

EXECUTIVE SUMMARY

INTRODUCTION

This Resource Management Plan (RMP) and Environmental Impact Statement (EIS) describes and analyzes alternatives for the future management of public lands and resources the Bureau of Land Management (BLM) administers in the Bighorn Basin in northwestern Wyoming. The Bighorn Basin RMP Revision Project is a combined effort to revise RMPs for the BLM Cody Field Office (CYFO) and BLM Worland Field Office (WFO). This document refers to the combined CYFO and WFO planning areas as the Planning Area. The Planning Area covers approximately 5.6 million acres of federal, state, and private lands in four Wyoming counties (Big Horn, Park, Washakie, and Hot Springs). Of the total area, 3.1 million acres are BLM-administered surface lands and 4.2 million acres are federal mineral estate.

Revising existing land use plans is a major federal action for the BLM. The National Environmental Policy Act of 1969 (NEPA), as amended, requires federal agencies to prepare an EIS for major federal actions; thus this Draft RMP and Draft EIS is a combined document. The Draft EIS analyzes the impacts of four alternative RMPs for the Planning Area, including the No Action Alternative (Alternative A) and the Agency Preferred Alternative (Alternative D). The No Action Alternative reflects current management (the existing plans). The analysis considers a range of reasonable alternatives that provide for various levels of resource protection and opportunities for motorized and nonmotorized recreational activities, leasing and development of mineral resources, livestock grazing, and other land use activities.

PURPOSE AND NEED

The BLM currently administers public lands in the Planning Area according to three plans – the Cody RMP (1990) for the CYFO and the Washakie RMP (1988) and Grass Creek RMP (1998) for the WFO. The existing plans have been updated since the BLM adopted them. Since the Records of Decision for the existing plans, new data have become available, and laws, regulations, and policies regarding management of these public lands have changed. In addition, decisions in the existing plans do not satisfactorily address all new and emerging issues in the Planning Area. These changes and potential deficiencies created the need to revise the existing plans.

The purpose of this RMP revision project is to ensure that public lands are managed according to the principles of multiple use identified in FLPMA while maintaining the valid existing rights and other obligations already established. The new RMPs will address changing needs of the Planning Area and create a management strategy that effectively responds to the planning issues within the framework of the planning criteria that best achieves a combination of the following.

- Employing a community-based planning approach to seek broadly supported solutions to issues, and collaborate with federal, state, and local cooperating agencies.
- Establishing goals and objectives for managing resources and resource uses in the approximately 3.1 million surface acres and 4.2 million acres of federal mineral estate in the Planning Area administered by the BLM CYFO and WFO in accordance with the principles of multiple use and sustained yield.
- Identifying land use plan decisions to guide future land management actions and subsequent site-specific implementation decisions.
- Identifying management actions and allowable uses anticipated to achieve the established goals and objectives and reach desired outcomes.

Executive Summary

- Providing comprehensive management direction by making land use decisions for all appropriate resources and resource uses the BLM administers in the Planning Area.
- Providing for compliance with applicable tribal, federal, and state laws, standards, and implementation plans, and BLM policies and regulations.
- Recognizing the Nation’s need for domestic sources of minerals, food, timber, and fiber, and incorporating requirements of the Energy Policy Act of 2005 (Public Law 109-58).
- Retaining flexibility to adapt to new and emerging issues and opportunities and to provide for adjustments to decisions over time based on new information and monitoring.
- Striving to be compatible with the plans and policies of adjacent local, state, tribal, and federal agencies and consistent with federal laws, regulations, and BLM policies; and be flexible enough to adapt to future BLM policy and guidance updates.

PLANNING ISSUE STATEMENTS

Planning issues identified through the scoping process and other public outreach efforts focus on the demands, concerns, conflicts, or problems concerning use or management of public lands and resources in the Planning Area. The main issues described and analyzed in the EIS include the following:

<i>Climate Change</i>	How can the BLM incorporate climate change adaptation and/or responses into its land management practices?
<i>Watershed and Air Quality Management</i>	How can the BLM manage the use of public lands while protecting watershed and air quality?
<i>Energy and Minerals Management</i>	Which areas should be open to mineral and energy development, and how should the BLM manage such development while protecting human health and natural and cultural resources?
<i>Fire and Fuels Management</i>	How can the BLM manage fire and fuels to protect public safety and natural and cultural resources?
<i>Invasive and/or Noxious Species</i>	How can the BLM manage the spread of and mitigate impacts associated with invasive species and/or noxious weeds?
<i>Fish, Wildlife, and Special Status Species</i>	How can the BLM manage public land use while maintaining and improving terrestrial and aquatic habitats?
<i>Wild Horses</i>	How can the BLM manage wild horses on public lands while also protecting natural and cultural resources?
<i>Cultural and Paleontological Resources</i>	How can the BLM manage paleontological, cultural, and traditional resources to provide both resource protection and opportunities for public education and study?
<i>Visual Resources</i>	How can the BLM manage public lands for visual qualities?
<i>Lands and Realty</i>	What land tenure and management adjustments are needed to meet access and development needs while also protecting natural and cultural resources?
<i>Comprehensive Travel and Transportation Management, and OHVs</i>	How can the BLM manage travel on public lands?
<i>Lands with Wilderness Characteristics</i>	Should the BLM manage to protect wilderness characteristics by designating Wild Lands? If so, where and how?
<i>Recreation and Visitor Use</i>	How can the BLM provide recreational opportunities on public lands while protecting public safety, and natural and cultural resources?

<i>Livestock Grazing</i>	How can the BLM manage livestock use on public lands while also protecting natural and cultural resources?
<i>Special Designation Management</i>	How can the BLM manage areas that contain unique or sensitive resources?
<i>Socioeconomic Resources</i>	How can the BLM manage public land use with the preservation of local tradition and local economies that rely upon BLM-administered land?

Planning criteria are the standards, rules, and guidelines that help direct the RMP planning process. In conjunction with planning issues, planning criteria ensure that the planning process is focused and incorporates appropriate analyses. The criteria also help guide final RMP selection, and the BLM uses the criteria as a basis for evaluating the responsiveness of planning options. Planning criteria for the Bighorn Basin RMP Revision Project are summarized below; the full planning criteria can be viewed on the Bighorn Basin RMP Revision Project website

(<http://www.blm.gov/wy/st/en/programs/Planning/rmps/bighorn.html>) in the Scoping Report.

- Address all BLM-administered lands in the Planning Area.
- Consider current scientific information, research, new technologies, and the results of resource assessments, monitoring, and coordination.
- Recognize valid existing rights.
- Apply the *Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Wyoming* to all activities and provide for public safety and welfare relative to fire, hazardous materials, and abandoned mine lands (AMLs). (Note: While the *Standards for Healthy Rangelands* apply to all activities, the *Guidelines for Livestock Grazing Management* apply only to livestock grazing management).
- Comply with NEPA, the Federal Land Policy and Management Act, and all applicable laws, regulations, policies, and guidance.
- Consider current and potential future uses of the public lands through the development of reasonable foreseeable future development and activity scenarios based on historical, existing, and projected levels of use.
- The Bighorn Basin RMP Revision Project planning effort will be collaborative and multi-jurisdictional. The BLM will strive to ensure that its management decisions complement its planning jurisdictions and adjoining properties within the boundaries prescribed by law and regulation.
- Consult with tribes to identify sites, areas, and objects important to their cultural and religious heritages.
- Consider a reasonable range of alternatives that reflects the principles of multiple use and sustained yield.

PUBLIC INVOLVEMENT

A Notice of Intent (NOI) published in the *Federal Register* on October 17, 2008, formally announced the BLM’s intent to revise the existing plans and prepare the associated EIS. Publication of the NOI initiated the scoping process and invited affected and interested agencies, organizations, and the general public to participate in determining the scope and issues to be addressed by alternatives and analyses in the EIS. The BLM held six public scoping meetings in Thermopolis, Worland, Greybull, Cody, Powell, and

Lovell, Wyoming between November 5 and 14, 2008. The six scoping meetings provided the public with an opportunity to learn and ask questions about the project and the planning process and to submit their issues and concerns to the BLM. In addition to members of the BLM Interdisciplinary Team, a total of 381 people attended the scoping meetings. The BLM collected comments from the public during the scoping meetings and throughout the scoping period.

The BLM published the Notice of Availability (NOA) for the Bighorn Basin Draft RMP and Draft EIS for public review and comment in the *Federal Register* on December 24, 2010. The NOA initiated the 90-day public comment period for this document. During this comment period, the BLM will hold seven public meetings on this Draft RMP and Draft EIS in Thermopolis, Worland, Greybull, Cody, Powell, Lovell, and Meeteetse, Wyoming.

COOPERATING AGENCIES AND TRIBAL CONSULTATION

The BLM invited local, state, federal, and tribal representatives to participate as cooperating agencies on the Bighorn Basin RMP Revision Project and EIS. The BLM invited these entities to participate because they have jurisdiction by law or because they could offer special expertise. Big Horn, Hot Springs, Park, and Washakie County Commissions, as well as seven local conservation districts agreed to participate as cooperating agencies in the RMP revision. The State of Wyoming and the United States (U.S.) Department of Agriculture Forest Service accepted cooperating agency status as well. The BLM and cooperating agencies participated in six workshops to formulate alternatives and multiple meetings to keep cooperating agencies informed and to solicit their input. Development of this Draft RMP and Draft EIS considered comments from cooperating agencies on previous administrative drafts. Cooperating agencies were provided an opportunity to submit position statements for publication in the Draft RMP and Draft EIS. The intent of these position statements was to allow the cooperating agencies to express their agreement or disagreement on substantive elements of the alternatives or impacts and whether or not these disagreements were adequately resolved in the Agency Preferred Alternative. No position statements were provided opposing the Agency Preferred Alternative, and only the Wyoming Department of Agriculture and the Washakie County Conservation District provided positions statements for publication in this Draft RMP and Draft EIS.

The BLM also invited Native American tribes to be cooperating agencies as part of the RMP revision and conducted ongoing coordination including two letters, multiple phone calls, and face-to-face meetings. In addition, BLM has met with tribes in government-to-government consultation. Government-to-government consultation with the tribes will continue throughout the RMP process.

ALTERNATIVES CONSIDERED IN DETAIL

To comply with NEPA requirements in the development of alternatives for this RMP and EIS, the BLM sought public input and analyzed a reasonable range of alternatives, including the No Action Alternative (Alternative A). The BLM conducted a series of workshops with an Interdisciplinary Team comprising BLM specialists and local, state, and federal cooperating agencies. The BLM formulated two alternatives (B and C) that reflect a range of resource use and conservation. The major issues addressed include: (1) energy and mineral resource exploration and development; (2) vegetation and habitat management; (3) landownership adjustments, access and transportation; and (4) special designations. Following analysis of alternatives A, B, and C, the Interdisciplinary Team provided recommendations for selecting the Agency Preferred Alternative—Alternative D. The Agency Preferred Alternative does not represent a final BLM decision and may change between publication of the Draft RMP and Draft EIS and Proposed RMP and Final EIS based on public comments on the draft document, new information, or changes in laws, regulations, or BLM policies. BLM recently released Manual 6301, "Wilderness Characteristics

Inventory" and 6302, "Consideration of Lands with Wilderness Characteristics in the Land Use Planning Process," which implement Secretarial Order 3310, "Protecting Wilderness Characteristics on Lands Managed by the Bureau of Land Management." These documents provide policy direction for designating areas with wilderness characteristics as "Wild Lands" in the land use planning process. "Wild Lands" is a designation resulting from a land use plan decision to protect lands with wilderness characteristics (LWCs). In designating an area as Wild Lands, the land use plan will make decisions to protect the area's wilderness characteristics to avoid impairment. The BLM is now in the process of incorporating the Secretarial Order and the BLM's implementing guidance into the Proposed RMP and Final EIS. Application of this policy direction may result in a change in the Agency Preferred Alternative or in development of a new alternative with regard to Wild Lands. The Agency Preferred Alternative or new alternative may be a combination of existing alternatives or an alternative within the range of alternatives already analyzed. BLM invites comment on this issue. The BLM will make its final decision after it publishes the Proposed RMP and Final EIS, and will document its decision in a Record of Decision.

Including the No Action Alternative (Alternative A), the four alternatives analyzed in this Draft RMP and Draft EIS represent differing approaches to managing resources and resource uses in the Planning Area. Each alternative comprises two categories of land use planning decisions: (1) desired outcomes (goals and objectives) and (2) allowable uses and management actions.

Goals and objectives direct BLM actions to most effectively meet legal mandates, regulations, and agency policy, as well as local and regional resource needs. Goals are broad statements of desired outcomes that are usually not quantifiable. Objectives identify more specific desired outcomes for resources and might include a measurable component. Objectives are generally expected to achieve the stated goals.

Allowable uses identify uses that are allowed, restricted, or excluded on BLM-administered surface lands and federal mineral estate. Management actions are proactive measures (for example, measures the BLM will implement to enhance watershed function and condition), or limitations intended to guide BLM activities in the Planning Area. Allowable uses often contain a spatial component because the alternatives identify whether particular land uses are allowed, restricted, or excluded. Alternatives may include specific management actions to meet goals and objectives and may exclude certain land uses to protect resource values.

Alternative A

The No Action Alternative represents continuation of current management and provides a baseline from which to identify potential environmental consequences when compared to the action alternatives. The No Action Alternative describes current resource and land management direction as represented in the Cody RMP (1990) for the CYFO and the Washakie RMP (1988) and Grass Creek RMP (1998) for the WFO, and associated maintenance actions and updates. Current management identifies constraints on mineral leasing in the Planning Area to protect resource values. Current management includes nine Areas of Critical Environmental Concern (ACECs), one National Back Country Byway, one National Historic Landmark, and one National Historic Trail (NHT). This alternative also includes 20 Wild and Scenic River (WSR) eligible waterways, each with interim protective management, and 10 Wilderness Study Areas (WSAs). The BLM maintains seven Special Recreation Management Areas (SRMAs) under Alternative A and allows livestock grazing on all but 5,171 acres of the Planning Area. Current management includes big game and greater sage-grouse seasonal wildlife restrictions for surface-disturbing activities, as well as lek buffers for greater sage-grouse.

Alternative B

Alternative B emphasizes conservation of physical, biological, heritage and visual resources, and LWCs with constraints on resource uses. Alternative B conserves the most land area for physical, biological, and heritage resources; designates the highest number of ACECs (17); and is the most restrictive to motorized vehicle use and mineral development. Alternative B retains the current National Back Country Byway and designates two additional back country byways, and applies protective management prescriptions to the Heart Mountain Relocation Center National Historic Landmark, Nez Perce NHT, and other important historic and regional trails. The BLM manages all 20 WSR eligible waterways as suitable for inclusion in the National Wild and Scenic River System (NWSRS) and applies more restrictive interim management prescriptions to the waterways. All LWCs under Alternative B are designated as Wild Lands, and are specifically managed to preserve naturalness, outstanding opportunities for solitude, and primitive and unconfined recreation. The BLM also applies additional constraints on travel within the 10 WSAs. The BLM designates 12 SRMAs under Alternative B and closes 1,988,927 acres to livestock grazing in the Planning Area. This alternative maintains contiguous blocks of vegetation and habitat on BLM-administered lands. Alternative B extends big game and greater sage-grouse seasonal wildlife restrictions for surface-disturbing activities, as well as lek buffers for greater sage-grouse.

Alternative C

Alternative C emphasizes resource uses and reduces constraints on resource uses to protect physical, biological, and heritage and visual resources. Compared to other alternatives, Alternative C conserves the least land area for physical, biological, and heritage resources; designates the fewest ACECs (2) and SRMA (1); and is the least restrictive to motorized vehicle use and mineral development. The BLM delineates Oil and Gas Management Areas around intensively developed existing fields to be managed primarily for oil and gas exploration and development. Alternative C carries forward the existing National Historic Landmark, NHT, and National Back Country Byway. Under this alternative, the BLM manages all 20 WSR eligible waterways as unsuitable for inclusion in the NWSRS and releases these areas to other uses. The BLM does not designate any LWCs as Wild Lands and manages these areas consistent with other resource objectives. Alternative C limits motorized vehicle use to designated roads and trails within the 10 WSAs. The BLM does not maintain contiguous blocks of native plant communities or minimize fragmentation. This alternative exempts Oil and Gas Management Areas and right-of-way (ROW) corridors from discretionary wildlife seasonal stipulations and allows the BLM to manage motorized vehicle use in big game crucial winter range and elk parturition habitat consistent with other resource objectives. Under Alternative C, the BLM applies the same prohibitions (outside of Oil and Gas Management Areas and ROW corridors) on surface-disturbing and disruptive activities for occupied greater sage-grouse leks and the same timing restrictions for greater sage-grouse winter concentration areas as under Alternative A.

Alternative D (Agency Preferred Alternative)

Alternative D generally increases conservation of physical, biological, and heritage and visual resources compared to current management, including the designation of one Special Management Area, two Management Areas, and 12 ACECs. Alternative D also emphasizes moderate constraints on resource uses, reclamation, and mitigation requirements to reduce impacts to resource values. Alternative D delineates Oil and Gas Management Areas, although smaller in size than Alternative C, to be managed primarily for oil and gas exploration and development. In addition to retaining the current National Back Country Byway, Alternative D designates one primitive Back Country Byway. Alternative D would also provide similar but less protective measures than Alternative B for the Heart Mountain Relocation Center National Historic Landmark, Nez Perce NHT, and Other Trails. The BLM manages all 20 WSR

eligible waterways as unsuitable for inclusion in the NWSRS. Nine LWCs are designated as Wild Lands under Alternative D and are managed to protect their wilderness characteristics. Alternative D limits motorized vehicle use to designated roads and trails within six WSAs and closes four WSAs to motorized vehicle use. Vegetation resources are managed to maintain contiguous blocks of native plant communities. Seasonal wildlife restrictions under this alternative include avoiding livestock grazing in elk parturition habitat during the birthing season but also exempting Oil and Gas Management Areas from discretionary big game seasonal stipulations. Alternative D extends greater sage-grouse seasonal restrictions for surface-disturbing activities, as well as lek buffers.

ENVIRONMENTAL CONSEQUENCES

This section summarizes the environmental consequences that would result from implementing each of the four alternatives. The purpose of the environmental consequences analysis is to determine the potential impacts of the federal action under each of the four alternatives on the human environment, while focusing on key planning issues identified by the BLM and raised during the scoping process. The analysis of environmental consequences is organized according to resource area, and includes: physical resources, mineral resources, fire and fuels management, biological resources, heritage and visual resources, land resources, special designations, and socioeconomics.

Physical Resources

Physical resources include air quality, soil, water, and cave and karst resources. Air quality impacts would primarily result from minerals development and production and oil and gas activities; emissions associated with these actions would outweigh those produced from other proposed activities. Alternative B would result in the lowest levels of emissions in 2015 and 2024 by reducing all emissions—except for carbon monoxide, which would increase slightly—and, therefore, it is unlikely that emissions under this alternative would contribute to an exceedance of a National Ambient Air Quality Standards (NAAQS) or Wyoming Ambient Air Quality Standards (WAAQS). Alternatives A and C would result in increases for some pollutants (PM[particulate matter]₁₀, carbon monoxide) and decreases for all others compared to the 2005 base year. Alternative C would have the greatest potential to contribute to exceedances of the NAAQS or WAAQS of any alternative. Alternative D would result in comparable impacts to the base level (year 2005), except that volatile organic compound emissions are expected to decrease by 13 percent in 2015 and by 34 percent by 2024. Alternative C is projected to result in the most new oil and gas wells and locatable mineral development (the activities anticipated to result in the greatest carbon dioxide (CO₂) contributions during the planning cycle), resulting in the most CO₂ emissions, followed by alternatives D, A, and B respectively.

Impacts to soil resources may result from surface disturbance associated with a variety of resource programs including minerals development, motorized vehicle use, road construction, and recreation. When it contributes to offsite erosion and sediment delivery, surface disturbance is an adverse impact to water resources as well. Actions that restrict surface disturbance or restore vegetation on disturbed areas occur under all alternatives and generally are considered to have a beneficial impact on soil and water resources by limiting erosion. The greatest impacts to soil and water resources are anticipated under Alternative C, which would result in the greatest amount of surface disturbance and contains the fewest measures to control erosion. Conversely, Alternative B would disturb the least surface area and develop watershed improvement practices and reclamation plans, among other measures, to control erosion, and improve watershed health. Alternative D would result in more surface disturbance than Alternative B, but contains comparable measures to control erosion and improve watershed health.

Adverse impacts to cave and karst areas would result from management that increases incompatible or excessive recreational use. The primary beneficial impacts to cave and karst resources, regardless of the alternative, result from managing the recreational use of caves under a cave management plan to protect and maintain cave resources. Alternatives A and B manage cave and karst resources as separate cave and karst based recreation management areas that would preserve the recreational setting in caves and provide protection of these resources by promoting appropriate recreational uses.

Alternatives C and D do not contain cave and karst specific recreation management areas, and the beneficial impacts realized under alternatives A and B would, therefore, not occur.

Mineral Resources

Mineral resources include locatable, leasable, and salable minerals. Implementation of the alternatives would result in public lands being opened (a beneficial impact), or withdrawn or segregated (an adverse impact) from locatable mineral entry under the mining laws. Alternative B, primarily due to withdrawals for ACECs and WSR suitable waterways, would result in the largest acreage restrictions to locatable mineral (325,102 acres), followed by Alternative A (174,354 acres), then Alternative D (72,031 acres), and Alternative C (47,846 acres).

Lands in the Planning Area have been classified as having low to negligible potential for geothermal development, with the exception of lands surrounding the known hydrothermal spring areas near Thermopolis and Cody. These geothermal resources are not capable of generating electricity and, therefore, adverse or beneficial impacts from management under any alternative would be minimal. Alternatives B and D place additional restrictions on geothermal development around the Hot Springs State Park in Thermopolis, the only area of moderately low geothermal resource potential in the Planning Area; though these restrictions would prevent commercial development, these alternatives would provide the greatest protection to the current public uses of these thermal springs.

The development potential for leasable oil and gas in the Planning Area ranges from moderate to no potential, depending on location. Management actions that restrict or constrain the potential for oil and gas leasing, development, and exploration would result in adverse impacts; management actions that ease restrictions or maintain areas as open for oil and gas exploration and development would result in beneficial impacts. All of the alternatives include management that restricts oil and gas leasing and development to varying levels, with Alternative C generally allowing the most development and Alternative B the least. Alternative C contains the smallest acreage managed as administratively unavailable for oil and gas leasing (147,760 acres), followed by Alternative A (154,861 acres), Alternative D (291,294 acres), and Alternative B (2,296,279 acres). Impacts to oil and gas exploration and development from the restriction of geophysical exploration would be the greatest under Alternative B due to limits on motorized vehicle use and restrictions on surface-disturbing activities. Additionally, the BLM manages LWCs designated as Wild Lands as administratively unavailable for oil and gas leasing under Alternative B (571,288 acres). Alternatives C and D establish Oil and Gas Management Areas (568,164 acres and 134,214 acres, respectively) allowing full development of known oil and gas resources in existing fields and exempting these areas from seasonal development and other restrictions, resulting in beneficial impacts to oil and gas exploration and development. Alternatives B and D are the only alternatives where areas managed as administratively unavailable to oil and gas leasing include some areas with moderate development potential (219,821 acres and 2,834 acres, respectively).

Primary impacts to the development of mineral materials (e.g., sand and gravel) result from management that prohibits or limits (adverse impacts), or opens (beneficial impacts) areas to mineral materials disposal. Such management commonly includes restrictions on surface-disturbing activities or

closures to mineral materials disposal. Alternative B would result in the greatest adverse impacts to mineral materials, as this alternative closes 2,599,082 acres to mineral materials disposal, including areas within ¼ mile of riparian/wetland areas, LWCs designated as Wild Lands (571,288 acres), and some ACECs (208,914 acres). Closures under Alternative C (348,215 acres), A (231,854 acres), and D (184,193 acres), respectively, would result in decreasing adverse impacts to mineral materials disposal.

The BLM anticipates only limited development for coal, oil shale, and other solid leasable minerals during the life of the plan and, therefore, effects to the development of these resources from the alternatives are expected to be minimal.

Fire and Fuels Management

Fire is an integral part of natural ecosystem function; however, the natural fire regime largely has been suppressed in the Planning Area. Although the suppression of the natural fire regime is considered an adverse impact to fire ecology, actions contributing to an increase in the incidence of wildland fires or limiting the ability to effectively fight wildland fires are considered adverse impacts to fire management. Management under the alternatives would affect three aspects of fire and fuels management: wildfires (unplanned ignitions), stabilization and rehabilitation following fire, and prescribed fires (planned ignitions).

All alternatives utilize wildland fire to restore fire-adapted ecosystems and reduce hazardous fuels. Alternative C would result in the greatest potential for adverse impacts from human caused, unplanned ignitions due to increased access and additional travel routes under this alternative. Conversely, Alternative C would also result in the greatest beneficial impacts from active fuels management (i.e., this alternative allows the widest use of fuels treatments) and the greatest ability to employ fire suppression tactics, followed by alternatives A, D, and B respectively. Alternative C includes the greatest amount of mechanical fuels treatments by acreage (60,000 acres), followed by alternatives A and D (30,000 acres each), and Alternative B (5,000 acres), resulting in beneficial impacts to fire and fuels management by reducing fuels and thereby the potential for fire spread and severity. Fire suppression restrictions (e.g., prohibiting the use of heavy equipment on fragile soils) increase the potential for wildfire spread in the short term and may increase the need for stabilization and rehabilitation as more wildfires occur. However, intensive fire suppression that reduces the natural role of fire in the ecosystem may result in large catastrophic wildfires in the long term that require more-intensive stabilization and rehabilitation activities. Under all of the alternatives, implementing the BLM Emergency Stabilization and Rehabilitation standards in the U.S. Department of the Interior *Interagency Burned Area Emergency Response Guidebook* (DOI 2006b) and *BLM Burned Area Emergency Stabilization and Rehabilitation Handbook* (BLM 2007b) would prescribe activities that would allow rehabilitation of areas following a wildfire and reduce the potential for future fires in burned areas.

Prescribed fires can be used to meet resource objectives, such as for wildlife habitat enhancement, forage production, and fuel reduction; therefore, restricting the use of prescribed fire would result in primarily adverse impacts to fire and fuels management. The use of prescribed fire would be further restricted in WSR eligible waterways under alternatives A and B (all waterways are recommended as WSR suitable under Alternative B), and in ACECs. Alternative C would impose the fewest restrictions on the use of prescribed fire, resulting in prescribed burns on approximately 80,000 acres, or twice as many acres as alternatives A and D, and four times as many as Alternative B.

Biological Resources

Biological resources include vegetation, fish, wildlife, special status species, and wild horses. Vegetation resources analyzed in this RMP revision include forests and woodlands, grassland and shrubland

Executive Summary

communities, and riparian/wetland resources; these plant communities incorporate the major vegetation types in the Planning Area.

Long-term surface disturbance contributes to the decline in abundance, distribution, or health of vegetation communities in the Planning Area. Conversely, short-term surface disturbance from vegetation treatments would improve vegetation health and diversity, and may reduce the severity of wildland fires that destroy or permanently alter vegetation communities. Especially in forests and woodlands, active management, such as timber harvesting and silviculture treatments, would reduce the potential for catastrophic fires (the greatest threat to forests and woodlands), reduce the number of diseased trees, enhance age and species diversity, and reduce the spread of invasive species.

Alternative C would result in the most long-term surface disturbance and allows the most activities that would adversely affect forests and woodlands, such as retaining timber harvest roads post-harvest for recreational activities. Conversely, silviculture treatments under Alternative C would result in the greatest beneficial impact to forests and woodlands by employing a greater degree and extent of treatments to improve stand health and density, followed by alternatives D, A, and B respectively. Alternatives that allow the greatest use of silviculture treatments would result in the greatest beneficial impacts to the harvest of forest products.

Management actions that advance active vegetation management, such as mechanical fuels treatments and invasive species control measures, would result in beneficial impacts to grassland and shrubland communities. Conversely, management that would result in the potential for increased long-term surface disturbance, especially from minerals development, would result in adverse impacts to the abundance or distribution of these communities. Grasslands and shrublands are the largest habitat type in the Planning Area and, assuming a proportional distribution of the projected surface disturbance would occur in these communities, Alternative B would result in fewest adverse impacts from long-term surface disturbance (9,538 acres), followed by alternatives A and D (13,771 acres and 16,166 acres, respectively), and Alternative C (36,417 acres). Although it would allow more long-term disturbance than Alternative A, Alternative D may result in fewer long-term adverse impacts to these communities because it requires more stringent reclamation practices following disturbances and manages for the maintenance of contiguous blocks of native plant communities.

Impacts to riparian/wetland areas occur as a result of either direct surface disturbance or actions in a watershed that cause a change in riparian/wetland functionality, such as changes in sediment loading rates or hydrology. Alternative B would result in the greatest direct beneficial impacts to riparian/wetland resources through restrictions on surface-disturbing activities in proximity to riparian/wetland resources and through proactive management actions, such as watershed improvement projects. Alternatives D, A, and C, respectively, would result in less protection for riparian/wetland areas. Alternatives A, B, and D manage to prevent vegetation degradation and soil compaction in riparian/wetland areas from livestock grazing; Alternative C contains no such actions.

The presence of invasive species is considered an adverse impact to other biological resources in the Planning Area and, in spite of management proposed in this RMP, invasive species are expected to spread under all alternatives. Those alternatives projected to involve the greatest amount of surface disturbance would have the potential to result in the greatest adverse impacts from the spread of invasive species. Stringent reclamation requirements, especially requiring reclamation plans be created before allowing surface-disturbing activities, would decrease the likelihood of invasive species establishment. Based on projected surface disturbance and the types of preventative measures required, Alternative C would result in the greatest potential for the spread of invasive species, followed by alternatives A, D, and B. Alternative D is projected to result in greater surface disturbance than

Alternative A, but contains more stringent reclamation requirements that would result in a reduced potential for the spread of invasive species.

The health of riparian/wetland areas, and water quality and quantity would affect fish populations in the Planning Area. Increased sediment in fish habitat (streams, rivers, and reservoirs) decreases the potential for fish to naturally reproduce, fills in pools, leads to channel degradation, decreases light penetration and productivity, alters fish community composition, and increases stream temperature. Based on overall surface disturbance, reclamation practices, and fish habitat management including erosion control and reservoir design, Alternative B would result in the most beneficial impact to fish (including special status species fish), followed by alternatives D, A, and C respectively.

The primary adverse impacts to wildlife result from surface disturbance related habitat loss and fragmentation; the primary beneficial impacts to wildlife result from management that restricts surface-disturbing activities in known or potential wildlife habitat and disruptive activities (e.g., motorized vehicle use, recreation) that can cause the abandonment of nest sites or home ranges. Alternative B minimizes wildlife habitat loss and fragmentation in the Planning Area (e.g., closing areas to oil and gas development) to the greatest degree, followed by alternatives D, A, and C respectively. Under Alternative B, restricting motorized vehicle use and surface-disturbing activities in the Absaroka Front Management Area provides the greatest beneficial impacts to wildlife species, especially big game and predators. Less restrictive management is applied to the Absaroka Front Management Area under Alternative D, while under Alternative C, the area is managed consistent with other resource objectives, with the exception of limiting motorized vehicle use to designated roads and trails with seasonal closures. The area is not managed as a Management Area under Alternative A. Alternatives B and D designate 571,288 acres and 52,485 acres of LWCs as Wild Lands, respectively, and manage them to protect their wilderness characteristics, which would benefit wildlife by limiting resource uses in these areas. Alternative C restricts surface-disturbing activities in the fewest areas and contains the least management designed to improve habitat quality. Alternative B designates the most ACECs designed to preserve wildlife habitat, followed by alternatives D, A, and C respectively.

Impacts to special status plants, fish, and wildlife species are generally the same as those for vegetation, fish, and wildlife; however, all the alternatives include additional protective management for special status species. Overall, proactive management actions would be most beneficial to special status species under alternatives B, D, A, and C respectively. Allowable uses and management actions with potential to degrade water quality in the Bighorn and Clarks Fork of the Yellowstone Rivers and their tributaries would affect special status fish species. Alternative B would result in the greatest beneficial impacts to Yellowstone cutthroat trout and other special status fish species habitat; however, management for WSR suitable waterways under Alternative B would limit the ability to construct fish barriers to protect Yellowstone cutthroat trout, limiting the ability to use this type of management to protect this species in the future. Alternative B includes the most proactive actions to restore and enhance habitats for special status wildlife species. Alternative C would have the greatest adverse and fewest beneficial impacts to special status wildlife species, with the exception of the Absaroka Front Management Area. While alternatives A and D may result in adverse impacts to special status wildlife species, surface-disturbing activity restrictions, habitat management, and special designations under Alternative D include management that would limit these adverse impacts to a greater extent.

Wild horses are managed for self-sustaining populations of healthy, free-roaming animals in balance with other uses and the productive capacity of their habitat within Herd Management Areas (HMAs). Impacts to wild horses include management that affects vegetation for forage, the availability of water, or other habitat components necessary to maintain the health and free-roaming nature of horses at the appropriate management level in HMAs. Expansion of the McCullough Peaks HMA under alternatives B

and D would result in beneficial impacts to wild horses by adjusting the HMA boundary to more accurately correspond to the range the resident herd uses, rather than continued attempts to recapture and move horses.

Heritage and Visual Resources

Heritage and visual resources include cultural resources, paleontological resources, and visual resources management. Because cultural resources are fragile, often unique, nonrenewable resources that occupy relatively small areas, almost any management action has the potential to affect them. Primary impacts to cultural resources result from surface disturbance, visual intrusions, and theft and vandalism. Overall, Alternative C is projected to result in the most surface disturbance and, therefore would result in the greatest adverse impacts to cultural resources. However, despite the most use and the most potential impact, Alternative C incorporates a contemporary understanding of cultural resources management, in contrast to current management (Alternative A). Alternative B provides the greatest restrictions on all resource uses, and would result in the fewest adverse impacts to cultural resources. Alternative D reflects a middle of the road approach overall, providing less specific cultural resource protection than Alternative B, but acknowledging and specifying situations in which more protective measures will be needed to a greater degree than alternatives A or C.

The widespread presence of paleontological resources throughout the Planning Area and their close spatial association with extractive (i.e., mineral) resources present a number of management challenges. Any surface-disturbing activities in an area that physically alter, damage, or destroy fossils or their context may result in adverse impacts to important paleontological resources. Alternative B, by designating nine ACECs (116,116 acres) for paleontological values and subjecting the least acreage to surface-disturbing activities, would result in the least adverse impacts and most resource protection compared to the other alternatives. Alternative C provides the least protection and the greatest exposure to direct impacts from surface-disturbing activities, but may result in more identification of paleontological localities due to increased resource use. In terms of potential impacts, management under Alternative D falls between management under alternatives A and B; that is, Alternative D employs a less proactive management approach than Alternative B, but a similar approach to casual use and education.

Adverse impacts result from projects that create visual contrast with the natural form, line, color, or texture of the landscape to the extent that it degrades the visual values of an area, which are documented in the visual resource inventory. Under all alternatives, traditional resource uses and development will continue, allowing varying degrees of development and resulting in new contrast on the landscape. Alternative B is most protective of visual values, as it would manage almost the entire Planning Area consistent with or more restrictive than the classification determined from the visual inventory. Alternative B would therefore be the most effective at maintaining the existing, primarily undeveloped, character of the landscape; managing areas of lower visual value under more restrictive management may also lead to an enhancement of these areas, primarily over the long term. Under Alternative D, visual resource management (VRM) closely matches VRM Classes to their corresponding visual inventory classes (i.e., most visual inventory Class II areas are managed as VRM Class II); this management would thereby be aimed at retaining the visual values identified during the visual inventory. Alternatives A and C, would be the least protective of visual values as both alternatives manage substantial portions of the Planning Area below their visual inventory class, including substantial areas of visual inventory Class II managed as VRM Classes III and IV.

Land Resources

Land Resources include lands and realty, renewable energy, ROW, comprehensive travel and transportation management, recreation, LWCs, and livestock grazing management. Impacts to the lands and realty program from implementing the alternatives include land disposal, acquisition, and withdrawal, and management that makes realty actions more difficult to complete. Alternative B includes the most area for standard acquisition (228,164 acres), followed by Alternative D (228,148 acres), and Alternative C (87,068). Alternative C includes the largest area available for disposal (117,961 acres), followed by Alternative A (116,800 acres), Alternative D (66,022 acres), and Alternative B (24,267 acres). In the past, there has been an overall net decrease of BLM-administered land in the Planning Area and this trend is expected to continue under all the alternatives. Long-term impacts associated with the withdrawal and segregation of lands would be the greatest under Alternative B, because the BLM would withdraw the largest area, followed by alternatives A, D, and C.

ROWs are for infrastructure and facilities, including renewable energy facilities for wind, solar, and biomass, that are in the public interest and require authorization for location over, under, on, or through BLM-administered land. Adverse impacts to ROWs result from restrictions, in the form of avoidance/mitigation and exclusion areas, on the location of ROWs. ROW avoidance/mitigation and exclusion areas are the greatest under Alternative B (2,717,617 acres), followed by Alternative D (2,512,202 acres), Alternative C (1,174,335 acres), and Alternative A (941,778 acres). Under all alternatives, WSAs are renewable energy exclusion areas.

Adverse impacts to travel and transportation management result from restrictions on or closures of travel routes to motorized or mechanized vehicles, while beneficial impacts would result from management that increases access to public lands. Alternative C manages the largest area as open to cross-country travel, followed by alternatives D, B, and A respectively. Alternative B closes the greatest acreage to motorized vehicle use (136,474 acres), followed by alternatives D (60,681 acres), A (59,192 acres), and C (10,636 acres). Alternative B also limits the most acreage to designated roads and trails in the Planning Area (2,054,228 acres), followed by alternatives D (1,055,257 acres), C (951,992 acres), and A (787,626 acres). ROW exclusion areas would prevent the construction of new roads and trails authorized through ROW permits; alternatives B, A, D, and C contain the largest area of ROW exclusion areas respectively. Overall, Alternative C would cause the fewest adverse impacts (and the most benefits) to travel and transportation management, followed by alternatives A, D, and B.

Management that affects settings, experiences, and the ability of recreationists to achieve desired beneficial outcomes from uses on public lands (e.g., hunting or camping) are impacts to recreation. Alternative B would be the most effective at enhancing the recreational experience of users who want a primitive recreational experience, followed by alternatives D, A, and C respectively. Conversely, Alternative C results in the greatest beneficial impacts to motorized recreation opportunities, followed by alternatives A, D, and B respectively. Special designations and management for resource protection in ACECs and WSR eligible waterways (recommended as WSR suitable under Alternative B) that maintain their recreation settings for scenery and wildlife viewing would result in the greatest benefit to recreationists under Alternative B, followed by alternatives A, D, and C. Alternative B would result in the fewest conflicting resource uses that could displace recreation and degrade the recreation setting (e.g., mineral development and ROW authorizations), followed by alternatives D, A, and C respectively.

Approximately 18 percent of BLM-administered lands in the Planning Area are identified as LWCs; adverse impacts result from activities that degrade wilderness characteristics in these areas. Alternative B designates all of these areas (571,288 acres) as Wild Lands and manages them to protect their wilderness characteristics; this management would adversely affect resource uses and other activities (e.g., motorized vehicle use) that could degrade the naturalness, opportunities for solitude, and

primitive and unconfined recreation in these areas. Alternative D designates nine LWCs as Wild Lands (52,485 acres); the remaining LWCs under Alternative D are not designated as Wild Lands based upon identified resource conflicts. LWCs do not have any special management prescriptions under alternatives A and C, and the preservation of wilderness characteristics in these areas under these alternatives would be least effective. Alternative C would result in the greatest adverse impacts, due to the greater intensity of resource uses, in LWCs.

The primary impacts to livestock grazing result from management that alters the area available to livestock grazing, constrains the placement or types of range improvements, or changes the number of animal unit months (AUMs) available to operators. Overall, Alternative B would have the greatest adverse impacts on livestock grazing due to livestock grazing closures on 1,988,927 acres; livestock grazing closures under alternatives A, D, and C would occur on 5,171 acres. Over the long term, surface disturbance and closing areas to livestock grazing would result in the greatest loss of AUMs under Alternative B (163,927 AUMs), followed by Alternative C (4,130 AUMs), Alternative D (1,930 AUMs), and Alternative A (1,670 AUMs). Alternative C would result in the greatest beneficial impacts to livestock grazing as it contains the fewest restrictions on livestock grazing management and livestock forage production and utilization.

Special Designations

Special Designations include ACECs, National Back Country Byways, National Historic Landmarks, NHTs and Other Historic Trails, WSRs, and WSAs. ACECs are designated to protect resources, natural systems, and natural hazards (i.e., ACEC values of concern); values of concern in ACECs proposed in the Planning Area include paleontological, vegetation, wildlife, special status species, cultural, recreational, and scenic values. To protect the values of concern, ACECs commonly include restrictions on mineral development and other surface-disturbing activities (e.g., mechanical fuels treatments and range improvements) or motorized vehicle use. Alternative B would designate the most acreage as ACECs (299,954 acres), followed by Alternative D (103,128 acres), Alternative A (71,297 acres), and Alternative C (12,144 acres). Alternative B would be the most effective at protecting the values of concern within ACECs by restricting resource uses and activities within these areas, followed by alternatives D, A, and C respectively.

National Back Country Byways are designated to protect important recreational travel routes; the primary impacts to these routes include management that limits or prevents public use. The Red Gulch/Alkali Road National Back Country Byway exists under all alternatives. Alternative B would be the most beneficial to the recreational use of National Back Country Byways as it designates two new byways, Hyattville Logging Road and the Hazelton (33-Mile) Road; Alternative D is the second most beneficial as it designates the Hyattville Logging Road and considers additional designations on a case-by-case basis. Alternatives A and C do not designate additional byways.

The Heart Mountain Relocation Center National Historic Landmark is on BLM-administered mineral estate with BLM-administered surface in view of the site. Impacts to the National Historic Landmark principally result from activities that affect the site's historical setting (i.e., viewshed). Under all the alternatives, the 72-acre National Historic Landmark would be withdrawn from appropriations under the mining laws and protected from direct impacts from surface-disturbing activity associated with mineral development. The greatest adverse impacts to the National Historic Landmark would occur under Alternative A, which applies the fewest restrictions on mineral development within the viewshed of the National Historic Landmark. Alternative B restricts surface-disturbing mineral development in the viewshed of the National Historic Landmark to the greatest degree, resulting in the greatest beneficial impacts under this alternative, followed by alternatives D, C, and A respectively.

NHTs are designated to protect cultural resources; the principle impacts to the Nez Perce (Neeme-poo or Nimi'ipuu) NHT, the only NHT in the Planning Area, and Other Historic Trails arise directly from development activities and intrusions into the viewshed that alter the environment that contributes to the trail's significance. Alternative B provides the greatest protection for these trails through the application of larger buffer zones for surface-disturbing activity (both no surface occupancy [NSO] and controlled surface use [CSU] stipulations) and restrictions on motorized vehicle use. The larger acreage of special designations and limited resource use under Alternative B also reduce the potential for direct and indirect adverse impacts. Alternative C allows the greatest resource use, and provides the least protection through special designations, but does provide more effective proactive management, including NSO and CSU restrictions, than Alternative A. Alternative A, the existing management, includes the least effective proactive management, in part because of the change in understanding of the adverse impact of viewshed intrusions that has evolved since this management was developed. However, management under Alternative A would result in less resource use than Alternative C, and adverse impacts would likewise be less under this alternative. Alternative D provides protection similar to Alternative B, but emphasizes viewshed protection that would result in a reduced potential for adverse impacts than alternatives A and C, but more than Alternative B.

Alternatives A and B manage the 20 WSR eligible waterways and associated waterway corridors (all of which are recommended as WSR suitable under Alternative B) to preserve their free-flowing characteristics, outstandingly remarkable values (ORVs), or characteristics that justified their tentative classifications. In contrast, under alternatives C and D, the BLM manages all of these waterways as unsuitable for inclusion in the NWSRS and does not apply special management to preserve ORVs and free-flowing characteristics. Alternatives A and B are the most protective of these waterways and would result in the greatest beneficial impact to the free-flowing characteristics, ORVs, and characteristics that justified their tentative classifications as wild, scenic, or recreational waterways by restricting or limiting resource uses that could degrade these qualities. Alternatives C and D include the least restrictive management of several resource uses and would have the fewest adverse impacts on mineral development, livestock grazing, and timber harvesting. Due to the extent and intensity of the restrictions under Alternative B, the beneficial impacts to the WSR-related qualities and the adverse impacts to other activities and resource uses would be greatest under this alternative.

WSAs exist under all alternatives and are managed under the Interim Management Policy and Guidelines for Lands Under Wilderness Review, which restricts discretionary activities in WSAs to ensure that their suitability for Wilderness designations is not impaired. Although there are limited discretionary actions the BLM can take that would affect WSAs, management under Alternative B would result in the greatest beneficial impacts to WSAs by emphasizing resource protection and limiting the potential for activities, such as motorized vehicle use, in and adjacent to WSAs that may adversely affect wilderness characteristics, followed by alternatives D, A, and C, respectively.

Socioeconomic Resources

Socioeconomic resources include social conditions, economic conditions, health and safety, environmental justice, and tribal treaty rights.

Impacts to social conditions in the Planning Area include changes in population, such as fluctuations caused by economic boom and bust cycles; changes in the demand for housing and community services along with community fiscal conditions, which can impact the ability of state, regional, and local governments to supply community services such as education; and changes in community character, culture, and social trends. Social conditions are closely tied to economic impacts, including changes in regional economic output, employment, and earnings, and in tax revenues for the local, state, and

federal governments. Based on modeling as well as qualitative analysis of economic activity from other sectors, earnings, output, employment, and tax revenues due to activities on BLM-administered surface land and mineral estate would be highest under Alternative C, less under alternatives A and D, and substantially less under Alternative B. Implications on the social conditions in the Planning Area would be greatest from reduced oil and gas development and livestock grazing and increased emphasis on recreational opportunities and land preservation under Alternative B. Conversely, under Alternative C, increased openness of areas to oil and gas development would bring more job opportunities, greater demand for community services, and greater tax revenues to local governments—allowing them to expand community services to meet the needs of a slightly higher population. Alternative D balances the resource conservation and development approaches.

Programs to manage health and safety include the management of AMLs, natural geologic hazards, and hazardous wastes and materials; impacts to the health and safety program would result from management that affects the risk of accidents in the areas in which AMLs, geologic hazards, or hazardous waste and materials spills or releases occur. Under all alternatives, the BLM and Wyoming Department of Environmental Quality identify and plan for remediation of AML sites. Alternative C would result in the greatest risk to health and safety from the management of AMLs by not prioritizing sites for reclamation and by allowing activities in mitigated AMLs. Alternative A contains no specific management for activities in geologic hazard areas, compared to the prohibition of activities under Alternative B, and allowing activities in mitigated geologic hazard areas under alternatives C and D. Under all alternatives, the impacts from management of hazardous wastes and materials would be the same, though the potential for impacts may vary by alternative with greater potential impact from increased mineral development activity.

While minority and low-income populations exist in the Planning Area, none of the alternatives are expected to result in disproportionate adverse impacts to these populations. There are no tribal treaty rights or trust responsibilities within the Planning Area, however, the BLM would continue to consult with interested tribes regarding issues of importance to the tribes under all alternatives.

THE NEXT STEPS

This Draft RMP and Draft EIS, now issued, provides 90 days for public comment. A series of seven public meetings on this Draft RMP and Draft EIS are scheduled during the 90-day comment period in Thermopolis, Worland, Greybull, Cody, Powell, Lovell, and Meeteetse, Wyoming. Following the 90-day public comment period, the BLM will prepare a Final EIS considering comments submitted. The Proposed RMP and Final EIS is scheduled for release in fall 2011 with a Record of Decision scheduled for May 2012.