Chapter 2
Alternatives

Introduction

Chapter 2 describes alternatives for managing the South Dakota Field Office (SDFO) to meet the purpose and need, management goals, and desired future condition, and to address issues discussed in Chapter 1. Each alternative represents a reasonable set of objectives and actions to guide future management of public land in the SDFO planning area. This chapter contains the following sections:

- Development of the Alternatives
- Alternatives Considered in Detail
- Alternatives Considered but Not Carried Forward for Detailed Analysis
- Summary of Restrictions (Table 2-1)
- Summary Comparison of Alternatives (Table 2-2)
- Summary Comparison of Impacts (Table 2-3)

Mitigation

Table 2-1, Summary of Restrictions, provides an overview of the restrictions including oil and gas stipulations that would be applied under the alternatives. This summary provides basic information about acres affected and the type of restriction for each alternative.

Mitigation of surface-disturbing or disruptive activities will be applied where needed to minimize impacts of human activities on resources vulnerable to impacts consistent with the stipulations outlined in the Fluid Minerals section of the Summary Comparison of Alternatives (Table 2-2, located at the end of Chapter 2) and Appendix E.

Mitigation measures would be applied on a case-by-case basis during activity level planning if an evaluation of the project area indicates the presence of important wildlife species, special status species, or resources sensitive to disturbance. Exceptions may be granted by the authorized officer if an environmental review demonstrates that effects could be mitigated to an acceptable level, habitat for the species is not present in the area, or portions of the area can be occupied without affecting a particular species. Exceptions may also be granted where the short-term effects are mitigated by the long-term benefits (e.g., prescribed fire or forest health treatments). Mitigation measures would also be applied at the project level to resolve potential conflicts with other resource users including the general public.

Mitigation Measures and Conservation Actions for Surface-Disturbing and Disruptive Activities

Mitigation measures and conservation actions are Best Management Practices (BMPs), operating procedures, or design features that have been developed to avoid, minimize, rectify, reduce, or compensate for potentially significant adverse environmental impacts associated with surface-disturbing or disruptive activities.

For the purposes of applying mitigation measures, surface-disturbing and disruptive activities are defined as follows:

Surface-Disturbing Activities: The physical disturbance or removal of land surface and vegetation. Some examples of surface-disturbing activities include, but are not limited to, construction of roads, well pads, pipelines, power lines, reservoirs, facilities, recreation sites, and mining. Vegetation renovation treatments that involve soil penetration and/or substantial mechanical damage to plants (plowing, chiseling, chopping, etc.) are also surface-disturbing activities.

Disruptive Activities: Those uses and activities that are likely to alter the behavior of, displace, or cause excessive stress to wildlife populations occurring at a specific location and/or time. In this context, disruptive activity(ies) refers to those actions that alter behavior or cause the displacement of wildlife such that reproductive success is negatively affected, or the physiological ability to cope with environmental stress is compromised. This term does not apply to the physical

disturbance of the land surface, vegetation, or features. Examples of disruptive activities may include fence construction, noise, vehicle traffic, or other human presence regardless of the activity. The term is used in conjunction with protecting wildlife during crucial life stages (for example, breeding, nesting, birthing, etc.), although it could apply to any resource value. This definition is not intended to prohibit all activities or authorized uses. For example, emergency activities (fire suppression, search and rescue, etc.), or rangeland monitoring, routine maintenance associated with an approved authorization, dispersed recreational activities (hunting, hiking, etc.), and livestock grazing are not considered surface-disturbing or disruptive activities.

Mitigation measures for all resources are included in Appendix B, and Appendix V includes the Greater Sage-Grouse Mitigation Measures and Conservation Actions. The BLM may add additional mitigation measures as deemed necessary by further environmental analysis and as developed through consultation with other federal, state, and local regulatory and resource agencies. Monitoring of sage-grouse and sagebrush habitats is described in Appendix W.

The BLM will apply appropriate mitigation measures and conservation actions to BLM-authorized activities to avoid, minimize, rectify, reduce, or compensate for impacts if an evaluation of the project area indicates the presence of important wildlife species, seasonal wildlife habitat, or other resource concern. The sequence of mitigation action will be:

Step 1. Avoid - Adverse impacts to resources are to be avoided and no action shall be permitted if there is a practicable alternative with less adverse impact.

Step 2. Minimize - If impacts to resources cannot be avoided, appropriate and practicable steps to minimize adverse impacts must be taken.

Step 3. Compensate - Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts which remain. The amount and quality of compensatory mitigation may not substitute for avoiding and minimizing impacts.

Even after avoiding and minimizing impacts, projects that will cause adverse impacts to resources typically require some type of compensatory mitigation. Compensatory mitigation refers to the restoration, establishment, enhancement, or in certain circumstances preservation of resources for the purpose of offsetting unavoidable adverse impacts. The BLM will determine the appropriate form and amount of compensatory mitigation required. Methods of compensatory mitigation include restoration, establishment, enhancement and preservation.

- *Restoration:* Re-establishment or rehabilitation of a resource with the goal of returning natural or historic functions and characteristics to a currently degraded area. Restoration may result in a gain in function or acres, or both.

- *Establishment (Creation):* The development of a resource where that resource did not previously exist through manipulation of the physical, chemical and/or biological characteristics of the site. Successful establishment results in a net gain in acres and function.

- *Enhancement:* Activities conducted within existing resource that heighten, intensify, or improve one or more functions. Enhancement is often undertaken for a specific purpose such as to improve water quality, flood water retention or wildlife habitat. Enhancement results in a gain in function, but does not result in a net gain in acres.

- *Conservation:* The permanent protection of ecologically important resources through the implementation of appropriate legal and physical mechanisms (i.e. conservation easements, title transfers). Preservation may include protection of areas adjacent to a resource location as necessary to ensure protection or enhancement of the ecosystem. Preservation does not result in a net gain of acres and may only be used in certain circumstances, including when the resources to be preserved contribute significantly to ecological sustainability.

There are times when mitigating project impacts through onsite mitigation alone may not be possible or sufficient to adequately mitigate impacts and achieve resource objectives. In these cases, it may be appropriate to consider offsite mitigation as a feature of one or more of the alternatives in the impact analysis. Offsite mitigation is generally appropriate when the authorized officer determines that impacts cannot be mitigated to an acceptable level onsite and it is expected that the land use authorization as submitted would not be consistent with the BLM's resource objectives. BLM may expressly

condition its approval of an action on the applicant's commitment to take actions, and the BLM may, if necessary, seek appropriate enforcement action to ensure the terms of the contract are met (BLM Instruction Memorandum No. 2012-xxx).

Because of site-specific circumstances, some mitigation measures and conservation actions may not apply to some activities (e.g., a resource or conflict is not present on a given site) and/or may require slight variations from what is described in Appendix V. Proposed variations will be addressed as site-specific mitigation applied in the permitting process. All variations in mitigation measures and conservation actions will require appropriate analysis and disclosure as part of activity authorization. It is anticipated that variations in the mitigation measures and conservation actions will be approved in very limited circumstances and only in coordination with state wildlife management agencies. Mitigation measures and conservation actions selected for implementation will be identified in the Record of Decision (ROD) or Decision Record (DR) for those activities. The proponent must implement those identified mitigations because they are commitments made as part of the BLM decision. Because these decisions create a clear obligation for the BLM to ensure any proposed mitigation adopted in the environmental review process is performed, there is assurance that mitigation will lead to a reduction of environmental impacts in the implementation stage and include binding mechanisms for enforcement (CEQ Memorandum for Heads of Federal Departments and Agencies 2011). The determination of adequate application of the mitigation measures and conservation actions for specific projects will remain with the BLM's Authorized Officer.

Guidelines and Best Management Practices

Guidelines and Best Management Practices (BMPs) represent an effective and practical means to achieve management goals and limit impacts to natural resources on a given site. Guidelines and BMPs are referenced in the applicable resource or resource use section in the Summary Comparison of Alternatives Table 2-2 and in Appendix B. Guidelines may include Standard Operating Practices (SOPs) as described in Appendix B and in specific resource or resource use sections of the South Dakota Resource Management Plan and Environmental Impact Statement (SD RMP/EIS). Specific mitigation measures for sage-grouse and sagebrush habitat are shown in Appendix V. Mitigation measures shown in Appendix B would also apply to sage-grouse and sagebrush habitat.

Guidelines and BMPs are a suite of techniques or practices used to guide desired outcomes while reducing impacts of various management actions. They may also be applied to management actions to aid in achieving desired outcomes. BMPs and Guidelines are not mandatory, but are often adopted or developed in conjunction with RMPs.

Unless detailed as a specific management action in a particular resource program area in the range of alternatives, the Guidelines and BMPs are not land use decisions. Rather, they are examples of mitigation measures that could be applied as appropriate, based on site-specific National Environmental Policy Act (NEPA) analysis for individual proposals. Comments on the use and application of specific mitigation measures can be made during the NEPA process. Because mitigation measures change or are modified based on new information, the Guidelines and BMPs may be updated or modified periodically, primarily through administrative review and without an RMP amendment, as new research findings, technologies, and techniques become available.

Within the limits of BLM authority, the Authorized Officer may require that applicable Guidelines or BMPs become mandatory requirements or conditions for a specific authorization in the planning area based on project level (implementation level) environmental review. Individual guidelines and BMPs for a specific use may be applied or adapted to other uses as applicable to reduce or avoid adverse impacts. The application of BMPs and guidelines for other uses would require project level (implementation level) environmental review.

Development of the Alternatives

Alternatives were developed to establish a framework for measuring impacts that might occur as a result of future management. The alternatives do not constitute management decisions; instead, they represent varying approaches to managing BLM-administered public land and activities. The preferred alternative will function as the BLM's draft plan for managing BLM-administered public land and resources. This, however, is subject to change between the Draft RMP and the Final RMP as a result of new information that may be raised during the public comment period.

The process to develop the range of alternatives included the following steps:

- Solicit and consider public input from scoping.
- Identify current management (Alternative A, the No Action Alternative).
- Identify and consider related plans.
- Consider BLM policies, plans and programs.
- Develop a range of alternatives (Alternatives A, B, C, and D).
- Analyze the effects of the alternatives.
- Identify the BLM's Preferred Alternative (Alternative D).

Alternative Components

Each alternative comprises two categories of land use planning decisions: (1) goals and objectives (desired outcomes) and (2) allowable uses and management actions.

Goals and objectives direct BLM actions to most effectively meet legal mandates, regulations, and agency policy, as well as local and regional resource needs. Goals and objectives are broad statements of desired outcomes that usually are not quantifiable, but identify the desired outcomes which allowable uses and management actions work toward achieving.

The BLM developed allowable uses and management actions to achieve the goals and objectives defined for each resource. Allowable uses identify uses that are allowed, restricted, or excluded on the BLM-administered surface lands and federal mineral estate. Alternatives can include specific land use restrictions to meet goals and objectives and can exclude certain land uses to preserve resource values (such as mineral leasing, locatable mineral development, recreation, forest management, utility corridors, and livestock grazing). Allowable uses often contain a spatial component because the alternatives identify whether particular land uses are allowed, restricted, or excluded. Maps of the planning area illustrate these spatial components and define the geographical extent of the management actions.

Management actions are proactive measures (for example, measures the BLM will implement to enhance watershed function and condition), or limitations intended to guide BLM activities in the planning area. Management actions can vary among the alternatives in degrees of intensity, geographic scope or temporal scale, but all would generally meet the identified goals and objectives of the resource.

Overview of the Alternatives

The alternatives provide a reasonable range of management options to resolve the issues identified for the planning area. Alternatives include a range of management actions that emphasize current use (Alternative A), commercial use (Alternative B), and conservation of resources (Alternative C). Alternative D, the Preferred Alternative, was developed after a review of the impacts of Alternatives A, B, and C. Table 2-1, located at the end of Chapter 2, provides an overview of the restrictions including oil and gas stipulations that would be applied under the alternatives. This summary provides basic information about acres affected and the type of restriction for each alternative. The alternatives are presented below and specific details about the alternatives are shown in Table 2-2, Summary Comparison of Alternatives, which follows Table 2-1.

The areas impacted by the restrictions that are described in the various alternatives are shown as follows:

- ROWs: Maps 2-15 through 2-18
- Renewable energy ROWs: Maps 2-19 through 2-24
- Oil and gas restrictions: Maps 2-25 through 2-28

Alternative A (Current Management)

Alternative A (Current Management) would continue present management on the BLM-administered surface and mineral estate within the planning area and provides baseline information from which to identify potential environmental consequences when compared to the other alternatives. If selected, this management option would follow direction in the

existing South Dakota RMP (as amended), the Miles City Field Office Oil and Gas Leasing EIS (1994), and the Fort Meade Recreation Area ACEC Plan (1996).

Under Alternative A, the BLM would continue with the present National Register of Historic Places District Boundary for portions of the Fort Meade ACEC (Figure 2-2) which includes about one-half of the ACEC. Motorized cross-country travel to retrieve downed big game animals would be prohibited. Cross-country travel would be allowed within 300 feet of roads to access campsites. Alternative A would not place restrictions on snowmobile use except in the Fort Meade ACEC, where it would be prohibited. All BLM-administered lands would be managed as Extensive Recreation Management Areas (ERMAs). Under Alternative A, Travel Management Plans would not be completed after the RMP/EIS is completed and all areas would be limited to existing routes except for emergency situations or travel that is directly related to a specific authorization. The Greater Sage-Grouse Protection Priority Areas (PPAs) would not be designated an ACEC. Priority habitat for sage-grouse in the planning area would be protected as described in Table 2-2, Special Status Species, Greater Sage-Grouse Protection Priority Areas and associated management actions.

Alternative B

Alternative B emphasizes commercial use while providing the minimum protection necessary to protect physical, biological, cultural and visual resources. Alternative B provides fewer constraints than Alternatives C and D, but provides more constraints than current management (Alternative A) because it brings current management up to date and results in more restrictions and actions to protect wildlife from surface-disturbing and disruptive activities, including additional buffers around sensitive soils, wildlife habitat and high value resources. In Alternative B, 83,744 surface acres and 253,357 oil and gas mineral acres would be managed as Greater Sage-Grouse PPAs (Map 2-4, located at the end of Chapter 2). Fort Meade ACEC would be managed as a Special Recreation Management Area (SRMA), while the rest of the BLM-managed land would be managed as an ERMA. The Greater Sage-Grouse PPAs would not be designated an ACEC. Priority habitat for sage-grouse in the planning area would be protected as described in Table 2-2, Special Status Species, Greater Sage-Grouse Protection Priority Areas and associated management actions.

The BLM would only allow new grazing allotments in the Exemption Area in the Black Hills where grazing capability criteria are met. High value resources including important wildlife habitat would be avoidance areas for renewable energy development. Compared to Alternatives C and D, Alternative B would provide less stringent measures to protect sensitive soils by utilizing Controlled Surface Use (CSU) in these areas (soils with low fugitive dust resistance and low restoration potential).

Alternative C

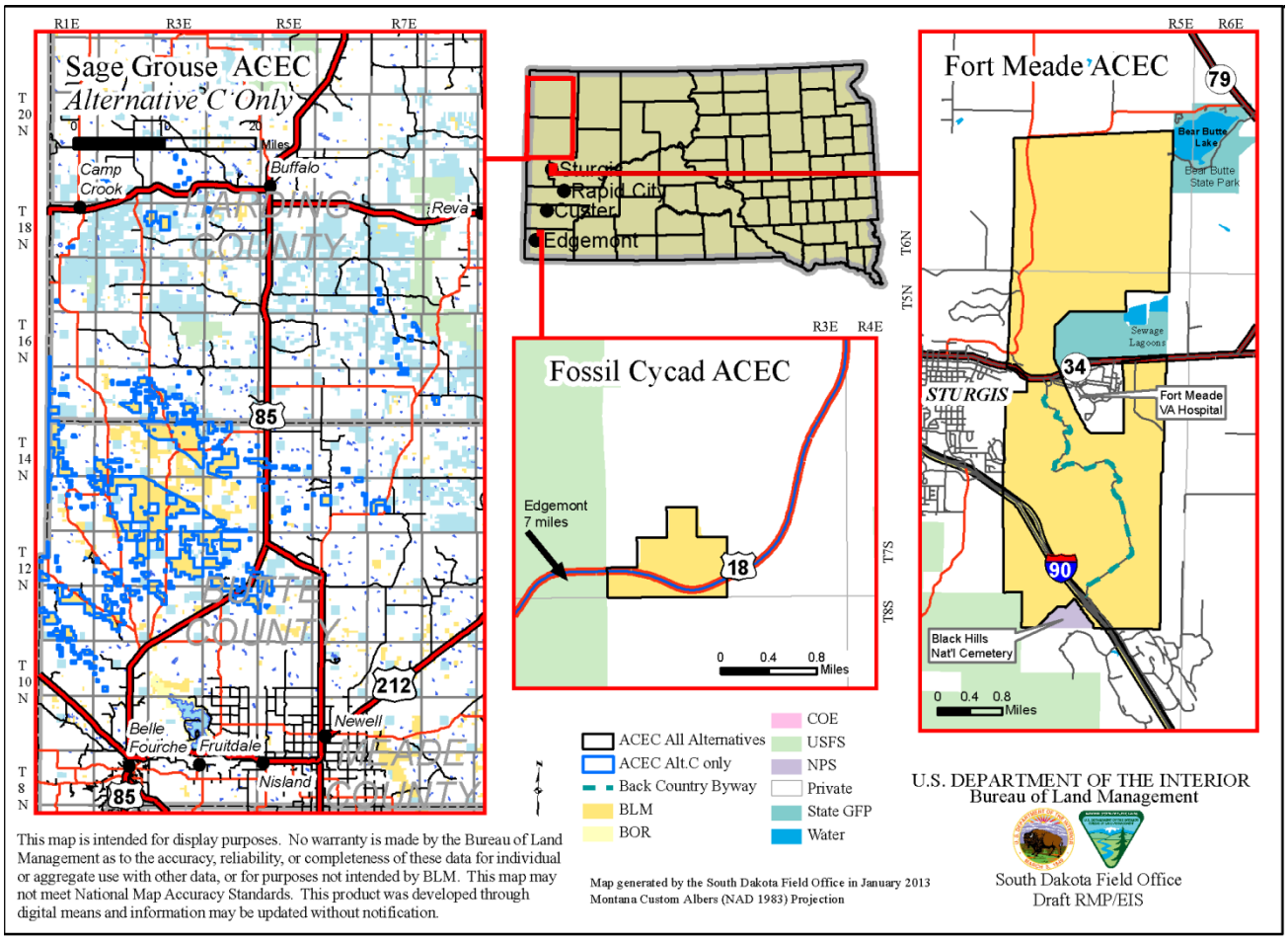
Alternative C emphasizes conservation of resources. Compared to the other alternatives, Alternative C provides the highest degree of resource protection for physical, biological, cultural and visual resources. In most cases, sensitive resources and important wildlife habitat would be exclusion areas for renewable energy development. Alternative C provides the largest area and degree of protection within PPAs by closing or withdrawing all minerals in PPAs except those that are already claimed or leased. This alternative would close all leasable and salable federal minerals within the abandoned Black Hills Army Depot (BHAD) and Igloo town site (refer to Map 2-34) south of Edgemont SD.

Alternative C would continue to manage the Fort Meade and Fossil Cycads ACECs as ACECs (refer to Figure 2-1) but acres would be slightly higher as the exchange of land for the Fort Meade National Cemetery (up to 170 acres) and South Dakota Army National Guard facility (up to 50 acres) would not occur. The BLM would revise the National Register of Historic Places Fort Meade District nomination to incorporate 3,370 additional acres inside the District Boundary and incorporate the entire Military Reservation. Total acreage in the Historic District would be changed to 6,570 acres. In Alternative C the Fort Meade Recreational Area would be managed as a SRMA and the Exemption Area would be managed as an ERMA. In addition to the Fort Meade ACEC and Fossil Cycad ACEC, all Greater Sage-Grouse PPAs would be managed as an ACEC (refer to Figure 2-1). Alternative C provides more acres managed as Travel Management Areas (TMAs). In addition to the Center of the Nation, Fort Meade, and Exemption Area TMAs, all areas within sage-grouse general habitat areas would be managed as a TMA (refer to Map 2-5, located at the end of Chapter 2).

Motorized cross-country travel to retrieve downed big game animals would not be allowed (the same as Alternative A). Motorized wheeled travel would be allowed within 100 feet of roads to access campsites in dispersed recreational areas (the

same as Alternative D). Decisions about cross –country travel for camping and retrieval of downed big game may be revaluated and changed when Travel Management Plans are completed. Snowmobiles and vehicles specifically equipped to travel on snow would be restricted to designated roads and trails.

Figure 2-1
Areas of Critical Environmental Concern



In general, the stipulations and ROW restrictions under Alternative C would provide a higher degree of constraint on resource uses compared to Alternatives A, B and D. Alternative D provides the most acres of No Surface Occupancy (NSO) restrictions. In addition, more acres would be protected through ROW exclusion compared to Alternative D. No surface occupancy use restrictions would be applied to sensitive soils. In addition to the land retention areas shown in Map 2-2 (located at the end of Chapter 2), Alternative C would retain all BLM-administered land within sage-grouse general habitat areas and PPAs including additional BLM-administered lands in Harding County and BLM-administered lands east of State Highway 85 in Butte County (refer to Map 2-5). In contrast, Alternatives B and D would retain only BLM-administered land shown in Map 2-2 and would not retain BLM-administered land in portions of the PPAs and general habitat areas in Harding County and general habitat areas in Butte County (portions of Harding County and lands east of State Highway 85 in Butte County (refer to Maps 2-2 and 2-4)).

Alternative D (Preferred Alternative)

Alternative D increases conservation of physical, biological, cultural and visual resources compared to Alternatives A and B, but does not provide the more stringent resource protection measures that were developed under Alternative C. In general, the management actions under Alternative D would provide an intermediate degree of restriction compared to Alternatives B and C.

Alternative D would provide more specific direction to protect resources and manage resource uses than Alternative A. The areas managed as Greater Sage-Grouse PPAs and general habitat areas would be the same as Alternative B (Map 2-5); however, specific management actions would vary. PPAs would be excluded from renewable energy and other types of Rights of Way (ROWs). The Greater Sage-Grouse PPAs would not be designated an ACEC. Priority habitat for sage-grouse in the planning area would be protected as described in Greater Sage-Grouse Protection Priority Areas and associated management actions (refer to Table 2-2, Wildlife and Special Status Species, Greater Sage-Grouse PPAs).

The criteria for allowing new grazing allotments in the Exemption Area in the Black Hills would be the same as Alternative B (areas displayed in Map 2-24, located at the end of Chapter 2).

Pending project-level environmental review and approval, the BLM would allow the transfer of up to 220 acres of surface/mineral estate out of the Fort Meade Recreational Area ACEC for use as a National Cemetery and South Dakota Army National Guard facility (same as Alternative B).

Prior to completion of a Travel Management Plan, motorized cross-country travel to retrieve downed big game animals would be prohibited (the same as Alternatives A and C). Cross-country travel would be allowed within 100 feet of roads to access campsites in dispersed recreational areas (the same as Alternative C). Decisions about cross–country travel for camping and retrieval of downed big game may be revaluated and changed when Travel Management Plans are completed.

Sensitive and high value resources including important wildlife habitat would be a mixture of avoidance and exclusion areas for renewable energy development. No surface occupancy use restrictions would be applied to sensitive soils.

Alternative D would revise the current National Register of Historic Places Nomination for the Fort Meade Historic District site boundary to incorporate all additional acres, approximately 3,370 acres inside the original Military Reservation, that are administered by the BLM. The BLM would consider a National Historic Landmark nomination, contingent on other partnering agency cooperation.

Alternatives Considered in Detail

Key components are described below for each alternative considered in detail. All alternatives are consistent with laws, regulations and policy, and provide for varying levels of compatible resource uses and development opportunities. A detailed discussion of each alternative is presented in Table 2-2, Summary Comparison of Alternatives.

This section summarizes the four alternatives (A through D) considered in detail in this Draft RMP/EIS. Due to the breadth of management prescriptions in the alternatives, this section describes only the key elements of the alternatives. The maps at the end of each chapter further illustrate differences in acreage allocations and management prescriptions by alternative for key resource program areas.

Management Actions Common to All Alternatives

Guidance found in the Management Actions Common to All Alternatives section has been carried forward from existing laws, regulations, policy, and previous planning efforts, primarily the 1985 SDFO RMP Record of Decision (as amended) (BLM 1986), and the Fort Meade Recreation Area ACEC Plan (BLM 1996). The Management Actions Common to All Alternatives combined with selected management actions from Alternatives A, B, or C form the Preferred Alternative (Alternative D).

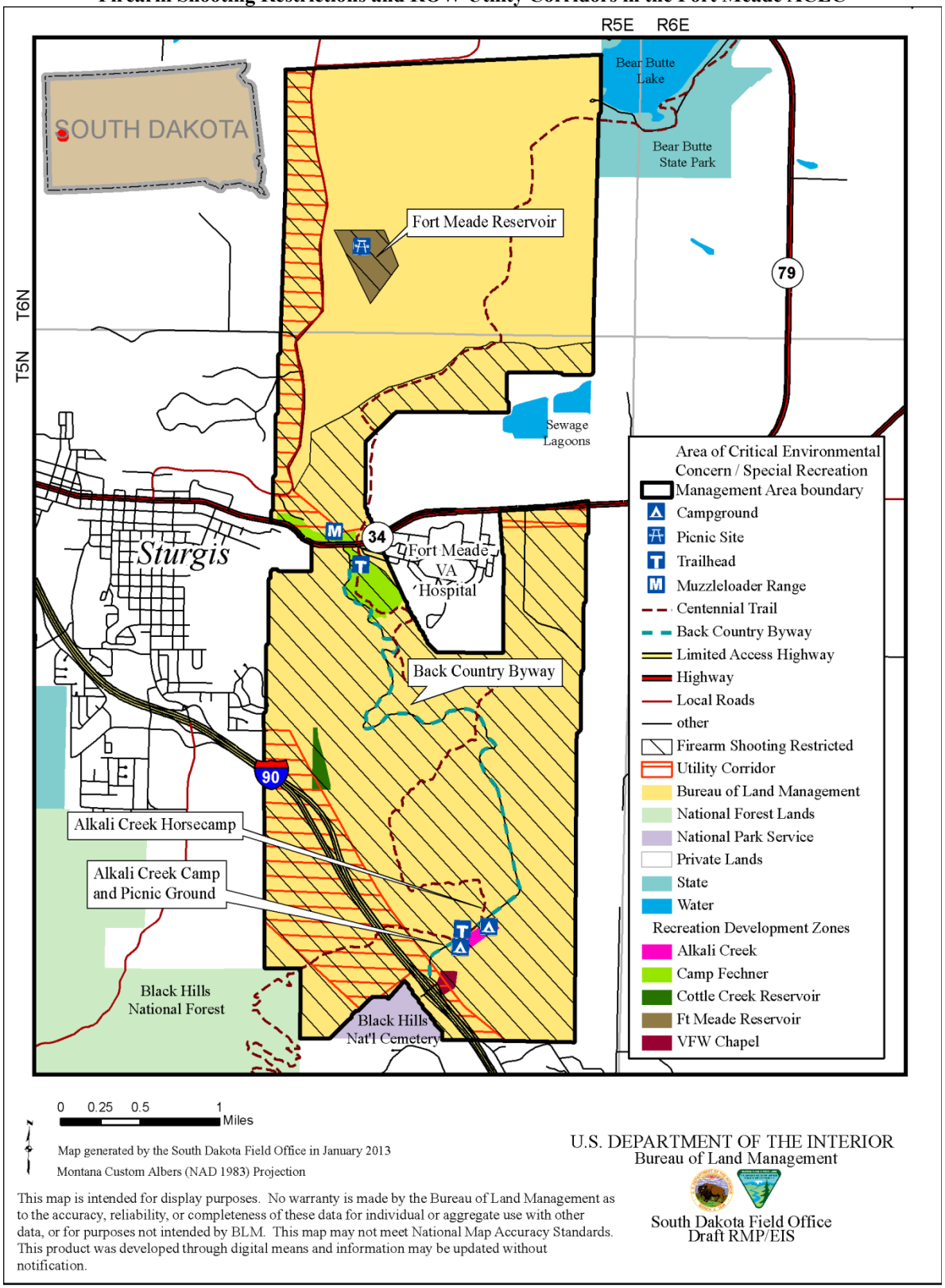
Some of the management actions common to all alternatives were developed as a result of specific limitations on management of resources and land use programs. These limitations are defined in various laws and regulations that govern BLM management decisions. They are also set forth in the planning criteria to ensure that management actions under all alternatives comply with nondiscretionary laws and regulations. In many cases, these laws and regulations preclude the development of the alternatives to a given action; in some cases, they limit management either to implementing or not implementing the action.

This section summarizes the key management action components that are common to and apply to all alternatives. This section does not list all management actions; only key actions are listed to provide an overview. Detailed descriptions of all management actions common to all alternatives are set forth at the beginning of each resource or resource use section in Table 2-2.

Highlights of Management Actions Common to All Alternatives

- Guidelines and BMPs (Appendix B) will be used to guide management practices based on site-specific evaluations.
- Priority will be placed on actions that reduce or mitigate greenhouse gas (GHG) emissions by actions such as enhanced energy efficiency, use of lower GHG-emitting technologies, renewable energy, planning for carbon capture and sequestration, and the capture or beneficial use of fugitive methane emissions.
- The BLM will continue to work in coordination with federal, state, and county agencies, tribal governments, lessees, private landowners, and organizations.
- The BLM will continue to use an Integrated Pest Management approach for control and management of noxious weeds and invasive pests.
- All Fire Management Units in the planning area will be designated as Category B where suppression is required, but prescribed fire and mechanical treatments will be utilized (Map 2-10, located at the end of Chapter 2).
- National fire suppression guidelines and the current Fire Management Plan will be utilized to guide fire suppression techniques.
- The State of South Dakota Division of Wildland Fire Suppression will continue to provide suppression responsibilities in cooperation with local rural and volunteer fire departments. The BLM Eastern Montana/Dakotas District Office in Miles City, Montana will continue to provide suppression responsibilities within Harding County.
- Wildland urban interface (WUI) areas will be prioritized for fuels treatments in conjunction with completed Community Wildfire Protection Plans.
- Fire Regime Condition Class will be used to determine the level of fuels treatment outside of WUI areas.
- The Fort Meade Recreation Area and Fossil Cycad Area will be managed as Areas of Critical Environmental Concern (ACECs) (Figure 2-1).
- A range of forest conditions (savanna to dense canopy, newly regenerated to mature stands) will be maintained. All appropriate silvicultural systems (even-aged, two-aged, uneven-aged) will be available for management.
- Rangeland Health Standards may be applied to other uses of BLM-administered public land, as applicable.
- Across the planning area, the BLM would allow approximately 50% of the annual vegetation production to be used by livestock with approximately 25 percent ingested by livestock and the other 25 percent trampled or soiled. Fifty percent of the annual vegetation production would remain to meet wildlife forage/cover requirements and watershed needs (soil and hydrologic conditions). The 25 percent of the annual vegetation production not consumed by livestock would meet wildlife forage/cover requirements and watershed needs.
- The BLM would continue to manage the National Recreational Trails per 16 USC Chapter 27, National Trails System Act of 1968, located in the planning area (Mickelson and Centennial Trails).
- Firearm shooting will be allowed except in portions of the Fort Meade Recreation Area ACEC (closed areas shown in Figure 2-2). Specific areas may be closed to firearm shooting if health and safety issues arise, littering occurs, or conflicts with other resources or resource uses occur.

Figure 2-2
Firearm Shooting Restrictions and ROW Utility Corridors in the Fort Meade ACEC



- Oil and gas timing limitation lease stipulations will not apply to the operation and maintenance of production facilities unless specifically mentioned in a management action. Mitigation of potential surface-disturbing or disruptive activities associated with oil and gas operation and maintenance activities would be applied as needed at the project level through Conditions of Approval or BMPs to minimize the impact of human activities on important seasonal wildlife habitats.

- Leasing and development decisions may also apply to geophysical exploration. When a geophysical application is received, restrictions may be placed on the application to protect resource values or mitigate impacts to them. Some of these requirements may be the same as oil and gas lease stipulations. Other less restrictive measures may be used when impacts to resource values will be less severe. This is due in part to the temporary nature of geophysical exploration. The decisions concerning the level of protection required are made on a case-by-case basis when a Notice of Intent (NOI) is received.

- Prior to authorizing Waivers, Exceptions or Modifications (WEMS) for oil and gas leasing, the BLM would coordinate with the State of SD including SD Game, Fish and Parks and other applicable State agencies or surface owners on any potential decision related to the use of WEMs that would affect resources or activities managed by the State or surface owner.

- Prior to implementing restrictions or stipulations, field verification of individual project sites would be required to confirm that a particular resource or resource attribute such as sensitive soils, floodplains, riparian areas, etc. are present and a stipulation or restriction is applicable to the project and the resource values that are being protected.

- No surface occupancy and use will be allowed within floodplains in Alternative A (Current Management), and within floodplains (currently defined by "flooded soils" in the NRCS data set – see Glossary) in Alternative B, C, and D (Preferred Alternative) or within 1/4 mile of least tern or piping plover habitat.

- Lands identified in this RMP as closed to oil and gas leasing would be leased for oil and gas production only if a state or fee well is proposed or completed within the same spacing unit, or if the lands are within a producing unit. These lands would be leased with a no surface occupancy and no subsurface occupancy stipulation with no waiver, modification or exception provisions. There would only be a paper transaction with no physical impacts on the unavailable lands. No exploration or development (drilling or production) would occur within the unavailable lands. After issuance of a lease, the lease would be committed to a communization agreement and the United States would then receive revenue in proportion to its acreage interest as it bears to the entire acreage interest committed to the agreements. This applies only to lands specifically prohibited by law from oil and gas leasing.

  Regulations at part 43 CFR 3100.0-3(d); the Secretary's general authority to prevent the waste and dissipation of public property; and the Attorney General's Opinion of April 2, 1941 (Vol. 40 Op. Atty. Gen 41) allow the BLM to lease lands that are otherwise unavailable for leasing if oil and gas is being drained from such lands. If the unavailable lands were under the jurisdiction of another agency, leasing of such lands would only occur following consultation, and consent if necessary, from the surface managing agency.

- The Fort Meade ACEC will be recommended for continued closure to leasable minerals, closed to salable minerals and recommended for withdrawal from locatable mineral entry.

- Motorized travel will be limited to existing roads and trails, unless otherwise restricted. Motorized cross-country travel will be allowed for BLM grazing lease holders if the travel is essential to administer the lease, provided it does not result in resource damage or wildlife disruption. The BLM may limit or prohibit administrative cross-country travel on a seasonal or site-specific basis to limit impacts to resources. Use of snowmobiles or vehicles specifically equipped to drive over snow will be prohibited in the Fort Meade Recreation Area ACEC. Authorization of cross-country travel for individuals with disabilities will be addressed on a case-by-case basis.

- Existing public access routes will be retained in land adjustment actions.

- The BLM will work with partners and willing landowners to proactively secure access to BLM-administered public lands for the use and enjoyment of the public with consideration of the working landscape and the intermingled landownership pattern that is present.

- Acquired lands will be managed the same as adjacent BLM-administered public lands or, if isolated, similar to nearby BLM-administered public lands.
- Exchanges will be the preferred method of land adjustment.
- Identified cultural resource sites will be assigned to cultural resource use categories as defined in Chapter 3, Cultural Resources and BMPs that are shown in Appendix B.
- The Back Country Byway designation and management will continue as detailed in the 1996 Fort Meade ACEC Management Plan.
- A Recreation Setting Characteristics Classification (RSC) will be identified for the entire planning area (refer to Appendix L).
- Visual Resource Management (VRM) classes will be designated for all areas (refer to Table 2-2).
- A detailed, comprehensive transportation and travel plan will be developed during the implementation phase of the RMP.
- Oil and gas stipulations may be applied to all new rights-of-way (ROWs) as applicable, including ROWs associated with renewable energy development (refer to Appendix E).
- A no surface occupancy and use restriction will be applied to occupied bighorn sheep range.
- There would be no recommendations to designate Wild and Scenic Rivers or Wilderness Areas (refer to the special designation section of Chapter 3 and Appendix U for more information).

Management Actions Common to Alternatives B, C, and the Preferred Alternative (Alternative D)

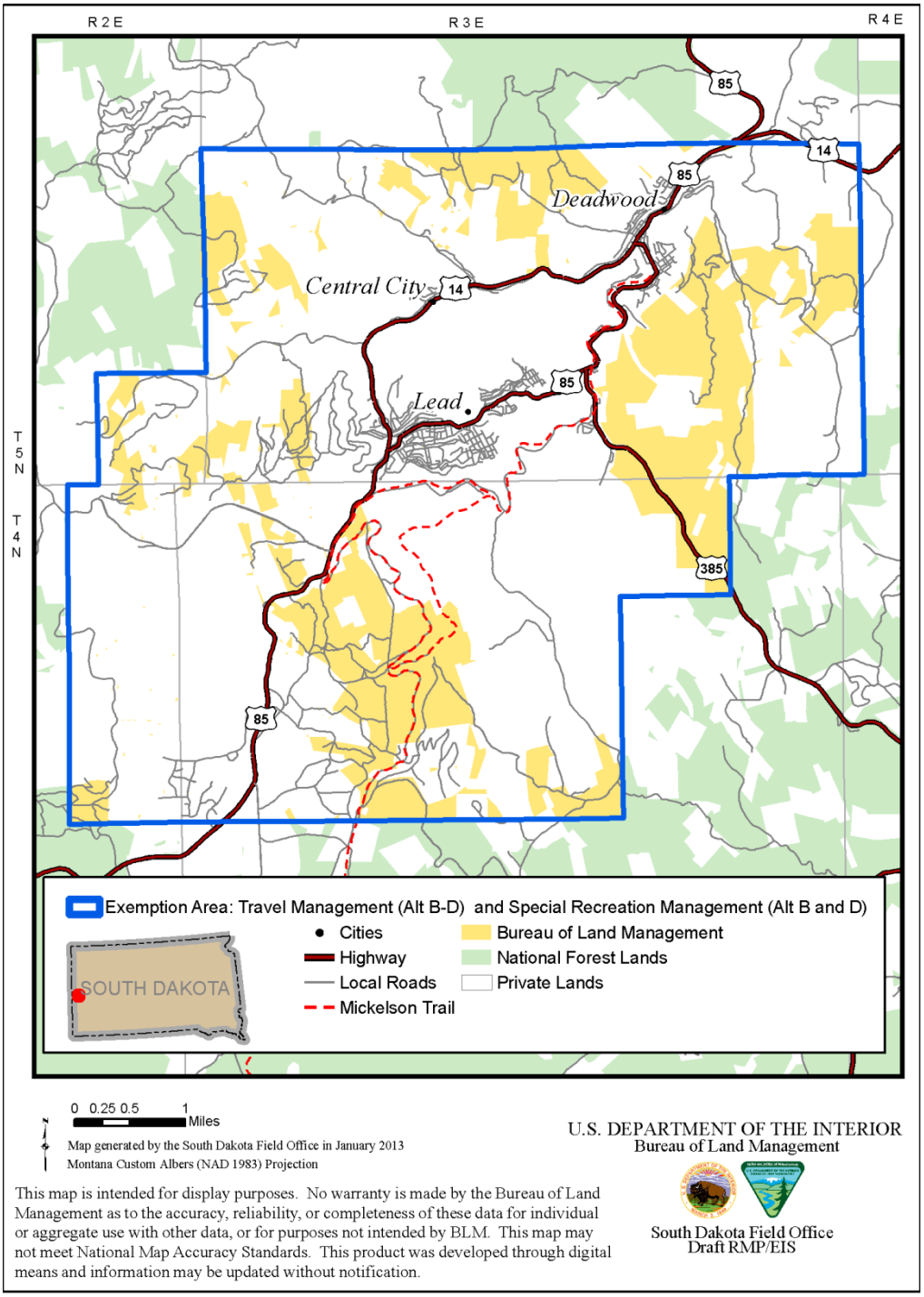
Greater Sage-Grouse general habitat areas and PPAs were developed for Alternatives B, C and D in cooperation and coordination with staff from South Dakota Game, Fish and Parks (SDGFP) and were reviewed by the US Fish and Wildlife Service. The general habitat area is the general occurrence area of sage-grouse in South Dakota. The direction and areas included in the PPAs were developed from lek data (active and inactive), lek buffer maps, sagebrush inventory maps, and year-round sage-grouse activity data collected during the studies in 2006-2008 (Kaczor 2008 and Swanson 2009). Prior to delineating PPAs, the active lek areas and areas around leks (lek buffers) were identified in Butte and Harding counties. Sagebrush habitat maps were then reviewed along with bird location maps from the recent studies (Kaczor 2008 and Swanson 2009). The most active lek areas and three lek buffers, major habitat areas, and year-round bird use areas were delineated in Butte and Harding counties as PPAs. Other sage-grouse use areas were delineated as general habitat areas (Maps 2-4 and 2-5). The size of the PPAs varies by alternative with Alternative C protecting the largest area.

No Surface Occupancy restrictions would apply to floodplains, wetlands, riparian areas, and water bodies and areas within a 300 foot buffer of these areas. In contrast, Alternative A provides NSO protection directly within floodplains, wetlands, and riparian areas but does not provide a buffer area around these areas. Frequently flood soils have been used for delineation and determination of acres affected by these restrictions; however, field inspections (site visits) along with a review of other data including wetland data from the BLM and other agencies would be used to determine exact boundaries of wetland, floodplains, riparian areas and water bodies in specific locations as projects are proposed and reviewed at the implementation level. As information is updated or new technology emerges, additional data or new methods of delineation may be used to determine the locations and boundaries of these areas.

Travel Management Areas will be utilized and will include the Center of the Nation (Map 2-1, located at the end of Chapter 2), Fort Meade Recreation Area ACEC (Figure 2-1), and Exemption Area (Figure 2-3). Motorized travel will be limited to existing roads and trails. Cross-country travel with snowmobiles and vehicles specifically equipped to travel over snow would be allowed except in the Fort Meade Recreation Area ACEC and portions of the Exemption Area. A detailed, comprehensive Travel Management Plan (TMP) will be completed after the RMP/EIS planning process is complete and as

a result, motorized travel may be limited to certain designated roads and trails in TMAs. Site-specific travel planning within TMAs located in Greater Sage-Grouse PPAs would be completed within a five (5) year period after the ROD is signed. Specific requirements authorizing or prohibiting cross-country travel within a certain distance of existing or designated routes for camping or retrieval of downed big game may be changed subject to project-level environmental review when TMPs are completed.

Figure 2-3
Exemption Area: Proposed Travel Management and Special Recreation Management Area Boundaries under Alternatives B, C, and D (Preferred Alternative)



The Fort Meade Recreation Area ACEC will be designated a SRMA.

Approximately 86,578 of public land will be available for disposal pending site-specific environmental review. Land ownership adjustment criteria are described in detail in the Summary Comparison of Alternatives (refer to the Lands section of Table 2-2 and Map 2-2 located at the end of Chapter 2, and Appendix I).

The Fort Meade ACEC and Fossil Cycad ACEC would continue to be managed as ACECs. The acres managed within each ACEC would vary slightly by alternative.

When applicable, stipulations developed for oil and gas development may be applied to other resource uses and activities pending environmental review at the project level (implementation level).

All sage-grouse habitat and use areas that are not identified as a Greater Sage-Grouse PPA would be managed as general habitat areas (Maps 2-4 and 2-5).

All grazing allotments wholly located in Greater Sage-Grouse PPAs would be considered for retirement where the base property owner relinquishes their preference.

Oil and gas stipulations as described by each alternative (Table 2-2) would also apply to geothermal exploration and development.

Alternative A (Current Management)

Overview of the Alternative

Alternative A (Current Management) would continue present management on the BLM-administered surface and mineral estate within the planning area and provides baseline information from which to identify potential environmental consequences when compared to the other alternatives. If selected, this management option would follow direction in the existing South Dakota RMP (as amended), the Miles City Field Office Oil and Gas Leasing EIS (1994), and the Fort Meade Recreation Area ACEC Plan (1996). Alternative A would continue to balance resource protection and use but would provide less specific direction and fewer management actions compared to Alternatives B, C, and D (Preferred Alternative). Compared to the other alternatives, Alternative A places the least constraints on resource uses.

Resource Uses and Support

This section includes a summary of the management actions under Alternative A that would affect forest and woodland products, livestock grazing, minerals, recreation, renewable energy, transportation and access, and lands and realty. It includes a summary of key restrictions that would affect these uses.

Under Alternative A, 267,445 BLM-administered surface acres would be available for locatable mineral entry and 6,894 acres would be recommended for withdrawal from locatable mineral entry. Areas recommended for withdrawal would include the Fort Meade and Fossil Cycad ACECs. Approximately 1,708,777 acres of BLM-administered mineral estate (subsurface estate) would be available for locatable mineral entry. Approximately 127,413 surface acres would be open to leasing without BLM restrictions other than standard terms and conditions. Approximately 798,690 mineral acres would be open without BLM restrictions other than standard terms and conditions.

Unlike Alternatives B, C and D, subsurface estate under Bear Butte (410 acres) would be available for mineral development of all types. The Fort Meade Recreation Area ACEC (6,574 acres) and Fossil Cycad ACEC (320 acres) would be recommended for withdrawal from locatable mineral entry. The Fort Meade and Fossil Cycad ACECs would be closed to exploration and development of leasable minerals. Motorized travel would be limited to existing roads and trails. Cross-country travel with snowmobiles would be allowed except in the Fort Meade Recreation Area ACEC. A detailed comprehensive travel plan would not be completed for the planning area after the RMP/EIS planning process is completed.

Oil and gas stipulations that establish protective buffers to reduce disturbance to wildlife and special status species would include a NSO stipulation within 1/4 mile of sage-grouse and sharp-tailed grouse and greater prairie-chicken leks

(strutting grounds); a 1/2 mile NSO around eagle and sensitive species raptor nests; a March 1 to July 1 timing restriction within two miles of sage-grouse, sharp-tailed grouse and greater prairie-chicken leks; and a timing restriction within sage-grouse winter range from December 1 through March 31 as shown in Table 2-2. Unlike Alternatives B, C, and D, the oil and gas stipulations would not be applied to other uses.

Noxious weed treatments would not occur from March 1 through June 30 within two miles of sage-grouse leks. There would be no weed treatment restrictions in areas with special status plants.

Under Alternative A, approximately 267,768 acres would be open to all types of ROW actions. In the Fort Meade ACEC, 1,066 acres would be open to utility and transmission line ROWs only, and approximately 5,521 acres would be a ROW exclusion area (refer to Figure 2-2). The acres available for renewable energy ROW projects would be the same as those for other types of ROWs. Renewable energy projects would be addressed on a case-by-case basis as applications are received.

Approximately 259,936 acres would be designated as an ERMA, indicating custodial (less intensive) management. The two ACECs (Fort Meade Recreation Area and Fossil Cycad) would continue to be designated as ACECs and would have NSO restrictions applied to oil and gas activity.

Motorized cross-country travel to retrieve downed big game animals would be prohibited. Cross-country travel would be allowed within 300 feet of roads to access campsites. Alternative A would not place restrictions on snowmobile use except in the Fort Meade ACEC, where it would be prohibited.

Livestock grazing would be allowed on 271,000 acres. The amount of forage available for permitted use on these lands would be 73,400 AUMs.

Direction from the BLM Washington Office Instruction Memorandum (IM) No. 98-140 (1998) would be followed to protect bighorn sheep. To limit the potential for disease transmission to bighorn sheep, the IM provides guidelines for domestic livestock management, summarized as follows: Domestic sheep and goat grazing and trailing should be discouraged in the vicinity of native wild sheep ranges; review of grazing permit applications for new domestic sheep or goat grazing permits would consider buffer strips up to nine miles or as developed through a cooperative agreement to minimize contact between domestic sheep and goats and native wild sheep; domestic sheep and goats should be closely managed and carefully herded where necessary to prevent them from straying into native wild sheep areas. Occupied bighorn sheep range is shown on Map 2-3, located at the end of Chapter 2.

New grazing allotments or expansion of current allotments would be allowed in the Exemption Area (Figure 2-3) in areas where tree regeneration is not of importance.

Special Designations

Special designations include ACECs, Back Country Byways, National Trails and Recreation Areas, Wild and Scenic Rivers, Wilderness and Wilderness Study Areas.

As noted in the Management Actions Common to All Alternatives section, the Fort Meade Recreation Area ACEC (6,574 acres) and Fossil Cycad ACEC (320 acres) would continue to be managed as ACECs. The Fort Meade ACEC (Figure 2-1) would not be designated a SRMA in Alternative A, but would be designated as a SRMA in Alternatives B and D. No SRMAs would be established.

The BLM would continue with the present National Register of Historic Places District Boundary for portions of the Fort Meade ACEC (includes 3,200 acres).

Physical, Biological, Cultural and Visual Resources

Physical, biological, cultural and visual resources include air, soil, geology, water, forest, rangeland and riparian vegetation, invasive species, wildlife, special status species, wild horses and burros, wildfire management and ecology, cultural and paleontological resources, visual resources, and wilderness characteristics. This section summarizes key management actions that would affect these resources.

The majority of BLM-administered surface estate in the planning area, including the Exemption Area (Figure 2-3), would be designated as an ERMA (267,758 acres).

Alternative A would not establish Greater Sage-Grouse PPAs. Protection of sage-grouse would occur through implementation of Standards for Rangeland Health and Guidelines for Livestock Grazing Management and implementation of GHAs with oil and gas restrictions in and around leks and brood rearing habitat. Alternative A would provide the least amount of restrictions in sage-grouse habitat. No specific sage-grouse restoration areas would be identified under Alternative A.

Conversion of native rangeland vegetation to non-native vegetation (tame pastures) would be allowed to increase livestock production.

The VRM classifications would be as follows: 0 acres in Class I; 1,231 acres in Class II; 4,993 acres in Class III; and 531 acres in Class IV. Approximately 264,997 acres would be managed on a case-by-case basis with no formal designation, using the Visual Resource Inventory as a guide.

Project-level travel planning at the implementation level would not occur. All areas would be limited to existing routes as no TMAs would be identified. No designated routes would be established except those that are already present in the Fort Meade ACEC.

The BLM would consider land ownership adjustments on a case-by-case basis, based on the criteria for retention, acquisition and disposal. Approximately 86,578 acres (32 percent of the surface acres in the planning area) would be categorized as potential disposal tracts.

Alternative B

Overview of the Alternative

Alternative B emphasizes commercial use while providing the minimum protection necessary to protect physical, biological, cultural and visual resources. Alternative B provides fewer constraints than Alternatives C or D, but provides more constraints than current management (Alternative A) because it brings current management up to date.

Resource Uses and Support

This section includes a summary of the management actions under Alternative B that would affect forest and woodland products, livestock grazing, minerals, recreation, renewable energy, transportation and access, and lands and realty. It includes a summary of key restrictions that would affect these uses.

Under Alternative B, 267,445 surface acres would be available for locatable mineral entry and 6,900 surface acres would be recommended for withdrawal from locatable mineral entry. Approximately 1,708,777 acres of BLM-administered mineral estate (subsurface estate) would be available for locatable mineral entry. The Fort Meade Recreation Area ACEC (6,574 acres) and Fossil Cycad ACEC (320 acres) and subsurface estate (minerals) under Bear Butte (410 acres) would be recommended for withdrawal from locatable mineral entry. Bear Butte (410 acres) would have NSO restrictions for oil and gas leasing and would be closed to other leasable minerals and closed to salable minerals.

Under Alternative B, approximately 83,625 surface acres would be open to leasing without BLM restrictions other than standard terms and conditions. Approximately 487,627 mineral acres would be open without BLM restrictions other than standard terms and conditions. The Fort Meade Recreation Area ACEC (6,574 acres) would be closed to exploration and development of leasable minerals. The Fossil Cycad ACEC (320 acres) would be closed to oil and gas leasing.

Stipulations would be at the minimal level to protect resources. In general, the stipulations under Alternative B would involve more constraints and would address specific resource concerns better than Alternative A, but would provide less stringent restrictions than Alternative C and D. Under Alternatives B, C, and D, stipulations would not be limited to oil and gas production; they may be applied to other resource uses as applicable and when needed to protect or manage resources and resource uses.

Key stipulations in Alternative B include:

- The NSO stipulations would include occupied bighorn sheep range, areas within 1/2 mile of sage-grouse leks and associated habitat (outside of PPAs), areas within 1/4 mile of sharp-tailed grouse and greater prairie-chicken leks and raptor nests, including special status species raptors (except for peregrine falcons which would have a 1/2 mile NSO stipulation from nests). Like Alternative D, Alternative B would establish an NSO on Greater Sage-Grouse PPAs totaling 83,744 BLM-administered surface acres and 253,357 subsurface mineral acres (locations of PPAs are shown in Map 2-4, located at the end of Chapter 2). In comparison, Alternative A would create no PPAs and Alternative C would close oil and gas leasing on PPAs totaling 93,266 BLM-administered surface acres and 289,563 acres of federal mineral subsurface estate. Under Alternatives B, C, and D, NSO stipulations would also apply to floodplains. Federal minerals within the abandoned Black Hills Army Depot (BHAD) would be NSO in Alternative B and D, but closed in Alternative C.

- Controlled Surface Use restrictions would include sensitive soils and steep slopes (slopes 25 percent or greater).

- Timing stipulations would not allow surface-disturbing or disrupting activities within three miles of sage-grouse leks from March 1 through July 15 and within two miles of sharp-tailed grouse and greater prairie-chicken leks from March 1 through June 30. Timing restrictions would also apply to big game and sage-grouse winter range from December 1 through March 31 under all alternatives as described in the Management Actions Common to All section.

Under Alternative B, chemical treatment of weeds would be applied using wick or spot treatment with backpack sprayers and selective herbicides in areas with threatened and endangered (T&E) and sensitive plant species, and special status plants. Weed treatments near sage-grouse leks would have timing limits from March 1 through June 30 within three miles of leks.

Under Alternative B, ROWs not associated with renewable energy would be managed as follows: The Fort Meade Recreation Area ACEC and Fossil Cycad ACEC would be ROW avoidance areas (except for the ROW corridor in the Fort Meade ACEC). Other ROW avoidance areas would be Greater Sage-Grouse PPAs and areas outside of PPAs that are within three miles of sage-grouse leks, big game/sage-grouse wintering areas, areas within two miles of sharp-tailed grouse leks, areas within 1/4 mile of raptor nests (except for peregrine falcon which would have a one mile ROW avoidance buffer), in bighorn sheep range, fisheries, piping plover and least tern habitat, VRM Class II areas, and on slopes over 25 percent. Floodplains and sensitive soils would also be ROW avoidance areas.

Renewable energy rights-of-way would be managed as follows: There would be no ROW exclusion areas for renewable energy. The Fort Meade Recreation Area ACEC, Fossil Cycad ACEC, VRM Class II areas, important wildlife, special status species habitat, floodplains, sensitive soils and steep slopes would be renewable energy ROW avoidance areas except for the Fort Meade utility ROW corridors which would be open to utility and transmission line ROWs (Figure 2-2). Areas in VRM Classes III and IV would be open to renewable energy ROWs.

Motorized cross-country travel would be limited to 300 feet from the nearest road to retrieve downed big game animals and to access campsites in dispersed recreational areas. Use of snowmobiles and vehicles specifically equipped to travel on snow would be unrestricted (except in the Fort Meade ACEC) unless damage to resources/ infrastructure occur, wildlife is disturbed, or safety problems become evident. In the Fort Meade ACEC, use of snowmobiles and vehicles specifically equipped to travel on snow would be prohibited. Cross-country travel actions related to camping and game retrieval may be changed subject to project-level environmental review when Travel Management Plans are completed.

Additional travel direction for Alternatives B, C and D is described in the Management Actions Common to Alternatives B, C, and D (discussed above Figure 2-1).

Livestock grazing would be allowed on about 272,000 acres. The amount of forage that could be available for permitted use on these lands would be about 77,300 AUMs.

Currently, there are no BLM domestic sheep or goat grazing authorizations on or near bighorn sheep range in the planning area. To limit the potential for disease transmission to bighorn sheep, the BLM would not allow cattle or bison grazing authorizations to be changed to domestic sheep or goat authorizations on grazing allotments within five miles of

occupied bighorn sheep range (shown on Map 2-3, located at the end of Chapter 2). Transfer of grazing preference would only be allowed to livestock types other than domestic sheep and goats within occupied bighorn sheep range. This distance would be greater if deemed necessary through site-specific analysis and additional research findings. To minimize contact with bighorn sheep, domestic sheep and goats used for weed control within five miles of bighorn sheep range would only occur in coordination with SDGFP. Actions that create separation buffers between domestic sheep and goats and bighorn sheep would be mandatory under Alternatives B, C, and D. In contrast, Alternative A recommends but does not require a separation buffer between domestic sheep and goats and bighorn sheep.

New grazing allotments or expansion of existing allotments would be allowed in the Exemption Area if capability criteria are met for 50 percent of the area.

Special Designations

Special designations include ACECs, Back Country Byways, National Trails and Recreation Areas, Wild and Scenic Rivers, Wilderness and Wilderness Study Areas.

As noted in the Management Actions Common to all Alternatives, the Fort Meade Recreation Area ACEC (6,574 acres) and Fossil Cycad ACEC (320 acres) would continue to be managed as ACECs**.** While 6,574 acres would be designated as an ACEC in the Fort Meade Recreation Area, up to 220 acres may be removed from ACEC designation to allow a land transfer to the Department of Veterans Affairs for expansion of the Black Hills National Cemetery (maximum of 170 acres), South Dakota Army National Guard facilities (maximum of 50 acres) and transfer of a maximum of six acres to the City of Sturgis pending site-specific environmental review. If the transfers are approved, the size of the Fort Meade ACEC may drop from 6,574 acres to 6,251 acres. Transfer of land in the Fort Meade ACEC would not be considered under Alternative C.

The BLM would complete a formal nomination of Fort Meade as a National Historic Landmark for a National Register Landmark listing of 6,574 acres.

Like Alternative D, Alternative B would designate approximately 11,816 acres (the Fort Meade ACEC (6,733 acres) and the Exemption Area (5,083 acres)) as SRMAs, indicating a commitment to intensive recreation management. The Fort Meade Recreation Area ACEC and the Exemption Area are shown in Figures 2-2 and 2-3.

Physical, Biological, Cultural and Visual Resources

Physical, biological, cultural and visual resources, and lands with wilderness characteristics include air, soil, geology, water, forest, rangeland and riparian vegetation, invasive species, wildlife, special status species, wild horses and burros, wildfire management and ecology, cultural and paleontological resources, visual resources, and wilderness characteristics. This section summarizes key management actions that would affect these resources.

Alternative B would provide Greater Sage-Grouse PPAs (83,744 surface acres, 253,357 subsurface acres) to manage sage-grouse habitat. PPAs would have NSO restrictions and would be avoidance areas for most types of ROWs. PPAs would be exclusion areas for ROWs associated with renewable energy projects. No specific sage-grouse restoration areas would be identified under Alternative B.

Under Alternative B, all areas would have a VRM classification. This classification would be as follows: 0 acres in Class I; 1,544 acres in Class II; 5,284 acres in Class III; and 264,924 acres in Class IV. Acres protected by other restrictions are shown in the Resource Uses and Support Section.

Alternative C

Overview of the Alternative

Alternative C emphasizes conservation of resources. Compared to the other alternatives, Alternative C provides the highest degree of resource protection for physical, biological, visual, and cultural resources. Alternative C would

provide the same number of ACECs, but acres would be slightly higher as the exchange of land for the Fort Meade National Cemetery (up to 170 acres) and SD Army National Guard facilities (up to 50 acres) would not occur.

Resource Uses and Support

This section includes a summary of the management actions under Alternative C that would affect forest and woodland products, livestock grazing, minerals, recreation, renewable energy, transportation and access, and lands and realty. It includes a summary of key restrictions that would affect these uses.

Under Alternative C, 173,663 surface acres would be available for locatable mineral entry and 100,576 acres would be recommended for withdrawal or extension of an existing withdrawal from locatable mineral entry. Areas recommended for withdrawal would include Greater Sage-Grouse PPAs, the Fort Meade and Fossil Cycad ACECs, and federal minerals under Bear Butte. In contrast to the other alternatives, Alternative C would manage all Greater Sage-Grouse PPAs as an ACEC (refer to Figure 2-1). Approximately 100,576 mineral acres would be withdrawn from locatable mineral entry and 1,615,101 acres of mineral estate would be available for locatable mineral entry. In addition to the areas described above, the Black Hills Army Depot would be closed to leasable minerals; leading to a total of 309,576 acres of oil and gas minerals closed (no lease). Under Alternative C, 52,146 surface acres and 451,382 mineral acres would be open to mineral leasing without BLM restrictions other than standard terms and conditions.

Alternative C would provide the highest level of resource protection. In general, the stipulations under Alternative C would provide a higher degree of constraints on resource uses compared to Alternatives A, B, and D, as many of the CSU stipulations would be NSO restrictions and the acres protected would be larger in many cases. In addition, mineral development in Greater Sage-Grouse PPAs would be closed or recommended for withdrawal.

Key stipulations of Alternative C include:

- The NSO stipulations would include occupied bighorn sheep range, areas within one mile of sage-grouse leks and associated habitat (outside of PPAs), areas within 1/2 mile of sharp-tailed grouse and greater prairie-chicken leks and raptor nests. Areas within one mile of peregrine falcon nests would be under NSO stipulations. The 12,709 acres of federal minerals within the abandoned Black Hills Army Depot (BHAD) would be closed to all leasable and salable minerals.

- Alternative C would protect the most acres as Greater Sage-Grouse PPAs by providing larger PPAs totaling 93,266 BLM-administered surface acres and 289,563 acres of federal minerals subsurface estate (locations of PPAs are shown on Map 2-5, located at the end of Chapter 2). Greater Sage-Grouse PPAs would be closed to oil and gas development but open to limited exploration. The PPAs would be withdrawn from locatable mineral development and exploration. The PPAs would be closed to salable mineral development and exploration and closed to other fluid energy minerals (geothermal) and other non-energy leasable minerals (potash, sodium, etc.) development and exploration. The PPAs would be unsuitable for coal leasing and closed to coal exploration. All sage-grouse habitat that is not part of a PPA would be managed as General Habitat Areas (GHAs) as noted in Map 2-5. PPAs would be excluded from renewable energy and other types of ROWs, and would not allow the use of prescribed fire.

  In comparison, Alternative A would create no PPAs, and Alternatives B and D would establish smaller Greater Sage-Grouse PPAs totaling 83,744 BLM-administered surface acres and 253,357 subsurface acres (federal minerals). Under Alternatives B and D, Greater Sage-Grouse PPAs would have NSO stipulations.

- The NSO stipulations would apply to floodplains. Occupied bighorn sheep habitat would be under NSO stipulations in Alternatives B, C, and D. Alternative C would provide NSO stipulations in sensitive soils and steep slopes (25 percent or greater).

- The CSU stipulations would not allow structures over 10 feet that create raptor perches to be used or would require anti-perch devices within the two mile buffer of sharp-tailed grouse and greater prairie-chicken nesting areas (the same as Alternative D).

- Timing stipulations would not allow surface-disturbing or disruptive activities within four miles of sage-grouse leks from March 1 through July 15 and areas three miles from sharp-tailed grouse or greater prairie-chicken leks from March 1 through June 30. Timing restrictions would also apply to big game and sage-grouse winter range from December 31 to March 31 under all alternatives as described in the Management Actions Common to All section.

- Site-specific travel planning within Greater Sage-Grouse PPAs would be completed within a five (5) year period after the ROD is signed. The Center of the Nation Travel Management Area would be extended to include all BLM-administered lands within PPAs and general habitat as shown in Map 2-5, located at the end of Chapter 2.

Under Alternative C, listed T&E and sensitive plant species would have a 100 foot herbicide buffer zone. Any herbicides applied in this buffer would be applied by spot treatment only unless broadcast treatment would have beneficial impacts to such species. Weed treatments near sage-grouse leks would have timing limits from March 1 through June 30 within four miles of leks.

Under Alternative C, ROWs not associated with renewable energy would be managed as follows: Alternative C would provide the most ROW exclusion areas. The Fort Meade Recreation Area ACEC and Fossil Cycad ACEC would be ROW exclusion areas (except for the ROW corridor in the Fort Meade ACEC). Other ROW exclusion areas would include Greater Sage-Grouse PPAs and areas outside of PPAs within four miles of sage-grouse leks. Other exclusion areas would include big game/sage-grouse wintering areas, areas within three miles of sharp-tailed grouse and greater prairie-chicken leks, areas within 1/2 mile of raptor nests, and in bighorn sheep range, fisheries, piping plover and least tern habitat. The VRM Class II areas, slopes over 25 percent, floodplains, and sensitive soils would also be ROW exclusion areas.

Renewable energy ROWs would be managed as follows: The Fort Meade Recreation Area ACEC and Fossil Cycad ACEC, VRM Class II areas, important wildlife and special species habitat, floodplains, sensitive soils, and steep slopes would be renewable energy ROW exclusion areas except for the Fort Meade utility ROW corridors, which would be open to utility and transmission line ROWs (Figure 2-2). The Exemption area would be a ROW avoidance area for renewable energy. The VRM Classes III and IV would be open to renewable energy ROWs.

Motorized cross-country travel to retrieve downed big game animals would not be allowed (the same as Alternative A). Motorized wheeled travel would be allowed within 100 feet of roads to access campsites in dispersed recreational areas (the same as Alternative D). Snowmobiles and vehicles specifically equipped to travel on snow would be restricted to designated roads and trails. Cross-country travel actions related to camping and game retrieval may be changed subject to project-level environmental review when TMPs are completed.

Additional travel direction for Alternatives B, C and D is described in the Management Actions Common to Alternatives B, C, and D (discussed above Figure 2-1).

Grazing use allocations would be the same as under Alternative A. Livestock grazing would be allowed on about 271,000 acres. The amount of forage available for permitted use on these lands would be about 73,400 AUMs.

Restrictions to address the potential for disease transmission from domestic livestock to bighorn sheep would be the same as Alternative B except the buffer separation distance between domestic sheep and goats and bighorn sheep would be larger; a 15 mile buffer between domestic sheep and goats would be used instead of a 10 mile buffer as described in Alternative B. A 10 mile buffer for domestic sheep and goats would be used for weed control instead of the five mile buffer that would be used in Alternative B.

No new grazing allotments or expansion of existing allotments would be allowed in the Exemption Area.

Special Designations

Special designations include ACECs, Back Country Byways, National Trails and Recreation Areas, Wild and Scenic Rivers, Wilderness and Wilderness Study Areas.

As noted under Management Actions Common to All Alternatives, the Fort Meade Recreation Area ACEC (6,574 acres) and Fossil Cycad ACEC (320 acres) (Figure 2-1) would continue to be designated as ACECs. In addition to the Fort

Meade and Fossil Cycad ACECs, all BLM surface lands within the Greater Sage-Grouse PPAs would be managed as an ACEC in Alternative C (Figure 2-1).

The BLM would revise the National Register of Historic Places Fort Meade District nomination to incorporate 3,370 additional acres inside the District Boundary and the entire Military Reservation. Total acreage in the Historic District would be changed to 6,570 acres.

Approximately 6,574 acres (Fort Meade Recreation Area ACEC) would be designated a SRMA, indicating a commitment to intensive recreation management. While Alternatives B and D would designate the Exemption Area as a SRMA, Alternative C would designate this area as an ERMA (less intensive management). The Fort Meade ACEC and the Exemption Area are shown in Figures 2-2 and 2-3.

Physical, Biological, Cultural and Visual Resources

Physical, biological, cultural and visual resources, and lands with wilderness characteristics include air, soil, geology, water, forest, rangeland and riparian vegetation, invasive species, wildlife, special status species, wild horses and burros, wildfire management and ecology, cultural and paleontological resources, visual resources, and wilderness characteristics. This section summarizes key management actions that would affect these resources.

Alternative C, like Alternative D, would identify sage-grouse restoration areas in areas previously mined or likely to be mined for bentonite in PPAs, areas with other forms of large-scale disturbance in PPAs, and areas disturbed in the high oil and gas development potential areas in PPAs (refer to Figure 4-1 and Map 2-8, located at the end of Chapter 2).

Alternative C provides the most visual resource protection. This classification would be as follows: 0 acres in Class I; 11,657 acres in Class II; 179,212 acres in Class III; and 80,883 acres in Class IV. Under Alternative C all areas would have a VRM classification. Acres protected by other restrictions are shown in the Resource Uses and Support Section.

Alternative D (Preferred Alternative)

Overview of the Alternative

Alternative D, the Preferred Alternative, contains a mixture of actions outlined in other alternatives. Alternative D was developed after analyzing the impacts of the other alternatives.

Resource Uses and Support

This section includes a summary of the management actions under Alternative D that would affect forest and woodland products, livestock grazing, minerals, recreation, renewable energy, transportation and access, and lands and realty. It includes a summary of key restrictions that would affect these uses.

Under Alternative D, 267,035 surface acres would be available for locatable mineral entry and 7,310 acres would be recommended for withdrawal. Areas recommended for withdrawal include the Fort Meade and Fossil Cycad ACECs and federal minerals under Bear Butte. Approximately 1,708,367 acres of mineral estate would be available for locatable mineral entry.

Under Alternative D, 52,803 surface acres and 461,747 mineral acres would be open to mineral leasing without BLM restrictions other than standard terms and conditions.

Stipulations would be at the minimal level to protect resources. In general, the stipulations under Alternative D would provide an intermediate degree of restriction compared to Alternatives B and C. Alternative D would provide more specific direction to protect resources and manage resource uses than Alternative A. Under Alternatives B, C, and D, stipulations would not be limited to oil and gas production; they may be applied to other resource uses as applicable and when needed to protect or manage resources and resource uses.

Key stipulations of Alternative D include:

- No Surface Occupancy stipulations would include occupied bighorn sheep range, areas within 1/2 mile of sage-grouse leks and associated habitat (outside of PPAs), and areas within 1/4 mile of raptor nests including most special status species raptors except bald eagles and peregrine falcons, which would have a 1/2 mile buffer around nests. Alternative D would establish the same areas for Greater Sage-Grouse PPAs as Alternative B, 83,744 BLM-administered surface acres and 253,357 subsurface acres (the same as Alternative B as shown in Map 2-4, located at the end of Chapter 2). In comparison, Alternative A would create no PPAs and Alternative C would create PPAs totaling 93,266 BLM-administered surface acres and 289,563 acres of federal minerals subsurface estate. Under Alternatives B and D, Greater Sage-Grouse PPAs would have NSO stipulations, and would be closed in Alternative C. No Surface Occupancy stipulations would also apply to floodplains and federal minerals within the abandoned Black Hills Army Depot (BHAD). Occupied bighorn sheep habitat would be under NSO stipulations in Alternatives B, C, and D.

- Sensitive soils and slopes between 25-50 percent would be managed through a CSU stipulation. Slopes over 50% would be managed under an NSO stipulation. In addition, structures over 10 feet that create raptor perches would not be authorized or would require anti-perch devices within the two mile buffer of sharp-tailed grouse and greater prairie-chicken nesting areas (the same as Alternative C).

- Timing stipulations would be the same as Alternative B; surface-disturbing or disruptive activities would not be allowed within four miles of sage-grouse leks from March 1 through July 15 and within two miles of sharp-tailed grouse or greater prairie-chicken leks from March 1 to June 30. Timing restrictions would also apply to big game and sage-grouse winter range from December 1 to March 31 as described in Alternatives Table 2-2.

Under Alternative D, listed T&E and sensitive plant species would have a 100 foot herbicide buffer zone. Any herbicides applied in this buffer would be applied by spot treatment only unless broadcast treatment would have beneficial impacts to such species (the same as Alternative C). Weed treatments near sage-grouse leks would have timing limits from March 1 through June 30 within three miles of leks (the same as Alternative B).

ROWs not associated with renewable energy development would be managed as follows: Alternative D would provide a mixture of ROW avoidance and exclusion areas. Avoidance areas would include Greater Sage-Grouse PPAs, areas outside of PPAs within four miles of leks, big game/sage-grouse wintering areas, areas within two miles of sharp-tailed grouse leks, and areas within 1/4 mile of raptor nests (except for peregrine falcons which would have a one mile avoidance area buffer). VRM Class II, least tern and piping plover habitat, fisheries, SRMAs, sensitive soils and floodplains would also be ROW avoidance areas.

Renewable energy ROWs would be managed as follows: The Fort Meade Recreation Area ACEC and Fossil Cycad ACEC, the Exemption area, VRM Class II areas, Greater Sage-Grouse PPAs, areas near sage-grouse leks, raptor nests and sharp-tailed grouse leks, greater prairie-chicken leks and wintering areas for sage-grouse would be renewable energy ROW exclusion areas except for the Fort Meade utility ROW corridors which would be open to utility and transmission line ROWs (Figure 2-2). Other important wildlife and special status species habitat, floodplains, sensitive soils and steep slopes would be ROW avoidance areas. VRM Classes III and IV would be open to renewable energy ROWs. Sage-grouse nesting and brood rearing areas outside of PPAs and big game wintering areas would be ROW avoidance areas.

Livestock grazing would be managed the same as Alternative B. Grazing would be allowed on about 272,000 acres. The amount of forage that could be available for permitted use on these lands would be about 77,300 AUMs.

Motorized cross-country travel to retrieve downed big game animals would be prohibited (the same as in Alternatives A and C). Cross-country travel would be allowed within 100 feet of roads to access campsites in dispersed recreational areas (the same as Alternative C).

Snowmobiles and vehicles specifically equipped to travel on snow would be managed the same as under Alternative B. They would be unrestricted unless damage occurs to resources/infrastructure, wildlife is disturbed, or safety problems become evident (except for the Fort Meade ACEC where this type of use would not be allowed). Cross-country travel actions related to camping and game retrieval may be changed subject to project-level environmental review when Travel Management Plans are completed. Additional travel direction for Alternatives B, C and D is described in the Management Actions Common to Alternatives B, C, and D (discussed above Figure 2-1).

Criteria to address the potential for disease transmission from domestic livestock to bighorn sheep would be the same as under Alternative C. A 15 mile separation buffer between domestic sheep and goats and bighorn sheep would be used except for domestic sheep and goats used for weed control; in this case, a 10 mile buffer would apply.

New grazing allotments or expansion of existing allotments would be allowed in the Exemption Area if capability criteria are met for 50 percent of the area.

Special Designations

Special designations include ACECs, Back Country Byways, National Trails and Recreation Areas, Wild and Scenic Rivers, Wilderness and Wilderness Study Areas.

As noted under Management Actions Common to All Alternatives, the Fort Meade Recreation Area ACEC (6,574 acres) and Fossil Cycad ACEC (320 acres) would continue to be designated as ACECs. While 6,574 acres would be designated as an ACEC in the Fort Meade Recreation Area, up to 220 acres may be removed from ACEC designation to allow a land transfer to the Department of Veterans Affairs for expansion of the Black Hills National Cemetery (maximum of 170 acres), South Dakota Army National Guard facilities (maximum of 50 acres) and transfer of a maximum of six acres to the City of Sturgis pending project level environmental review. If the transfers are approved, the size of the Fort Meade Recreation Area ACEC may drop from 6,574 acres to 6,354 acres. Transfer of land in the Fort Meade ACEC would not be considered under Alternative C.

Alternative D would revise the current National Register of Historic Places Nomination for the Fort Meade Historic District boundary to incorporate all additional acres, approximately 3,370 acres, inside the original Military Reservation that are administered by the BLM. The BLM would consider a National Historic Landmark nomination, contingent on other partnering agency cooperation.

Approximately 11,657 acres (Fort Meade ACEC (6,574 acres) and the Exemption Area (5,083 acres) would be designated as SRMAs, indicating a commitment to intensive recreation management (the same as Alternative B). The Fort Meade ACEC and the Exemption Area are shown in Figures 2-2 and 2-3.

Physical, Biological, Cultural and Visual Resources

Physical, biological, cultural and visual resources, and lands with wilderness characteristics include air, soil, geology, water, forest, rangeland and riparian vegetation, invasive species, wildlife, special status species, wild horses and burros, wildfire management and ecology, cultural and paleontological resources, visual resources, and wilderness characteristics. This section summarizes key management actions that would affect these resources. Alternative D, like Alternative C, would identify sage-grouse restoration areas in areas previously mined or likely to be mined for bentonite in PPAs, areas with other forms of large-scale disturbance in PPAs, and areas disturbed in the high oil and gas development potential areas in PPAs (refer to Figure 4-1 (located in Chapter 4) and Map 2-8 (located at the end of Chapter 2)).

Alternative D provides higher levels of visual resource protection than Alternatives A and B, and less protection than under Alternative C. This classification would be as follows: 0 acres in Class I; 1,544 acres in Class II; 10,367 acres in Class III; and 259,841 acres in Class IV. Under Alternative D all areas would have a VRM classification. Acres protected by other restrictions are shown in the Resource Uses and Support Section.

Alternatives Considered but Not Carried Forward for Detailed Analysis

The BLM considered several alternatives and management options as possible methods for resolving resource management issues and conflicts. However, after further review and consideration, the BLM did not carry all of those forward for detailed analysis.

The BLM did not carry forward for detailed analysis the alternatives described in the following sections because (1) they would not fulfill requirements of the Federal Land Policy and Management Act (FLPMA) or other existing laws or regulations, (2) they would not meet the purpose and need, (3) they were already part of an existing plan, policy, or administrative function, or (4) they did not fall within the limits of the planning criteria.

Conservation Groups Alternative

During the range-wide scoping effort for sage-grouse, several conservation organizations submitted scoping comments and proposed management actions and alternatives for sage-grouse conservation (referred to here as the Conservation Groups Alternative). In summary, the primary intent of these proposed alternatives and management actions was to: (1) add additional measures beyond those conservation measures identified in the National Technical Team (NTT) report (disseminated by BLM WO-IM-2012-044) in order to maintain and increase sage-grouse abundance and, (2) designate two additional habitat types – Greater Sage-Grouse Areas of Critical Environmental Concern (ACECs) and "restoration" habitat areas.

These proposed actions and alternatives submitted by these organizations were determined to be substantially similar to the actions and habitat areas considered within the range of alternatives in this DRMP/EIS. As described in the Wildlife and Special Status Species section in Chapter 2, this DRMP/EIS delineates three types of sage-grouse habitat areas as part of the planning process (refer to Maps 2-4 and 2-5), including: Sage-Grouse Habitat – Protection Priority Areas (PPAs), Sage-Grouse Habitat – Restoration Areas (RAs), and Sage-Grouse Habitat – General Sage-Grouse Areas. Varying degrees of management are considered and analyzed as part of the range of alternatives within each of these habitat delineations in this DRMP/EIS in order to achieve the goals or objectives for each sage-grouse habitat area, as well as address the conservation measures and management practices to conserve sage-grouse consistent with the NTT report. Additionally, this DRMP/EIS includes Mitigation Measures and Conservation Actions for Greater Sage-Grouse (Appendix V). The appendix identifies best practices, design features and proactive management activities to conserve sage-grouse that would be applied during project-specific activities through subsequent environmental review and analysis.

Specific to the organization's proposed alternative to designate sage-grouse ACECs and 'restoration' areas, this DRMP/EIS does include, within the range of alternatives for detailed study, a Greater Sage-Grouse Protection Priority Areas ACEC (Alternative C) and restoration areas for sage-grouse. The Summary Comparison of Alternatives Table 2-2 provides a summary of the range of acreages for priority, general, and restoration habitat for sage-grouse and a summary of the range of alternatives for sage-grouse (e.g., allowable uses, constraints, etc.). This range of alternatives is adequate to compare impacts to sage-grouse from different conservation measures as well as the sizes of habitat classifications.

In summary, the additional alternatives and actions proposed through the Conservation Groups Alternative were considered but eliminated from detailed study from this RMP revision because the range of alternatives adequately addresses conservation measures for sage-grouse. For example, the alternatives range from open to fluid mineral leasing and right-of-way development, to a no-lease stipulation for new oil and gas development and exclusion areas for rights-of-way.

Develop a Conditional Surface Use Stipulation (CSU) for Greater Sage-Grouse Protection Priority Areas (PPAs)

A controlled surface use stipulation (CSU) was considered for Greater Sage-Grouse PPAs but was determined to be impractical because sage-grouse core use areas in South Dakota are smaller and more closely defined than in other states and habitat distribution and use is more concentrated. To be effective, a CSU would need to include a three to four mile buffer around sage-grouse leks. Given the density of leks, the concentrated sage-grouse use, and highly intermingled land and mineral ownership status in PPAs, a CSU buffer around leks or other habitat features in Greater Sage-Grouse PPAs would effectually result in the same on-the-ground management as an NSO stipulation. To adequately protect sage-grouse, CSU requirements in PPAs on BLM-administered lands in South Dakota would need to be stringent and offer such limited options for development that project proponents would often relocate proposed projects to nearby adjacent private lands/private minerals. These circumstances make implementation of a CSU impractical in PPAs. Greater Sage-Grouse PPAs are shown in Maps 2-4 and 2-5.

Western Heritage Alternative

The Western Heritage Alternative was sent to the South Dakota Field Office during the initial scoping period for the RMP and offered as an approach to manage public lands in South Dakota. This alternative was developed as "A sustainable vision for the public land and resources of the Great Divide, managed by the Rawlings Field Office of the BLM" (Western Heritage Alternative, Biodiversity Conservation Alliance 2003). The proposed alternative was developed to address a wide variety of resources and resource uses typically addressed in an RMP including energy development, grazing, soils, wildlife, forest health, and special designations. The alternative was reviewed and considered by the South Dakota RMP interdisciplinary team for applicability and discussed with the cooperating agencies.

The South Dakota RMP alternatives were developed with cooperating agencies through an interdisciplinary process stipulated by NEPA standards and rules and address a reasonable range of alternatives for resources and resource uses. The Western Heritage Alternative was developed for specific areas within the Great Divide planning area and does not identify issues or concerns specific to management of public lands or resources in South Dakota.

Eliminate or Reduce Livestock Grazing on BLM-Administered Public lands

An alternative that proposes to make the entire South Dakota Planning Area unavailable for grazing would not meet the purpose and need of the RMP/EIS. NEPA requires that agencies study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources. Livestock grazing was not a source of contention or controversy during scoping for this RMP and no issues or conflicts have been identified during this land use planning effort that require the complete elimination or major reduction of grazing within the planning area for their resolution. Because the BLM has considerable discretion through its grazing regulations to determine and adjust stocking levels, seasons-of-use, and grazing management activities, and to allocate forage to uses of the public lands in RMPs, the analysis of an alternative to entirely eliminate grazing is not needed.

Resource conditions on BLM-administered public lands in the planning area, including vegetation, riparian areas, watershed, and wildlife habitat, and biodiversity do not warrant elimination or reduction of livestock grazing throughout the planning area. The BLM has assessed rangeland health on approximately 95 percent of the public lands in the planning area. These ongoing rangeland health assessments on BLM surface estate indicate that less than two percent of the areas assessed are not meeting rangeland health standards as a result of grazing practices that were occurring at the time of the evaluation. Of the two percent of public lands not meeting standards because of current grazing practices, corrective management actions have already been implemented to address the grazing practices that contributed to the decline in rangeland health. Refer to the Livestock Grazing section in Chapter 3 for additional details.

The South Dakota RMP planning area is located in the northern portion of the Great Plains Ecoregion (U.S. Environmental Protection Agency 2010) and the rangelands in the planning area are classified as mixed-grass prairie. The rangelands of the Great Plains have a long evolutionary history of grazing and grazing is accepted by grassland ecologists as a keystone process of the grassland ecosystem (Fuhlendorf and Engle 2001, Milchunas, et al. 1988, Knapp, et al. 1999). There is also agreement among many scientists and natural resource managers that some level of grazing disturbance is necessary to assure the ecological integrity of the mixed-grass prairie ecosystem (Grasslands National Park Management Plan 2001).

From 1956 through 1972, the BLM conducted a classification of public lands to estimate the amount of available forage within these planning areas. These are typically referred to as the "Missouri River Basin Surveys." From this effort, multiple sub-basin reports were generated, which provided the carrying capacities by Animal Unit Months (AUMs) for all BLM lands at the time of survey. The measurement of the available forage for livestock grazing was conducted by trained professionals and involved intensive vegetation sampling (clipping, weighing, and ocular estimation). The BLM, in cooperation with grazing advisory boards, used the information to make adjustments to the AUMs allocated to a grazing permit. This cooperative effort resulted in implementation of appropriate changes to grazing permits in the planning areas. Most of these changes were implemented prior to 1975, however in a few cases they were not implemented until the 1980s. These historical grazing allocations have been included in the existing RMP that was approved in 1986 and allocation of vegetation in most areas is set at a very conservative levels with 28 percent of forage available for livestock and 72 percent allocated for watershed and wildlife.

While the BLM received no comments or concerns that would require a reduction or elimination of grazing during the scoping process for this RMP, the BLM has periodically received requests to graze livestock in ungrazed (unleased) portions of the Exemption Area that burned in a major fire in 2002 (Figure 2-3). For this reason, the BLM analyzed and addressed grazing suitability in the ungrazed portions of the Exemption Area in this RMP. Through this analysis, the BLM has developed various suitability criteria in the range of alternatives and has identified areas that are unsuitable for grazing because of slope, low productivity and erosion potential for the ungrazed portions of the Exemption Area (Table 2-2).

Resource conditions on BLM-administered public lands in the planning area, including range vegetation, watershed, and wildlife habitat, do not warrant elimination or major reductions of livestock grazing throughout the planning area. The BLM has assessed rangeland health on approximately 95 percent of the public lands in the planning area. These ongoing rangeland health assessments on BLM surface estate indicate that less than two percent of the areas assessed are not meeting rangeland health standards as a result of grazing practices that were occurring at the time of the evaluation. Of the two percent of public lands not meeting standards because of grazing practices, corrective management actions have already been implemented to address the grazing practices that contributed to the decline in rangeland health.

Reduction or elimination of livestock grazing could become necessary in specific situations where livestock grazing causes or contributes to conflicts with the protection and/or management of other resource values or uses. Such determinations would be made during site-specific (implementation level) activity planning and associated environmental analysis. These determinations would be based on several factors, including monitoring studies, reviewing current science, obtaining input from livestock operators and interested parties, and assessing the ability to meet the Dakotas Standards for Rangeland Health.

Implementation of a no grazing alternative would be highly problematic. The scattered and highly intermingled pattern of land ownership in the planning area would require extensive fencing to eliminate livestock use from BLM-administered public land. In some cases, fence maintenance along public property boundaries would be very difficult due to terrain features. Additionally, the extensive fencing needed to implement such an action would increase hazards to wildlife. To implement a no grazing alternative, nearly 2,600 miles of fence would need to be constructed in the planning area between the boundaries of BLM surface estate and lands owned by other parties. Fence construction costs would easily exceed 20 million dollars and approximately one-half million to one million dollars would be needed per year for additional maintenance costs for upkeep of the fence. In most cases, these costs would be borne by livestock producers that own or control land adjacent to BLM. Without construction of fences along boundaries of BLM public land parcels, herding of livestock would be required 24 hours a day to keep them off the BLM public land that is intermingled with other lands. Continuous herding is not practical and as a result, trespass of livestock onto BLM public land from other lands would be constant. Under a no grazing alternative, proper administration and orderly management of livestock grazing on BLM public land would be extremely difficult.

As previously evaluated in 1986 South Dakota RMP, eliminating grazing from BLM-administered public lands in the planning area would cause significant economic hardship and adverse social impacts to local communities. The economic and social structure of local communities has not changed to a large degree since this time; agriculture, especially livestock grazing, remains one of the major drivers of the local economy in western South Dakota and as stated above, it would be extremely difficult to separate management of grazing on public and private land in a discrete fashion without extensive fencing. Refer to the Social-Economic sections of Chapter 3 for a discussion of social and economic conditions in the planning area.

Livestock grazing is and has been an important use of the public lands in the planning area for many years and is a continuing government program. The CEQ guidelines for compliance with NEPA require that agencies analyze the "No Action Alternative" in all EISs (40 CFR 1502.14(d)). For the purposes of this NEPA analysis, the "no action alternative" is to continue the status quo, which includes livestock grazing. For this reason and those stated above, the South Dakota Planning Area dismissed a no grazing alternative for the entire planning area from further consideration in this RMP/EIS.

The alternatives analyzed in detail do include various considerations for eliminating or reducing livestock grazing or maximizing individual resource values or uses in specific areas where conflicts exist.

Summary of Restrictions (Table 2-1)

Table 2-1, which follows this chapter, provides an overview of the restrictions including oil and gas stipulations that would be applied under Alternatives A (Current Management), B, C, and D (Preferred Alternative). This summary provides basic information about acres affected and the type of restriction for each alternative. Additional details about individual alternatives can be found in the Summary Comparison of Alternatives Table 2-2.

Summary Comparison of Alternatives (Table 2-2)

Table 2-2, Summary Comparison of Alternatives, addresses management in the entire planning area, as well as alternatives specific to the Fort Meade Recreation Area ACEC and the Fossil Cycad ACEC. Table 2-2 provides detailed descriptions of the alternatives by resource and resource use. Each resource section includes a list of goals, management actions common to all alternatives, cross references to other applicable alternative sections, and a description of the alternatives. When an alternative is developed to address a specific management objective, the objective is shown in the alternative column. Adaptive management actions that have been developed are also listed under the alternative column.

How the Summaries of Acres Apply (GIS Analysis)

Acreages affected by restrictions are approximations based on Geographic Information System (GIS) analysis. The acreages represent a single restriction's areal (area) extent. There may be areas where multiple restrictions overlap. In instances where there is overlap, the most restrictive type of restriction would be employed to ensure proper resource protection. The areal extent affected by a management action may change through the life of the RMP based on new knowledge obtained on resources, new refinements in definitions, and new applications of technology. These changes would normally be documented during RMP maintenance.

Unless otherwise noted, acres listed as BLM surface estate includes the BLM-managed surface estate acres regardless of subsurface (mineral) ownership. Acres listed as subsurface include BLM-administered federal mineral estate regardless of surface ownership. Actual acres affected by withdrawals or closures may differ because the withdrawals or closures would not affect valid existing rights; valid claims or leases for minerals that are leased would not be included as part of a withdrawal or closure.

In some cases the BLM-administered mineral estate (subsurface) acres protecting the same area may be different for each mineral type because the federal government may own only certain portions of the minerals rights. For example, on a section of land the federal government may have the oil and gas mineral rights, but not the salable mineral rights. The manner in which the federal government maintained or relinquished all or portions of mineral rights when federal lands were privatized is complex and has varied during different time periods. In other cases, apparent inconsistencies in the acres that are listed may occur because of cases where there is no federal mineral estate underneath BLM-administered surface estate. This usually occurs when private lands are transferred back to the federal government and the previous owner kept all or part of the mineral rights.

Summary Comparison of Impacts (Table 2-3)

Table 2-3 contains a summary comparison of potential impacts under the alternatives. Where appropriate, the table quantifies potential impacts anticipated from BLM-authorized actions. Table 2-3 summarizes impacts under the four alternatives by acres and actions. For example, more acreage implies more impact (either beneficial or adverse). The Summary Comparison of Impacts by Alternative section for each resource in Chapter 4 provides a more detailed comparison of impacts between the alternatives. Table 2-3 does not include or describe cumulative impacts from non-BLM actions; however, they are discussed in detail in Chapter 4.

Standard practices, the BMPs, and guidelines for surface-disturbing activities are built into each alternative to avoid and minimize potential impacts. The BLM would consider mitigation of residual impacts during subsequent implementation-level projects and any associated environmental analyses performed at that time. All alternatives include reclamation of surface disturbance to reduce long-term impacts.

The figures for acres and other units that are listed throughout this document for vegetation and fuels treatments or products resulting from these treatments are not specific target commitments to be accomplished each year; they represent the average number of acres or other units that BLM expects to be treated or produced each year (or the period provided) assuming that levels of funding remain the same.

Prairie Reservoir BLM Photo

Table 2–1
Summary of Restrictions

Key
ACEC: Area of Critical Environmental Concern
CSU: Controlled Surface Use Stipulation
NSO: No Surface Occupancy Stipulation
O&G: Oil and Gas
ROWs: Rights-of-Way
TL: Timing Limitation Stipulation

Note: *Subsurface acres include federal mineral estate below BLM-administered surface estate and federal mineral estate below lands of other surface ownerships (split-estate).*

Resource and Resource Use	***Alternative A (Current Management)***	***Alternative B***	***Alternative C***	***Alternative D (Preferred Alternative)***
Soil and Water				
O&G stipulation on floodplains, wetlands, and riparian areas	NSO: Floodplains, wetlands, and riparian areas Surface: 13,397 acres Subsurface: 63,426 acres	NSO: Within 300 feet of floodplains, wetlands, riparian areas and waterbodies Surface: 30,487 acres Subsurface: 146,169 acres		
ROWs restriction on floodplains, wetlands, and riparian areas	Open	ROWs avoidance Surface: 14,191 acres	ROWs exclusion Surface: 14,191 acres	ROWs avoidance Surface: 14,191 acres
O&G stipulation on sensitive soils	Open with standard lease terms	CSU Surface: 39,230 acres Subsurface: 268,414 acres	NSO Surface: 39,230 acres Subsurface: 268,414 acres	CSU Surface: 39,230 acres Subsurface: 268,414 acres
ROWs restriction on sensitive soils	Open	ROWs avoidance Surface: 45,954 acres	ROWs exclusion Surface: 45,954 acres	ROWs avoidance area Surface: 45,954 acres
O&G stipulation on steep slopes	CSU: 30% slopes Surface: 8,575 acres Subsurface: 40,476 acres	CSU: Slopes over 25% Surface: 14,061 acres Subsurface: 62,890 acres	NSO: Slopes over 25% Surface: 14,061 acres Subsurface: 62,890 acres	CSU: Slopes between 25-50% Surface: 13,132 acres Subsurface: 59,642 acres. NSO: Slopes over 50% Surface: 929 acres Subsurface: 3,248 acres
ROWs restriction on steep slopes	Open	ROWs avoidance on slopes over 25% Surface: 14,770 acres	ROWs exclusion on slopes over 25% Surface: 14,770 acres	ROWs avoidance on slopes over 25% Surface: 14,770 acres
Fisheries				
O&G stipulation on areas within ¼ mile of reservoirs with fisheries	NSO Surface: 551 acres Subsurface: 12,548 acres			
ROWs restriction within ¼ mile of reservoirs with fisheries	Open	ROWs avoidance Surface: 1,018 acres	ROWs exclusion Surface: 1,018 acres	ROWs avoidance Surface: 1,018 acres
Invasive Species				
Weed treatments in or near special status plant species	Open	In areas with identified T&E, special status plants, and sensitive plant species, wick or	Listed T&E and sensitive plant species would have a 100 foot herbicide buffer zone,	Listed T&E and sensitive plant species would have a 100 foot herbicide buffer zone,

Table 2–1
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TL: Timing Limitation Stipulation

Note: *Subsurface acres include federal mineral estate below BLM-administered surface estate and federal mineral estate below lands of other surface ownerships (split-estate).*

Resource and Resource Use	***Alternative A (Current Management)***	***Alternative B***	***Alternative C***	***Alternative D (Preferred Alternative)***
		backpack sprayers and selective herbicides would be used to minimize risks to those species.	applied by spot treatment unless broadcast treatment would have beneficial impacts to such species.	applied by spot treatment unless broadcast treatment would have beneficial impacts to such species.
Weed treatments near active raptors nests (including bald eagle nests)	Open	No weed treatments from 3/1-8/1 within ¼ mile raptor nest that are currently occupied from March 1-August 1. Some exceptions would apply.	No weed treatments from 3/1 -8/1 within ¼ mile of current year active raptor nesting site active over the last 7 years. Some exceptions would apply.	No weed treatments from 3/1-8/1 within ¼ mile raptor nest that are currently occupied from March 1-August 1. Some exceptions would apply.
Weed treatments near Greater Sage-Grouse leks that are outside of Protection Priority Areas (PPAs) (General Habitat)	TL: No treatments within 2 miles of sage-grouse leks from March 1-June 30.	TL: Spot treatments only within 3 miles of sage-grouse leks from March 1-June 30.	TL: Spot treatments only within 4 miles of sage-grouse leks from March 1-June 30.	TL: Spot treatments only within a 3 mile buffer zone of sage-grouse leks from March 1-June 30.
Weed treatments in Greater Sage-Grouse PPAs	Open	Spot treatments in PPAs only, using IPM methods within suitable nesting or brood rearing habitat of known sage-grouse leks from March 1 – June 30. This does not apply to areas outside of PPAs.		
Wildlife				
O&G stipulation on bighorn sheep habitat	Open with standard O&G stipulations	NSO Surface: 788 acres Subsurface: 58,072 acres		
ROWs restrictions in bighorn sheep habitat	Open	ROWs avoidance Surface: 875 acres	ROWs exclusion Surface: 875 acres	ROWs avoidance Surface: 875 acres
Livestock grazing in bighorn sheep habitat	Open (domestic sheep/goat grazing discouraged but not prohibited near bighorn sheep habitat)	Closed to domestic sheep and goat grazing within 5 miles of bighorn sheep range Surface: 3,536 acres		
O&G stipulation on or near other raptor nests (not bald eagle, peregrine falcon, or special status species)	Open with standard O&G stipulations	NSO ¼ mile. Based on 7 years of past nest occupancy Surface: 544 acres Subsurface: 3,059 acres	NSO ½ mile. Based on 7 years of past nest occupancy Surface: 2,258 acres Subsurface: 13,674 acres	NSO ¼ mile. Based on 7 years of past nest occupancy Surface: 544 acres Subsurface: 3,059 acres
ROWs restriction on or near other raptor nest (not bald eagle, peregrine falcon, or special status species)	Open	ROWs avoidance within ¼ mile Surface: 657 acres	ROWs exclusion within ¼ mile Surface: 657 acres	Exclusion ¼ mile from nests for Renewable Energy ROWs Surface: 657 acres
				Avoidance ¼ mile

Table 2–1
Summary of Restrictions

Key
ACEC: Area of Critical Environmental Concern
CSU: Controlled Surface Use Stipulation
NSO: No Surface Occupancy Stipulation
O&G: Oil and Gas
ROWs: Rights-of-Way
TL: Timing Limitation Stipulation

Note: *Subsurface acres include federal mineral estate below BLM-administered surface estate and federal mineral estate below lands of other surface ownerships (split-estate).*

Resource and Resource Use	***Alternative A (Current Management)***	***Alternative B***	***Alternative C***	***Alternative D (Preferred Alternative)***
				from nests for other types of ROWs Surface: 657 acres
O&G stipulation on Big Game wintering areas	TL: 12/1-3/31 Surface: 106,382 acres Subsurface: 411,150 acres			
ROWs restriction on Big Game wintering areas	Open	ROWs avoidance Surface: 121,406 acres	ROWs exclusion Surface: 121,406 acres	Avoidance for Renewable Energy and other types of ROWs Surface: 121,406 acres
O&G stipulation on or near sharp-tailed grouse/greater prairie-chicken brood rearing/nesting habitat	TL: 3/1-6/15 2 miles from sharp-tailed grouse leks Surface: 1,316 acres Subsurface: 15,378 acres	TL: 3/1-6/30 2 miles from sharp-tailed grouse/greater prairie-chicken leks Surface: 1,316 acres Subsurface: 15,378 acres	TL: 3/1-6/30 3 miles from sharp-tailed grouse/greater prairie-chicken leks Surface: 2,736 acres Subsurface: 34,605 acres	TL: 3/1-6/30 2 miles from sharp-tailed grouse/greater prairie-chicken leks Surface: 1,316 acres Subsurface: 15,373 acres
ROWs restriction on or near sharp-tailed grouse/greater prairie-chicken brood rearing/nesting habitat	Open	ROWs avoidance 2 miles from sharp-tailed grouse/greater prairie-chicken leks Surface: 1,366 acres	ROWs exclusion 3 miles from sharp-tailed grouse/greater prairie-chicken leks Surface: 2,811 acres	ROWs avoidance 2 miles from sharp-tailed grouse/greater prairie-chicken leks Surface: 1,366 acres
O&G stipulation on structures that create raptor perches on or near sharp-tailed grouse/greater prairie-chicken brood rearing/ nesting habitat	Open with standard O&G stipulations	CSU: 2 miles from sharp-tailed grouse and greater prairie-chicken leks Surface: 1,316 acres Subsurface: 15,378 acres		
O&G stipulation on or near sharp-tailed grouse/greater prairie-chicken leks	NSO: ¼ mile from sharp-tailed grouse leks Surface: 0 acres Subsurface: 163 acres		NSO: ½ mile from sharp-tailed grouse/greater prairie-chicken leks Surface: 27 acres Subsurface: 805 acres	NSO: ¼ mile from sharp-tailed grouse/greater prairie-chicken leks Surface: 0 acres Subsurface: 163 acres
ROWs restriction on or near sharp-tailed grouse/greater prairie-chicken leks	Open	ROWs avoidance within ¼ mile of sharp-tailed grouse/ greater prairie-chicken leks. Surface: 0 acres	ROWs exclusion within ½ mile of sharp-tailed grouse/ greater prairie-chicken leks Surface: 30 acres	ROWs exclusion within ¼ mile of sharp-tailed grouse/ greater prairie-chicken leks for Renewable Energy ROWs Surface: 0 acres
				Avoidance within ¼

Table 2–1
Summary of Restrictions

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Note: *Subsurface acres include federal mineral estate below BLM-administered surface estate and federal mineral estate below lands of other surface ownerships (split-estate).*

Resource and Resource Use	***Alternative A (Current Management)***	***Alternative B***	***Alternative C***	***Alternative D (Preferred Alternative)***
				mile of sharp-tailed grouse/greater prairie-chicken leks for other types of ROWs Surface: 0 acres
Special Status Species				
O&G stipulation in interior least tern nesting habitat	NSO: ¼ mile from identified habitat (specific habitat not identified but potential exists)			
ROWs restrictions in interior least tern nesting habitat	Open	ROWs avoidance	ROWs exclusion	ROWs avoidance
O&G stipulation in piping plover nesting habitat	NSO: ¼ mile from identified habitat (specific habitat not identified but potential exists)			
ROWs restriction in piping plover nesting habitat	Open	ROWs avoidance	ROWs exclusion	ROWs avoidance
O&G stipulation on or near peregrine falcon aeries	NSO: 1 Mile Surface: 0 acres Subsurface: 0 acres	NSO: ½ Mile Surface: 0 acres Subsurface: 0 acres	NSO: 1 Mile Surface: 0 acres Subsurface: 0 acres	NSO: 1 Mile Surface: 0 acres Subsurface: 0 acres
ROWs restriction on or near peregrine falcon aeries	Open	ROWs avoidance within ½ mile of aeries Surface: 0 acres	ROWs exclusion within 1 mile of aeries Surface: 0 acres	ROWs exclusion within ½ mile of aeries for Renewable Energy ROWs Surface: 0 acres
				Avoidance within ½ mile of aeries for other types of ROWs Surface: 0 acres
O&G stipulation on or near bald eagle nests	NSO: ½ mile. Based on 5 years of past nest occupancy Surface: 0 acres Subsurface: 259 acres	NSO: ¼ mile. Based on 5 years of past nest occupancy Surface: 0 acres Subsurface: 80 acres	NSO: ½ mile. Based on 5 years of past nest occupancy Surface: 0 acres Subsurface: 259 acres	
ROWs restriction on or near bald eagle nests	Open	ROWs avoidance within ¼ mile of nests & within riparian habitat within ¼ mile of nests	ROWs exclusion within ½ mile of nests & within riparian habitat within ¼ mile of nests	ROWs exclusion within ½ mile of nests for Renewable Energy ROWs
				ROW avoidance within ½ mile of nests for other types of ROWs

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Note: *Subsurface acres include federal mineral estate below BLM-administered surface estate and federal mineral estate below lands of other surface ownerships (split-estate).*

Resource and Resource Use	***Alternative A (Current Management)***	***Alternative B***	***Alternative C***	***Alternative D (Preferred Alternative)***
O&G stipulation on or near sensitive raptors nests (bald eagles and peregrine falcon addressed in separately)	NSO: ½ mile. Based on 7 years of past nest occupancy Surface: 1,837 acres Subsurface: 10,636 acres	NSO: ¼ mile. Based on 7 years of past nest occupancy Surface: 499 acres Subsurface: 7,510 acres	NSO: ½ mile. Based on 7 years of past nest occupancy Surface: 1,837 acres Subsurface: 10,636 acres	NSO: ¼ mile. Based on 7 years of past nest occupancy Surface: 499 acres Subsurface: 7,510 acres TL: 3/1-7/31 within ½ mile of nests Surface: 1,837 acres Subsurface: 10,636 acres
ROWs restriction on or near sensitive raptors nests (bald eagles and peregrine falcon addressed separately)	Open	ROWs avoidance within ¼ mile of nests Surface: 554 acres	ROWs exclusion within ½ mile of nests Surface: 2,160 acres	ROWs exclusion within ¼ mile of nests for Renewable Energy ROWs Surface: 554 acres Avoidance within ¼ mile of nests for other types of ROWs Surface: 554 acres
O&G stipulation on Greater Sage-Grouse PPAs See Maps 2-4 and 2-5 for PPA boundary differences by alternative.	NSO: ¼ mile from leks Surface: 916 acres Subsurface: 1,950 acres TL: 3/1-7/1 2 miles from leks Surface: 27,634 acres Subsurface: 73,828 acres	NSO Surface: 83,744 acres Subsurface: 253,357 acres	Closed to O&G leasing Surface: 93,266 acres Subsurface: 289,563 acres	NSO Surface: 83,744 acres Subsurface: 253,357 acres
ROWs restriction on Greater Sage-Grouse PPAs See Maps 2-4 and 2-5 for PPA boundary differences by alternative.	Open	ROWs avoidance Surface: 84,384 acres	ROWs exclusion Surface: 96,379 acres An exception would apply if the exclusion may cause development of a ROW on adjacent lands with better quality habitat than is present on BLM-administered lands.	ROWs exclusion for Renewable Energy ROWs Surface: 84,384 acres Avoidance for other types of ROWs Surface: 84,384 acres

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Note: *Subsurface acres include federal mineral estate below BLM-administered surface estate and federal mineral estate below lands of other surface ownerships (split-estate).*

Resource and Resource Use	***Alternative A (Current Management)***	***Alternative B***	***Alternative C***	***Alternative D (Preferred Alternative)***
Locatable, salable and other leasable mineral development in Greater Sage-Grouse PPAs	Open		PPAs withdrawn from locatable mineral entry, closed to salable and other non-energy leasable minerals and unsuitable for coal. Surface: 93,266 acres Subsurface: 289,288 acres	Open
O&G stipulation on or near Greater Sage-Grouse leks outside of PPAs (in General Habitat) See Maps 2-4 and 2-5 for General Habitat.	NSO: ¼ mile from sage-grouse leks Surface: 81 acres Subsurface: 816 acres TL: 3/1-7/1 2 miles from leks Surface: 5,109 acres Subsurface: 23,584 acres	NSO: ½ mile from sage-grouse leks Surface: 509 acres Subsurface: 2,072 acres	NSO: 1 mile from sage-grouse leks Surface: 767 acres Subsurface: 1,846 acres	NSO: 1 mile from sage-grouse leks Surface: 2,407 acres Subsurface: 6,243 acres
ROWs restriction on BLM surface on or near Greater Sage-Grouse leks outside of PPAs (in General Habitat) Note: Other ROW restrictions for nesting/ brood rearing habitat would also apply. See Maps 2-4 and 2-5 for General Habitat.	Open	ROWs avoidance ½ mile from sage-grouse leks for all types of ROWs Surface: 526 acres	All sage-grouse general habitat would be a ROW avoidance area for all types of ROWs Surface: 67,035 acres	ROWs exclusion within 1 mile of sage-grouse leks for Renewable Energy ROWs Surface: 2,617 acres Avoidance 1 mile from sage-grouse leks for other types of ROWs Surface: 2,617 acres
O&G stipulation on Greater Sage-Grouse brood rearing/nesting habitat outside of PPAs (in General Habitat) See Maps 2-4 and 2-5 for General Habitat.	TL: 3/1-6/30 2 miles from sage-grouse leks Surface: 5,109 acres Subsurface: 23,584 acres	TL: 3/1-7/15 3 miles from sage-grouse leks, outside of PPAs in General Habitat Surface: 14,749 acres Subsurface: 31,522 acres	TL: 3/1-7/15 4 miles from sage-grouse leks; outside of PPAs in General Habitat Surface: 19,926 acres Subsurface: 60,528 acres	TL: 3/1-7/15 4 miles from sage-grouse leks; outside of PPAs in General Habitat Surface: 29,360 acres Subsurface: 65,846 acres
ROWs restriction on Greater Sage-Grouse brood rearing/nesting habitat outside of PPAs (in General Habitat)	Open	ROWs avoidance 3 miles from sage-grouse leks Surface: 17,741 acres	ROWs exclusion 4 miles from sage-grouse leks Surface: 20,959 acres	ROWs avoidance 4 miles from sage-grouse leks Surface: 32,865 acres

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Note: *Subsurface acres include federal mineral estate below BLM-administered surface estate and federal mineral estate below lands of other surface ownerships (split-estate).*

Resource and Resource Use	***Alternative A (Current Management)***	***Alternative B***	***Alternative C***	***Alternative D (Preferred Alternative)***
See Maps 2-4 and 2-5 for General Habitat				
CSU – Bury or modify fiber optic, telephone, or power lines – Greater Sage-Grouse General Habitat, PPAs and within Greater Sage-Grouse winter range	No specific management action exists.	All new power lines within 1 mile of sage-grouse leks and within sage-grouse winter range and PPAs would be buried provided the lines can be safely buried. Acres affected vary depending on site specific circumstances.	All new power lines within 2 miles of sage-grouse leks and within sage-grouse winter range and PPAs would be buried provided the lines can be safely buried. Acres affected vary depending on site specific circumstances.	
O&G stipulation on Greater Sage-Grouse wintering areas	TL: 12/1-3/31 Surface-disturbing and disruptive activities not allowed from 12/1-3/31 Surface: 50,791 acres Subsurface: 103,553 acres			Plan required for surface-disturbing and disruptive activities that occur from 12/1-3/31 to minimize impacts to sage grouse Surface: 50,791 acres Subsurface: 103,553 acres
ROWs restriction on Greater Sage-Grouse wintering areas	Open	ROWs avoidance Surface: 53,144 acres	ROWs exclusion Surface: 53,144 acres	ROWs exclusion within winter range for Renewable Energy ROWs Surface: 53,144 acres
				Avoidance within winter range for other types of ROWs Surface: 53,144 acres
Visual Resources				
CSU O&G stipulation on VRM Class II designation	VRM Class II criteria (refer to glossary) would apply to 1,231 acres in Fort Meade and Fossil Cycad ACECs.	VRM Class II criteria constraints would apply to 1,544 acres in Fort Meade and Fossil Cycad ACECs.	VRM Class II criteria would apply to 6,801 acres in Fort Meade ACEC and Fossil Cycad ACEC. Other Visual Resource Inventory Class 2 areas would become VRM Class II areas (4,790 acres).	VRM Class II criteria would apply to 1,544 acres in Fort Meade and Fossil Cycad ACECs.
ROW restriction on VRM Class II designation	Open Surface: 1,231 acres	ROWs avoidance Surface: 1,544 acres	ROWs exclusion Surface: 11,590 acres	ROWs exclusion for Renewable Energy ROWs Surface: 1,544 acres
				Avoidance for other

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Resource and Resource Use	***Alternative A (Current Management)***	***Alternative B***	***Alternative C***	***Alternative D (Preferred Alternative)***
				types of ROWs Surface: 1,544 acres
Recreation				
Leasable minerals and O&G stipulation in or near SRMAs	No SRMAs would be established	NSO in and within ½ mile buffer of Exemption Area SRMA. NSO within a ½ mile buffer around Fort Meade SRMA. (Locatable minerals would be withdrawn and leasable minerals would be closed within the Fort Meade SRMA/ACEC.) Surface: 5,078 acres Subsurface: 8,839 acres	Exemption Area would not be designated as an SRMA. NSO within a 1 mile buffer around Fort Meade SRMA. (Locatable minerals would be withdrawn and leasable minerals would be closed within the Fort Meade SRMA/ACEC.) Surface: 0 acres Subsurface: 1,497 acres	NSO in and within ½ mile buffer of Exemption Area SRMA. NSO within ½ mile buffer around Fort Meade SRMA. (Locatable minerals would be withdrawn and leasable minerals would be closed within the Fort Meade SRMA/ACEC.) Surface: 5,078 acres Subsurface: 8,839acres
ROWs restriction on Fort Meade SRMA, buffer only (Fort Meade ACEC addresses the interior area)	Open	ROWs avoidance with ½ mile buffer Surface: 0 acres Subsurface: N/A	ROWs exclusion with 1 mile buffer Surface: 0 acres Subsurface: N/A	ROWs exclusion within ½ mile for Renewable Energy ROWs Surface: 0 acres Subsurface: N/A
				Avoidance within ½ mile for other types of ROWs Surface: 0 acres Subsurface: N/A
ROWs restriction on Exemption Area SRMA and SRMA buffer	Open	ROWs avoidance within SRMA and ½ mile buffer Surface: 5,078 acres Subsurface: 0 acres	Open	Exclusion within SRMA and ½ mile for Renewable Energy ROWs Surface: 5,078 acres Subsurface: 0 acres
				Avoidance within SRMA and ½ mile for other types of ROWs Surface: 5,078 acres Subsurface: 0 acres
Firearm Shooting	No discharge of firearms in southern portion of Fort Meade ACEC Surface: 3,996 acres (Refer to Map 4-3)			

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Note: *Subsurface acres include federal mineral estate below BLM-administered surface estate and federal mineral estate below lands of other surface ownerships (split-estate).*

Resource and Resource Use	***Alternative A (Current Management)***	***Alternative B***	***Alternative C***	***Alternative D (Preferred Alternative)***
Cultural				
Leasable minerals and O&G stipulation on Bear Butte Surface: 0 acres Subsurface: 410 acres	Open with standard O&G stipulations	NSO	Closed to O&G leasing	
Locatable minerals on Bear Butte Surface: 0 acres Subsurface: 410 acres	Open to locatable mineral entry	Recommended for withdrawal from locatable mineral entry		
Salable minerals on Bear Butte Surface: 0 acres Subsurface: 410 acres	Open to salable minerals	Closed		
Refer to the Hazardous Materials section (below) for actions related to the abandoned Black Hills Army Depot.				
ACECs				
Summary of ACECs and acres protected by ACEC Designation	Two ACECs: Fort Meade Recreational Area and Fossil Cycad Surface: 6,894 acres Minerals: 6,894 acres	Two ACECs: Fort Meade Recreational Area and Fossil Cycad Surface: 6,894 acres Minerals: 6,894 acres	Three ACECs: Fort Meade, Fossil Cycad and Greater Sage-Grouse PPAs Surface: 103,273 acres Minerals: 296,457 acres	Two ACECs: Fort Meade Recreational Area and Fossil Cycad Surface: 6,894 acres Minerals: 6,894 acres
Other leasable minerals and O&G stipulation on Fort Meade ACEC	No lease (Closed) Surface: 6,574 acres Subsurface: 6,574 acres			
ROWs restriction on Fort Meade ACEC	Utility and transmission line ROWs would be allowed (open) in the designated ROW corridor in the Fort Meade ACEC. Surface: 1,066 acres			
ROWs restriction on Fort Meade ACEC, outside the ROW corridor Surface: 5,521 acres	Exclusion	Avoidance	Exclusion	Exclusion
Locatable minerals on Fort Meade ACEC	Withdrawn from locatable mineral entry Surface: 6,574 acres Subsurface: 6,574 acres			
Salable minerals on Fort Meade ACEC	Closed to salable minerals Surface 6,574 acres Subsurface: 6,574 acres			

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Note: *Subsurface acres include federal mineral estate below BLM-administered surface estate and federal mineral estate below lands of other surface ownerships (split-estate).*

Resource and Resource Use	***Alternative A (Current Management)***	***Alternative B***	***Alternative C***	***Alternative D (Preferred Alternative)***
O&G stipulation on Fossil Cycad ACEC Surface: 320 acres Subsurface: 320 acres	Closed to O&G leasing	NSO	Closed to O&G leasing	
ROWs restriction on Fossil Cycad ACEC	Open	Avoidance Surface: 320 acres	Exclusion Surface: 320 acres	
Other leasable minerals on Fossil Cycad ACEC	No Lease (Closed) Subsurface: 320 acres			
Locatable minerals on Fossil Cycad ACEC	Withdrawn from mineral entry Acres same as above. Subsurface: 320 acres			
Salable minerals on Fossil Cycad ACEC	Closed Surface: 320 acres Subsurface: 320 acres			
Locatable minerals in Greater Sage-Grouse PPAs ACEC	N/A	N/A	Withdrawn Surface: 93,266 acres Subsurface: 289,288 acres	N/A
O&G minerals in Greater Sage-Grouse PPAs ACEC	N/A	N/A	Closed (No Lease) Surface: 93,266 acres Subsurface: 289,563 acres	N/A
ROW in Greater Sage-Grouse PPAs ACEC	N/A	N/A	Excluded from all types of ROW actions Surface: 96,379 acres Subsurface: N/A	N/A
Hazardous Materials and Cultural Resources				
Mineral exploration and development at the abandoned Black Hills Army Depot Site (BHAD)	Open	NSO to leasable Minerals. Closed to salable minerals: Open to locatable minerals with standard stipulations. Surface: 0 acres Subsurface: 12,709 acres	Closed to leasable and salable minerals. Open to locatable minerals subject to standard stipulations. Surface: 0 acres Subsurface: 12,709 acres	NSO to leasable minerals. Closed to salable minerals. Open to locatable minerals with standard stipulations. Surface: 0 acres Subsurface: 12,709 acres

Table 2-1 (continued)
Cumulative Acres of Federal Mineral Estate Available or Unavailable for Oil and Gas Leasing[1]

	Alternative A (Current Management)		*Alternative B*		*Alternative C*		*Alternative D (Preferred Alternative)*	
	Surface[2]	***Subsurface***	***Surface[2]***	***Subsurface***	***Surface[2]***	***Subsurface***	***Surface[2]***	***Subsurface***
Cumulative Acres Available for Oil and Gas Leasing								
No Surface Occupancy	15,489	87,349	105,837	404,306	43,897	355,396	107,025	406,005
Timing Limitations	115,204	450,032	61,186	305,570	45,836	244,689	66,821	340,948
Controlled Surface Use	2,954	19,613	10,561	158,501	1,535	1,535	10,031	146,574
Standard Lease Terms	103,033	798,690	59,416	487,627	52,146	451,382	52,803	461,747
Cumulative Areas Unavailable for Oil and Gas Leasing								
Non-discretionary	--	National parks, wildlife refuges, wilderness areas, and incorpor-ated cities and towns (175 acres)	--	National parks, wildlife refuges, wilderness areas, and incorpor-ated cities and towns (175 acres)	--	National parks, wildlife refuges, wilderness areas, and incorpor-ated cities and towns (175 acres)	--	National parks, wildlife refuges, wilderness areas, and incorpor-ated cities and towns (175 acres)
Discretionary (closed)	Fort Meade and Fossil Cycad (6,894 acres)	Fort Meade and Fossil Cycad (6,894 acres)	Fort Meade (6,574 acres)	Fort Meade (6,574 acres)	SG PPAs, Fort Meade and Fossil Cycad (100,160 acres)	SG PPAs, BHAD, Fort Meade, Fossil Cycad, and Bear Butte (309,576 acres)	Fort Meade and Fossil Cycad (6,894 acres)	Fort Meade, Fossil Cycad, and Bear Butte (7,304 acres)

[1] Acreages by subcategory were calculated such that each column of subcategories under each alternative adds up to the total available acres for leasing based on the following general concepts where multiple stipulations overlapped: Unavailable land categories override available land categories. Within available lands, No Surface Occupancy stipulations override and are more restrictive than Timing Limitations, Controlled Surface Use, and Standard Lease Terms. Timing Limitation stipulations override and are more restrictive than Controlled Surface Use and Standard Lease Terms. Controlled Surface Use stipulations override and are more restrictive than Standard Lease Terms.

[2] BLM-administered surface acres with federal minerals lands underneath.

Table 2-1 (continued)
Acres of Federal Mineral Estate Available or Unavailable for Oil and Gas Leasing[1]

	Alternative A (Current Management)		*Alternative B*		*Alternative C*		*Alternative D (Preferred Alternative)*	
	Surface[2]	***Subsurface***	***Surface[2]***	***Subsurface***	***Surface[2]***	***Subsurface***	***Surface[2]***	***Subsurface***
Acres Available for Oil and Gas Leasing								
No Surface Occupancy	16,385	88,246	107,412	405,884	75,225	454,377	108,609	407,688
Timing Limitations	127,220	501,754	112,832	460,595	118,401	498,577	121,811	507,484
Controlled Surface Use	9,695	41,599	54,036	337,048	12,443	26,504	54,036	337,048
Areas Unavailable for Oil and Gas Leasing								
Non-discretionary	--	National parks, wildlife refuges, wilderness areas, and incorporated cities and towns (175 acres)	--	National parks, wildlife refuges, wilderness areas, and incorporated cities and towns (175 acres)	--	National parks, wildlife refuges, wilderness areas, and incorporated cities and towns (175 acres)	--	National parks, wildlife refuges, wilderness areas, and incorporated cities and towns (175 acres)
Discretionary (closed)	Fort Meade and Fossil Cycad (6,894 acres)	Fort Meade and Fossil Cycad (6,894 acres)	Fort Meade (6,574 acres)	Fort Meade (6,574 acres)	SG PPAs, Fort Meade and Fossil Cycad (100,160 acres)	SG PPAs, BHAD, Fort Meade, Fossil Cycad, and Bear Butte (309,576 acres)	Fort Meade and Fossil Cycad (6,894 acres)	Fort Meade, Fossil Cycad, and Bear Butte (7,304 acres)

[1] Acreages by subcategory under each alternative. Total available and unavailable may overlap and do not equal the total number of BLM administered lands (surface and federal minerals). Overlapping individual stipulation-specific acreages by restriction order are displayed by alternative in Chapter 2 in Table 2-2.
[2] BLM-administered surface acres with federal minerals lands underneath.

Table 2-1 (continued)
Rights-of-Way, Cumulative Acres of BLM-Administered Surface Acres Affected[1]

	Alternative A (Current Management)		*Alternative B*		*Alternative C*		*Alternative D (Preferred Alternative)*	
	BLM-admin Surface Acres	***BLM-admin Surface in the Planning Area (%)***	***BLM-admin Surface Acres***	***BLM-admin Surface in the Planning Area (%)***	***BLM-admin Surface Acres***	***BLM-admin Surface in the Planning Area (%)***	***BLM-admin Surface Acres***	***BLM-admin Surface in the Planning Area (%)***
Cumulative Acres for All ROWs								
Exclusion	5,522	2%			199,420	73%	--	--
Avoidance	--	--	189,153	69.2%			--	--
Open	267,768	98%	84,137	30.8%	73,870	27%	--	--
Cumulative Acres for Renewable Energy ROWs								
Exclusion	--	--	--	--	--	--	118,904	43.5%
Avoidance	--	--	--	--	--	--	78,636	28.8%
Open	--	--	--	--	--	--	75,751	27.7%
Cumulative Acres for other ROWs								
Exclusion	--	--	--	--	--	--	5,836	2.1%
Avoidance	--	--	--	--	--	--	191,704	70.1%
Open	--	--	--	--	--	--	75,750	27.7%

[1] Acres within this table are cumulative, taking out the overlap between resource uses. The most restrictive acres are reported for each acre of ground. Areas of exclusion override and are more restrictive than areas of avoidance and open. Areas of avoidance are more restrictive than open areas.

Table 2-1(continued)
Acres of Federal Mineral Estate Available or Unavailable for Oil and Gas Leasing[1]

	RFD Level	***Alternative A (Current Management)***	***Alternative B***	***Alternative C***	***Alternative D (Preferred Alternative)***
Cumulative Areas Unavailable for Oil and Gas Leasing					
Non-discretionary		National parks, wildlife refuges, wilderness areas, and incorporated cities and towns	National parks, wildlife refuges, wilderness areas, and incorporated cities and towns	National parks, wildlife refuges, wilderness areas, and incorporated cities and towns	National parks, wildlife refuges, wilderness areas, and incorporated cities and towns
Discretionary		Fort Meade and Fossil Cycad	Fort Meade	Greater Sage-Grouse PPAs, BHAD, Fort Meade, Fossil Cycad, and Bear Butte	Fort Meade, Fossil Cycad, and Bear Butte
Total acres closed	High			Surface[2]: 18,358 acres Subsurface: 37,618 acres	
	Moderate			Surface[2]: 2,336 acres Subsurface: 12,138 acres	
	Low			Surface[2]: 32,882 acres Subsurface: 99,825 acres	
	Very Low	Surface[2]: 6,376 acres Subsurface: 6,376 acres	Surface[2]: 6,376 acres Subsurface: 6,376 acres	Surface[2]: 46,066 acres Subsurface: 159,477 acres	Surface[2]: 6,376 acres Subsurface: 6,786 acres
	None	Surface[2]: 518 acres Subsurface: 518 acres	Surface[2]: 198 acres Subsurface: 198 acres	Surface[2]: 518 acres Subsurface: 518 acres	Surface[2]: 518 acres Subsurface: 518 acres
	Not Assessed	Surface[2]: 0 acres Subsurface: 0 acres	Surface[2]: 0 acres Subsurface: 0 acres	Surface[2]: 0 acres Subsurface: 0 acres	Surface[2]: 0 acres Subsurface: 0 acres

[1] Acreages by subcategory were calculated such that each column of subcategories under each alternative adds up to the total available acres for leasing based on the following general concepts where multiple stipulations overlapped: Unavailable land categories override available land categories. Within available lands, No Surface Occupancy stipulations override and are more restrictive than Timing Limitations, Controlled Surface Use, and Standard Lease Terms. Timing Limitation stipulations override and are more restrictive than Controlled Surface Use and Standard Lease Terms. Controlled Surface Use stipulations override and are more restrictive than Standard Lease Terms.

[2] BLM-administered surface acres with federal minerals lands underneath.

Areas referenced as open in this table may be subject to site- or project-specific restrictions as determined by project level (implementation) environmental review.