approved APD. Conditions of approval are more project and site-specific than lease stipulations.

Conditions of approval are placed on the APD and ancillary facilities, such as roads, to protect sensitive resource values. With the landowner's concurrence,

BLM's surface protection requirements can also be applied to operations on private surface. In general, actions that are expected to have a "significant" impact are analyzed through the EIS process. Actions not expected to have a "significant" impact are analyzed through the EA process. Mitigation measures carried through to the decision document become conditions of approval to the approved APD. Actions adequately addressed in an existing EIS or EA may be evaluated in the Documentation of NEPA Adequacy process.

Examples of conditions of approval to reduce habitat enhancement for predators include:

- Constructing roads to the lowest standard necessary to access the project site;
- locating facilities away from sensitive resource areas;
- raptor deterrents on power poles;
- buried powerlines and wellheads; and
- offsite well monitoring

Conservation Outcome. Energy development and associated facilities are built to discourage raptor-perching so that sage-grouse do not become more vulnerable to predation.

Lands and Realty

Rights-of-Way

Program Status. See response to Issue 1.

Program Element Generating Threat. Public land rights-of-way granted by the BLM may facilitate establishment and movement of predatory animals that make use of roads and powerlines.

Ongoing Conservation Measures. Designation of rights-of-way exclusion areas in land use plans identifies areas where other resource values dictate that rights-of-way will not be considered. In the case of sage-grouse for example, these areas can be based on known leks or other essential habitat areas where predation associated with rights-of-way could be significant. The designation of rights-of-way avoidance areas defines areas where rights-of-way will only be permitted if stipulations can be attached to the rights-of-way grant that mitigate potential impacts to sensitive resource values. These stipulations are based on

site-specific needs or BMPs, or can be pulled from the sage-grouse conservation strategy where applicable.

Ongoing BLM participation in sage-grouse conservation planning and coordination with sage-grouse conservation partners and other interests ensures that all rights-of-way actions are consistent with management for sage-grouse conservation.

Conservation Outcome. Energy development and associated facilities are built to discourage raptor-perching so that sage-grouse do not become more vulnerable to predation.

Issue 2. Disease.

Minerals/Energy

Fluid Minerals

Projects Status. See Factor A, Issue 5, for a description of the program status. A full discussion about the regulations and administrative processes guiding the oil and gas program are found in Chapter III(B)(1).

Program Element Generating Threat. The outbreak of West Nile Virus in 2003 has potential to affect greater sage-grouse as a result of land management decisions and actions. The BLM is addressing the virus in all aspects of land management planning and actions as more information about vectors and disease spread become available. Decisions considered and incorporated will be based on the most current scientifically-credible information.

Water disposal from coal-bed methane is creating new water bodies and potential mosquito habitat on the arid landscape.

Ongoing Conservation Measures. Some operators are treating man-made water sources with larvicides.

When the first known incidence of West Nile Virus in greater sage-grouse populations was detected in 2003, coincident with research being conducted by the University of Montana to investigate the effects of coal-bed methane development on greater sage-grouse, the BLM immediately engaged in supporting West Nile Virus research and control efforts as part of collaborative interagency and intergovernmental efforts. The BLM has contributed over \$100,000, to date, in direct financial support of research to study the virus and its impacts and will be providing additional funding in the future. Logistical and administrative support is also provided whenever appropriate. The BLM is

participating with the following entities in West Nile Virus monitoring and research efforts in Montana and Wyoming, which is the present geographic focus for investigations regarding West Nile Virus and greater sage-grouse:

- University of Montana;
- Montana State University;
- University of Wyoming;
- University of Alberta;
- Wyoming Department of Health;
- Wyoming Game and Fish Department;
- Wyoming State Veterinary Laboratory;
- USDA-Agricultural Research Service, Arthropod-Borne Animal Diseases Research Laboratory;
- U.S. Fish and Wildlife Service, C. M. Russell National Wildlife Refuge; and
- U.S. Geological Survey, EROS Data Center.

The major areas of research, including monitoring the spread of the virus are:

- 1) Survivorship monitoring of radio marked sage-grouse at study locations throughout Wyoming and Montana;
- 2) direct impacts of West Nile Virus on sage-grouse;
- 3) monitoring of mosquitoes in study locations in item 1, above;
- 4) placement of sentinel birds (hen pheasants) at specific locations to detect new or recurring West Nile Virus outbreaks; and,
- 5) continued surveillance of the virus through analysis of blood and tissue samples from a variety of species and sources throughout Wyoming and Montana.

In addition to support of ongoing research and control activities, the BLM is cooperating with the USGS and state wildlife agencies to initiate new research related to the virus, and to continue funding to ongoing research.

Imminent and Future Conservation Measures. BLM will develop management guidance to curtail the spread of West Nile Virus when more information is available. The guidance will address all potential natural and anthropogenic (human-caused) sources of West Nile Virus on BLM-administered land, including natural and constructed wetlands, livestock watering ponds and troughs, wildlife guzzlers, and recreation impoundments.

Conservation Outcome. Partners continue to work together to learn more about the transmission of West Nile Virus among sage-grouse. As new

information is discovered, management practices are applied to reduce the vectors that transmit the disease to sage-grouse populations.

Factor D: Inadequacy of Existing Regulatory Mechanisms

FWS Determination. There is concern regarding the adequacy of regulatory mechanisms in relation to habitat conservation. The past and ongoing degradation of greater sage-grouse habitat, such as habitat conversion, fragmentation, and alteration due to various land use practices (see discussion under Factor A), is due in large part to human actions rather than natural events. To the extent that human-caused habitat degradation is contributing to population declines of greater sage-grouse, it is possible that existing regulatory mechanisms, particularly at the Federal level (since most of the habitat is on Federal land), but also at the state, provincial, and local levels, may be inadequate with regard to addressing threats to the species.

Synopsis. Specific issues are discussed by FWS in the 90-day Finding related to the inadequacy of existing regulatory mechanisms that may be germane to BLM-administered public lands. The specific issues under Factor D are followed by a discussion of the FLPMA and NEPA based planning and decision-making process that forms the regulatory foundation for BLM's management of public lands. Additional detail on this topic can also be found in Section III. A program-by-program summary of the regulatory mechanisms is described for Factor D and can be read for more detail in Chapter III.

Issue 1. Regulations for greater sage-grouse management established by state wildlife agencies are not sufficient to protect the species, because hunting is still permitted.

Except where commercial use of public land is involved, the state wildlife agencies regulate and permit hunting. To the extent that BLM plays a role in managing hunters' access on public lands, BLM will continue to coordinate with and work cooperatively with the states.

Issue 2. At present, there are no regulations requiring that BLM land use plans specifically address the conservation needs of special status species (BLM 2003b).

Although not codified in the CFR, the BLM's Special Status Species Manual 6840 is a regulatory mechanism that provides a mandatory national policy for the conservation of the greater sage-grouse and its habitat. The Bureau's manual addressing special status species fits within the overarching regulatory guidance provided by the Department of the Interior Manual 632.16. Manual 632.16 requires that Interior land management agencies, such as the BLM

will also especially utilize their authorities to not only protect listed species but also to avoid precipitating the decline of other species to the point where (ESA) listing would be appropriate.

The BLM Manual system tiers to applicable laws, regulations, and Departmental manuals. BLM manuals are an element in the larger system of regulatory mechanisms that governs management of public lands. The BLM Manual System is “a permanent record of written policy and procedural instruction for BLM Employees . . . Instructions in BLM Manuals are mandatory unless the text states otherwise (Manual 1221.13).”

The purpose of BLM’s Manual 6840 is to provide policy and guidance, consistent with appropriate laws, for the conservation of special status species of plants and animals, and the ecosystems upon which they depend. The objective of the special status species is to ensure that actions requiring authorization or approval by the BLM are consistent with the conservation needs of special status species and do not contribute to the need to list any special status species under provisions of the ESA. The BLM’s Manual 6840 specifies that BLM sensitive species will be given the same level of protection afforded Federal candidate species.

Several BLM Manual 6840 sections are applicable to BLM’s management of sage-grouse habitat and implementation of conservation actions—the full text of these specific sections is contained in Appendix F.

The BLM Manual requires that BLM

obtain and use the best available information deemed necessary to evaluate the status of special status species in areas affected by land use plans . . . Land use plans shall be sufficiently detailed to identify and resolve significant land use conflicts with special status species without deferring conflict resolution to implementation-level planning . . . [6840.22].

At the implementation plan level, BLM is required to do what is needed

to bring the species and their habitats to the condition under which the provisions of the ESA are not necessary, current listings under special status species categories are no longer necessary, and future listings under special status species categories would not be necessary [6840.22].

In addition, the regulations for the Fundamentals of Rangeland Health require the BLM to ensure standards for grazing administration address “habitat for . . . special status species” and that guidelines address “restoring, maintaining, or enhancing habitats of . . . special status species” (CFR 4180.2(d) and (e)). These regulations would encompass most if not all of the current sage-grouse habitat on public lands. For more discussion of the BLM Manual 6840 and sage-grouse as a special status species, see Chapter II(A)(2).

Issue 3. FWS and BLM are developing strategies for conservation of the species, including BLM's draft interim planning and habitat management guidelines for its lands. FWS and BLM are also working with the states on the Sage-grouse Conservation Planning Framework Team. BLM is undertaking a number of on-the-ground sagebrush habitat restoration projects, while it is working to complete the longer-term joint conservation assessment and planning.

As has been described in Chapter II(D), BLM engages in three levels of planning: resource management planning, activity-level planning, and project planning. Regardless of whether sage-grouse and/or sagebrush habitat conservation is specifically addressed in a land use plan, sage-grouse habitat is currently addressed through (1) overarching land management regulation and policy (such as FLPMA and Standards of Rangeland Health), (2) land use plan-specific wildlife habitat or land health desired outcomes (objectives and/or standards), and (3) standard operating procedures for the various authorized land use programs designed to protect and/or enhance crucial habitats for sensitive species.

At the national level and broad-scale, the National Sage-grouse Strategy ensures the Bureau has a framework to provide guidance for conserving and managing sage-grouse habitats and as an umbrella for BLM state-level strategies. Several elements of this strategy are relevant to land use planning (see Appendix B1). Approximately two-thirds of the land use plans encompassing current range are either in revision (36 plans or 37 percent) or will be underway within 2 years (29 plans or 30 percent).

As one specific element of this National Sage-grouse Strategy, BLM has developed "Guidance for Addressing Sage-grouse Habitat Conservation in BLM Land Use Plans" (2004) (Appendix B3). This guidance is intended to help BLM field offices include sagebrush habitat and sagebrush-obligate wildlife species (including sage-grouse) considerations in BLM land use planning efforts. The guidance is to be used in planning areas with sagebrush habitat for those land use plans currently in progress, as well as for new planning starts. It is important to plan for the conservation of habitat for all wildlife species; therefore, this guidance focuses on sagebrush habitat as a whole rather than on sage-grouse or other individual species. The guidance describes how planning teams can incorporate sagebrush habitat considerations into each of the basic steps involved in preparing a land use plan and associated NEPA analysis. Planning teams are to supplement this guidance, as appropriate, with any completed state- or local-level sage-grouse strategies or plans.

Issue 4. Most states within the range of the greater sage-grouse have initiated conservation planning efforts for sage-grouse and sage-grouse habitat on state, private, and, in some cases, Federal lands. The plans are focused on addressing local sage-grouse or sagebrush habitat concerns

through a variety of mechanisms (i.e., changes in regulations and habitat improvement projects).

The National Sage-grouse Strategy (Appendix B1) has been purposefully designed at the broad-scale to be responsive to needs identified by partners and cooperators in the state-Federal conservation effort, including improvements in science and technical support, information on funding options, and voluntary mechanisms for participation in conservation efforts. BLM continues as a partner on the Sage-grouse Conservation Planning Framework Team which provided data and logistical support to the WAFWA Conservation Assessment and will guide development of a range-wide conservation action plan. As of the 2004 WAFWA annual meeting in Sun Valley, Idaho (July 23–30), it was reported that 7 of the 11 states with greater sage-grouse were working from state strategic plans. The remaining states are working to complete either local plans or their respective statewide plans. The Canadian Recovery plan is complete. Additional details are available from WAFWA.

BLM state directors and their staffs are working within their respective states with state wildlife agencies and other partners on conservation strategies and habitat restoration inventory, mapping, restoration, and monitoring. The National Sage-grouse Strategy directs BLM state directors to accomplish several conservation efforts in concert with state-level efforts, including completion of conservation plans, habitat and disturbance regime maps, and cooperative monitoring strategies.

The BLM is involved in many local, state, and national partnerships and encourages volunteer assistance to improve management of public lands. BLM works with the states on habitat conservation, including restoration actions on public lands. For example, the State of Idaho has received grants totaling over \$750,000 to fund sage-grouse conservation efforts. The State Sage-grouse Advisory Committee, of which BLM is a member, is charged with prioritizing projects submitted by the local collaborative groups and helping them take full advantage of the funding. Many of these projects have been or will be implemented on public lands, once NEPA and land use plan consistency have been addressed.

Through the years, a critical part of BLM's success has been the development of partnerships. Partnerships have leveraged the Agency's capacity for sage-grouse/sagebrush conservation through increased planning, management, and monitoring. Partnership involvement is reflected in the increase in interagency and cooperative agreements over the last 5 years and the increase in the number of volunteers on BLM lands (see Figure 1 on page 34). In 1979, the Bureau had one cooperative effort related to conservation for sage-grouse. In 2004, the Agency initiated 24 new cooperative efforts and has 132 ongoing cooperative efforts related to the conservation of sage-grouse and their habitat. Key areas of partnership efforts include education, easements/acquisitions,

habitat enhancement, habitat restoration, inventory, research, and weed management.

The Bureau anticipates providing \$127 million toward partnerships with other Federal, state, and local governments, academic institutions, and non-government organizations in 2004 and expects a match of \$93 million in non-Federal funding. Volunteers are expected to donate more than 1.2 million hours of work at an estimated value of more than \$20 million (BLM 2005 Budget Justifications). For more specific information about conservation partnerships, including the authorities that support them, see Chapter II(A)(3) and (4).

Issue 5. FWS concluded that based on the information before it at the time of the 90-day Finding, the principal concern regarding the adequacy of regulatory mechanisms is in relation to habitat conservation. Noting that past and ongoing degradation of greater sage-grouse habitat is due in large part to human actions, existing regulatory mechanisms, particularly at the Federal level, may be inadequate with regard to addressing threats to the species.

In managing the public lands, FLPMA requires the Secretary to develop, with public involvement, land use plans (43 USC 1712(a)). Land use plans prepared by BLM are called resource management plans (RMPs). The predecessors to RMPs were management framework plans (MFPs).

Land use plans, through FLPMA authority and program-specific regulatory mechanisms, provide land managers with the mandate, authority, and tools necessary to manage the public lands to address threats to sage-grouse habitats. Through the land use plans BLM has implemented, and will continue to implement, conservation actions have reduced, are reducing, and will continue to reduce threats to sage-grouse and sagebrush habitats.

BLM engages in three levels of planning: resource management planning, activity-level planning, and project-level planning. These levels of planning and their implications for sage-grouse and/or sage-grouse habitat are discussed below, summarizing information that is also presented in Chapter II(D).

Resource Management Planning

The broadest level of land use planning is documented in RMPs, and a few older MFPs. Land use planning provides the means or regulatory mechanism to address habitat conservation for sage-grouse and all other species. Land use plan decisions are expressed as allocation of resources, allowable uses, management actions, or constraints that meet desired outcomes (goals and objectives). These plans form the basis for every action and authorization on the public lands and resources administered by the BLM and include both surface management and private surface/Federal mineral (split estate) management.

Land use plans provide a documented record of desired outcomes and permissible resource uses, actions, and constraints, thus providing a framework to guide subsequent implementation decisions. RMPs follow laws, guidance, and direction from FLPMA, the BLM's planning regulations (43 CFR 1600), BLM Manual direction (Manual 1601), and the Land Use Planning Handbook (H-1601-1). All land use plans, including amendments or revisions, must also meet the requirements of applicable laws such as the NEPA, the NHPA, and the ESA.

FLPMA requires that the land use planning process and management of the public lands is to be on the basis of “multiple use” and “sustained yield” standards. BLM’s planning regulations (43 CFR 1601.0-5(k)) define “resource management plans” to mean a land use plan as described by FLPMA that generally establishes:

- Land areas for limited, restricted or exclusive use; designation, including areas of critical environmental concern designation; and transfer from BLM administration;
- allowable resource uses and related levels, either singly or in combination, of production or use to be maintained;
- resource condition goals and objectives to be attained;
- program constraints and general management practices needed to achieve the above items;
- need for an area to be covered by more detailed and specific plans;
- support action, including such measures as resource protection, access development, and realty actions cadastral survey, as necessary to achieve the above;
- general implementation sequences, where carrying out a planned action is dependent upon prior accomplishment of another planned action; and
- intervals and standards for monitoring and evaluating the plan to determine the effectiveness of the plan and the need for amendment or revision.

The BLM Manual 1601.06 states it is BLM's mission

to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations. Land use plan decisions will further this mission by identifying desired outcomes and actions that restore and maintain the health of the land; preserve natural and cultural heritage; reduce threats to public health, safety

and property; and provide opportunities for environmentally responsible recreational and commercial activities.

The National Sage-grouse Strategy (Appendix B1) requires that land use plans adequately address sage-grouse habitat conservation. This strategy requires, by April 2005, a schedule and process for updating those plans that are deficient in addressing sage-grouse and sagebrush conservation needs. To accomplish this, BLM states will assess their land use plans, including management actions and stipulations in the plans and the effectiveness of these actions and stipulations in meeting sage-grouse habitat needs. Plans will be prioritized based on the magnitude of threats and population declines. Needed plan modifications would be accomplished through the plan maintenance, amendment, or revision process.

Conservation measures to protect both sage-grouse and their habitats will be incorporated into land use plans in accordance with FLPMA, the National Sage-grouse Strategy, the special status species manual (BLM Manual 6840) and the land use planning handbook (BLM Handbook H-1601-1). Conservation measures for protecting both sage-grouse and sagebrush habitat are found in Appendix B3. New plans and plan updates will contain similar measures for sage-grouse conservation. Actual measures will be developed in collaboration with state and local working groups based on the planning area condition, issues, and needs. Conservation measures to address such issues as habitat fragmentation, loss, and productivity, will be based on the best available science at the time of analysis, including consultation with local wildlife agencies, FWS, local knowledge, and the Connelly Guidelines. RMPs that are not scheduled for full revision in the near future will be amended to address new information or changing issues specific to sage-grouse management. Interim measures for protecting sage-grouse and their habitat will be developed and applied through the site-specific EA process associated with land use authorizations or, if new information or issues become apparent related to sage-grouse or their habitats, plan amendments can be accomplished with an EIS or EA as required by FLMPA and NEPA. Many older MFPs have been amended through the years using this process.

BLM performs monitoring for all of its programs. The regulations at 43 CFR 1610.4–9 require BLM to address monitoring needs in the land use plans and to evaluate monitoring findings at a level of intensity based on the sensitivity of the resource. Monitoring and subsequent evaluations allow BLM to determine whether goals and objectives for sage-grouse are being achieved. Monitoring and evaluations also determine if mitigation measures for sage-grouse, such as seasonal use restrictions, are satisfactory. Evaluations determine whether new information for sage-grouse or sagebrush habitat conditions, trends, or management requirements is available. Evaluations also determine whether changes in related plans of state and Federal wildlife agencies may have an influence on BLM's sage-grouse management decisions.

Activity-level (Implementation-level) Planning

Desired outcomes (goals and objectives), resource allocations, allowable uses, management actions, and constraints contained in land use plans provide the programmatic guidance and basis for subsequent program-specific or area-specific plans and decisions. These program- and area-specific plans are prepared at a finer scale than land use plans and contain more detailed management direction. Activity-level plans must conform to the land use plan and all provisions of FLPMA and other laws and regulations.

Activity-level plans provide additional management guidance for the implementation of programs or projects. Activity-level plans determine BMPs necessary to achieve land use plan desired outcomes. More specific objectives, desired conditions, and management decisions are established in activity plans. Resource values, such as special status species, social and economic considerations, and monitoring are also considered and addressed during the development of implementation plans. If activity-level plans make new decisions that are not covered by the NEPA analysis for the land use plan, then an appropriate NEPA analysis would be completed on the activity-level planning decisions.

Project-level Planning

Specific projects or authorizations (such as a vegetation restoration treatment, off-highway vehicle event, development of a spring in an allotment, drilling an exploratory oil and/or gas well, or building a road or construction of a communication tower) are designed to accomplish the desired goals and objectives of the land use plan and any activity-level plans that have been developed. Projects and authorizations must be implemented in accordance with land use allocation decisions, management actions, and constraints identified in the land use plan and any activity-level plans.

Project-level plans are generally narrow in scope and consist of the NEPA document that is prepared for an individual project or proposal, plus associated site-specific design material. Projects and proposed authorizations require an EA in compliance with NEPA. According to the BLM NEPA Handbook (H-1790-1) an EA must be prepared for proposed actions that (1) are not exempt from NEPA, (2) have not been categorically excluded, (3) have not been covered in an existing RMP/EIS or other environmental analysis, and (4) do not normally or obviously require an EIS. The EA serves:

- To provide sufficient evidence and analysis of impacts on the quality of the human environment to support a finding of no significant impact (FONSI) or a determination to prepare an EIS;

- as a vehicle for an interdisciplinary review of proposed actions, and thus promotes consideration of all affected resources, including sage-grouse and sagebrush habitats, even though impacts are not significant; and
- as a mechanism for identifying and developing appropriate mitigation measures, such as restrictions on disturbances to sage-grouse leks.

The NEPA analysis (EA, EIS, or categorical exclusion) must identify the existing land use plan associated with the proposal and explicitly state that the proposed action conforms to the land use plan. It must also conform to any activity-level plans that are in place. A proposed project, such as a new fence, or a proposed authorization, such as a powerline right-of-way, would have to be consistent with the actions, stipulations, and mitigation measures outlined in these plans. For example, if the land use plan prohibits new disturbance on a critical sage-grouse lek, then the proposed fence or powerline right-of-way would not cross or be situated on the lek.

Monitoring requirements are an important component of project-level plans. The decision associated with an EA generally contains requirements for mitigation and related monitoring. In an EIS, monitoring and enforcement activities are usually prescribed as part of a mitigation strategy (40 CFR 1505.2(c)). The level and intensity of monitoring varies according to the purpose being served and the issues being addressed. Three primary purposes of monitoring are to:

- 1) Ensure compliance with decisions;
- 2) measure the effectiveness or success of decisions; and
- 3) evaluate the validity of decisions (H-1790-1).

Fundamentals of Rangeland Health

BLM conducts land health assessments and evaluations and takes appropriate actions, in compliance with NEPA, to address the Department's policy of managing for healthy rangelands (60 FR 9954, February 22, 1995) in conformance with the Fundamentals of Rangeland Health (43 CFR 4180). The Fundamentals of Rangeland Health required BLM to develop rangeland health standards in consultation with resource advisory councils [http://www.access.gpo.gov/nara/cfr/waisidx_o2/43cfr4100_02.htm]. The BLM worked with the resource advisory councils to broaden the focus and apply the rangeland health standards to all ecosystems, and BLM management actions, not just livestock grazing (Manual 4180, Handbook H-1601-1). Using the fundamentals of rangeland health listed in BLM Manual handbook 4180-1, BLM now evaluates the condition of the public land by determining if a minimum level of standards are met. Land health standards combine the basic precepts of physical function and biological health in the context of water quality, soils, plant

and animal populations, and riparian and vegetation communities. Refer to Figure 2 on page 62 for an overview of the land health assessment process.

BLM is required to manage public lands in a manner that achieves or makes significant progress toward meeting minimum standards for land health unless specified otherwise in the land use plan (43 CFR 4180 and BLM Manual Handbook 1601-1(IIB)(1)). Appropriate action is taken to remedy the problem and make significant progress when standards are not being met. Some of these assessments are being done in conjunction with grazing permit renewals to determine if existing livestock grazing is a significant contributing factor in failing to achieve the standards. Monitoring the progress toward achieving standards or maintaining standards in high priority areas will take precedence over monitoring and evaluation in low priority areas (BLM manual 4180.06(D)).

Fundamentals of Rangeland Health and Sage-grouse. BLM managers are directed to determine the priority for conducting land health assessments and evaluations based on several physical and biological factors (BLM Handbook H-4180(III)(A)(2)). Several of these factors listed below would ensure priority to public lands of significance to sage-grouse conservation:

- Terrestrial habitats (including riparian) that have declined substantially from historical geographic extent (these areas may be associated with special status species);
- all areas with habitat for known threatened, endangered, or other special status species (includes sage-grouse);
- areas with pending application(s) for high disturbance activities; and
- areas with highly conflicting uses.

BLM state directors developed state or regional land health standards using interdisciplinary teams and, with the exception of Wyoming, standards were developed in consultation with resource advisory councils. All included at least one standard that addressed habitat for endangered, threatened, proposed, candidate, or special status species and habitat quality for native plant and animal populations and communities (H-4180-1). Thus, when BLM conducts a land health assessment and evaluation, sage-grouse habitat is addressed.

The assessment and evaluation address existing management, including but not limited to, the administration of livestock grazing, and if a standard is not being achieved, a determination is made of the causal factors. The implications of the determination to livestock grazing authorizations are discussed in Chapter III(A)(1). More generally, BLM uses the findings of the assessment and evaluation to develop a plan and make decisions, in compliance with the requirements of NEPA and in conformance with the land use plan, to address all standards which were not achieved, including proposed modification of existing

use authorizations, restoration actions, and monitoring. When it is determined that sage-grouse habitat is being adversely affected by BLM's management or authorization of uses, corrective actions are taken.

Program-Based Regulatory Mechanisms: Regulatory Framework

This section summarizes the program-based regulatory mechanisms that influence sage-grouse habitat from that presented in Chapter III(A)(1).

a. Grazing Program

Besides being the fundamental law that authorizes and provides for a livestock grazing program on public lands, the Taylor Grazing Act of 1934, as amended, authorizes the Secretary of the Interior

to do any and all things necessary . . . to insure the objects of . . . grazing districts, namely, to regulate their occupancy and use, to preserve the land and its resources from destruction or unnecessary injury, to provide for the orderly use, improvement and development of the range . . . and to perform such work as may be necessary amply to protect and rehabilitate the areas subject to the provisions of this Act. [43 U.S.C. 315(b)]

The Taylor Grazing Act provides that

the creation of a grazing district or the issuance of a permit pursuant to the provisions of this Act shall not create any right, title, interest, or estate in or to the lands. [43 U.S.C. 315(a)]

The Act also provides that

[t]he Secretary . . . shall provide . . . or cooperation with . . . State land officials, engaged in conservation or propagation of wildlife interested in the use of grazing districts. [43 U.S.C. 315(h)]

In addition, FLPMA provides that

[t]he Secretary . . . may reexamine the condition of the range at any time, and, if he finds on reexamination that the condition of the range requires adjustment in the amount or other aspect of grazing use, that the permittee or lessee shall adjust his use to the extent the Secretary . . . deems necessary. [43 U.S.C. 1752(e)]

The Public Rangelands Improvement Act of 1978 provides that

[e]xcept where the land use planning process required pursuant to Section 202 of [FLPMA] determines otherwise or the Secretary determines, and sets forth his reasons for this determination, that grazing uses should be discontinued (either temporarily or permanently) on certain lands, the goal of . . . management shall be to improve the range conditions of the public rangelands so that they become as productive as feasible in accordance with the rangeland management objectives established through the land use planning process, and consistent with the values and objectives listed in sections 2(a) and (b)(2) of this Act. [43 U.S.C. 1901 et seq.]

Grazing Regulations Overview. The regulations at 43 CFR 4100–Grazing Administration, Exclusive of Alaska, govern livestock grazing on public land and other lands administered by the BLM (except for Alaska) [http://www.access.gpo.gov/nara/cfr/waisidx_o2/43cfr4100_02.htm]. Subpart 4100.02 and 0-5 lays out definitions used by the regulations and requires BLM to manage grazing use in accordance with land use plans, which set forth resource goals and objectives, program constraints, and general management practices needed to achieve management objectives.

As described in Chapter II(D) and under Factor B, Issue 5, the land use plan management decisions are where allowable uses, management guidance, constraints, and desired outcomes that affect sage-grouse habitat would be. Grazing permits and leases are amended, modified with terms and conditions, or cancelled to ensure that authorized grazing use occurring within the planning area is consistent with the provisions of the land use plan. Land use plans make the following types of decisions relevant to livestock grazing:

- a. Identify objectives for vegetation goals.
- b. Determine where livestock grazing would and would not be permitted.
- c. Identify the kind and types of range improvements.
- d. Identify kind and class of livestock to be permitted by area.
- e. Identify goals for authorized levels of livestock use.
- f. Identify "initial levels" of authorized livestock grazing.
- g. Identify that "monitoring" would be used to adjust livestock grazing if it was determined that the existing authorizations were not meeting the land use plan objectives.

Other regulatory direction for livestock grazing administration includes:

43 CFR 4110: provides that a successful applicant for grazing privileges receives a preference for renewal of those privileges so long as the land remains available for grazing (as provided by the applicable land use plans) and they abide by applicable regulation. This preference is attached to property owned or controlled by the grazing permittee or lessee (base property) and may be transferred upon request to the successor property owner or to the owner of another property that qualifies as base property, whereupon the preference is then attached. These permits/leases are generally authorized for a period of 10 years. This subpart also describes the process BLM must follow to reduce or increase grazing privileges.

43 CFR 4120: governs development of grazing allotment management plans and range improvements. The allotment management plans are the activity-plan-level documents that describe planning on an allotment or watershed-specific basis (refer to Chapter II(D)(2), this document). There are 35,504,900 acres of occupied sage-grouse habitat associated with areas having allotment management plans (Table A-19, Appendix A). Range improvements are required to be installed, used, maintained, and/or modified or removed in a manner consistent with multiple-use management. This subpart also states that the standards, design, construction, and maintenance shall be determined by the BLM, and that range improvement projects shall be reviewed in accordance with the requirements of NEPA.

43 CFR 4130: describes how the grazing privileges are authorized under a grazing permit or lease that BLM issues to the preference holder, mandates description of certain terms and conditions of use (such as conformance with Subpart 4180 Fundamentals of Rangeland Health and Standards and Guidelines for Livestock Grazing Administration, livestock number, and period of use), and provides authority to include additional (other than mandatory) terms and conditions, to modify permits or leases, and to authorize temporary changes in grazing management. Subpart 4130 also provides for other grazing authorizations (livestock crossing permits, for example). Violation of the permit/lease and these terms and conditions subjects the permit to modification, suspension, or cancellation.

43 CFR 4140: lists prohibited acts, including non-compliance with the terms and conditions of permits and leases, and authorizes penalties for their violation.

43 CFR 4150: describes how BLM deals with unauthorized grazing use.

43 CFR 4160: provides for administrative review of BLM grazing decisions and how BLM authorizes grazing while decisions are being reviewed. Authority is also provided for decisions that are effective upon issuance when there is sufficient reason for immediate action.

43 CFR 4170: describes penalties for grazing rules violations.

43 CFR 4180: describes the process that BLM follows to develop regionally-based standards for rangeland health and guidelines for livestock grazing to achieve or make progress towards achieving those standards and describes what BLM must do if it determines that the standards are not being achieved or are not significantly progressing towards being achieved because of current livestock grazing management.

43 CFR 4190: describes and provides BLM the authority to implement wildland fire management decisions in full force and effect.

The BLM utilizes an assessment process to ensure multiple uses are meeting or making progress toward meeting land use plan goals, allotment-specific objectives, and the land health standards (as described in Chapter II(D) and under Factor D, Issue 5). In accordance with regulations (43 CFR 4180), if BLM determines that existing grazing practices are not meeting those standards, then appropriate action to make significant progress toward achieving standards will be taken as soon as possible, but no later than the beginning of the next grazing year. Appropriate action may include modifying the terms and conditions of the permit or lease, modifying grazing systems, or installing range improvement.

BLM monitors the condition of allotments using a number of methods, collecting both quantitative and qualitative data. Data collection techniques are described in a series of technical references listed in Chapter III(A)(1). The information gathered using these techniques is used to describe current resource conditions and compare them to potential using ecological site descriptions or ecological site inventory. When evaluating achievement of land health standards, current conditions are compared to habitat needs of threatened and endangered or sensitive species.

The regulations provide flexibility by giving the BLM authority to modify or cancel a permit at any time when needed to achieve resource objectives, if the reasons are backed up by data. When immediate action is needed to protect resources, BLM may issue a decision and make it effective immediately or on a date specified in the decision (which greatly restricts appeals). Such a decision must be supported by a finding that the change was needed immediately because continued grazing at current levels or management would pose a significant risk to resources. In fiscal years 2000 through 2004, BLM rested or temporarily suspended use, due to factors like drought or wildfire, to improve rangeland health and sage-grouse habitat, on 11,178,000 acres of occupied range.

Figure 2 on page 62 illustrates the process for administering, modifying, and managing permitted uses on public land.

The BLM is in the process of proposing new grazing regulations. The draft regulations would not diminish BLM's requirements nor enforcement authority to administer livestock grazing on the public lands. Refer to Appendix E for a side-by-side comparison of the change items that relate most to sage-grouse habitat management.

b. Wild Horse and Burro Program

The Wild Free-Roaming Horse and Burro Act of 1971 (Public Law 92-195 (16 U.S.C. 1331)), gives BLM statutory authority for management of wild horses and burros and calls for a "thriving natural ecological balance" on public rangelands. At 43 CFR 4700.0-6, BLM has set forth a policy that:

Wild horses and burros shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat.

This would include actions to conserve and enhance sagebrush habitat for greater sage-grouse.

Herd management areas are established during land use planning. At the next level of planning (the activity-level) in the herd management plan, BLM establishes the appropriate management level for wild horses and burros. The appropriate management level is the number of animals that can be sustained over time within the carrying capacity of the land. BLM is directed under 43 CFR 4710.3–1 that:

In delineating each herd management area, the authorized officer shall consider the appropriate management level for the herd, the habitat requirements of the animals, the relationships with other uses of the public and adjacent private lands . . .

c. Wildlife Program

BLM authority to manage wildlife as outlined above comes primarily from planning policies and laws outlined previously, including FLPMA and the Sikes Act of 1974 (16 U.S.C. 670g et seq.). Sage-grouse may benefit from land use allocations, such as special designations in some existing land use plans, to protect big game winter range or wildlife travel corridors. Big game impacts on sagebrush habitat are addressed in the planning process (see Chapter III(A)(3)) and/or are evaluated during range health assessments (see Chapter II(D)(4)). Additionally, scoping for specific wildlife-related projects include consideration for habitat needs for all wildlife species, including big game forage needs.

d. Minerals and Energy Program

Fluid Minerals. To implement the National Energy Policy (43 CFR 3000-3280), BLM developed an implementation plan consisting of 54 separate tasks that provide for balanced approaches to energy production and environmental protection. All environmental standards currently in place are maintained as are all regulatory authorities (such as FLPMA, ESA, and the Clean Water Act). Nearly all leasing is analyzed in land use plan EISs, which address the cumulative impacts of leasing, exploration, and development. These impact studies include a reasonably foreseeable development scenario for long-term oil and gas development (for example, an estimate of the number of oil and gas wells that might be drilled), a cumulative impact analysis of existing and anticipated oil and gas activity, and stipulations that will be attached to leases to ensure environmental protection. Any oil and gas activity on BLM-administered lands takes place only if in conformance with existing land use plans, which are developed through a public process, and only if the activity can be conducted in an environmentally sound manner (refer to: Land Use Planning Handbook, H-1601-1; Planning for Fluid Minerals H-1624-1; 43 CFR 1610, Resource

Management Planning). Chapter III(B)(1) describes the decisions that are made in the land use plans regarding fluid minerals.

In areas of occupied sage-grouse habitat, BLM applies sage-grouse protective lease stipulations to new leases. Lease stipulations vary from no surface occupancy (no development of any kind, year-round) within 0.25 to 0.5 mile of leks; to seasonal timing restrictions extending approximately 2 miles, precluding drilling operations during critical time periods, such as nesting, brood-rearing, and wintering. Some older leases do not have sage-grouse protective stipulations. Even so, BLM has the regulatory authority to protect sage-grouse habitat by adding additional constraints during the permitting process, as explained per 43 CFR 1610.5-3(b) and 43 CFR 3101.1-2 (described more thoroughly in Chapter III(B)(1)). The field office attaches protective conditions of approval to the approved APD. Conditions of approval are generally more site-specific than lease stipulations. Regardless of whether a sage-grouse protective leasing stipulation has been applied to the oil and gas lease as a result of land use planning, Section 6 of the “Offer to Lease and Lease for Oil and Gas” (BLM Form 3100-11), provides the legal foundation for consideration of other resource values (including biological) in the execution of lease rights and operations. It reserves authority to the BLM to ensure that the

Lessee shall conduct operations in a manner that minimizes impacts to the land, air, and water, to cultural resources, biological, visual, and other resources, and to other land uses or users . . . The lessee shall take reasonable measures deemed necessary by the lessor . . .

BLM Instruction Memorandum No. WO-2004-194 requires the incorporation of appropriate BMPs into proposed APD and associated on- and off-lease rights-of-way approvals after appropriate NEPA evaluation. A menu of continually updated BMPs can be found on the web at:
<http://www.blm.gov/nhp/300/wo310/O&G/Ops/operations.html>

BLM's Inspection and Enforcement program responsibilities include inspection of oil and gas operations to determine compliance with applicable statutes, regulations, onshore operating orders, notices to lessees, lease terms and permit conditions of approval pertaining to drilling, production, well plugging and abandonment, and other requirements related to lease administration. The BLM's inspectors have broad responsibilities and authority with respect to protection of the environment and the public, proper disposition of production, accurate reporting of production, and adequate lease site security. When inspectors identify noncompliance they initiate enforcement actions to bring the operation into compliance by issuing written orders, notices of violations, imposing assessments or civil penalties, ordering a shut-down of operations, and possible lease cancellation. 43 CFR 3161.2 (Responsibility of the Authorized Officer) requires BLM to

. . . inspect and regulate the operations that are subject to the regulations in this part; to require compliance with lease terms, with the regulations in this title and all other applicable regulations promulgated under the cited laws; and to require that all operations be conducted in a manner which protects other natural resources and the environmental quality, protects life and property . . .

BLM performs periodic surface compliance inspections to ensure that the terms and conditions of the approved APD are implemented. Surface compliance may also include “monitoring”, which asks: *Were BLM’s mitigation requirements effective? If not, what changes are needed?*

Additional discussion of the BLM’s compliance and monitoring inspections for fluid mineral development is found in Chapter III(B)(1).

Coal. Depending on size, state, and type of authorization, BLM may or may not have the primary oversight authority over coal operation on BLM lands. For large coal mining operations and exploration within an established Surface Mining Control and Reclamation Act (SMCRA) permit, the lead for reclamation standards would fall to the SMCRA authority which is administered by the Office of Surface Mining Reclamation and Enforcement or a delegated state (30 CFR 745) primacy agency. In this situation, BLM functions as a participating agency. Issuance of a SMCRA mining permit is a significant Federal action that requires NEPA and public participation. All concerned Federal and state agencies have a participatory role in this process (30 U.S.C. 1272(e) – Surface Mining Control and Reclamation Act).

BLM’s regulatory mechanisms for coal are described in 43 CFR 3400–3480. All Federal lands that have potential for coal developments are subject to a review for suitability for coal leasing during the land use planning process. This review can also occur after land use planning but prior to lease issuance. There are currently 20 different unsuitability criteria (43 CFR 3461). Unsuitability criterion number 15 (43 CFR 3461.5(o)(1)) provides that

Federal lands which the surface management agency and the state jointly agree are habitat for resident species of fish, wildlife, and plants of high interest to the state and which are essential for maintaining these priority wildlife and plant species shall be considered unsuitable. Examples of such lands which serve a critical function for the species involved include: (i) Active dancing and strutting gourds for sage-grouse . . .

Lands that are unsuitable for coal leasing might be available with stipulation for exploration (43 CFR 3461.4). Lands that are unsuitable for leasing will not be leased. If special needs are identified, mitigation measures are included in a lease stipulation. Reclamation standards for leased lands are under the authority of the Office of Surface Mining Reclamation and Enforcement of the State primacy agency working under the authority of the Office of Surface Mining.

Actions with smaller or more limited disturbance can fall outside of the scope of the SMCRA. This would include a license to mine that covers less than 10 acres

and exploration licenses that are outside of an established SMCRA mining permit. Environment standards for exploration within a Reclamation Act permit are established by the SMCRA permit itself. BLM will only issue exploration licenses after completion of an environment analysis (43 CFR 3410.2-2(a)). An exploration license will not be issued if it would jeopardize the continued existence of a threatened or endangered species (43 CFR 3410.2-2(a)(2)). All applicable mitigation measures and reclamation standards will be stipulated in the exploration license (43 CFR 3410.2-2(b)). An exploration license must conform to the standards and conditions prescribed by the surface management agency (43 CFR 3410.2-3).

Inspection authority for coal leases or licenses is found at 43 CFR 3465.2 and 3486.1. BLM has a broad inspection authority to include inspections ranging from environmental protection to production verification. Minimum inspection intervals are quarterly for active leases or licenses and annually for those that are inactive. Typically, due to the demands of production verification and royalty reporting, inspection of active leases is done at least monthly. Active coal mines are also inspected by the Office of Surface Mining, Mine Health and Safety Administration, and various state agencies with regulatory authority.

SMCRA (and Office of Surface Mining authority under the Act) requires reclaiming the surface mine to the approximate original contour. Generally, reclamation is restoring to a similar pre-mining land use, but exceptions can be made. There are typically woody shrub (such as sagebrush) replacement requirements where woody shrubs existed prior to mining.

Saleable Minerals. BLM's authority to dispose of sand, gravel, and other mineral materials that are not subject to mineral leasing or location under the mining laws is the Act of July 31, 1947, as amended (30 U.S.C. 601 et seq.), commonly referred to as the Materials Act. This authority applies to sale and free use of these materials. The regulations are codified in 43 CFR 3600–3620. BLM's authority to allow removal of limited quantities of petrified wood from public lands without charge is section 2 of the Act of September 28, 1962 (Public Law 87-713, 76 Stat. 652).

Section 302 of FLPMA (43 U.S.C. 1732) provides the general authority for BLM to manage the use, occupancy, and development of the public lands under the principles of multiple use and sustained yield in accordance with the land use plans that BLM develops under FLPMA.

Through the land use planning process, all proposed mineral material disposal areas are evaluated on a broad-scale for known conflicts with other resources to identify major constraints and mitigation in accordance with FLPMA and NEPA. Standard terms and conditions provide for further site-specific evaluations of activities. All actual projects involving on-the-ground activity (such as exploration, contracts, permits) are subject to environmental field reviews and

analysis (such as biological assessments and opinions), applicable levels of environmental analysis under the NEPA (516 DM 1–7; 40 CFR Parts 1500–1508). Mining and reclamation plans are required as needed to address site specific issues. Financial guarantees are used to ensure performance and reclamation in accordance with the stipulations and conditions of approval

Inspection and enforcement includes on-the-ground site visits to monitor and ensure proper compliance with laws and regulations, policy, and mine and the reclamation plans. Inspection and enforcement also includes environmental, permit, and contract stipulation monitoring, and the identification and resolution of mineral trespass. Inspections are conducted regularly before, during, and after the period of operation. The issuance of, and follow-up on, notices of noncompliance and trespass are also an inherent part of inspection and enforcement. Operations are also bonded for reclamation or they pay a reclamation fee, both of which go to reclamation of the mineral material site if the operator defaults on its reclamation responsibilities.

Non-Energy Leasable Minerals. (*Includes potassium, sodium, phosphate, sulphur, and gilsonite.*) The regulations at 43 CFR 3592.1(c)(8)(iii) require that a mine plan address the

environmental aspects associated with the proposed mine which includes . . . a description of measures to be taken to prevent . . . damage to fish or wildlife.

The regulations also require the submission of a reclamation schedule and the measures to be taken for reclaiming the surface, including the types and mixtures of species to be planted and the method of planting.

Prospecting permits and exploration licenses also receive NEPA review prior to issuance. The regulations at 43 CFR 3505.45 and 43 CFR 3506.11, respectively, require that the exploration plan that is submitted with the application for a prospecting permit, or exploration license, contain a section stating what measures will be taken to “prevent . . . damage to fish and wildlife.” The regulations also require a reclamation schedule that includes the measures to be taken for reclaiming the surface and the types, species mixtures, and planting methods of species to be planted.

The 43 CFR 3598 regulations provide that

operators/lessees shall provide means at all reasonable hours . . . for the authorized officer to inspect or investigate; . . . to determine reclamation procedures and progress; environmental concerns; and to determine if the operator/lessee is in compliance with established requirements.

It is BLM policy to conduct a minimum of one compliance inspection quarterly on leases with active operations and at least one compliance inspection annually on leases without active operations. The regulatory reclamation standards for the

non-energy leasable minerals are performance standards, rather than prescriptive standards. For the non-energy leasable minerals, the level and types of acceptable plant cover are specified in the stipulations attached to the lease and/or mining/exploration plan approval. The reclamation standard is developed during the NEPA process and includes input from all members of the interdisciplinary team that prepares the NEPA document or reviews it for the BLM if prepared by a contractor.

Locatable Minerals. *(Includes gold, silver, lead, zinc, and other minerals.)* Plans of Operations are processed under the 43 CFR 3809 Surface Management Regulations. These regulations govern locatable mineral exploration and development on public lands. Under the General Mining Law of 1872, as amended (30 U.S.C. 22 et seq.), many public lands are open for exploration and development of valuable mineral deposits.

The 43 CFR 3809 authorities and mandates are found in FLPMA specific sections are described in Chapter III(B)(5).

Prior to approving mine operations, BLM field office interdisciplinary resource specialists review all mining plans under the NEPA process. Stipulations or mitigation measures are included if applicable, concerning the proposed operation and/or reclamation plan. The plan must also conform to the current field office resource management plan. An acceptable financial guarantee to cover the actual costs of reclamation must be posted prior to commencing operations. In addition, the operator must also obtain all applicable operating permits prior to commencing.

BLM inspects operations for compliance with the approved plan, and takes enforcement actions if the operator is found to be in noncompliance or has failed to prevent unnecessary or undue degradation of public land (see 43 CFR 3809.601).

Reclamation is conducted according to the approved reclamation plan. The reclamation plan is based on the performance standards outlined in 43 CFR 3809.420, including any stipulations.

e. Recreation Program

The BLM manages motorized and other access on the public lands in accordance with existing law (such as FLPMA and ESA), Executive Orders 11644 (1972) and 11989 (1997), proclamation, regulation (43 CFR 8340, 8342, and 2930), and policy (BLM Manual 8300). In addition, recreation uses of public lands and visitor services provided by BLM must be in conformance with the applicable land use plan for any given area. FLPMA requires that allowable uses and actions be prescribed through land use planning decisions.

Access Management. In accordance with appropriate authorities (43 CFR 8340.0-3), the BLM defines appropriate access to the public lands through the land use planning process, including preparation of RMPs and, in some cases, subsequent, more area-specific activity plans (43 CFR 8342.2). The planning process allows for revision, amendment, or maintenance, as appropriate. Generally, BLM allows use of vehicles and other conveyances on public lands, but in certain circumstances can close an area, such as big game winter range or sage-grouse leks, to all public access for specified periods of time (43 CFR 8364.1). Failure to comply with a closure or restriction order is subject to penalty (43 CFR 8364).

Direction for addressing vehicular access designations in land use planning is in the Recreation section (Appendix C, Section II. C.) of the Land Use Planning Handbook (H-1601-1) and it has been clarified in Instruction Memorandum No. 2004-005 (2003). BLM direction is to, at minimum, designate areas in the RMP as open, closed or limited to motorized vehicles and other conveyances, and include a map of area designations. Executive Orders 11644 (1972) and 11989 (1997) establish policies and procedures that ensure that the use of off-road vehicles on public lands are controlled and directed so as to protect resources, promote safety, and minimize conflict. The BLM Land Use Planning Manual and Handbook address these Executive orders. Specific criteria for open, limited, and closed designations are provided in definitions outlined in 43 CFR 8340. As described more thoroughly in Chapter III(C)(1), wildlife habitat issues can and have influenced designation of areas as closed or with access limited to specified roads and trails.

BLM regulations also provide that BLM may temporarily or permanently modify recreation use when needed to achieve resource objectives, including the objective to achieve land health standards. In every state, at least one land health standard addresses protection of wildlife habitat (see Chapter III(C)(1) for more discussion). Furthermore, the regulations give the BLM authority to modify travel management decisions at any time, if the reasons are valid. Within the last several years, BLM has elevated the development of travel management plans to be among the highest priorities of the Bureau.

Special Recreation Use Permits. In addition to vehicular access, BLM requires that other allowable uses and actions be prescribed through the land use plans. Special recreation use permits for commercial use, competitive events, organized groups, and recreation use in special areas are required and could be amended, modified, or cancelled to ensure that authorized use occurring within the planning area is consistent with the allowable uses and desired outcomes (goals, objectives and standards) of the land use plan (43 CFR 2932.11). Violation of the stipulations or conditions of a permit is prohibited. Penalties include fines (18 U.S.C. 3571), civil action, and/or loss of the special recreation permit.

BLM land health regulations provide that BLM may temporarily or permanently modify recreation use authorizations, including special use permits, when needed to achieve land health standards. The authority BLM has to change existing recreation use authorizations is the same for issuing the authorization (43 CFR 2932.11 and Manual/Handbook H-2930-1). In addition, permits are monitored for compliance with stipulations, terms, and conditions of the permit. The BLM's capability to monitor terms and conditions may be a factor in deciding whether or not to issue a permit. Failure to comply with the stipulations or conditions of the permit may result in a loss of the permit.

f. Wildland Fire, Hazardous Fuels, Prescribed Fire, and Emergency Stabilization/Burned Area Rehabilitation

The underpinnings of the National Fire Plan, the 2001 Federal Fire Policy, the 10-year Comprehensive Strategy, the President's Healthy Forests Initiative, and the Healthy Forests Restoration Act of 2003 all provide guidance and direction for the wildland fire program. They are all discussed more thoroughly in Chapter III(D). All the reports, guidance, and legislative assistance are now in place, incorporated under the concepts of the National Fire Plan, to reduce the devastation of uncharacteristic wildland fire and improve the health of the Nation's forests and rangelands.

Fire planning. Per the National Sage-grouse Strategy (Appendix B1, Action Item 1.1.6) fire management plans will be developed or revised to include sage-grouse habitat management guidance. In the meantime, states are completing state-led sage-grouse plans and incorporating management guidance into land use plans. Suggested management practices are recommended as described in Appendix B3, Action Item 1.4.1. The BLM Sage-grouse Land Use Plan Guidance (Appendix B2, Action Item 1.3.1) is also available to field offices to use during the planning process.

Appropriate NEPA analysis and consultations are conducted when fire management plans make new decisions that have not been covered by other NEPA documents using guidance outlined in BLM's NEPA Handbook (H-1790-1). State and Federal wildlife agencies and other interested parties are involved in the development of fire management plans and NEPA documents. Currently, all BLM fire management plans are being converted to a new interagency format. During this conversion process fire management objectives are being reviewed and modified to ensure they reflect resource values and objectives. This conversion process, scheduled to be completed by September 30, 2004, is another opportunity to add objectives for sage-grouse.

Project-level plans for fire and resource management are developed by interdisciplinary teams to guide specific on-the-ground projects, such as mechanical fuel reduction projects, prescribed burns, or emergency stabilization/rehabilitation treatments. These projects are implemented to

achieve objectives identified in land use plans and other activity plans including fire management plans. Through the NEPA process, applicable constraints and BMPs are identified and applied. The Connelly Guidelines are sometimes the basis for the BMPs, as in many planning areas in Idaho.

Emergency stabilization and rehabilitation (ESR). Excerpts from the newly authorized Departmental Manual 620 DM 3; 2004 are presented in Chapter III(D). ESR entails actions to (1) stabilize and prevent unacceptable degradation to natural and cultural resources (stabilization) and (2) repair or improve lands unlikely to recover naturally by emulating historical or pre-fire ecosystem structure, function, diversity, and dynamics consistent with existing land use plans (rehabilitation). Treatments must be consistent with land use and activity plans. BLM also uses an “Interagency Emergency Stabilization and Rehabilitation Handbook” (which is being finalized) and the BLM Supplemental Emergency Stabilization and Rehabilitation Handbook (draft is being updated).

From Instruction Memorandum No. 2004-184, Annual Operating Procedures for Emergency Stabilization and Rehabilitation Activities (in Fiscal Year 2004 and 2005):

In compliance with BLM Manual 1745 and Executive Order 13112, Invasive Species, February 3, 1999, use of non-native seeds as part of a seeding mixture is appropriate only if: 1) suitable native species are not available; 2) the natural biological diversity is not diminished and exotic and naturalized species can be confined within the proposed treatment area; 3) analysis of appropriate information (including ecological site inventory) indicates that a site may not support reestablishment of a species that was historically part of the natural environment; or 4) resource management or land use plan objectives cannot be met with native species.

g. Lands and Realty

Rights-of-Way. BLM processes applications for rights-of-way, including wind energy rights-of-way applications, in accordance with BLM land use plans, NEPA, ESA, the NHPA, and other applicable laws and regulations. BLM has statutory authority to grant rights-of-way across public lands under Title V of FLPMA and Section 28 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 185). FLPMA rights-of-way are processed in accordance with the 43 CFR 2800 regulations and Mineral Leasing Act rights-of-way are processed in accordance with the 43 CFR 2880 regulations. Wind energy rights-of-way on the public lands are also authorized under Title V of FLPMA and the 43 CFR 2800 regulations.

FLPMA also directs BLM to designate utility corridors through the land use planning process to “minimize a proliferation of rights-of-ways . . .” Further, the National Energy Policy of May 2001 cites the need for an energy infrastructure to include a network of utility corridors to assure the secure and reliable transmission of energy. Supplemental BLM land use planning guidance on rights-of-way utility corridors was issued by Instruction Memorandum No. 2002-

196, Right-of-Way Management-Land Use Planning (2002). This guidance provides specific direction to consider the designation of utility corridors as a land use planning decision and to designate those areas where rights-of-way should be avoided or excluded all together.

Much more information about the rights-of-way program is provided in Chapter III(E)(1).

Land Tenure. Section 102(a)(1) of FLPMA requires that BLM-administered lands be retained in Federal ownership unless BLM determines through the land use planning process that disposal of a particular parcel will serve the national interest (43 U.S.C. 1701). Land tenure decisions are those decisions that identify lands for retention, proposed disposal, or acquisition. Whether a specific tract of public land will be found suitable for disposal or retention is determined through a classification process in accordance with the regulations in 43 CFR 2400. During the land use planning process, the classification process under 43 CFR 2400 is applied. There are two distinct sets of criteria in FLPMA for evaluating whether disposal of public lands will serve the national interest. One set of criteria applies to disposal by sale and the other for disposal by land exchange. Land disposal by public sale is addressed in Section 203(a) of FLPMA and the regulations at 43 CFR 2700. Land disposal by exchange is addressed in Section 206(a) of FLPMA and the regulations at 43 CFR 2200. Chapter III(E)(2) provides more information about these criteria. Lands identified as important for resource values, including wildlife habitat values, would not be classified as available or suitable for disposal.

Section 205 (b) of FLPMA, as paraphrased, requires that acquisitions of land, or interests in land, be consistent with the BLM mission and applicable Agency land use plans (see Chapter III(E)(2)). The criteria in Section 206 of FLPMA provides for the acquisition of sage-grouse habitat on non-Federal lands that are of more value than habitat on Federal lands.

h. Vegetation Management

Vegetation management practices are included in the Standards for Rangeland Health (43 CFR 4180)

[http://www.aces.gpo.gov/nara/cfr/waisidx_02/43cfr4100_02.html].

Management practices and activities subject to standards for rangeland health include the development of grazing-related portions of activity plans and range improvement activities, such as vegetation manipulation, fence construction, and development of water. In accordance with 43 CFR 4180, at a minimum, standards must address:

- 1) Watershed function;
- 2) nutrient cycling and energy flow;

- 3) water quality;
- 4) habitat for endangered, threatened, proposed, candidate 1 or 2, or special status species; and
- 5) habitat quality for native plant and animal populations and communities (43 CFR 4180.2(d)).

The following authorities provided guidance for developing BLM regulation and policy that affects vegetation management.

FLPMA: Directs the BLM to “take any action necessary to prevent unnecessary and or undue degradation of the public lands” (43 U.S.C. 1734(b)).

Public Rangelands Improvement Act of 1978 (16 U.S.C. 670g et seq.): Requires that BLM will manage, maintain, and improve the condition of the public rangelands so that they become as productive as feasible.

Executive Order 13112 Invasive Species: “to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological and human health impacts that invasive species cause . . . ”

Federal Noxious Weed Act of 1974, as amended (7 U.S.C. 2801 et seq.) by Section 15–Management of Undesirable Plants on Federal Lands, 1990: Authorizes the Secretary

to cooperate with other Federal and state agencies, and others in carrying out operations or measures to eradicate, suppress, control, prevent, or retard the spread of any noxious weed. Each Federal agency shall 1) designate an office or person adequately trained to develop and coordinate an undesirable plants management program for control of undesirable plants on Federal lands under the agency’s jurisdiction, and 2) establish and adequately fund an undesirable plants management program through the agency’s budgetary process, 3) complete and implement cooperative agreements with State agencies regarding the management of undesirable plant species on Federal lands, and 4) establish integrated management systems to control or contain undesirable plant species targeted under cooperative agreements.

Carlson-Foley Act of 1968: Directs agency heads to enter upon lands under their jurisdiction with noxious plants and destroy noxious plants growing on such land.

Departmental Manual 517: Prescribes policy for the use of pesticides on the lands and waters under its jurisdiction, and for compliance with the Federal Insecticide, Fungicide, and Rodenticide Act, as amended.

Departmental Manual 209: Prescribes policy to control undesirable or noxious weeds on the lands, waters, or facilities under its jurisdiction to the extent

economically practicable, and as needed for resource protection and accomplishment of resource management objectives.

BLM Manual 9011 and Handbook H-9011-1: Provides policy for conducting chemical pest control program under an integrated pest management approach.

BLM Manual 9014: Provides guidance and procedures for planning and implementing biological control in integrated pest management programs.

BLM Manual 9015: Provides policy relating to the management and coordination of noxious weeds activities among BLM, organizations, and individuals.

BLM Manual 1740: Requires all range improvements to be consistent with land use planning and NEPA requirements.

The use of native plants for rehabilitation after wildfires and restoration of disturbed wildlands is encouraged by various BLM programs, initiatives, and policies. Examples include the 2001 Interior Appropriations Bill, the Great Basin Restoration Initiative, Departmental Manual 620 DM 3 and subsequent guidance (Interagency Emergency Stabilization and Rehabilitation Handbook), Executive Order 12112 (Invasive Species), and the BLM's Fundamentals of Rangeland Health (43 CFR 4180).

Factor E: Other Man-made or Natural Factors Affecting its Continued Existence

FWS determination. *Substantial information is not available to indicate that natural and manmade factors not associated with habitat loss or degradation (discussed in Factor A) threaten the continued existence of the greater sage-grouse in the contiguous United States.*

BLM Response. No response is required.