

## **CHAPTER 2—DESCRIPTION OF ALTERNATIVES**

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To prepare the Coordinated Activity Plan (CAP) for the Jack Morrow Hills (JMH) planning area, comprehensive alternative CAPs were developed to address the resource management objectives identified during the scoping process.

### **2.1 DEVELOPMENT OF ALTERNATIVES**

The alternatives developed for this analysis were formulated to include the full range of management options or actions that could be implemented in the planning area. The previous options and alternatives analyzed for the Green River Resource Management Plan (RMP) and for the original draft Environmental Impact Statement (EIS) for the JMH CAP were reviewed, taking into account management and resource issues identified by BLM technical staff in the Rock Springs Field Office (RSFO). New information obtained on resources in the planning area since preparation of the original draft EIS, along with public comments and input from cooperating agencies and users of the lands and resources in the JMH planning area, were also considered in the development of alternatives.

After the original draft EIS for the JMH CAP was completed in June 2000, the Solicitor for the Department of the Interior issued an opinion stating that the original draft EIS did not consider a full range of alternatives for management of the JMH planning area. The Solicitor's opinion directed BLM to evaluate alternatives for the CAP which included a full range of available management options for protection of resources and land management. BLM was directed to evaluate all reasonable alternatives for management of the planning area as needed to comply with the Code of Federal Regulations (CFR), specifically 40 CFR 1502.14(a), which is the Council on Environmental Quality's rule for the range of alternatives that must be considered for an EIS to meet the requirements of the National Environmental Policy Act (NEPA).

In response to the Solicitor's opinion, the Director of BLM determined that a supplemental draft EIS would be prepared to include a range of alternatives required to comply with NEPA, and to select a JMH CAP that addresses all planning decisions for the area which were deferred in the Green River RMP. The range of alternatives considered for the JMH CAP includes the full range of possible management options and actions for land uses and resource preservation under BLM's obligation to provide for multiple land use and resource protection as required by FLPMA and other laws. Examples of additional management options and actions considered for analysis in the supplemental draft EIS include designation of new Wilderness Study Areas as allowed under the Wilderness Act, and withdrawal of areas from consideration for mineral resource development as provided for under the Federal Land Policy and Management Act (FLPMA) and the Mining Act.

#### **2.1.1 Alternatives Development Process**

BLM complied with NEPA requirements in the developing of alternatives for this supplemental draft EIS, including seeking public input and analyzing an adequate range of reasonable alternatives, including a No Action Alternative. In developing alternatives BLM also took into consideration management options for planning decisions that were deferred in the Green River RMP, as well as direction provided by the Record of Decision for the Green River RMP. Where necessary to meet the planning criteria for the JMH CAP, address public comments, and provide a reasonable range of alternatives, the alternatives include

management options for the planning area that would modify or amend decisions in the Green River RMP. Finally, all alternatives meet the management objectives for each BLM resource and land management program.

The process used to develop the alternatives began with a review of the Green River RMP (October 1997), the original draft EIS for the Jack Morrow Hills Coordinated Activity Plan (June 2000), and the existing policies and mandates of BLM. During this review, management objectives and actions from the Green River RMP applicable to the JMH planning area were identified (Appendix 2). Public input received during the 90-day comment period on the original draft EIS for the JMH CAP, and also during the scoping process, was reviewed to ensure that all issues and concerns would be identified and addressed, as appropriate, in developing the alternatives and their management action options. (For example, either leasing or not leasing sensitive resources could be considered an action option.) The resource and land use programs were consolidated into the following eight basic management categories:

- Land and water resources management
- Heritage resources management
- Travel-access-realty management
- Recreation resources management
- Mineral and alternative energy resources management
- Visual resources management
- Special management area management
- Air resources management

Each category contained specific subcategories based on the resources in the JMH planning area and the land use programs of BLM. The management categories were used to describe the range of alternatives and their management options and actions.

Development of alternatives began with identifying and analyzing the No Action Alternative, taking into consideration public comments. Other alternatives were then developed. Public review of these draft alternatives was conducted to solicit public input into the development of alternatives prior to development of the Preferred Alternative. Among all the alternatives, the Preferred Alternative was developed last.

An adequate range of alternatives has now been developed for a comparative analysis. Descriptions of the five alternatives addressed in this supplemental draft EIS are summarized in Table 2-1.

### **2.1.2 Management Objectives**

Management objectives or goals were defined for each management category and for each resource and land use program BLM must address in the planning process. The management objective for each category also defines the overall goal for each category. The management objectives for the management categories are as follows:

- **Land and Water Resources Management:** The planning area would be managed to maintain or enhance land and water resources using ecological principles and science-based performance criteria.

- **Heritage Resources Management:** The planning area would be managed to protect important heritage resources (cultural, historic, archaeological, and unique geological features) while allowing for educational research and appropriate interpretive uses.
- **Travel-Access-Realty Management:** The planning area would be managed to accommodate access needs for approved public land uses and to manage access where appropriate to protect other resource values.
- **Recreation Resources Management:** The planning area would be managed to accommodate opportunities for recreational resources while protecting other resource values and minimizing conflicts with other resource uses.
- **Mineral and Alternative Energy Resources Management:** The planning area would be managed to provide opportunities for mineral extraction and energy development while protecting other resource values.
- **Visual Resources Management:** The planning area would be managed to maintain or improve scenic value and overall visual quality by managing impacts of human activities and other intrusions on the visual landscape.
- **Special Management Areas Management:** The planning area would be managed to protect unique resource values of special management areas.
- **Air Resources Management:** The planning area would be managed to maintain and, where possible, enhance present air quality levels and, within the scope of BLM's authority, minimize emissions that may add to acid rain, cause violations of air quality standards, or reduce visibility.

It is important to note that all management options or actions for each land and resource use directly and/or indirectly relate to each other. Therefore, management options within each section of an alternative may apply or relate to other sections of that alternative (e.g., Wyoming Rangeland Standards apply to all resource uses and activities, but are not repeated in each resource section in the alternatives).

### **2.1.3 Alternatives and Management Options Considered But Eliminated From Detailed Analysis**

The following alternatives and management options were considered as possible methods of resolving the issues but were eliminated from detailed analysis because they were unreasonable or not practical as a result of technical, legal, or policy factors.

#### **2.1.3.1 National Conservation Area (NCA) Designation**

Designating the JMH planning area an NCA was suggested during the scoping process as a possible method of resolving some resource conflicts and planning issues. The option was considered but was not analyzed in detail. Designation of an NCA is not a land use planning decision. This supplemental draft EIS focuses on the analysis of alternative management scenarios for the public lands and resources within the planning area, as directed in 43 CFR 1610. Designation of an NCA is a congressional designation which Congress can enact at any time and is outside the scope of analysis for the JMH CAP.

### **2.1.3.2 Closure to Livestock Grazing**

The elimination of livestock grazing from all public lands in the planning area was considered as a possible method for resolving some of the planning issues related to vegetative resources in the Green River RMP EIS, and was dropped from detailed analysis in that document. The same reasons for eliminating the “no grazing” option from detailed analysis in the EIS for the Green River RMP also apply to the EIS for the JMHCAP.

Resource conditions on the BLM-administered public lands in the planning area, including range vegetation, watershed, and wildlife habitat, do not warrant prohibition of livestock grazing throughout the planning area. However, reduction or elimination of livestock grazing may be necessary in specific situations where livestock grazing would significantly conflict with the protection and/or management of other resource values or uses. Such determinations would be made during site-specific activity planning and would be based on several factors, including monitoring studies and ability to meet the standards for healthy rangelands.

### **2.1.3.3 Closure to Mineral Leasing**

Closing the planning area to new mineral leasing of federal minerals was considered as a possible method to resolve conflicts with other resource uses. Because the federal minerals in much of the planning area have already been leased, and portions of the area are developed, this option would not help resolve the issues. The proposal was eliminated from further analysis because resource conflicts tend to be located in specific, scattered areas and are thus not conducive to planning areawide. Closing the entire planning area to new mineral leasing would eliminate mineral development and production activities in areas where conflicts do not exist, thereby placing unreasonable restrictions on such activities.

In addition, based on the Reasonably Foreseeable oil and gas Development Scenario (RFD) and the Hydrocarbon Occurrence and Development report (HOD) for the JMHCAP area, BLM does not anticipate a large amount of new development that would lead to unacceptable levels of adverse effects in all areas. The analysis of impacts indicated that effects were not anticipated on every acre, and that not all acres where development would occur were so sensitive as to preclude all new development. Therefore closure to new leasing of federal oil and gas resources in the entire planning area is unreasonable, because the entire planning area does not have conflicts with fluid mineral leasing.

Because development is likely to be limited in scope and effect, it was concluded that it would not be reasonable to analyze this option in detail. However, not issuing new mineral leases in portions of the planning area in response to other identified resource needs is addressed in the alternatives analyzed in detail. The alternatives analyzed in detail include various considerations for maximizing individual resource values and uses in specific areas where conflicts exist, and for closing these areas to mineral leasing and related development.

### **2.1.3.4 Maximum Unconstrained and Maximum Constrained Alternatives**

Alternatives and general management options that proposed and/or promoted maximum development, production, or use of one resource at the expense of other resources were not analyzed in detail. Likewise, alternatives and general management options that proposed and/or promoted the elimination of development, production, or use of one resource for the purposes of promoting other resource values were not analyzed in detail. Generally these options do not meet the objectives of BLM’s multiple use management mandate and

responsibilities (FLPMA Sec. 202 (c) and (e)). In addition, this approach would not meet the direction developed for the planning area, which is described in the Record of Decision for the Green River RMP EIS. However, the alternatives analyzed in detail do include various considerations for maximizing individual resource uses in specific areas where conflicts exist, and for eliminating individual resource uses or maximizing resource values in specific areas where conflicts exist.

### **2.1.3.5 Applying Standard Lease Notice 1 as the Only Mitigation for Surface Disturbance and Disrupting Activities Due to Oil and Gas Exploration and Development Activities**

Application of Standard Lease Notice 1 as the only mitigation for surface disturbing activities due to oil and gas exploration and development activities was not analyzed in detail. Lease Notice 1 is an oil and gas term for the standard lease notice that is included in all federal oil and gas leases. The notice provides guidance for use or occupancy, and in some cases prohibition of surface disturbing activities on areas with slopes in excess of 25 percent; within 500 feet of water and/or riparian areas; within 500 feet of interstate highways and 200 feet of other rights-of-way; within one-quarter mile of occupied dwellings; or on material sites. The notice also provides prohibition of construction with frozen material, or during periods when the soil material is saturated or when watershed damage is likely to occur. The mitigation described in this lease notice applies to all surface disturbing and disruptive activities, whether or not they are related to oil and gas exploration and development activities (i.e., range improvement projects, recreation structures, rights-of-way, etc.). This Lease Notice 1 option was addressed in the draft EIS for the Green River RMP. The analysis in that EIS indicated that potentially significant impacts to resources and uses in the planning area would result if Lease Notice 1 were the only mitigation required, demonstrating that minimal mitigation would not be sufficient to meet resource objectives or BLM's multiple use management mandate and responsibilities. However, applying Lease Notice 1 as the only mitigation for surface disturbance and disruptive activities in portions of the planning area, in response to other identified resource needs, is addressed in the alternatives analyzed in detail.

### **2.1.3.6 Authorizing Activities with a No Surface Occupancy Requirement (for All Surface Disturbing and Disruptive Activities) on the Entire Planning Area**

A no surface occupancy (NSO) requirement to preclude surface use of an area by surface disturbing and disruptive activities would apply to all such disturbance and disruptive activities, not only to those resulting from mineral exploration and development. Applying this requirement to the entire planning area as project mitigation was considered but dropped from detailed analysis.

Much of the planning area is already leased for oil and gas. Exploration and development activities could (and likely will) occur on some of those leased areas. All nonleased or undeveloped areas do not contain the sensitive or significant resources that warrant this most restrictive stipulation. Such a restriction would deny accessibility to the area and would likely prohibit any surface disturbing or disruptive projects related to constructing range improvements, watershed protection improvements, wildlife habitat improvements, recreation developments, road and other rights-of-way, and other such developments and improvements. This could also cause impacts to areas with sensitive resources on adjacent leased areas, as activity would be moved to these adjacent areas. However, applying the NSO requirement as

mitigation for surface disturbance and disruptive activities in portions of the planning area, in response to other identified resource needs, is addressed in the alternatives analyzed in detail.

### **2.1.3.7 Prohibiting Oil and Gas Exploration and Development Activity on Existing Leased Areas**

During scoping it was suggested that an alternative be considered that would evaluate impacts of a prohibition of further exploration or development of federal lands and minerals that are already leased for oil and gas. Under this option, activities would continue on private and state lands and minerals, but not on federal lands and minerals. After review of the leases issued for federal minerals, BLM determined that this alternative was not reasonable.

To prohibit any new development on all existing leases in the JMH CAP (and retain temporary suspensions that are in effect in portions of the planning area) is unreasonable because all lands with existing leases are not so sensitive or critical that some level of development cannot occur. In addition, timing and sequencing of development on existing leases can provide for avoiding unacceptable levels of adverse effects and for balancing a mix of multiple uses in the JMH CAP area. Some development has occurred in this area and is ongoing. The effects of this development as a whole do not cause major conflicts with resources and users to the extent that the existing development should be precluded.

In addition, based on the RFD and HOD for the JMH CAP area, BLM does not anticipate a large amount of new development that would lead to unacceptable levels of adverse effects in all areas with existing leases. The analysis of impacts indicated that effects were not anticipated on every acre, or every lease, and that not all acres where development would occur were so sensitive as to preclude all new development. Therefore closure to new leasing, or not developing federal oil and gas resources on existing leases, within the entire planning area is unreasonable, as is closure to new leasing of other federal minerals in the area, because the entire planning area does not have conflicts with oil and gas or other mineral leasing.

Because development is likely to be limited in scope and effect, it was concluded that it would not be reasonable to analyze this prohibition option in detail. However, restrictions on mineral leasing oil and gas development in portions of the planning area, in response to other identified resource needs, are addressed in the alternatives analyzed in detail. The alternatives analyzed in detail do include various considerations for maximizing individual resource values and uses in specific areas where conflicts exist, and for closing those areas to leasing and related development.

### **2.1.3.8 Buy Back/Exchange of Existing Producing Oil and Gas Leases**

During scoping, it was suggested that an option be considered that would buy back or exchange producing federal leases within the planning area for federal mineral interests outside the planning area. This option was not analyzed in detail, because the current level of oil and gas production as a whole does not cause major conflicts with other resources or resource uses. In addition, buy back of producing oil and gas leases would not be cost effective. However, the alternatives analyzed in detail do include consideration of buy back of nonproducing leases.

### **2.1.3.9 Eliminating Surveys for Threatened and Endangered or Sensitive Species Required by the Endangered Species Act, Federal Regulation, and the Wyoming Standards for Healthy Rangelands**

It was suggested during the scoping process that conducting surveys concerning threatened and endangered as well as sensitive species in relation to proposed actions or activities should be eliminated. The Endangered Species Act (ESA) was passed by Congress to conserve, protect, enhance, and manage endangered species and their habitats. Further, federal regulations require that habitats for threatened and endangered species, and species of special concern, or sensitive species, will be maintained or enhanced. The Wyoming Standards for Healthy Rangelands are an implementation extension of the ESA and the regulations. To meet these requirements, surveys are necessary to determine whether the species of concern and their related habitats occur in the area that may be affected by a proposed action or activity. Because species may move and occupy different areas at different times, survey information does not remain static and would need to be updated as needed. The option to eliminate the requirement for the surveys was determined to be unreasonable, because it would be against the law, regulation, and policy, and the option was therefore not analyzed in detail.

## **2.2 MANAGEMENT ACTIONS COMMON TO ALL ALTERNATIVES**

Management actions common to all alternatives, as presented in this chapter, are integral to but are not repeated in the descriptions for each of the alternatives. Specific limitations on managing resources and land use programs guided development of the alternatives. These limitations are defined in the various laws and regulations that govern BLM management decisions. They are also set forth in the planning criteria to ensure that management actions within all alternatives are compliant with nondiscretionary laws and regulations. Because of these specific limitations, management actions common to all alternatives are discussed below in the management actions' respective categories.

### **2.2.1 Land and Water Resources Management**

The planning area would be managed to maintain or enhance land and water resources using ecological principles and science-based performance criteria.

#### **2.2.1.1 General Management Actions for Land and Water Resources**

**Healthy Rangelands.** The Wyoming Standards for Healthy Rangelands would apply to all resource uses on BLM-administered lands. These standards are the minimal acceptable conditions for addressing the health, productivity, and sustainability of the rangeland. The standards describe healthy rangelands rather than rangeland byproducts. Achievement of a standard is determined through observing, measuring, and monitoring appropriate indicators. An indicator is a component of a system whose characteristics (e.g., presence, absence, quantity, and distribution) can be observed, measured, or monitored based on sound scientific principles. The standards would direct management of public lands and focus the implementation of this activity plan toward the maintenance or attainment of healthy rangelands.

**Proper Functioning Condition.** Riparian areas would be managed to attain or maintain a minimum standard of Proper Functioning Condition (PFC), which is the minimum acceptable level of ecological condition for riparian areas. PFC for different types of riparian-wetland

systems is fully defined in TR 1737-15, “A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas,” and TR 1737-16, “A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lentic Areas.” PFC can be summarized as the minimum acceptable level of ecological status where vegetation, land form, and/or woody debris create a level of inherent resiliency that allows the stream or wetland system to be protected from erosive forces, capture sediment, provide for infiltration, and create appropriate habitat. Riparian areas would be maintained, improved, or restored to enhance forage conditions, provide wildlife habitat, and improve stream and water quality. To achieve PFC, riparian areas would be managed to maintain dominance by species capable of stabilizing soils and stream banks. All riparian areas would be assessed on an as-needed basis to determine existing condition and whether specific management actions would be needed for improvement.

Site-specific activity and implementation plans would be prepared where needed to identify methods to achieve or maintain PFC as a minimum. Plans could include measures to reduce erosion and sediment yield, promote ground cover, and enhance water quality.

**Desired Plant Community.** Upland and riparian vegetation would be managed to achieve Desired Plant Community (DPC) objectives. DPC is a plant community that produces the kind, proportion, and amount of vegetation necessary for meeting or exceeding the land use plan requirements. DPC objectives would be identified through site-specific activity and implementation plans and would focus on native plant species and their natural succession. Particular attention would be given to mountain shrub, basin big sagebrush, lemon scurfpea, aspen, and other unique or important vegetation types. Site-specific DPC objectives would be determined by an interdisciplinary team, usually comprised of specialists in soil, vegetation, hydrology, and biology. The team determines desired vegetative conditions for an area by considering ecological potential, current and anticipated resource uses, applicable publications, and professional judgment.

**Vegetation Treatments.** Herbicide loading sites would be prohibited within 500 feet of water sources, floodplains, riparian areas, and special status plant locations and would be utilized in accordance with the guidelines in Appendix 8, Standard Operating Procedures for Range Improvements and Vegetation Manipulations.

**Watershed Health Assessments.** Watershed health assessments would be initiated to determine the condition of the watershed including riparian areas, and would be prioritized based on levels of development, rangeland standards, PFC, and other available data. Watersheds with more sensitive baseline conditions would be the focus for increased monitoring efforts and mitigation (Appendixes 5, 6).

**Monitoring Plan.** Monitoring the effectiveness of management decisions is integral to improving both areawide and site-specific management strategies. Given that the public lands are managed to accommodate multiple uses, an interdisciplinary monitoring plan would be developed for the entire planning area. The monitoring plan would assess the implementation and effectiveness of management decisions and provide feedback to help determine whether and where changes to management are needed. This creates an iterative process, where management actions are continuously revised in response to changing conditions and new information, which is the premise of adaptive management. Site-specific monitoring plans would be developed for projects and proposals.

### 2.2.1.2 Fire Management

**Fire Management Implementation Plan.** Fire management in the planning area would be implemented through the Fire Management Implementation Plan for BLM-Administered Public Lands in the State of Wyoming. The plan emphasizes protecting natural resources and property while recognizing the essential role fire plays in restoring and maintaining the health of the public lands. The primary objectives of the plan are to use prescribed fire as a management tool to help meet multiple use resource management goals and to provide cost effective protection from wildfire to life, property, and resource values. The plan would be reviewed and updated as necessary to be consistent with the National Fire Plan for BLM.

Wildland and prescribed fires would be managed in all vegetation types to maintain or improve biological diversity and the overall health of the public lands. In particular, plant species and age class diversity would be a priority, thus all wildfires would be suppressed to some degree depending on their potential impact on vegetation communities. Suppression techniques would be identified to reduce wildfire on portions of the landscape where fire could cause undesirable changes in plant community composition and structure. A site-specific analysis would be prepared for sensitive areas, such as special status plant species sites, heritage sites, historic trails, and Areas of Critical Environmental Concern (ACEC) to determine the type of fire suppression activity that would be acceptable.

### 2.2.1.3 Watershed Management

**Water Quality.** All surface disturbing activities would be required to adopt design strategies that serve to reduce erosion and maintain or improve water quality. Aquifer recharge areas would be managed to maintain or enhance recharge volume and ground water quality. Vegetative communities would be managed for density and diversity appropriate for the recharge areas. Additional protective management actions for the protection of water quality and recharge areas could include utilizing closed systems for drilling fluids and limiting road density, impermeable surfaces, and surface occupancy.

Activities in aquifer recharge areas could be allowed if a site-specific analysis determines that no unacceptable impacts would occur to 100-year floodplains, wetlands, riparian areas, or water quality, and a plan to mitigate impacts to water quality is approved.

**Permanent Facilities.** Proposals for linear crossings in 100-year floodplains, wetlands, and riparian areas would be considered on a case-by-case basis.

**Colorado River Salinity Control.** BLM would continue to participate with federal, state, and local government agencies and the Colorado River Basin Salinity Control Forum to develop and implement salinity control plans for the basin, and to maintain existing and future applicable water quality plans. The Colorado River Basin Salinity Control Forum is comprised of water resource and water quality representatives of the seven basin states (Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming). The Forum coordinates a basinwide approach to controlling salinity levels in the Colorado River, and it gathers and reviews information relevant to the complex problem of salinity standards and implementation of related controls by the basin states.

**Wetlands and Floodplains.** Wetlands and floodplains would be managed in accordance with Executive Orders 11988 and 11990 and Section 404 of the Clean Water Act.

**Riparian Management Enclosures.** Riparian management enclosures would be closed to livestock grazing.

**Fluid Mineral Wells.** Water wells constructed to provide water for drilling of fluid mineral wells (oil, gas, or coalbed methane wells) would be constructed in compliance with BLM regulations for resource protection. Hydrogeologic investigations would be required where there is a reasonable expectation that surface water features are in connection with coal seams being dewatered. Such investigations would serve to determine the potential extent of the effect and provide information that could assist in mitigation of undesirable effects related to development. Attributes that could trigger a hydrogeologic investigation would include, but would not be limited to, preexisting designation of an area as a recharge zone; similar water chemistry between surface and ground waters; proximity of a proposed project to shallow water tables, springs and/or seeps, wetlands, streams, or water courses; and/or underlying lithology that suggests surface-ground water communication, such as dipping geologic beds, fractures in the underlying rocks, and shallow producing zones. Mitigation requirements would also be implemented as needed to protect surface waters.

#### **2.2.1.4 Wild Horse Management**

**Wild Horse Herd Management Area Boundaries and Appropriate Management Levels.** Wild horse populations would continue to be managed within the Divide Basin Wild Horse Herd Management Area (HMA) at an appropriate management level (AML) of 415–600 horses.

**Activity and Monitoring Plans.** Site-specific activity planning would be implemented to support herd management decisions throughout the Divide Basin HMA. A site-specific activity plan and related monitoring plan would be prepared and implemented for the Divide Basin HMA to ensure that objectives for vegetation management are met and that adequate forage is provided to support the AML of 415–600 horses. Annual monitoring data would be collected to evaluate progress toward meeting management goals and objectives. Public education and interpretation for the public enjoyment of wild horse herds in the Divide Basin HMA would be provided through interpretive signs and access to sites for viewing horses.

#### **2.2.1.5 Livestock Grazing Management**

**Guidelines for Livestock Grazing Management.** The Wyoming Guidelines for Livestock Grazing Management (Appendix 10) would apply to all livestock grazing activities on public lands. These guidelines address management practices at the grazing allotment management plan (AMP) and watershed levels and are intended to maintain desirable conditions or improve undesirable rangeland conditions within reasonable time frames.

**Rangeland and Riparian Habitat.** Management practices could include timing, duration, and levels of authorized grazing (e.g., reduction in animal unit months [AUM], modified turnout dates, shorter grazing periods, growing season rest, implementation of forage utilization levels, and livestock conversions), and range improvements (e.g., fences, water developments, etc.) that maintain channel morphology, protect ecological functions, and sustain native animal and plant communities. If livestock grazing were determined to be a factor in not meeting the Wyoming Standards for Healthy Rangelands, appropriate management actions would be implemented. The type of appropriate action would be determined through cooperation between BLM and livestock operators.

**Forage Utilization Levels.** Forage utilization levels for upland and riparian species would be in accordance with individual AMPs, or other activity plans intended to serve as the functional equivalent of an AMP. Determination of forage utilization levels would be based on PFC Guidelines, BLM reference handbooks, and professional judgment (Appendix 10).

### 2.2.1.6 Vegetation Management

**Special Status Plant Species.** Special status plants are those species federally listed as threatened or endangered, proposed for listing, or candidates for listing under the ESA. These species also include those designated by each BLM State Director as sensitive, and any species designated by a state agency in a category implying potential endangerment or extinction. The State of Wyoming does not have an official list of designated sensitive, threatened, or endangered plant species. Surveys would be conducted of potential habitat for federally listed, proposed, or candidate threatened and endangered plant species prior to any surface disturbance. Should any such species be found, all disruptive activities would be halted until species-specific protective measures could be developed and implemented. For listed species, protective measures would be developed and implemented in consultation with the U.S. Fish and Wildlife Service (USFWS).

Known locations of special status plant species would be closed to surface disturbing activities or any disruptive activity that could adversely affect the plants or their habitat; to the location of new mining claims (withdrawal from mineral location and entry under the land laws will be pursued); to mineral material sales; to all off-highway vehicular use, including those vehicles used for geophysical exploration activities, surveying, and other such activities; and to the use of explosives and blasting.

Locations of special status plant species are open to consideration for mineral leasing with an NSO requirement.

**Fire Suppression.** A site-specific analysis would be prepared for all fire management actions around special status plant species sites to determine the appropriate fire management response. Fire equipment and fire suppression techniques, such as vegetation clearing, would be limited to existing roads and trails in special status plant species habitat.

**Threatened and Endangered Species.** Surveys would be conducted on any potential habitat for listed, proposed, or candidate ESA species prior to surface disturbance or depletion of water sources. Should a species be located, formal consultation with USFWS would occur. Management prescriptions to provide, maintain, or improve habitat would be developed on a case-by-case basis.

**Invasive Species.** Executive Order 13112 would be implemented to expand and coordinate efforts to prevent the introduction and spread of invasive species. Preventing the introduction and proliferation of invasive species would be accomplished through close monitoring and containment of infestations and through implementation of best management practices for all surface disturbing activities (Appendix 6). Public education regarding invasive species and the means to address them would also be promoted.

**Forest and Woodland Health.** Management of conifer and aspen communities would be designed to promote forest and woodland health. Old decadent trees may be left standing or downed to provide cover or other habitat for wildlife (e.g., Animal Inn). Animal Inn is an

education and information program focused on the value of dead, dying, and hollow trees for wildlife and fish habitat.

### 2.2.1.7 Wildlife Habitat Management

**Habitat Management Plan.** A habitat management plan (HMP) identifies management actions to be implemented to achieve specific objectives related to RMP decisions. An HMP focuses on priority species and their habitats and is generally limited to a specific geographic area. HMPs would guide BLM in managing and rehabilitating wildlife habitat in site-specific locations within the planning area. HMPs could include habitat expansion efforts, threatened and endangered species reintroduction, and population goals and objectives (in coordination with the Wyoming Game and Fish Department [WGFD] and other appropriate federal agencies). To the extent possible, suitable wildlife habitat and forage would be provided to support the WGFD Strategic Plan objectives. Changes in the WGFD planning objective levels would be considered based on habitat capability, availability, and site-specific analysis.

**Water Developments.** Wildlife water developments to maintain or improve wildlife habitat and resource conditions would be considered on a case-by-case basis.

**Special Status Wildlife Species.** Special status wildlife species are those species federally listed as threatened or endangered, proposed for listing, or candidates for listing under the ESA. They also include species designated by each BLM State Director as sensitive, and any species designated by a state agency in a category implying potential endangerment or extinction.

Federal agencies are required to ensure that the actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of species listed as threatened or endangered or that adversely modify or destroy their critical habitat under the ESA. The ESA requires federal agencies (e.g., BLM) to consult with USFWS to determine whether their actions may affect any listed or proposed species, and to document their determinations in a Biological Assessment (Appendix 3). Land use decisions would be implemented with appropriate conservation measures or with reasonable and prudent alternatives to avoid jeopardizing any species or habitat or to avoid listing of any species or their habitat.

Surveys or searches would be conducted of potential habitat for federally listed, proposed, or candidate threatened and endangered wildlife species prior to any surface disturbance. Special status species habitat would be protected from habitat degradation, and BLM would take proactive measures to improve vegetative character on an as-needed basis per BLM 6840 Regulations and Section 7 of the ESA.

**Sensitive Habitat.** Crucial winter habitat, birthing areas, nesting sites, and sensitive fisheries habitats would be maintained or improved by reducing habitat loss or alteration and by applying appropriate mitigation requirements (e.g., distance and seasonal limitations, rehabilitation) to all appropriate activities. Exceptions could be provided on a case-by-case basis should exception criteria (Appendix 4) be met. Mitigation requirements would be determined on a case-by-case basis.

**Predator Damage Control.** BLM would continue to coordinate with the Animal and Plant Health Inspection Service–Wildlife Services (APHIS-WS) and review their annual management plan for animal damage control activities on public lands.

**Greater Sage-Grouse Leks and Nesting Habitat.** Avoidance areas for Greater Sage-Grouse leks and nesting habitat would be identified as needed and may vary depending on natural topographic barriers, terrain, type of activity, line-of-sight distance, and other factors. Exceptions to avoidance areas and seasonal limitations could be provided on a case-by-case basis should exception criteria (Appendix 4) be met.

Leks and nesting habitat would be protected from habitat degradation, and measures would be taken to improve habitat vegetative character on an as-needed basis in accordance with 6840 of the BLM Manual.

**Black-Footed Ferret.** The USFWS has established survey guidelines and protocols for the black-footed ferret (listed as endangered under the ESA) and the mountain plover (proposed for listing as threatened under the ESA). Surveys for black-footed ferrets would be conducted within prairie dog towns and/or complexes because of the close association of the two species. If the surveys indicate the presence of ferrets, procedures outlined in the survey guidelines would be followed, and appropriate mitigation measures, as determined in consultation with the USFWS, would be implemented. Surface disturbing activities could proceed provided survey results indicated no presence of black-footed ferrets. If a ferret should be found, all disruptive activities would be halted until protective measures developed in consultation with the USFWS could be implemented.

BLM would cooperate with USFWS and WGFD on any black-footed ferret reintroduction within the JMH planning area.

**Mountain Plover.** Mountain plover surveys, consistent with the USFWS Mountain Plover Survey Guidelines (March 2002), would be required prior to authorizing any surface disturbing or disruptive activities in potential plover habitat. Should a mountain plover or nest be found, all disruptive activities would be halted until protective measures, developed in consultation with the USFWS, can be implemented.

**Raptor Nesting Sites.** Active and historic raptor nesting sites would be protected and managed (e.g., through distance restrictions) for continued nesting activities. Different species of raptors may require different types of protective measures.

**Introduction and Reintroduction of Species.** BLM would cooperate with WGFD in studies for the introduction and reintroduction of native and nonnative wildlife (game) and fish species.

## 2.2.2 Heritage Resources Management

The planning area would be managed to protect important heritage resources (cultural, historic, archaeological, and unique geological features) while allowing for educational research and appropriate interpretive uses.

The State Historic Preservation Office (SHPO) would be consulted under provisions of the National Historic Preservation Act (NHPA) on any potential effects on heritage resources. Sites that are not eligible for the National Register of Historic Places (NRHP) would be managed on a case-by-case basis according to their values. Sites that are listed or eligible for listing on the NRHP would be managed for their local, regional, and national significance in accordance with the NHPA and the Archaeological Resources Protection Act (ARPA). Sites would be managed to ensure against adverse effects, through proper mitigation if disturbance

or destruction is not avoidable. Mitigation may include scientific information retrieval as well as other measures, such as interpretation and improved public appreciation of the heritage resource. Pursuant to the Protocol Agreement between BLM and the Wyoming SHPO (Appendix 7), sites eligible for inclusion in the NRHP because of their scientific information content, would be avoided.

**Heritage Resources Protection.** Heritage resources in special management areas would remain protected through specific and general management actions (mitigation requirements and site-specific management prescriptions) associated with designated ACECs, wilderness study areas (WSA), or National Historic Trails (Appendix 7). Heritage resources are found in the Greater Sand Dunes ACEC (including Boars Tusk and Crookston Ranch), White Mountain Petroglyphs ACEC, South Pass Historic Landscape ACEC (including the Oregon Trail, California Trail, Mormon Pioneer Trail, and Pony Express Route), and the Tri-Territory Marker.

**Protection of Scientific Values.** Sites eligible for inclusion in the NRHP because of their scientific value would be protected. Preservation of the scientific information would be the preferred mitigation method should any such sites have to be impacted by other activities. These sites include Finley, Krmopotich, and Eden-Farson archaeological sites, and the West Sand Dunes Archaeological District (paleosol deposition area). Other sites will be included as they are located, recorded, and evaluated for NRHP eligibility.

The confidential location of the Finley, Krmopotich, and Eden-Farson archaeological sites would be maintained. Interpretive information would be developed and made available at the RSFO.

**National Register Eligible Sites.** All National Register-eligible historic sites would be protected through provisions of the NHPA.

**Native American Sites.** Consultation would occur with Native American tribal governments in accordance with the American Indian Religious Freedom Act (AIRFA) for the protection of recognized traditional uses and cultural values in the planning area.

Surface disturbance and disruptive activities would be prohibited within 100 feet of respected places. Native American respected places (located generally in the Steamboat Mountain, Steamboat Rim, White Mountain Rim, Essex Mountain, Monument Ridge, and Joe Hay Rim areas) and the Indian Gap Trail would be protected by provisions of the NHPA and AIRFA.

In managing respected places, rights-of-way would avoid the actual sites. For related viewsheds, mitigation would be applied to reduce the sights and sounds from an activity. The intent is to provide mitigation in these viewsheds, not to exclude an action or activity.

**Paleontological Sites.** Documented vertebrate fossil sites would be avoided to protect scientific and educational values. If impacts cannot be avoided, sites would be evaluated and surveyed as needed by a qualified paleontologist. A mitigation plan that may include activity monitoring, fossil documentation, recovery, and storage in a federally approved repository, would be coordinated with BLM before any surface disturbing activity could occur.

### 2.2.3 Travel Management, Access, and Realty

The planning area would be managed to accommodate access needs for approved public land uses and to manage access where appropriate to protect other resource values.

**Rights-of-Way.** The planning area, with the exception of defined exclusion and avoidance areas, would be open to considering grants of rights-of-way.

**Off-Highway Vehicular Management.** Management of off-highway vehicle (OHV) activities would be in accordance with Executive Order 11644, as amended by Executive Order 11989, and applicable regulations (43 CFR 8340) which address OHV use on public lands. Designation and authorization of OHV use would be designed to protect resource values, promote safety of users, and minimize conflict among various uses of public lands. OHV designations include Open, Limited to Existing Roads and Trails, Limited to Designated Roads and Trails, and Closed (see Glossary for definitions). Until specific designations can be put in place, areas of designated roads and trails would be managed the same as areas limited to existing roads and trails.

Specific roads and trails may be closed to OHV use for public health and safety reasons, for restoration or remediation actions, or for other valid reasons.

Exceptions to closed or limited OHV designations may be granted by the Authorized Officer in consideration of such factors as scientific purposes and emergency access needs.

**Over-the-Snow Vehicles.** Travel by over-the-snow vehicles would generally be subject to the OHV designations, just as are all other motorized vehicles. Proposals for over-the-snow vehicle travel contrary to these provisions would be considered on a case-by-case basis.

**Land Withdrawals and Exchanges.** Public lands would be retained in federal ownership unless it were determined to be in the best public interest to dispose of some of them.

Land withdrawals and exchanges identified in the Green River RMP would be pursued (Map 5). Exchanges would conform to the JMH planning objectives and actions. BLM acquisition of lands would be considered to facilitate various resource management objectives. The preferred method for acquisition would be through exchange. Land exchanges are considered discretionary and voluntary real estate transactions between the willing parties involved. Exchanges for state lands in WSAs and other special management areas would be considered to ensure easier and consistent management in these areas. Exchanges would be considered to acquire state or private lands that hold high cultural and historical value; and important resource values, such as habitat for threatened and endangered species. Exchanges to acquire state or private lands would also be considered for facilitating resource management objectives, such as preventing habitat fragmentation.

**Ownership Adjustments.** Aquatic, wetland, and riparian habitat would not be suitable for disposal unless opportunities exist for land exchanges of equal or greater value (including monetary and functional resource values).

**Access.** Access would be guaranteed to landlocked private and state lands consistent with FLPMA.

## 2.2.4 Recreation Resources Management

The planning area would be managed to accommodate opportunities for recreational resources while protecting other resource values and minimizing conflicts with other resource uses.

Management of recreation resources would comply with applicable regulations (43 CFR 8300 et al.) for functions and activities such as OHV, visitor services, special recreation use permits, and commercial operations. All management actions and recreation uses would focus on the health and safety of the user and would provide for recreational opportunities while protecting sensitive environmental resources.

**Backcountry Byways.** Recreation project plans would be developed for existing backcountry byways.

**Recreation Project Plans.** Recreation project plans and interpretive prospectuses would be developed as necessary to provide for recreational opportunities in the following areas: Crookston Ranch historic site, Boars Tusk, wild horse viewing areas, Oregon Buttes, Honeycomb Buttes, Steamboat Mountain, National Historic Trails, and White Mountain Petroglyphs.

**Camping.** Areas would be closed to camping throughout the JMH planning area if resource damage occurs.

**Special Recreation Use Permits.** Special recreation use permits would be considered on a case-by-case basis. A Plan of Operation would be required for all commercial recreational operators and outfitters. Appropriate mitigation would be included in special recreation permits, commercial recreation uses, and major competitive events to provide resource protection and public safety.

## 2.2.5 Minerals and Alternative Energy Resources Management

The planning area would be managed to provide opportunities for mineral extraction and energy development while protecting other resource values.

All minerals and energy resource management actions would recognize valid existing rights and ensure compliance with existing legal and regulatory requirements. This scope would include leases issued under the Mineral Leasing Act of 1920 and Amendments, and mining claims filed under the Mining Act of 1872.

### 2.2.5.1 Leasable Fluid Minerals Management

Areas that cannot be offered for lease include WSAs and other areas where fluid mineral leasing and development would not be in compliance with laws or with land use planning decisions that prohibit fluid mineral leasing and development in certain areas.

For fluid mineral leases, valid existing rights would be recognized. Lease stipulations would be applied as necessary (Table 2-2). These stipulations would notify the leaseholder that development activities may be limited, prohibited, or implemented with mitigation measures to protect specific resources. The stipulations would condition the leaseholder's development activities and provide BLM the authority to require other mitigation or to deny some

proposed exploration and development methods. The general types of resource protections in lease stipulations include—

- Limitation on the amount and type of surface disturbance.
- Avoidance of other resources.
- Timing restrictions on development activity.
- Implementation of protective measures, such as spill containment and noise abatement.
- No surface occupancy.

A site-specific analysis would be performed prior to any exploration and development activity to identify and locate resource elements in the lease area that would require protection or mitigation measures (Appendix 14).

Exceptions to lease stipulations and mitigation measures, identified as Conditions of Approval attached to an Application for Permit to Drill (APD), can be requested and would be considered on a case-by-case basis (Appendixes 4, 5).

### **2.2.5.2 Leasable Solid Minerals Management**

**Exploration.** Exploration activities could be conducted on lands that are open to exploration for solid leasable minerals. A site-specific analysis would be performed prior to any exploration activity to identify and locate resource elements that would require protection or mitigation measures.

**Leasing.** Leasing of solid minerals would comply with the Mineral Leasing Act of 1920, the Federal Coal Leasing Amendments Act of 1976, and coal regulations and coal planning requirements.

WSAs within the coal development potential area (Map 6) would remain closed to leasing.

### **2.2.5.3 Locatable Minerals Management**

**Locatable Mineral Withdrawals.** Proposed withdrawals from locatable minerals identified in the Green River RMP would be pursued.

The mineral classification withdrawals for coal and oil shale classifications would be revoked. In some areas these classification withdrawals would remain in effect until replaced with an appropriate withdrawal for other appropriate purposes.

In areas open to mineral location, mining claims could be filed which would allow the claim to be held and developed in accordance with applicable regulations (39 CFR 3809). Mining activities would also comply with other regulatory requirements, including limitations on air and water discharges, waste management, spill prevention, and endangered species.

Surface disturbing activities of 5 acres or less on mining claims would require a notice to BLM. A plan of operations would be required for surface disturbances greater than 5 acres and for a disturbance of any size in ACECs, WSAs, and areas closed to OHV use. A plan of operations would specify how the operator intends to manage the mining operation and location of surface disturbing activities.

#### **2.2.5.4 Saleable Minerals Management**

**Mineral Material Sales.** Existing permits for sales of mineral materials, such as sand and gravel, would be recognized. Mining of mineral materials would comply with applicable regulatory requirements (43 CFR 3600) and air and water quality protection regulations. A site-specific analysis would be performed prior to any exploration activity to identify and locate resource elements that would require protection or mitigation measures. Mineral material sales that pose potential impacts on identified cultural and historic resources, as well as other sensitive resources, would not be allowed. Mining and reclamation plans would be prepared for use areas to provide protection for sensitive resources and to restore disturbed areas.

#### **2.2.6 Visual Resources Management**

The planning area would be managed to maintain or improve scenic value and overall visual quality by managing impacts of human activities and other intrusions on the visual landscape.

The four Visual Resource Management (VRM) classes (I, II, III, IV) set standards for planning, designing, and evaluating projects by identifying various permissible levels of landscape alteration while protecting overall regional scenic quality. The scenic quality of an area is a measure of its visual appeal. The VRM class objectives range from very limited management activity (Class I) to activity allowing major landscape modifications (Class IV). Visual resource classes would be retained or modified to enhance other resource objectives, such as heritage resources, recreation uses, wild horse viewing, and special management areas. Projects would be designed to meet the objectives of established visual classifications, and appropriate mitigation would be applied.

**VRM Class I Areas.** WSAs would be managed as VRM Class I areas to preserve the natural setting and existing character of the landscape. Although WSAs were established as VRM Class II areas in the Green River RMP, recent BLM policy (Instruction Memorandum 2000-096) has assigned WSAs to the visual resource inventory of Class I. Oregon Buttes ACEC and the western portion of the Greater Sand Dunes ACEC, which fall within WSAs, would also be managed as VRM Class I areas.

#### **2.2.7 Special Management Area Management**

The planning area would be managed to protect unique resource values of special management areas.

Special management areas are those areas that require special management considerations to ensure public land and resources are protected from irreparable damage. These areas include WSAs, ACECs, special recreation management areas (SRMA), and other special management areas, such as watersheds. Management of these areas would comply with applicable regulations (43 CFR 1610, 6300, 8350) for activities that could occur within them. All management actions and recreation and resource uses would focus on the protection of sensitive environmental resources and the health and safety of the user.

#### **2.2.8 Air Resources Management**

FLPMA states that, “The public lands [are to] be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water

resource, and archeological values.” NEPA indicates that any proposed federal action should comply with other existing environmental laws, regulations, and standards (Sec. 104 [42 USC 4334]). This would include the Clean Air Act. In particular, the Clean Air Act Amendments of 1990 indicate that federal actions should comply with state and local as well as federal laws, regulations, and standards. Management actions for air resources management in the planning area would be implemented consistent with the land use decisions of the Green River RMP (Appendix 2).

The management actions common to all alternatives presented above are integral to each of the alternatives described below. However these actions are not repeated in the following section describing the alternatives, other than for the Preferred Alternative.

## **2.3 NO ACTION ALTERNATIVE**

The No Action Alternative is defined as a continuation of the present course of management until that management is changed. Ongoing programs initiated under existing legislation, regulations, and the Green River RMP, would continue, even as new plans are developed or new planning efforts are being conducted within the RMP area. Thus the No Action Alternative describes the current resource and land use management direction in the JMH CAP planning area, represented by the decisions stated in the Green River RMP, dated October 1997. The No Action Alternative and its analysis is the baseline to which the other alternatives and their analyses are compared.

The public provided comment and information concerning formulation of the No Action Alternative during the scoping period for the supplemental draft EIS (December 6, 2001–January 11, 2002). Information open houses were held, and a scoping notice was mailed to interested parties and posted on the BLM website. Formal scoping meetings were also held. (See Chapter 5 for more details on the public involvement process.) Comments provided during scoping recommended that the No Action Alternative should be the continuation of management objectives and actions stated in the Green River RMP, and that valid existing rights should be recognized. In addition, some activity would be reasonably foreseeable and could occur on areas with existing mineral leases (Appendix 13). The cooperating agencies provided similar comments, particularly in regard to the No Action Alternative depicting the Green River RMP decisions.

The No Action Alternative was developed based on these comments. It includes continuation of existing management as stated in the Green River RMP and considers actions that would be reasonably foreseeable based on existing management. Such reasonably foreseeable actions include the lifting of temporary lease suspensions, consideration of vegetation treatments, and location and installation of directional signs for backcountry byways.

### **2.3.1 Land and Water Resources Management**

#### **2.3.1.1 General Management Actions for Land and Water Resources**

Management actions for land and water resources management in the planning area would be implemented consistent with the land use decisions of the Green River RMP (Appendix 2).

**Healthy Rangelands.** Same as described in Actions Common to All Alternatives.

**Proper Functioning Condition.** Same as described in Actions Common to All Alternatives.

**Desired Plant Community.** In addition to Actions Common to All Alternatives, desired plant objectives would focus on native plant communities.

**Vegetation Treatments.** Vegetative treatments would be designed on a case-by-case basis. Such activities may include plowing and seeding, reseeding (e.g., wildfire rehabilitation), fence construction, weed control, water development, and enhancement of fish and wildlife habitat. Vegetation treatments would be utilized to abate, alter, or transform vegetation communities in an effort to achieve DPC objectives, protect water quality, dissipate or reduce erosion, and conform to requirements to protect special status plant species. This may include activities such as manual or mechanical manipulation, chemical treatments, and prescribed burns. Prescribed burns would be the preferred method of vegetation manipulation to convert stands of brush to grasslands and to promote regeneration of aspen stands and/or shrub species. The prescribed burns would generally be conducted in areas having greater than 35 percent sagebrush composition, 20 percent desirable grass composition, and greater than 10 inches of precipitation.

Low-intensity burns during periods of high soil moisture would be the preferred method and timing of prescribed burns in mountain shrub communities. Prescribed burns would be restricted in areas with coal or other fossil fuel outcrops. All vegetation treatments would be irregular in shape for edge effect, cover, and visual aesthetics. Treated areas would be rested a minimum of two full growing seasons after treatment and would be fenced from livestock and big game animals if necessary.

**Fences.** Fences on public lands would be removed, modified, or reconstructed where documented wildlife conflicts with fencing occur. Herding control of livestock would be encouraged as an alternative to fencing. Fence construction would be in accordance with BLM design standards and located so as not to impede wildlife or wild horse movement.

**Watershed Health Assessments.** Same as described in Actions Common to All Alternatives.

**Native Vegetation.** Native vegetation would be managed to allow natural plant succession to continue, with emphasis on mountain shrub, basin big sagebrush/lemon scurfpea, aspen, and other unique or important vegetation types.

**Monitoring Plan.** Same as described in Actions Common to All Alternatives.

### **2.3.1.2 Fire Management**

**Fire Management Implementation Plan.** Same as described in Actions Common to All Alternatives.

**Fire Suppression.** Full fire suppression would be applied in basin big sagebrush/lemon scurfpea vegetation associations. See also Vegetation Treatments paragraph 2.3.1.1.

### **2.3.1.3 Watershed Management**

**Water Quality.** In addition to the Actions Common to All Alternatives, the area within 500 feet of wetlands, riparian areas, and 100-year floodplains, and within 100 feet of the edge of the inner gorge of intermittent and large ephemeral drainages, would be avoidance areas for surface disturbing activities.

**Permanent Facilities.** The 100-year floodplains, wetlands, and riparian areas would be closed to new permanent facilities (e.g., storage tanks, structure pits). Proposals for linear crossings in these areas would be considered on a case-by-case basis.

**Erosion Control.** Areas with highly erodible soils would also be avoidance areas for all surface disturbing activities. Surface disturbing activities could be permitted within avoidance areas provided that a mitigation plan is approved and a site-specific analysis determines that unacceptable impact levels would not occur as a result of the activity. When applicable, erosion control plans would be required as part of surface disturbing project proposals.

**Colorado River Salinity Control.** Same as described in Actions Common to All Alternatives.

**Wetlands and Floodplains.** In addition to Actions Common to All Alternatives, projects to improve the ecological integrity of the dunal ponds would be considered and evaluated.

**Riparian Management Enclosures.** Riparian enclosures would be developed and maintained, and enclosure plans would be implemented. Riparian enclosures would be used to protect degraded riparian areas from further impacts and to ensure reclamation of vegetation communities and ecological processes. Enclosures would remain closed to livestock grazing, and AUMs in these enclosures would not be available for livestock use.

**Fluid Mineral Wells.** Same as described in Actions Common to All Alternatives.

**Aquifer Recharge Areas.** Aquifer recharge areas would be managed to maintain or enhance recharge volume and ground water quality by limiting road density, surface disturbance, and surface occupancy to maintain a healthy recharge area.

#### **2.3.1.4 Wild Horse Management**

**Wild Horse Herd Management Area Boundaries and Appropriate Management Levels.** Wild horse populations would be managed within the Divide Basin HMA at an AML of 415–600 horses. The Divide Basin HMA boundaries would remain unchanged.

**Activity and Monitoring Plans.** Same as described in Actions Common to All Alternatives.

**Water Developments.** Water developments would be considered to maintain or improve resource conditions and/or enhance herd distribution and manage forage utilization. Such developments within sensitive wildlife habitats would be permitted provided they conform to wildlife objectives. A selective gathering plan to remove excess horses from inside and outside the HMA would also be developed and implemented. Compatibility with special status plant species would be required.

**Gathering Plan.** Same as described in Actions Common to All Alternatives.

**Public Education.** Opportunity for public education and enjoyment of wild horses would be provided by placing interpretive signs, providing interpretive sites, and providing access to the herd areas.

### 2.3.1.5 Livestock Grazing Management

**Guidelines for Livestock Grazing Management.** Same as described in Actions Common to All Alternatives.

**Rangeland and Riparian Habitat.** In addition to Actions Common to All Alternatives, grazing management systems (AMP) would assist in improving or maintaining the desired range condition. Approved AMPs, or other activity plans intended to serve as the functional equivalent of an AMP, for each of the designated grazing allotments would provide the necessary guidance for achieving grazing management objectives.

**Forage Utilization Levels.** Same as described in Actions Common to All Alternatives

**Livestock Water Developments and Range Improvements.** Livestock water developments and range improvements would be considered to maintain or improve resource conditions and/or enhance livestock distribution. Compatibility with special status plant species would be required.

**Salt or Mineral Supplements.** Salt or mineral supplements would be prohibited within 500 feet of riparian habitat and National Historic and Scenic Trails unless analysis shows that the resources (watershed, riparian, recreation, wildlife) would not be adversely affected by livestock concentrations within these areas. Supplements would also be prohibited on areas inhabited by special status plant species, regardless of analysis findings.

### 2.3.1.6 Vegetation Management

**Special Status Plant Species.** In addition to Actions Common to All Alternatives, specific management actions related to known locations of special status plant species habitat include closing locations to surface disturbing activities or any disruptive activity that could adversely affect the special status plants or their habitat, as well as closing locations to the location of new mining claims, mineral material sales, OHV use (including those vehicles used for geophysical exploration activities), surveying, and the use of explosives and blasting.

Potential habitat areas for special status species would be avoidance areas for surface disturbing activities (Map 7).

Known locations of special status plant species would be open to consideration for mineral leasing with no surface occupancy requirements.

**Rights-of-Way Limitations.** Areas where Wyoming BLM-sensitive plant species are known to exist would be right-of-way avoidance areas (Map 8). Exceptions could be granted by the Authorized Officer if analysis shows that there is no adverse impact to the plant populations.

**Fire Suppression.** Same as described in Actions Common to All Alternatives.

**Threatened and Endangered Plant Species.** Same as described in Actions Common to All Alternatives.

**Invasive Species.** Same as described in Actions Common to All Alternatives.

**Forest and Woodland Health.** Same as described in Actions Common to All Alternatives.

### 2.3.1.7 Wildlife Habitat Management

**Habitat Management Plan.** In addition to Actions Common to All Alternatives, habitat management plans would be developed as needed for highly developed and disturbed areas to mitigate wildlife habitat losses. Habitat management plans would include habitat expansion efforts, threatened and endangered species reintroduction, and population goals and objectives.

**Water Developments.** Same as described in Actions Common to All Alternatives.

**Special Status Wildlife Species.** In addition to Actions Common to All Alternatives, should a special status wildlife species be found, all disruptive activities would be halted until species-specific protective measures developed in consultation with USFWS could be implemented.

**Sensitive Habitat.** Same as described in Actions Common to All Alternatives.

**Predator Damage Control.** In addition to Actions Common to All Alternatives, proposed animal damage control activities not compatible with BLM planning and management prescriptions or objectives for other resource activities and users would be identified on a case-by-case basis. APHIS-WS would be requested to amend or adjust the plan accordingly. APHIS-WS would determine the appropriate animal damage control methods in coordination with BLM.

**Greater Sage-Grouse Leks and Nesting Habitat.** In addition to Actions Common to All Alternatives, surface occupancy (long-term or permanent aboveground facilities) would be controlled within one-quarter mile of Greater Sage-Grouse leks (Map 7). Seasonal limitations on surface disturbing and disruptive activities (usually from February 1 to July 31) would apply up to 2 miles from Greater Sage-Grouse leks on a case-by-case basis. Disruptive activities would avoid occupied Greater Sage-Grouse leks from 6:00 p.m. to 9:00 a.m. daily. The actual area to be avoided (usually within one-quarter to one-half mile of the lek), and appropriate seasonal limitations (usually February 1 to June 30) would be determined on a case-by-case basis.

**Greater Sage-Grouse Winter Concentration Areas.** Disruptive activities would be prohibited in Greater Sage-Grouse winter concentration areas (Map 7) from November 15 to April 30. Seasonal limitations may be excepted provided criteria in the Procedures for Processing Applications in Areas of Seasonal Restriction (Appendix 4) can be met, and appropriate mitigation can be implemented (as determined by BLM in coordination with commodity users).

**Big Game Winter Range.** Disruptive activities would be prohibited in big game (elk, deer, and antelope) crucial winter range between November 15 and April 30 (Map 7). Seasonal limitations may be excepted provided criteria in the Procedures for Processing Applications in Areas of Seasonal Restriction (Appendix 4) can be met, and appropriate mitigation can be implemented (as determined by BLM in coordination with commodity users).

**Big Game Birthing Areas.** Surface disturbing and disruptive activities and the amount of habitat disturbed would be limited in big game birthing areas from May 1 to June 30.

**Black-Footed Ferret.** Same as described in Actions Common to All Alternatives.

**Mountain Plover.** Same as described in Actions Common to All Alternatives.

**Game Fish and Special Status Fish Species.** Seasonal limitations for surface disturbing activities to protect game and special status fish species during spawning would be applied as necessary.

**Raptor Nesting Sites.** In addition to Actions Common to All Alternatives, permanent or high-profile structures would be prohibited within a specified distance of active raptor nests. Distance would be determined on a case-by-case basis and would depend on the raptor species involved, natural topographic barriers, line-of-sight distances, and other such factors. Temporary disturbances associated with placement of facilities, such as pipelines, as well as other actions, such as seismic activities, could be allowed one-half to 1 mile of active raptor nests.

Disruptive activities would be seasonally restricted within a one-half- to 1-mile radius of occupied raptor nesting sites. Raptor nest surveys would be conducted within a 1-mile radius or linear distance of proposed surface uses or activities during raptor nesting season (see Table 2-3 for dates which vary by species). Seasonal limitations may be excepted provided criteria in the Procedures for Processing Applications in Areas of Seasonal Restriction (Appendix 4) can be met, and appropriate mitigation can be implemented (as determined by BLM in coordination with commodity users).

**Introduction and Reintroduction of Species.** Same as described in Actions Common to All Alternatives.

### 2.3.2 Heritage Resources Management

Management actions for heritage resources would be implemented consistent with the land use decisions of the Green River RMP (Appendix 2).

**Heritage Resources Protection.** In addition to Actions Common to All Alternatives, management of heritage resources would include inventories and mitigation as needed for specific projects. An analysis of all surface disturbing activities would be conducted to determine the potential effect of the activities on heritage resources. Heritage resources would be evaluated for their eligibility for listing on the NRHP. All National Register-eligible historic sites would continue to be protected through provisions of the NHPA. Site stewardship and public education aspects of the heritage resource management program would also be implemented.

**Protection of Scientific Values.** Same as described in Actions Common to All Alternatives.

**National Register Eligible Sites.** In addition to Actions Common to All Alternatives, sites eligible for inclusion in the NRHP because of their scientific information content would be surrounded by a 100-foot avoidance area, pursuant to the Protocol Agreement between BLM and Wyoming SHPO (Appendix 7).

**Native American Sites.** In addition to Actions Common to All Alternatives, tribal leaders would be consulted and traditional cultural properties including respected places would be protected.

**Expansion Era Roads and Associated Sites.** Expansion era roads and associated sites (Freighter Gap, stage stations, and freighter's camps) would be protected under provisions of the NHPA.

**Historic Livestock Management Sites.** Some historic livestock management sites may be eligible for inclusion in the NRHP within the context of the development of pastoral agriculture in Wyoming and the Rocky Mountain regions. There are no special management or recognition provisions for these sites under existing management.

**Native and Euro-American Sites.** Historic and archaeological sites within the context of early contact between Native Americans and Euro-American peoples have been identified and understood in general terms. Because of their importance, these sites would continue to be protected by provisions of the NHPA on a case-by-case basis.

**Paleontological Sites.** Same as described in Actions Common to All Alternatives.

### 2.3.3 Travel Management, Access, and Realty

Management actions for travel management, access, and realty in the planning area would be implemented consistent with the land use decisions of the Green River RMP (Appendix 2).

**Transportation Planning.** Transportation planning would not occur for the JMH planning area.

**Travel Management Plan.** A travel management plan would not be developed.

**Road Installations.** Proposed road installations and improvements would follow the Green River RMP management objectives and applicable BLM guidelines.

**Geophysical Activities.** Geophysical activities would conform to the OHV designations of the Green River RMP. Exceptions may be granted on a case-by-case basis, with appropriate limitations to protect sensitive resources. Detonation activities would not be allowed in areas of sensitive heritage resources and geologic features, such as Boars Tusk, White Mountain Petroglyphs, and historic trails. Geophysical vehicle use would not occur in areas closed to OHV use (Map 9).

**Rights-of-Way.** The right-of-way restrictions listed in the Green River RMP would apply as applicable to utilities and other realty actions. Areas would be designated as right-of-way avoidance or exclusion areas based the location of sensitive resources (Map 8). Map 8 includes the right-of-way avoidance and exclusion areas identified in the Green River RMP. The Tri-Territory marker and White Mountain Petroglyphs would remain right-of-way exclusion areas. The Steamboat Mountain ACEC would remain closed to communication sites.

**Linear Rights-of-Way.** No specific actions would be applied to locate linear rights-of-way adjacent to existing roads, trails, or similar facilities.

**Winter Access.** Winter access would be subject to seasonal road closures. Plowing of roads during the winter would be considered on a case-by-case basis.

**Off-Highway Vehicular Management.** In addition to Actions Common to All Alternatives, the OHV decisions in the Green River RMP would be implemented. Specific roads and trails may be seasonally closed to OHV use for public health and safety reasons, for restoration or remediation actions, for wildlife or wildlife habitat protection, or for other reasons as determined by BLM (Map 9).

**Over-the-Snow Vehicles.** Same as described in Actions Common to All Alternatives.

**Land Withdrawals and Exchanges.** Same as described in Actions Common to All Alternatives.

**Ownership Adjustments.** Same as described in Actions Common to All Alternatives.

**Access.** In addition to Actions Common to All Alternatives, access to public, state, and private land would be provided throughout the planning area and would be restricted only where necessary to protect public health and safety as well as to protect sensitive resources. Access decisions would be consistent with existing regulatory requirements and would be made for the purposes of providing for the reasonable use and enjoyment of inholdings. Access needs would be considered on a case-by-case basis.

### 2.3.4 Recreation Resources Management

Management actions for recreation resources management in the planning area would be implemented consistent with the land use decisions of the Green River RMP (Appendix 2).

The recreation resources management objective is to provide for the continued availability of passive and active outdoor opportunities while protecting environmental resources and ensuring the health and safety of users.

**Backcountry Byways.** In addition to Actions Common to All Alternatives, public information and education activities would be developed for backcountry byways (Tri-Territory Loop and Red Desert) and would include the development and installation of interpretive and directional signs and the development of recreation project plans. The location of the signs would be coordinated with state and local governments and other interested parties for the Red Desert view point from the dugway of Steamboat Mountain and for the Chicken Springs overlook. Other locations may be identified through coordination with state and local governments and interested parties. Site-specific recreation activity or implementation plans would be prepared as appropriate or necessary.

**Greater Sand Dunes Recreation Area.** The parking area and camping facilities in the Greater Sand Dunes Recreation Area would be expanded. This would include developing a recreation site plan and addressing public health and safety, resolving user conflict, and protecting adjoining resources.

**Recreation Project Plans.** Same as described in Actions Common to All Alternatives.

**Camping.** In addition to Actions Common to All Alternatives, overnight camping would be allowed throughout the planning area, including WSAs, in accordance with BLM guidelines. Dispersed camping would be allowed within 200 feet of a water source except where necessary to protect water quality and wildlife and livestock watering areas. Camping

designations are a discretionary action approved by a BLM Authorized Officer. Areas would be closed to camping if resource damage occurs.

**Special Recreation Use Permits.** In addition to Actions Common to All Alternatives, special recreation use permits would be reviewed and issued. The current permit evaluation process considers the nature of the event, potential impacts to resources, conflicts with other events, and impacts to the quality of other visitors' experiences. Mitigation measures necessary to protect the resources would be included in any permit issued. A Plan of Operation would be required for all commercial recreational operators and outfitters. The Plan of Operation would describe the type, extent, and location of the recreation use and the mechanisms by which the operator/outfitter would prevent impacts to environmental resources. Any requests in special recreation use permit applications to remove natural resources would be evaluated on a case-by-case basis after an environmental analysis process.

**Recreational Mining Activity.** Recreational mining activities would be allowed throughout the planning area that are not withdrawn from mineral location, where such withdrawals would not be pursued, or where not closed or restricted by Wyoming DEQ Guideline 19 (Non-coal: Non-commercial Recreation Panning and Dredging). A withdrawal is in place for the White Mountain Petroglyphs ACEC. Withdrawals would be pursued for special status plant species locations, Crookston Ranch, public water reserves, Tri-Territory Marker, and South Pass Summit.

## 2.3.5 Minerals and Alternative Energy Resources Management

Management decisions in the Green River RMP on leasing fluid minerals and on locatable minerals were deferred for a portion of the JMH CAP planning area, referred to as the core area. These deferrals were necessary because information concerning potential mineral leasing or locations for mining claims was not yet sufficiently developed for making sound management decisions for the core area. Management actions for Mineral and Alternative Energy Resources Management in the planning area would be implemented consistent with the land use decisions of the Green River RMP (Appendix 2).

### 2.3.5.1 Leasable Fluid Minerals Management

**Oil and Gas Leases.** In addition to Actions Common to All Alternatives, existing leases that were suspended during the JMH CAP planning process would be reinstated. New leases would be offered outside the core area based on industry interest and resource development potential (Map 10). The core area would be closed to leasing, and no new leases would be issued in the core area.

**Lease Stipulations.** In addition to Actions Common to All Alternatives, stipulations would be placed on new leases to protect sensitive resources and land uses identified in the Green River RMP (Appendix 2).

Stipulations limiting surface disturbance would be included as a standard provision on all new oil and gas leases offered by the RSFO. Stipulations would prevent surface disturbing activities, such as road, pipeline, or well pad construction, within certain areas unless site-specific mitigation is proposed and approved, or a site-specific analysis indicates that the activity would not cause unacceptable levels of impact to other resources. Stipulations requires that surface disturbing activities would not occur—

- In areas with a surface slope in excess of 25 percent.
- In Class I and Class II VRM areas.
- Within 500 feet of surface water or riparian areas.
- Within one-quarter mile or visual horizon (whichever is closer) from a historical trail.
- During periods when soil material is saturated, frozen, or when watershed damage is likely to occur.

Stipulations restricting the timing of development activity to protect wildlife resources would also be included as a standard provision in new oil and gas leases offered in the planning area. Access into certain areas for the construction of drilling pads and for drilling activities would be limited during specific times of the year to prevent impacts based on wildlife seasonal patterns and habitat use. Timing restrictions would not apply to maintenance and operation of producing wells. These stipulations address—

- Drilling and other surface disturbing activity would not be allowed from November 15 to April 30 within areas specified as important big game ungulate winter habitat. This restriction also applies to elk calving areas from May 1 to June 30.
- Drilling and other surface disturbing activity would not be allowed from February 1 to July 31 within areas specified as important raptor and/or sage- and sharp-tailed grouse nesting habitat.
- No surface occupancy would be allowed within portions of leases specified as requiring this protection for identified habitat protection (such as threatened or endangered species habitat) that cannot be protected by seasonal restrictions.

An Authorized Officer of BLM may provide exceptions to any of these limitations. Exceptions could be approved if site-specific information indicates that changes to wildlife protection stipulations would not result in unacceptable impacts to wildlife (Appendix 4).

**Drilling Permits.** In addition to Actions Common to All Alternatives, BLM specialists would review sensitive resources with lease operators to develop and implement protection measures to allow for effective development operations where impacts could be avoided or mitigated.

Conditions of Approval (COA) for APDs would be based on site-specific analysis and would include general surface control, avoidance, and other requirements for mitigation of development impacts consistent with the Green River RMP.

Mitigation requirements, such as seasonal restrictions on drilling, may be required as a result of a site-specific analysis. Stipulations on existing leases could be excepted where site-specific analyses do not identify the presence of the resource of concern addressed by the stipulation (Appendix 4). For existing leases with current standard stipulations, exceptions would be allowed when site-specific analyses show no unacceptable impacts to sensitive resources would occur.

Well spacing requirements for oil and gas resource protection would defer to the Wyoming Oil and Gas Conservation Commission guidance, with consideration for surface resource values.

### 2.3.5.2 Leasable Solid Minerals Management

**Exploration.** In addition to Actions Common to All Alternatives, lands outside the Coal Occurrence and Development Potential Area that have not gone through the 20-point screening process would be open for coal exploration unless specifically closed to coal exploration (Map 11). Exploration proposals would be allowed in open areas on a case-by-case basis, along with mitigation requirements to protect sensitive resources. Areas identified in the Green River RMP as being closed to coal exploration include wetlands, 100-year floodplains with 500-foot buffers, riparian areas, Oregon Buttes ACEC, White Mountain Petroglyphs with a one-half mile vista, raptor nesting sites, Greater Sage-Grouse leks with a one-quarter mile buffer, South Pass Historic Landscape ACEC, special status plant species sites, Steamboat Mountain ACEC (outside the area with coal recommendations), and WSAs.

**Leasing.** Lands within the Coal Occurrence and Development Potential Area have been identified as having a known or assumed potential for coal development. These lands are reviewed against 20 criteria to determine if the lands would be suitable for development (43 CFR 43.61). The criteria consider existing resource values such as heritage resources, scenic values, wildlife, threatened and endangered species, natural landmarks, and watersheds. Locations within the planning area that have been through the 20-point criteria screening process for suitability of coal development are designated as Coal Occurrence and Development Potential Areas (Map 6) and would be available for leasing and development of coal unless specifically closed because of multiple use conflicts. Those locations within the Coal Occurrence and Development Potential Area that would be closed to leasing include the western portion of Greater Sand Dunes ACEC, which includes the Sand Dunes WSA; wetlands; riparian areas; and 100-year floodplains with a 500-foot buffer.

Important geological, ecological, and historic resources would be open to consideration for coal leasing and development by subsurface mining methods. Such areas available for coal leasing that would include no surface occupancy requirements include Boars Tusk, Crookston Ranch, and special status plant species sites. Areas available for coal development by subsurface mining and controls on surface facilities include Steamboat Mountain ACEC, the eastern part of Greater Sand Dunes ACEC, Tri-Territory Marker, and raptor nest sites with a one-half mile buffer.

### 2.3.5.3 Locatable Minerals Management

**Locatable Mineral Withdrawals.** Specific lands within the planning area would be withdrawn from mineral location as identified in the Green River RMP (Map 5).

Withdrawals would be revoked for lands classified as prospectively valuable for oil shale. Upon revocation, the area would be open to the filing of mining claims, exploration, and development of locatable minerals. The White Mountain Petroglyphs ACEC and Boars Tusk located in the oil shale classification lands would be withdrawn from mineral location prior to the revocation.

Withdrawals would be revoked for lands classified as prospectively valuable for coal. Upon revocation, the area would be open to the filing of mining claims, exploration, and development of all locatable minerals. Areas that would be withdrawn from mineral location prior to the revocation of the coal classification include Greater Sand Dunes ACEC (western portion), special status plant sites, Crookston Ranch, public water reserves, Tri-Territory Marker, and South Pass Summit.

In areas open to mineral location, mining claims could be filed which would allow that claim to be held and developed in accordance with applicable regulations (39 CFR 3809). Mining activities would also have to comply with other regulatory requirements, including limitations on air and water discharges, waste management, spill prevention, and endangered species.

#### **2.3.5.4 Saleable Minerals Management**

**Mineral Material Sales.** Saleable minerals are common use minerals, such as sand and gravel, which can be purchased from the Government on federal lands. The planning area would be open to consideration of mineral material sales except for areas identified as closed to sales, or where development of saleable minerals would cause unacceptable impacts (Map 12). Areas closed to mineral material sales include Crookston Ranch, Oregon Buttes ACEC, Native American burial sites, Boars Tusk, White Mountain Petroglyphs, Greater Sand Dunes ACEC, South Pass Historic Landscape ACEC and viewshed, and special status plant sites.

Sale areas, community pits, and common use areas would be developed for saleable minerals at locations that are compatible with other resources and land uses. Mining and reclamation plans would be required for each proposed sale area and use, and management of the area would be in conformance with other resource protection requirements, including Standard Practices, Best Management Practices, and Guidelines for Surface Disturbing Activities (Appendices 5, 6).

#### **2.3.5.5 Alternative Energy Management**

There were no similar land management decisions made in the Green River RMP.

### **2.3.6 Visual Resources Management**

The planning area would be managed to maintain or improve scenic quality by managing the impacts of human activities and other intrusions on the visual landscape (Map 13). The VRM classes provide the design standards for all surface disturbing projects. Projects would be designed, sited, screened, or painted to reduce visual impacts regardless of the VRM classification. Management actions for VRM in the planning area would be implemented consistent with the land use decisions of the Green River RMP (Appendix 2).

**VRM Class I Areas.** Same as described in Actions Common to All Alternatives.

**VRM Class II Areas.** Management actions on lands classified as VRM Class II would be designed for blending into the natural landscape. A visual transition area of 1 mile adjacent to each WSA would be managed as Class II to retain the existing character of the WSA landscape. A low level of change would be acceptable to the characteristic landscapes of the ACECs, thus South Pass Historic Landscape, White Mountain Petroglyphs, the eastern portion of the Greater Sand Dunes ACEC, and the southern portion of Steamboat Mountain ACEC would be managed as Class II. Surface disturbing activities could be seen in these areas but would not attract the attention of the casual observer. Oregon Buttes ACEC lies entirely within the WSA and thus would be managed as VRM Class I.

**VRM Class III Areas.** Management actions on lands classified as VRM Class III would be designed to partially retain the existing character of the landscape and would allow a moderate level of change. The northern portion of Steamboat Mountain ACEC, the portion of White Mountain that falls within the southwest corner of the planning area, Split Rock,

Eden Valley, and the western part of Red Desert Watershed that is included in the planning area would be managed as Class III. Surface disturbing activities could attract attention but would not dominate the view of the casual observer.

**VRM Class IV Areas.** Management actions on lands classified as VRM Class IV could result in a major modification to the existing character of the landscape. The level of change to the landscape could be high. The remainder of the planning area not managed as VRM Class I, II, or III would be managed as Class IV. Surface disturbing activities could dominate the view of the casual observer and would be the major focus of attention.

### 2.3.7 Special Management Area Management

The special management areas would continue to be managed to preserve and protect the integrity and character of the specific areas in accordance with ACEC policies and WSA interim management policies. Management actions for special management areas in the planning area would be implemented consistent with the land use decisions of the Green River RMP (Appendix 2).

The designation, boundaries, and management prescriptions of Steamboat Mountain, Greater Sand Dunes, Oregon Buttes, and South Pass Historic Landscape ACECs, as well as the seven WSAs, would remain unchanged. The location and size of the Special Status Plant Species ACEC would remain unchanged but could be expanded in the JMH planning area on a case-by-case basis.

**Leasable Solid Minerals.** Special management areas are available for exploration and leasing of mineral resources subject to specific limitations for resource protection. The WSAs and Oregon Buttes, South Pass Historic Landscape, White Mountain Petroglyphs, and the western part of Greater Sand Dunes ACECs would be closed to leasable solid minerals exploration and leasing. Steamboat Mountain ACEC and the eastern part of Greater Sand Dunes ACEC would be open to coal leasing and development using subsurface mining methods and controls on surface facilities. The WSAs, the western part of Greater Sand Dunes ACEC, and the remaining special management areas outside the coal development potential area would be closed to leasable solid minerals exploration and leasing (Map 6, 11).

**Locatable Minerals.** The planning area is open to the filing of mining claims, exploration, and development of locatable minerals, except in areas requiring resource protection. The areas, or portions thereof, that would be withdrawn from mineral location include the Greater Sand Dunes ACEC (western portion), Crookston Ranch, Boars Tusk, South Pass Summit (part of the South Pass Historic Landscape), special status plants species, and the Tri-Territory Marker site (Map 5).

**Leasable Fluid Minerals.** Certain special management areas would be open to fluid mineral leasing with no surface occupancy requirements. These areas include Oregon Buttes ACEC, White Mountain Petroglyphs ACEC, South Pass Historic Landscape ACEC (visible portion), and the Tri-Territory Marker site (Maps 7, 10). Boars Tusk and Crookston Ranch (part of the eastern portion of the Greater Sand Dunes ACEC) would be no surface occupancy areas for surface disturbing activities.

**Communication Sites.** Communication sites would not be allowed in Steamboat Mountain ACEC but would be considered on Essex Mountain and Pacific Butte (Map 8).























































































































**Table 2-4. Summary of Impacts (Continued)**

<b>No Action Alternative</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Preferred Alternative</b>
<p><b>Mineral Resources Management</b> Adverse impacts from increased fire frequency caused by an increased number of ignition sources.</p>	<p>Same as No Action Alternative, except impacts would be greatest under this alternative due to increased potential for mineral development.</p>	<p>Same as No Action Alternative, except impacts would be least intensive under this alternative due to decreased potential for mineral development.</p>	<p>Same as No Action Alternative, except impacts would be greater due to increased potential for mineral development.</p>	<p>Adverse impacts from increased fire frequency caused by an increased number of ignition sources. The degree of impact would depend on the amount of area ultimately developed, which is uncertain due to implementation of the adaptive management strategy.</p>
<p><b>Recreation Management</b> Adverse impacts from increased fire frequency caused by escaped campfires and OHV-ignited fires.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative, except impacts would be least intensive under this alternative due to camping restrictions and OHV use limitations.</p>	<p>Same as No Action Alternative, except impacts would be reduced due to camping restrictions and OHV use limitations</p>	<p>Same as No Action Alternative: Adverse impacts from increased fire frequency caused by escaped campfires and OHV-ignited fires.</p>
<p><b>Wild Horse Management</b> Beneficial and/or adverse impacts through the reduction (via browsing) of fine fuels.</p>	<p>Same as No Action Alternative</p>	<p>Potential impacts within the planning area would be eliminated due to exclusion of the planning area from the HMA.</p>	<p>Same as No Action Alternative, except impacts could be greater due to greater herd distribution resulting from expansion of the HMA.</p>	<p>Same as No Action Alternative: Beneficial and/or adverse impacts through the reduction (via browsing) of fine fuels.</p>
<p><b>Vegetation Management</b> Beneficial impacts from maintaining diverse vegetation communities. Potential adverse impacts from prescribed burn stipulations, fire suppression restrictions, and allowing natural accumulation of fuels.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: Beneficial impacts from maintaining diverse vegetation communities. Potential adverse impacts from prescribed burn stipulations, fire suppression restrictions, and allowing natural accumulation of fuels.</p>



Table 2-4. Summary of Impacts (Continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative
<b>Summary of Impacts to Watershed Resources</b>				
<b>Heritage Resources Management</b> Adverse impacts from surface-disturbing excavations. Beneficial impacts due to limitations on surface disturbance near heritage sites.	Same as No Action Alternative	Same as No Action Alternative, except beneficial impacts would be greater due to increased limitations on surface disturbance near heritage sites.	Same as No Action Alternative, except beneficial impacts would be slightly greater due to increased limitations on surface disturbance near heritage sites.	Same as No Action Alternative: Adverse impacts from surface-disturbing excavations. Beneficial impacts due to limitations on surface disturbance near heritage sites.
<b>Fire Management</b> Short-term, adverse impacts due to vegetation removal associated with prescribed burns and suppression activities. Long-term beneficial impacts from enhancing vegetative conditions.	Same as No Action Alternative	Same as No Action Alternative, except impacts would be slightly reduced due to reduced suppression efforts (limited suppression versus full suppression for basin big sagebrush/lemon scurpua vegetation associations).	Same as No Action Alternative	Same as No Action Alternative: Short-term, adverse impacts due to vegetation removal associated with prescribed burns and suppression activities. Long-term beneficial impacts from enhancing vegetative conditions.
<b>Livestock Grazing Management</b> Adverse impacts from vegetation removal, soil compaction and stream bank instability. Implementing Wyoming Standards for Healthy Rangelands would prevent impacts from becoming significant.	Same as No Action Alternative, except impacts would be greatest under this alternative due to reduced restrictions on grazing management and anticipated increases in livestock grazing.	Same as No Action Alternative, except impacts would be least intensive under this alternative due to greater restrictions on grazing management.	Same as No Action Alternative, except impacts would be reduced due to greater restrictions on grazing management.	Same as No Action Alternative: Adverse impacts from vegetation removal, soil compaction and stream bank instability. Implementing Wyoming Standards for Healthy Rangelands would prevent impacts from becoming significant.



**Table 2-4. Summary of Impacts (Continued)**

<b>No Action Alternative</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Preferred Alternative</b>
<p><b>Wild Horse Management</b> Minimal adverse impacts from trampling of riparian vegetation and subsequent erosion. Maintaining the AML would help minimize impacts.</p>	<p>Same as No Action Alternative</p>	<p>Potential impacts within the planning area would be eliminated due to exclusion of the planning area from the HMA.</p>	<p>Same as No Action Alternative, except impacts would be reduced on the current HMA due to greater distribution of the herd; impacts could be greater on the expanded portion of the HMA.</p>	<p>Same as No Action Alternative: Minimal adverse impacts from trampling of riparian vegetation and subsequent erosion. Maintaining the AML would help minimize impacts.</p>
<p><b>Vegetation Management</b> Overall beneficial impacts due to enhancement and protection of vegetation resources. Short-term, adverse impacts from vegetation treatments.</p>	<p>Same as No Action Alternative, except beneficial impacts would be slightly reduced due to fewer protections afforded to special status plant species.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: Overall beneficial impacts due to enhancement and protection of vegetation resources. Short-term, adverse impacts from vegetation treatments.</p>
<p><b>Wildlife Habitat Management</b> Beneficial impacts from enhancement of wildlife habitat, which promotes healthy plant communities.</p>	<p>Same as No Action Alternative, except beneficial impacts would be reduced due to less restrictive actions to improve wildlife habitat.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greater due to more restrictive actions to improve wildlife habitat.</p>	<p>Same as No Action Alternative, except beneficial impacts would be slightly greater due to more restrictive actions to improve wildlife habitat.</p>	<p>Same as No Action Alternative: Beneficial impacts from enhancement of wildlife habitat, which promotes healthy plant communities.</p>



**Table 2-4. Summary of Impacts (Continued)**

<b>No Action Alternative</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Preferred Alternative</b>
<p><b>Fire Management</b> Short-term, adverse impacts from forage removal. Long-term beneficial impacts from enhanced forage conditions.</p>	<p>Same as No Action Alternative</p>	<p>Potential impacts within the planning area would be eliminated due to exclusion of the planning area from the HMA.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: Short-term, adverse impacts from forage removal. Long-term beneficial impacts from enhanced forage conditions.</p>
<p><b>Livestock Grazing Management</b> Beneficial impacts from compliance with healthy rangeland standards, thereby improving forage conditions. Potential adverse impacts from competition over forage resources.</p>	<p>Same as No Action Alternative, except adverse impacts would be greater due to anticipated increases in livestock grazing.</p>	<p>Potential impacts within the planning area would be eliminated due to exclusion of the planning area from the HMA.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: Beneficial impacts from compliance with healthy rangeland standards, thereby improving forage conditions. Potential adverse impacts from competition over forage resources.</p>
<p><b>Watershed Management</b> Beneficial impacts due to actions aimed at maintaining and enhancing vegetative conditions.</p>	<p>Same as No Action Alternative, except beneficial impacts could be reduced due to less restrictive watershed management actions (e.g., smaller buffer zones around riparian areas and floodplains).</p>	<p>Potential impacts within the planning area would be eliminated due to exclusion of the planning area from the HMA.</p>	<p>Same as No Action Alternative, except beneficial impacts could be greater due to more restrictive watershed management actions (e.g., larger buffer zones around riparian areas and floodplains).</p>	<p>Same as No Action Alternative: Beneficial impacts due to actions aimed at maintaining and enhancing vegetative conditions.</p>
<p><b>Mineral Resources Management</b> Adverse impacts from vegetation removal associated with construction of well pads and connector roads.</p>	<p>Same as No Action Alternative, except impacts would be greatest under this alternative due to increased potential for mineral development.</p>	<p>Potential impacts within the planning area would be eliminated due to exclusion of the planning area from the HMA.</p>	<p>Same as No Action Alternative, except impacts would be greater under this alternative due to increased potential for mineral development.</p>	<p>Adverse impacts from vegetation removal associated with construction of well pads and connector roads. The degree of impact would depend on the amount of area ultimately developed, which is uncertain due to implementation of the adaptive management strategy.</p>



**Table 2-4. Summary of Impacts (Continued)**

<b>No Action Alternative</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Preferred Alternative</b>
<p><b>Wildlife Habitat Management</b> Beneficial impacts from enhancement of wildlife habitat, which promotes healthy plant communities.</p>	<p>Same as No Action Alternative, except beneficial impacts would be reduced due to less restrictive actions to improve wildlife habitat.</p>	<p>Potential impacts within the planning area would be eliminated due to exclusion of the planning area from the HMA.</p>	<p>Same as No Action Alternative, except beneficial impacts would be slightly greater due to more restrictive actions to improve wildlife habitat.</p>	<p>Same as No Action Alternative: Beneficial impacts from enhancement of wildlife habitat, which promotes healthy plant communities.</p>
<p><b>Special Management Area Management</b> Beneficial impacts due to limitations placed on surface-disturbing activities within special management areas.</p>	<p>Same as No Action Alternative, except beneficial impacts would be reduced due to elimination of management actions associated with removing special management area designations.</p>	<p>Potential impacts within the planning area would be eliminated due to exclusion of the planning area from the HMA.</p>	<p>Same as No Action Alternative, except beneficial impacts would be slightly greater due to implementation of management actions associated with expansion of special management areas.</p>	<p>Beneficial impacts due to limitations placed on surface-disturbing activities within special management areas. Beneficial impacts would be slightly greater than the No Action Alternative due to implementation of management actions associated with additional special management areas.</p>
<p><b>Cumulative Impacts</b> Cumulative impacts could include reductions in forage resources caused by development and grazing wildlife. Impacts are not expected to be significant.</p>	<p>Same as No Action Alternative, except impacts, although insignificant, could increase due to increased development and livestock grazing activity.</p>	<p>Same as No Action Alternative, except impacts, although insignificant, could increase from concentrating wild horses into a smaller area.</p>	<p>Cumulative impacts could include improved distribution and management of wild horses due to expansion of the HMA.</p>	<p>Same as No Action Alternative: Cumulative impacts could include reductions in forage resources caused by development and increased wildlife objectives. Impacts are not expected to be significant.</p>



**Table 2-4. Summary of Impacts (Continued)**

<b>No Action Alternative</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Preferred Alternative</b>
<p><b>Watershed Management</b> Beneficial impacts due to actions aimed at maintaining and enhancing vegetative conditions.</p>	<p>Same as No Action Alternative, except beneficial impacts could be reduced due to less restrictive watershed management actions (e.g., smaller buffer zones around riparian areas and floodplains).</p>	<p>Same as No Action Alternative, except beneficial impacts could be greater due to more restrictive watershed management actions (e.g., larger buffer zones around riparian areas and floodplains).</p>	<p>Same as No Action Alternative, except beneficial impacts could be greater due to more restrictive watershed management actions (e.g., larger buffer zones around riparian areas and floodplains).</p>	<p>Same as No Action Alternative: Beneficial impacts due to actions aimed at maintaining and enhancing vegetative conditions.</p>
<p><b>Mineral Resources Management</b> Adverse impacts from vegetation removal associated with construction of well pads and connector roads.</p>	<p>Same as No Action Alternative, except impacts would be greatest under this alternative due to increased potential for mineral development.</p>	<p>Same as No Action Alternative, except impacts would be least extensive under this alternative due to decreased potential for mineral development.</p>	<p>Same as No Action Alternative, except impacts would be greater under this alternative due to increased potential for mineral development.</p>	<p>Adverse impacts from vegetation removal associated with construction of well pads and connector roads. The degree of impact would depend on the amount of area ultimately developed, which is uncertain due to implementation of the adaptive management strategy.</p>
<p><b>Recreation Management</b> Minimal adverse impacts due to forage removal associated with dispersed recreation. Potentially greater adverse impacts from OHV use.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative, except impacts would be reduced due to increased OHV use limitations.</p>	<p>Same as No Action Alternative, except impacts would be slightly reduced due to increased OHV use limitations.</p>	<p>Same as No Action Alternative: Minimal adverse impacts due to forage removal associated with dispersed recreation. Potentially greater adverse impacts from OHV use.</p>



**Table 2-4. Summary of Impacts (Continued)**

<b>No Action Alternative</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Preferred Alternative</b>
<p><b>Wildlife Habitat Management</b> Beneficial impacts from enhancement of wildlife habitat, which promotes healthy plant communities. Potential adverse impacts due to competition over forage resources.</p>	<p>Same as No Action Alternative, except beneficial impacts would be reduced due to less restrictive actions to improve wildlife habitat. The potential for adverse impacts would be greater due to increased competition over forage resources.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greater due to more restrictive actions to improve wildlife habitat. The potential for adverse impacts would be slightly greater due to increased competition over forage resources.</p>	<p>Same as No Action Alternative, except beneficial impacts would be slightly greater due to more restrictive actions to improve wildlife habitat. The potential for adverse impacts would be slightly greater due to increased competition over forage resources.</p>	<p>Beneficial impacts from enhancement of wildlife habitat, which promotes healthy plant communities. Potential adverse impacts due to competition over forage resources. The potential for adverse impacts would be slightly greater than the No Action Alternative due to increased competition over forage resources.</p>
<p><b>Special Management Area Management</b> Beneficial impacts due to limitations placed on surface-disturbing activities within special management areas.</p>	<p>Same as No Action Alternative, except beneficial impacts would be reduced due to elimination of management actions associated with removing special management area designations.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greatest under this alternative due to implementation of management actions associated with expansion of special management areas.</p>	<p>Same as No Action Alternative, except beneficial impacts would be slightly greater due to implementation of management actions associated with expansion of special management areas.</p>	<p>Beneficial impacts due to limitations placed on surface-disturbing activities within special management areas. Beneficial impacts would be slightly greater than the No Action Alternative due to implementation of management actions associated with additional special management areas.</p>



**Table 2-4. Summary of Impacts (Continued)**

<b>No Action Alternative</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Preferred Alternative</b>
<p><b>Livestock Grazing Management</b> Adverse impacts from vegetation removal, soil compaction, season-long grazing, and localized forage competition and overuse. Implementing healthy rangeland standards and guidelines for livestock grazing would prevent impacts from becoming significant.</p>	<p>Same as No Action Alternative, except adverse impacts would be greatest under this alternative due to increased grazing activity and less restrictive measures for range improvements and water developments.</p>	<p>Same as No Action Alternative, except adverse impacts would be less due to increased restrictions on livestock grazing activities.</p>	<p>Same as No Action Alternative.</p>	<p>Same as No Action Alternative: Adverse impacts from vegetation removal, soil compaction, season-long grazing, and localized forage competition and overuse. Implementing healthy rangeland standards and guidelines for livestock grazing would prevent impacts from becoming significant.</p>
<p><b>Watershed Management</b> Beneficial impacts due to restoration and enhancement efforts, buffer zones placed around riparian areas and floodplains, and restrictions on surface-disturbing activities.</p>	<p>Same as No Action Alternative, except beneficial impacts would be reduced due to fewer restrictions on surface-disturbing activities and smaller buffer zones around riparian areas and floodplains.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greatest under this alternative due to increased restrictions on surface-disturbing activities and larger buffer zones around riparian areas and floodplains.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greater due to increased restrictions on surface-disturbing activities and larger buffer zones around riparian areas and floodplains.</p>	<p>Same as No Action Alternative: Beneficial impacts due to restoration and enhancement efforts, buffer zones placed around riparian areas and floodplains, and restrictions on surface-disturbing activities.</p>



**Table 2-4. Summary of Impacts (Continued)**

<b>No Action Alternative</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Preferred Alternative</b>
<p><b>Recreation Management</b> Adverse impacts due to damage and loss of vegetation and noxious weed invasion from concentrated recreational activity such as camping and recreational mining.</p>	<p>Same as No Action Alternative, except adverse effects would be greater due to decreased restrictions on use.</p>	<p>Same as No Action Alternative, except adverse effects would be less due to increased restrictions on use and decreased development.</p>	<p>Same as No Action Alternative, except adverse effects would be slightly less due to increased restrictions on use and limiting recreational mining to a 5-acre site.</p>	<p>Same as No Action Alternative: Adverse impacts due to damage and loss of vegetation and noxious weed invasion from random concentrated recreational activity such as camping and recreational mining.</p>
<p><b>Wild Horse Management</b> Minimal adverse impacts from localized forage competition. Maintaining the AML would help minimize impacts.</p>	<p>Same as No Action Alternative</p>	<p>Beneficial impacts from elimination of the Divide Basin Wild Horse Herd Management Area from the planning area.</p>	<p>Beneficial impacts from reduction in localized forage competition due to expansion of Divide Basin Wild Horse Herd Management Area to cover the entire planning area.</p>	<p>Same as No Action Alternative: Minimal adverse impacts from localized forage competition. Maintaining the AML would help minimize impacts.</p>
<p><b>Special Management Area Management</b> Long-term beneficial impacts from conservation of sensitive vegetation communities and limitations on surface disturbing activities.</p>	<p>Same as No Action Alternative, except benefits would be reduced by removal of ACEC designation from Steamboat Mountain and decreasing the viewshed associated with the South Pass Historic Landscape.</p>	<p>Same as No Action Alternative, except benefits would be much greater from expansion of the Steamboat Mountain, Greater Sand Dunes, and Special Status Plants ACECs, and the addition of the Cushion Plant Community ACEC and the Pinnacles WSA.</p>	<p>Same as No Action Alternative, except benefits would be much greater from expansion of the Steamboat Mountain, Greater Sand Dunes, and Special Status Plants ACECs, and the addition of the Cushion Plant Community ACEC and the Pinnacles WSA.</p>	<p>Long-term beneficial impacts from conservation of sensitive vegetation communities and limitations on surface disturbing activities. Benefits greater than the No Action Alternative due to the addition of the West Sand Dunes Archeological District and protection of the Pinnacles Geographic Area.</p>



**Table 2-4. Summary of Impacts (Continued)**

<b>No Action Alternative</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Preferred Alternative</b>
<p><b>Livestock Grazing Management</b> Adverse impacts from vegetation removal, soil compaction, season-long grazing, and localized forage competition and overuse. Implementing healthy rangeland standards and guidelines for livestock grazing would prevent impacts from becoming significant.</p>	<p>Same as No Action Alternative, except impacts would be greatest under this alternative due to an increased grazing activity and less restrictive measures for range improvements and water developments.</p>	<p>Same as No Action Alternative, except adverse impacts would be least extensive under this alternative due to increased restrictions on livestock grazing activities.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: Adverse impacts from vegetation removal, soil compaction, season-long grazing, and localized forage competition and overuse. Implementing healthy rangeland standards and guidelines for livestock grazing would prevent impacts from becoming significant.</p>
<p><b>Watershed Management</b> Beneficial impacts due to restoration and enhancement efforts, restrictions on surface disturbing activities, and buffer zones placed around riparian areas and floodplains.</p>	<p>Same as No Action Alternative, except beneficial impacts would be reduced due to fewer restrictions on surface-disturbing activities and smaller buffer zones around riparian areas and floodplains.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greatest under this alternative due to increased restrictions on surface-disturbing activities and larger buffer zones around riparian areas and floodplains.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greater due to increased restrictions on surface-disturbing activities and larger buffer zones around riparian areas and floodplains.</p>	<p>Same as No Action Alternative: Beneficial impacts due to restoration and enhancement efforts, restrictions on surface disturbing activities, and buffer zones placed around riparian areas and floodplains.</p>



**Table 2-4. Summary of Impacts (Continued)**

<b>No Action Alternative</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Preferred Alternative</b>
<p><b>Wild Horse Management</b> Minimal, adverse impacts from localized forage competition. Maintaining the AML would help minimize impacts.</p>	<p>Same as No Action Alternative</p>	<p>Beneficial impacts from elimination of wild horses from the planning area, which would decrease competition over forage resources.</p>	<p>Beneficial impacts from reduction in localized forage competition due to expansion of Divide Basin Wild Horse Herd Management Area to cover the entire planning area.</p>	<p>Same as No Action Alternative: Minimal, adverse impacts from localized forage competition. Maintaining the AML would help minimize impacts.</p>
<p><b>Vegetation Management</b> Beneficial impacts to sensitive species associated with special status plants.</p>	<p>Same as No Action alternative, except benefits would be reduced due to fewer restrictions associated with special status plants.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: Beneficial impacts to sensitive species associated with special status plants.</p>
<p><b>Special Management Area Management</b> Long-term beneficial impacts from conservation and enhancement of sensitive habitat and limitations on surface-disturbing activities.</p>	<p>Same as No Action Alternative, except benefits would be reduced by removal of the ACEC designation from Steamboat Mountain.</p>	<p>Same as No Action Alternative, except benefits would be much greater from expansion of the Steamboat Mountain, Greater Sand Dunes, and Special Status Plants ACECs, and the addition of the Cushion Plant Community ACEC and the Pinnacles WSA.</p>	<p>Same as No Action Alternative, except benefits would be much greater from expansion of the Steamboat Mountain, Greater Sand Dunes, and Special Status Plants ACECs, and the addition of the Cushion Plant Community ACEC and the Pinnacles WSA.</p>	<p>Long-term beneficial impact from conservation of sensitive vegetation communities and limitations on surface-disturbing activities. Benefits would increase due to protection of the Pinnacles Geographic Area.</p>



Table 2-4. Summary of Impacts (Continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative
<p><b>Mineral Resources Management</b> Adverse impacts due to potential surface disturbance over approximately 1,800 acres. Pre-authorization inventory and avoidance would help to minimize impacts.</p>	<p>Adverse impacts due to potential surface disturbance over approximately 2,100 acres. Pre-authorization inventory and avoidance would help to minimize impacts.</p>	<p>Adverse impacts due to potential surface disturbance over approximately 1,300 acres. Pre-authorization inventory and avoidance would help to minimize impacts.</p>	<p>Adverse impacts due to potential surface disturbance over approximately 1,600 acres. Pre-authorization inventory and avoidance would help to minimize impacts.</p>	<p>Same as Alternative 3: Adverse impacts due to potential surface disturbance over approximately 1,600 acres. Pre-authorization inventory and avoidance would help to minimize impacts.</p>
<p><b>Recreation Management</b> Indirect, adverse impacts due to human disturbance. Beneficial impacts due to implementation of public education and interpretive programs that encourage protection of heritage resources. Expansion of the Greater Sand Dunes Recreation Area could increase adverse impacts.</p>	<p>Same as No Action Alternative, except impacts could be slightly reduced due to not expanding the Greater Sand Dunes Recreation Area.</p>	<p>Same as Alternative 1</p>	<p>Same as Alternative 1</p>	<p>Same as No Action Alternative: Indirect, adverse impacts due to human disturbance. Beneficial impacts due to implementation of public education and interpretive programs that encourage protection of heritage resources. Expansion of the Greater Sand Dunes Recreation Area could increase adverse impacts.</p>
<p><b>Visual Resources Management</b> Beneficial impacts by prohibiting surface-disturbing and construction activities in certain areas that may contain heritage resources. Viewsheds and historic resources located within higher VRM classifications could be adversely affected.</p>	<p>Same as No Action Alternative, except beneficial impacts would be reduced due to issuance of less restrictive VRM classifications over larger areas.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greatest under this alternative due to issuance of more restrictive VRM classifications over larger areas.</p>	<p>Same as No Action Alternative, except beneficial impacts could be slightly greater due to issuance of more restrictive VRM classifications over larger areas.</p>	<p>Beneficial impacts by prohibiting surface-disturbing and construction activities in certain areas that may contain heritage resources. Viewsheds and historic resources located within higher VRM classifications could be adversely affected. Beneficial impacts would be slightly greater than the No Action Alternative due to issuance of more restrictive VRM classifications over larger areas.</p>



**Table 2-4. Summary of Impacts (Continued)**

<b>No Action Alternative</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Preferred Alternative</b>
<p><u>-Geophysical:</u> Placing restrictions on geophysical activities could adversely impact users.</p> <p><u>-Rights-of-way:</u> Placing restrictions (i.e., exclusion and avoidance areas) on rights-of-way activities could adversely impact users.</p>	<p>Same as No Action Alternative, except impacts would be reduced due to fewer restrictions on geophysical activities.</p> <p>Same as No Action Alternative</p>	<p>Same as No Action Alternative, except impacts would be greatest under this alternative due to increased restrictions on geophysical activities</p> <p>Same as No Action Alternative, except impacts would be greatest under this alternative due to increased restrictions on rights-of-way activities.</p>	<p>Same as No Action Alternative, except impacts would be greater due to increased restrictions on geophysical activities.</p> <p>Same as No Action Alternative, except impacts would be greater due to increased restrictions on rights-of-way activities.</p>	<p>Placing restrictions on geophysical activities could adversely impact users. Impacts could be slightly greater than the No Action Alternative due to increased restrictions on geophysical activities.</p> <p>Placing restrictions (i.e., exclusion and avoidance areas) on rights-of-way activities could adversely impact users. Impacts could be slightly greater than the No Action Alternative due to increased restrictions on rights-of-way activities.</p>
<p><b>Mineral Resources Management</b> Beneficial impacts by increasing access and expanding transportation routes associated with mineral development.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greatest under this alternative because more of the planning area would be open to mineral development.</p>	<p>Same as No Action Alternative, except beneficial impacts would be least extensive under this alternative because most of the planning area would be closed to mineral development.</p>	<p>Same as No Action Alternative, except beneficial impacts would be reduced due to increased restrictions on mineral development.</p>	<p>Beneficial impacts by increasing access and expanding transportation routes associated with mineral development. Impacts would be reduced as compared to the No Action Alternative due to increased restrictions on mineral development.</p>



Table 2-4. Summary of Impacts (Continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative
<p><b>Livestock Grazing Management</b> Beneficial impacts due to restrictions on salt and mineral supplements near riparian habitat and national historic and scenic trails.</p>	<p>Same as No Action Alternative, except beneficial impacts would be less extensive due to relaxed restrictions on salt and mineral placement.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greater due to increased salt and mineral placement restrictions.</p>	<p>Same as No Action Alternative, except beneficial impacts would be slightly greater due to increased salt and mineral placement restrictions.</p>	<p>Same as No Action Alternative: Beneficial impacts due to restrictions on salt and mineral supplements near riparian habitat and national historic and scenic trails.</p>
<p><b>Watershed Management</b> No net impact</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: No net impact</p>
<p><b>Travel, Access and Realty Management</b> Existing roads and trails provide adequate vehicle access in the planning area for recreational purposes. The OHV designations and adherence to them would minimize adverse impacts on recreation resources by limiting disturbance to vegetation, watersheds, and wildlife.</p>	<p>Fewer restrictions on OHV use would benefit those recreationists that participate in OHV activities, but could have adverse effects on users that prefer non-motorized forms of recreation.</p>	<p>Increased restrictions on OHV use could adversely affect OHV users, but could have a beneficial effect on those recreationists that prefer non-motorized forms of recreation.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: Existing roads and trails provide adequate vehicle access in the planning area for recreational purposes. The OHV designations and adherence to them would minimize adverse impacts on recreation resources by limiting disturbance to vegetation, watersheds, and wildlife.</p>
<p><b>Mineral Resources Management</b> Adverse impacts from degrading the overall recreational experience due to visual and auditory intrusions.</p>	<p>Same as No Action Alternative, except impacts would be greatest under this alternative due to increased potential for mineral development.</p>	<p>Same as No Action Alternative, except impacts would be least extensive under this alternative due to decreased potential for mineral development.</p>	<p>Same as No Action Alternative, except impacts would be reduced due to decreased potential for mineral development.</p>	<p>Adverse impacts from degrading the overall recreational experience due to visual and auditory intrusions. Impacts would be reduced as compared to the No Action Alternative due to staged development.</p>



Table 2-4. Summary of Impacts (Continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative
<p><b>Visual Resources Management</b> VRM classifications would have beneficial effects on the recreation resources and users by ensuring that surface-disturbing activities would be compatible with the existing character of the landscape and that visual intrusions would not adversely affect the recreational experience.</p>	<p>Same as No Action Alternative, except beneficial impacts would be reduced due to issuance of less restrictive VRM classifications over larger areas.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greatest under this alternative due to issuance of more restrictive VRM classifications over larger areas.</p>	<p>Same as No Action Alternative, except beneficial impacts could be slightly greater under this alternative due to issuance of more restrictive VRM classifications over larger areas.</p>	<p>Classifications would have beneficial effects on the recreation resources and users by ensuring that surface-disturbing activities would be compatible with the existing character of the landscape and that visual intrusions would not adversely affect the recreational experience. Impacts would be slightly greater than the No Action Alternative due to issuance of more restrictive VRM classifications over larger areas.</p>
<p><b>Special Management Area Management</b> Beneficial impacts on recreational users by minimizing incompatible uses in special management areas and providing areas for solitude and primitive recreational opportunities.</p>	<p>Same as No Action Alternative, except impacts would be reduced due to elimination of management actions associated with removing special management area designations.</p>	<p>Same as No Action Alternative, except impacts would be greatest under this alternative due to implementation of management actions associated with expansion of special management areas.</p>	<p>Same as No Action Alternative, except impacts would be slightly greater due to implementation of management actions associated with expansion of special management areas.</p>	<p>Beneficial impacts on recreational users by minimizing incompatible uses in special management areas and providing areas for solitude and primitive recreational opportunities. Impacts would be slightly greater than the No Action Alternative due to implementation of management actions associated with additional special management areas.</p>



**Table 2-4. Summary of Impacts (Continued)**

No Action Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative
<b>Summary of Impacts to Leasable Solid Minerals</b>				
<p><b>All Resource Categories with Mineral-Related Provisions or Restrictions</b>                      Adverse impacts would occur from closing areas to leasing, including the WSAs and the western part of the Greater Sand Dunes ACEC. Surface use restrictions may make some coal resources not economically viable.</p>	<p>Adverse impacts would be minimized due to management actions that provide for increased leasing and development. Some impacts would occur due to mining restrictions within certain sensitive resource areas and due to requirements related to current laws and regulations.</p>	<p>Adverse impacts would include closing of federal coal lands within the Coal and Sodium Occurrence and Development Potential Area to future leasing and development</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: Adverse impacts would occur due to closing areas to leasing, including the WSAs and the western part of the Greater Sand Dunes ACEC. Surface use restrictions may make some coal resources not economically viable.</p>
<b>Summary of Impacts to Locatable Minerals</b>				
<p><b>All Resource Categories with Mineral-Related Provisions or Restrictions</b>                      Adverse impacts due to withdrawals from locatable minerals specified in the Green River RMP. Adverse impacts would also occur for proposed mining claims where a required plan of operations causes mining to not be economically viable.</p>	<p>Minimal adverse impacts due to withdrawals from locatable minerals specified in the Green River RMP.</p>	<p>Adverse impacts due to withdrawing the planning area from filing mineral claims, exploration, and development of locatable minerals, including recreational use mining activity. Impacts would include loss of current claims found not to be valid, and no new claims could be located in the planning area.</p>	<p>Same as No Action Alternative, except impacts would be slightly greater due to additional withdrawals. The northern elk calving areas and the potential diamond-bearing area of Steamboat Mountain ACEC would be withdrawn. Withdrawals would also be proposed for areas where general land use is classified as no surface occupancy.</p>	<p>Adverse impacts due to withdrawals from locatable minerals specified in the Green River RMP. Adverse impacts would also occur for proposed mining claims where a required plan of operations causes mining to not be economically viable. Impacts would be slightly greater than the No Action Alternative due to additional withdrawals. The northern elk calving areas and the potential diamond-bearing area of Steamboat Mountain ACEC would be withdrawn.</p>



Table 2-4. Summary of Impacts (Continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative
<b>Summary of Impacts to Alternative Energy Resources</b>				
<p><b>All Resource Categories with Mineral-Related Provisions or Restrictions</b> No net impact. Alternative energy development is not discussed or analyzed under the No Action Alternative (no related action in the Green River RMP).</p>	Beneficial impacts by allowing for the maximum level of alternative energy resource development within the planning area.	Adverse impacts due to closure of the planning area to all alternative energy development proposals.	Beneficial impacts by allowing for alternative energy resource development within the planning area, except where such activity would cause unacceptable impacts to sensitive resources. Where favorable development conditions coexist with sensitive resources, the alternative would have a negative impact on alternative energy resources.	Same as Alternative 3: Beneficial impacts by allowing for alternative energy resource development within the planning area, except where such activity would cause unacceptable impacts to sensitive resources. Where favorable development conditions coexist with sensitive resources, the alternative would have a negative impact on alternative energy resources.
<p><b>Cumulative Impacts</b> Cumulative effects are expected to accrue to the oil and gas industry and regional economy with increased development. The effects are not expected to be significant.</p>	Cumulative effects would increase with increased development.	Development would be curtailed in some areas due to conflicts with other resources uses. Reduction in production due to these restrictions is not expected to have a significant cumulative effect. Impacts would be greatest under this alternative.	Development would be curtailed in some areas due to conflicts with other resources uses. Reduction in production due to these restrictions is not expected to have a significant cumulative effect.	Development would be curtailed in some areas due to conflicts with other resources uses. Reduction in production due to these restrictions is not expected to have a significant cumulative effect.



Table 2-4. Summary of Impacts (Continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative
<p><b>Mineral Resources Management</b> Adverse impacts due to surface-disturbing activities that alter the visual characteristics of the landscape. Mitigation requirements and mineral withdrawals would help reduce impacts.</p>	<p>Same as No Action Alternative, except impacts would be slightly reduced as there would be less Class II land area with the change in VRM Class of the Steamboat Mountain area.</p>	<p>Same as No Action Alternative, except impacts would be reduced due to decreased potential for mineral development.</p>	<p>Same as No Action Alternative, except the significance of this impact would depend on the amount of development projected to occur on existing leases within Class I and Class II areas and the extent of mitigation (siting, painting, screening) applied to the proposed activity to protect scenic quality.</p>	<p>Adverse impacts due to surface-disturbing activities that alter the visual characteristics of the landscape. Mitigation requirements and mineral withdrawals would help reduce impacts. The significance of this impact would depend on the amount of development projected to occur on existing leases within Class I and Class II areas and the extent of mitigation (siting, painting, screening) applied to the proposed activity to protect scenic quality.</p>
<p><b>Recreation Management</b> No net impact on the visual character of the landscape. Increased recreational activity could potentially affect the scenic quality of localized areas that experience increased use. However, such impacts would likely be insignificant, as these small areas would be closed if resource damage were to occur.</p>	<p>No net impact on the visual character of the landscape. The user could likely be affected by visual intrusions on the landscape that could occur in a majority of the planning area.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: No net impact on the visual character of the landscape. Increased recreational activity could potentially affect the scenic quality of localized areas that experience increased use. However, such impacts would likely be insignificant, as these small areas would be closed if resource damage were to occur.</p>
<p><b>Special Management Area Management</b> Beneficial impacts on the visual character and scenic quality of the landscape due to VRM classifications assigned to special management areas.</p>	<p>Same as No Action Alternative, except beneficial impacts would be slightly reduced due to a reduction in Class II designations.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greatest due to increases in Class I and Class II designations.</p>	<p>Same as No Action Alternative, except beneficial impacts would be greater due to increases in Class I and Class II designations.</p>	<p>Beneficial impacts on the visual character and scenic quality of the landscape due to VRM classifications assigned to special management areas. Beneficial impacts would be greater than the No Action Alternative due to an increase in Class II designations.</p>



Table 2-4. Summary of Impacts (Continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative
<p><b>Travel, Access and Realty Management</b> Beneficial impacts from identifying and controlling high-traveled routes, adhering to OHV designations, and providing orderly development.</p>	<p>Same as No Action Alternative, except benefits would be reduced due to decreased restrictions on use and increased development.</p>	<p>Same as No Action, except benefits would be increased due to increased restrictions on use, decreased development, and the development of a transportation plan specific to the planning area.</p>	<p>Same as No Action, except benefits would be increased due to increased restrictions on use, decreased development, and the development of a transportation plan specific to the planning area.</p>	<p>Beneficial impacts from identifying and controlling high-traveled routes, adhering to OHV designations, and providing orderly development. Benefits would be greater than the No Action Alternative due to increased restrictions on use, staged development, and the development of a transportation plan specific to the planning area.</p>
<p><b>Mineral Resources Management</b> Adverse impacts from associated surface-disturbing and disruptive activities. Implementing management prescriptions and interim management guidelines would prevent impacts from becoming significant.</p>	<p>Significant adverse impacts from associated surface-disturbing activities. Implementing management prescriptions and interim management guidelines would reduce adverse impacts.</p>	<p>Same as No Action Alternative, except adverse impacts would be much less due to increased restrictions on use, expansion of special management areas, and closure of planning area to the majority of mineral development activities.</p>	<p>Same as No Action Alternative, except adverse impacts would be much less due to increased restrictions on use, expansion of special management areas, and closure of planning area to the majority of mineral development activities.</p>	<p>Adverse impacts from associated surface-disturbing and disruptive activities. Adverse impacts would be less than the No Action Alternative due to increased restrictions and protection of the Pinnacles Geographic Area. Implementing management prescriptions and interim management guidelines would prevent impacts from becoming significant.</p>
<p><b>Recreation Management</b> Beneficial impacts from preparation of recreation site plans and recreation project plans.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: Beneficial impacts from preparation of recreation site plans and recreation project plans.</p>
<p><b>Visual Resources Management</b> Beneficial impacts through Class I and Class II designations on the majority of special management areas within the planning area.</p>	<p>Same as No Action Alternative</p>	<p>Beneficial impacts through Class I designations on all special management areas.</p>	<p>Same as No Action Alternative</p>	<p>Same as No Action Alternative: Beneficial impacts through Class I and Class II designations on the majority of special management areas within the planning area.</p>



Table 2-4. Summary of Impacts (Continued)

No Action Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative
<b>Livestock Grazing Management</b> Increased economic benefits with the support, on average, of eight jobs per year and increased total earnings of \$1.4 million over the twenty-year study period.	Average annual jobs supported would increase to 16, and total earnings would increase to \$2.7 over the twenty-year study period.	Same as No Action Alternative	Same as No Action Alternative	Same as No Action Alternative: Increased economic benefits with the support, on average, of eight jobs per year and increased total earnings of \$1.4 million over the twenty-year study period.
<b>Watershed Management</b> No measurable impact	Same as No Action Alternative	Same as No Action Alternative	Same as No Action Alternative	Same as No Action Alternative: No measurable impact
<b>Mineral Resources Management</b> Increased economic benefits with the support, on average, of 128 jobs per year; increased total earnings by \$53 million; and increased mineral tax revenues to \$101 million.	Increase in potential average annual employment (148), total earnings (\$59 million), and mineral tax revenues (\$114 million) from the No Action Alternative.	Decrease in potential average annual employment (100), total earnings (\$43 million), and mineral tax revenues (\$85 million) from the No Action Alternative.	Decrease in potential average annual employment (121), total earnings (\$51 million), and mineral tax revenues (\$97 million) from the No Action Alternative.	Same as Alternative 3: Decrease in potential average annual employment (121), total earnings (\$51 million), and mineral tax revenues (\$97 million) from the No Action Alternative.
<b>Recreation Management</b> Increased economic benefits with the support, on average, of 23 jobs per year and increased total earnings of \$3.4 million over the twenty-year study period.	Slight decrease in average employment (22) and earnings (\$3.3) from the No Action Alternative	Slight decrease in average employment (22) and total earnings (\$3.3) from the No Action Alternative.	Slight decrease in average employment (20) and total earnings (\$3.0) from the No Action Alternative.	Slight increase in employment and total earnings from the No Action Alternative.
<b>Wild Horse Management</b> No measurable impact	Same as No Action Alternative	Same as No Action Alternative	Same as No Action Alternative	Same as No Action Alternative: No measurable impact
<b>Vegetation Management</b> No measurable impact	Same as No Action Alternative	Same as No Action Alternative	Same as No Action Alternative	Same as No Action Alternative: No measurable impact

