

EXECUTIVE SUMMARY



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OVERVIEW

The United States Department of the Interior (DOI), Bureau of Land Management (BLM) has prepared this draft revision of the Resource Management Plan (RMP) to provide direction for managing public lands under the jurisdiction of the Butte Field Office (BFO) in mid-western Montana and an environmental impact statement (EIS) to analyze the environmental effects that could result. The affected lands are currently being managed under two plans: the Headwaters Resource Management Plan (USDI-BLM 1984a) and the Dillon Management Framework Plan (MFP) (USDI-BLM 1979). The Headwaters RMP has been formally amended on eight occasions and the Dillon MFP has been formally amended on three occasions. In addition, several new laws, regulations, and policies have affected management of public land since approval of both plans.

Land use planning is used to manage resources and to designate uses on public lands in coordination with tribal, state, and local governments, land users, and interested public. This RMP: 1) incorporates new information and regulatory guidance, and 2) provides management direction where it may be lacking or requires clarification. The RMP is being revised according to guidance in the Federal Land Policy and Management Act (FLPMA) of 1976 (43 US Code [USC] 1701 et seq.) and BLM's Land Use Planning Handbook, H-1601-1. An EIS is incorporated into this document as required by the National Environmental Policy Act of 1969 (NEPA), Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508) (CEQ 1978), and requirements of BLM's NEPA Handbook, H-1790-1 (USDI-BLM 1988).

PURPOSE OF AND NEED FOR REVISING THE PLAN

Since the original plans were approved, several conditions have changed. These include:

- Changed ecological, socioeconomic, institutional, and regulatory conditions;
- Many new laws, regulations, and policies that invalidate or supersede previous decisions;
- Changing user demands and activities;
- Changing acceptance of impacts; and
- Changes in the BFO boundaries.

These conditions drive the need for an inclusive, comprehensive plan that provides updated, clear direction to both BLM and the public.

The purpose of the RMP is to provide a single, comprehensive land use plan to guide management of public

lands administered by the BFO. The plan provides objectives, land use allocations, and management direction to maintain, improve, or restore resource conditions and to support the long-term economic needs of local communities. In the context of site-specific travel planning, there is a need to develop travel plans that meet the needs of public and administrative access, are financially affordable to maintain, and minimize user conflicts and natural resource impacts associated with roads and trails.

DECISIONS FROM THIS PLAN

This RMP will provide the basis for two types of decisions. Land Use Plan decisions will be those associated with management prescriptions and activities tied to the various Resource and Resource Use visions, desired future conditions, and goals in the plan. Management, such as the range of acres for vegetation treatments by alternative, Fire Management Unit designations, and whether or not to implement Riparian Management Zones are examples of Land Use Plan Decisions. The only implementation decisions to be made from this document will be associated with five site-specific travel plan areas (Helena, East Helena, Lewis and Clark County Northwest, Upper Big Hole, and Boulder/Jefferson City) where travel route-specific management decisions will be made.

ISSUES

PLANNING ISSUES

A planning issue is a major controversy or dispute regarding management of resources or uses. These issues drive the formulation of the range of alternatives considered in this EIS.

Issue 1: Vegetation Communities

How will vegetation on BLM lands be managed to achieve healthy ecosystems while providing for a broad range of multiple uses?

Issue 2: Wildlife, Wildlife Habitat, Special Status and Priority Plant and Animal Species

How will BLM lands be managed to provide wildlife and fish habitat, and to conserve, and recover special status and priority species?

Issue 3: Travel Management and Access

How should the BLM manage motorized public travel to meet the needs for public access and resource uses while minimizing user conflicts and impacts to air, soil, watershed, vegetation, wildlife, and other resource values?

Issue 4: Recreation

How should recreation be managed to accommodate the full range of recreational uses enjoyed by the public on BLM lands?

Issue 5: Special Designations including ACECs, National Trails, Wild and Scenic Rivers, and WSAs

Which areas, if any, should be managed as special designations? How should they be managed to protect values that warrant their special designation status?

Management Concerns

Management concerns are topics that involve a resource, resource management activity or land use that generally do not have enough controversy surrounding them to generate different RMP alternatives to address them. While these concerns are addressed in the plan, management related to them may or may not change by alternative.

Management concerns included:

- Air Quality;
- Soil Resources;
- Water Resources;
- Cultural Resources, Traditional Cultural Properties and Paleontological Resources;
- Visual Resources;
- Lands and Realty;
- Minerals and Energy;
- Abandoned Mine Lands;
- Hazardous Materials;
- Social and Economic Environment;
- Prime or Unique Farm Land;
- Environmental Justice; and
- Tribal Treaty Rights including Native American Religious Concerns.

DESIRED FUTURE CONDITIONS

The overall vision for the Decision Area is expressed in the desired future conditions and management goals summarized below.

Issue 1: Vegetation Communities

The desired future condition is for vegetation to fall within the historic range of variability, with diverse, site-appropriate plant communities that contain healthy populations for native species.

- **Forests and Woodland** - Maintain or restore healthy stands of site appropriate species with a di-

versity of age classes and structure for wildlife habitat, soil stability, and wood products for present and future generations.

- **Upland and Riparian Resources** - Provide a sustained level of livestock grazing while maintaining healthy public land resources.
- **Wildland Fire Management** - Protect public health, safety, and property.

Issue 2: Wildlife, Wildlife Habitat, Special Status and Priority Plant and Animal Species

The desired future condition is for BLM lands to provide a diverse landscape with native vegetation communities that provide suitable habitat to maintain viable and well distributed populations of native wildlife species on public land.

Issue 3: Travel Management and Access

The vision is to provide a range of quality motorized and non-motorized opportunities, and reasonable access for management while protecting natural resources, now and in the future.

Issue 4: Recreation

The vision is to provide a range of quality recreation opportunities, services, and appropriate facilities for public use and enjoyment.

Issue 5: Special Designations including ACECs, National Trails, Wild and Scenic Rivers and Wilderness Study Areas

The vision is to protect relevant and important ACEC values and manage for appropriate uses; protect established National Trail values and manage for appropriate uses; protect Outstandingly Remarkable Values in Wild and Scenic River-eligible river segments and manage for appropriate uses; protect wilderness characteristics in Wilderness Study Areas.

Management Concerns

Air Quality

Air resources are maintained to protect human health and the environment.

Soil Resources

Stable soils contribute to properly functioning watersheds and support productive plant communities consistent with site potential.

Water Resources

Water bodies have sufficient water quality to meet state and federal standards, and support designated beneficial uses.

Cultural Resources, Traditional Cultural Properties and Paleontological Resources

There is a minimal loss or degradation of cultural resources, traditional cultural properties, and paleontological resources within the BFO.

Visual Resources

A spectrum of visual qualities are provided and protected for the public. RMP alternatives establish Visual Resource Management (VRM) Classifications to guide the management of public land based on scenic quality, sensitivity levels, and distance zones.

Lands and Realty

The needs of the public are met and support for all BLM resource programs is provided.

Minerals and Energy

Use of geologic resources recognizes the need for domestic sources of energy and minerals.

Abandoned Mine Lands

Threats to human health and the environment from historic mining activities on public land are reduced.

Hazardous Materials

Employees, the public, and the environment are protected from exposure to hazardous materials in public facilities or on public land.

Social and Economic Environment

Conservation, stewardship, and partnerships on public land are cultivated for the use and enjoyment of present and future generations.

OVERVIEW OF THE ALTERNATIVES

There are four alternatives considered in detail. This section provides a brief overview of each of those alternatives. Alternatives considered in detail include one “No Action” Alternative (Alternative A), and three “action” alternatives (Alternatives B-D) that would reflect various levels of change from the existing Headwaters RMP and Dillon MFP direction.

All alternatives include management direction that is not being revised. This direction is presented in the section “Management Common to All Alternatives” and is not described in this overview. Continued management direction reflects the following categories:

1. Management Direction from legal statute, regulation, or manual direction. This management direction may not have been specifically included in the Headwaters RMP or Dillon MFP but includes management direction for things such as restricted uses near bald eagle nests or current regional decisions on noxious weed abatement techniques.
2. Management Direction from the Headwaters RMP/Dillon MFP, including amendments by subsequent modifications from other decisions that are not being revised by the Butte RMP.

Some potential management options identified early in this planning process were resolved using one approach in the “action alternatives”. These are identified under the category “Management Common to Action Alternatives” in the “Alternatives Considered in Detail” section. This management guidance represents areas where there was generally little controversy over that particular aspect of management. One example of this approach is the common management direction for the “action” alternatives to maintain or improve habitat conditions for special-status plant species by altering or removing trees and shrubs, prescriptive livestock grazing, prescribed and managed wildland fire, and planting. These components are not included in this overview.

ALTERNATIVE A – NO ACTION

Alternative A is the continuation of present management, referred to as “No Action”. This alternative would continue present management practices based on existing land use plans and other management decision documents. Direction contained in the Headwaters RMP and the Dillon Management Framework Plan would continue to be implemented. Direction contained in existing laws, regulations, and policies would also continue. The current levels, methods, and mix of multiple use management would continue, and resource values would receive attention at present levels. Motorized access and motorized recreational opportunities would not change from the current condition. Eligible Wild and Scenic River segments would continue to be managed to protect the values that make them eligible.

ALTERNATIVE B – PREFERRED ALTERNATIVE

This alternative emphasizes moderate levels of resource protection, use, and restoration. Alternative B places a priority on vegetative restoration. Quantities of forest-based commodity resources from vegetation restoration activities would be similar to Alternative A, greater than in Alternative C, but less than in Alternative D. Project-level wildlife habitat and riparian management measures would be greater than in Alternatives A and D, but less than in Alternative C.

Alternative B emphasizes a balance of motorized and non-motorized recreation and access opportunities com-

pared to the other action alternatives (C and D). Two rivers would be recommended as “suitable” for Wild and Scenic River designation. There would be more oil and gas leasing management measures than in Alternatives A and D, but less than in Alternative C.

Alternative B represents the mix and variety of actions that in the opinion of BLM, best resolves the issues and management concerns and is therefore considered BLM’s Preferred Alternative.

ALTERNATIVE C

Alternative C emphasizes a lesser degree of vegetative restoration than any of the other alternatives. Production of forest-based commodity resources from vegetation restoration activities would be lowest of all alternatives. This alternative emphasizes a greater degree of project-level wildlife habitat and riparian management measures than in any other alternative.

Alternative C emphasizes non-motorized recreation opportunities more than the other alternatives. All potential Areas of Critical Environmental Concern would be designated with this alternative. All four river segments eligible for Wild and Scenic status would be found suitable and recommended for Wild and Scenic designation. Alternative C provides for the most oil and gas leasing management measures of any alternative.

ALTERNATIVE D

Alternative D emphasizes the greatest degree of active management to restore vegetative communities and would produce the greatest quantities of forest products from vegetation restoration activities of all alternatives. Alternative D features fewer wildlife habitat and riparian management measures than Alternatives B and C, but more than Alternative A.

This alternative emphasizes motorized access and recreation opportunities more than Alternatives B and C. No river segments eligible for Wild and Scenic status would be recommended as suitable for Wild and Scenic designation with this alternative. Alternative D would have the fewest oil and gas leasing management measures of all the alternatives.

ENVIRONMENTAL CONSEQUENCES

Effects on all resources from all actions are described in detail in Chapter 4. This section contains a summary of the effects by alternative as related to the Planning Issues.

ISSUE 1: VEGETATION COMMUNITIES

Grassland and Shrubland

In Alternative A, vegetation treatments would occur on 5,250 acres of grasslands and shrublands per decade.

Because conifer encroachment into these habitats is occurring at a rate of approximately 6,411 acres per decade, conifer encroachment would continue to increase at a net rate of 1,161 acres per decade under Alternative A. Alternative B would restore up to 15,450 acres per decade of grassland and shrubland communities for a net increase in restored grassland/shrubland habitat on 9,039 acres per decade. Alternative C would treat up to 2,700 acres per decade resulting in a net increase in conifer encroachment (3,711 acres per decade) rather than an increase in restored habitat. Alternative D would treat up to 25,900 acres per decade resulting in a greater net increase in restored habitat (19,489 acres per decade) than under any other alternative.

In Alternative A, prescribed fire would reduce fuel loading and remove encroaching conifers and there would be no timing restrictions for prescribed burning. Under Alternative B prescribed burns would be planned to burn 80 percent by area (on average) of planned burn units, leaving conifers in a mosaic of unburned patches within units. Soil, grasses, and forbs would be protected from fire-related mortality during hotter drier months by imposed burning restrictions May-August. Prescribed burns to treat conifer encroachment in Alternative C would be planned to burn 60 percent by area (on average) of each unit (leaving more conifers in unburned patches than Alternative B) and would have the same seasonal restriction as Alternative B. These prescribed burns in Alternative D would be planned to burn 90 percent of each unit without the seasonal restriction described above.

Alternative A would include no conversion of non-native grassland vegetation to native grasslands at McMasters Hills and Ward Ranch. Alternatives B, C, and D would convert up to 850 acres in these areas to native grasslands, which would provide benefits to grassland habitat in this area that would not occur with Alternative A.

Forests and Woodlands

In dry forest types, Alternative A would treat the least acres per decade (5,100 acres) to help restore historic conditions and still exceed the rate of decline in forest health, as well as the least acres of cool, moist forest (2,400 acres) to help restore historic conditions and still exceed the rate of decline in forest health. Alternative B would treat the second most acres of dry forest treated per decade (up to 14,750 acres) and cool, moist forest treated per decade (up to 3,750 acres). Alternative C treats the least acreage (up to 4,800 and 500 respectively), and vegetation would not be restored at a rate exceeding the rate of decline in forest health. Alternative D would treat the most acres of each (up to 18,200 and 5,050 respectively) and would move the greatest number of forested acres back toward historic condition of all alternatives.

Under all action alternatives, timber harvest is considered a tool for meeting forest health and restoration goals. The following levels of forest product removal are directly related to the amount of forest health and ecosystem restoration proposed as follows. Alternative A would result in a Probable Sale Quantity (PSQ) of 12 to 27 Million Board Feet (MMBF) (40,000 to 97,000 Hundred Cubic Feet (CCF)) per decade. Alternative B would result in a PSQ of 9 to 25 MMBF (33,000 to 91,000 CCF) per decade. Alternative C would result in a PSQ of 5 to 12 MMBF (19,000 to 41,000 CCF) per decade. And, Alternative D would result in a PSQ of 10 to 30 MMBF (36,000 to 107,000 CCF) per decade.

Noxious Weeds

Proposed noxious weed treatments vary across the alternatives, mainly dependent on the amount of disturbance proposed by other management actions as well as the number of designated open roads. Alternative A would treat a minimum of 20,000 acres per decade, with Alternative B slightly higher at a minimum of 21,000 acres of treatment per decade. Management under Alternative C would result in the least amount of treatment at a minimum of 16,000 acres per decade, with the greatest amount of treatment in Alternative D at a minimum of 25,000 acres per decade. Even with continued or increased noxious weed treatments, all alternatives would result in a projected increase of noxious weeds infestations on public lands in the BFO by 2015. Infestations are projected to spread to 43,000 acres under Alternative A management, 48,000 acres under Alternative B, 51,000 acres under Alternative C, and 47,000 acres under Alternative D. Alternative A would have the greatest amount of weed infestation associated with open roads at 67 acres, with Alternative B at 46 acres, Alternative C at 42 acres, and Alternative D at 52 acres.

Riparian

Alternative A would manage 3,270 acres of riparian and associated upland vegetation in Streamside Management Zones (SMZs) and mechanically treat or prescribe burn 30 acres of riparian vegetation per decade to restore communities to properly functioning condition. (This treatment figure is a continuation of what has occurred, however the Headwaters RMP allows treatment in all riparian areas subject to other management constraints.)

Alternatives B and C would both include the concept of Riparian Management Zones (RMZs) where riparian ecological health would be the primary focus. Alternative B would manage 10,461 acres of riparian and associated upland vegetation in RMZs and mechanically treat or prescribe burn up to 700 acres per decade to improve vegetative conditions. Alternative C would manage 19,620 acres in RMZs and mechanically treat or

prescribe burn up to 200 acres per decade. Alternative D would manage the same amount of acres in SMZs as Alternative A. By mechanically treating or burning up to 1,700 acres per decade to meet site-specific riparian objectives, Alternative D would provide the shortest period required to restore riparian vegetation communities to proper functioning condition. Additional acres of riparian communities would be restored through implementation of livestock grazing guidelines and AML reclamation under all alternatives.

Wildland Fire Management

Alternative A provides for 7,300 acres of Category A fire management in which wildland fire is not desired and prescribed fire cannot be used as a fuels reduction tool. It treats the second least acres (12,780 acres/decade) for fuel reduction of all alternatives. Lower fuel levels would result in a reduced potential for high-severity fires. Alternative A provides the most opportunities for human caused wildland fire due to it having the greatest number of open road miles of all alternatives.

Alternative B provides more flexibility to manage fires since there would be no Category A designations. It treats the second most acres for fuels reduction (up to 34,650 acres/decade) and would reduce fire intensity and behavior, improve fire fighter safety, and move towards historic fire regime more than Alternatives A and C. Extent of motorized access for fire suppression and fuel reduction treatments would be the second lowest of the alternatives. However, this also provides the second least amount of opportunity for human-caused fire ignitions of all alternatives.

Alternative C would be the most restrictive fire management with most acres (41,000) of Category A fire management. The least acres would be treated for fuels reduction (up to 8,200 acres/decade), which would do the least of all alternatives to reduce fire intensity and behavior, improve wildland fire fighter safety and move toward historic fire regimes. It provides the least motorized access for fire suppression and fuel treatments and the fewest opportunities for human-caused wildland fire associated with road access.

Alternative D allows the greatest flexibility in fire management. It treats the most acres for fuels reduction (up to 50,850 acres/decade) and would do the most of any alternative to reduce fire intensity and behavior, improve wildland fire fighter safety, and move toward historic fire regimes. The second highest level of motorized access for fire suppression and fuel reduction treatments would be provided of all the alternatives, along with the second greatest opportunity for human-caused fire ignitions.

ISSUE 2: WILDLIFE, WILDLIFE HABITAT, SPECIAL STATUS AND PRIORITY PLANT AND ANIMAL SPECIES

Wildlife

In all vegetation types, vegetation treatments in Alternative A would provide less restoration of habitat than Alternatives B and D. Alternative C would provide the least vegetation restoration of all alternatives. Alternative D would treat and restore more habitat than all other alternatives but would also have the most short-term adverse effects from treatments and temporary road construction than all other alternatives.

Alternative A would have the greatest miles of open road (471.8 miles open yearlong) and would have the least amount of road restrictions of all alternatives. This would cause the most negative impacts on wildlife and habitat from disturbance, road kill, habitat alteration and loss (from weeds, firewood cutting and trespass), and habitat fragmentation of all alternatives. Alternative B would have fewer open roads (261 miles open yearlong) than Alternatives A and D but 7 percent more than Alternative C. The benefits to wildlife from fewer open roads would be the greatest in Alternative C (244.3 miles open yearlong). Alternative D (304.8 miles open yearlong) would have 17 percent more open roads than Alternative B, 25 percent more than Alternative C, but 55 percent less than Alternative A.

Bighorn Sheep Management

Domestic sheep and goat grazing can detrimentally affect native bighorn sheep by creating competition for resources and allowing for introduction of diseases into bighorn sheep populations. Alternatives A and D provide the least amount of protection of wild sheep from the effects of domestic sheep and goat allotments and from weed control using domestic sheep and goats because they lack specific buffers between domestic sheep/goat grazing and occupied bighorn sheep habitat. Alternative B would allow no new sheep/goat allotments in occupied bighorn sheep habitat or within a five-mile buffer. Under Alternative B, sheep and goats could not be used for weed control within 2 miles of occupied native sheep habitat. Alternative C offers the greatest protection from disease and competition for resources due to the largest mandatory buffer (nine miles) between bighorn sheep and domestic sheep/goat allotments. Under Alternative C, sheep and goats could not be used for weed control within 4 miles of occupied native sheep habitat.

Big Game Management

Alternative A contains little direction related to road density within important big game areas. No unroaded blocks would be protected as security habitat.

Alternative B would protect more winter range than Alternatives A and D by managing to reduce the road density to 1.0 mile/mi² or less in the five site-specific travel plan areas and by allowing no net increase in permanent roads where current road densities are 1 mi/mi² or less in winter range. Alternative B would also provide more security habitat by protecting 250-acre blocks of forested habitat as unroaded during hunting season. It provides more wildlife corridor in low road density than Alternatives A and D, but less than Alternative C.

Alternative C would have the most improvement to big game winter range by having the lowest road density (road densities in winter range would be 0.8 mi/mi² or less in the five site-specific travel plan areas) and by allowing no net increase in permanent roads where road densities are 1.5 mi/mi² or less in winter range. Alternative C would also improve more big game security habitat by closing more roads within 500 acre blocks of forested habitat during the hunting season. It would also provide the most connectivity and least fragmentation of habitat because it provides for the most acres of low road density in wildlife movement corridors.

Alternative D would provide less protection to winter range because more roads would be allowed to remain open in winter range (road densities in winter range would be 1.2 mi/mi² or less in the five site-specific travel plan areas) than in Alternatives B and C, but less than in Alternative A. Under Alternative D, winter range would continue to be degraded or lost because net increases in permanent road mileage would be allowed in areas where road densities exceed 0.5 mi/mi². Alternative D would provide less connectivity and more fragmentation than Alternatives B and C due to fewer acres of low road density in wildlife movement corridors.

Fish

Alternatives A and D provide some protection for fish and aquatic and riparian habitats through Streamside Management Zones (SMZs). Alternative B provides more protection with Riparian Management Zones (RMZs) where management would be focused primarily on meeting site-specific riparian objectives, including aquatic resource objectives. RMZs under Alternative B would be an average of 160 feet wide for fish bearing streams (either side of stream), compared to generally 50 foot widths of SMZs in Alternatives A and D. RMZs are the widest in Alternative C (300 feet on either side of fish-bearing streams), providing the most protection to aquatic and riparian habitats for a diversity of species. RMZ widths on perennial non fish-bearing streams would be 80 feet in Alternative B and 150 feet in Alternative C. RMZ widths on intermittent streams would be 50 feet in both Alternatives B and C.

RMZs (Alternatives B and C) would reduce sediment inputs in streams, and provide for more long-term large wood recruitment, more streamside shade and nutrient

inputs, and better long-term riparian vegetation health compared to SMZs (Alternatives A and D).

Roads in riparian areas can have effects on fish and aquatic habitat including sedimentation; loss of shade, ground cover, and large wood recruitment due to preclusion of riparian vegetation; and alteration of stream channel morphology due to roads impacting stream channel or floodplain function. Miles of open road within 300 feet of streams were used as an indicator to assess the relative degrees to which these direct and indirect impacts may occur by alternative. Alternative A would likely have the greatest degree of these negative impacts with 87.7 miles of open road within 300 feet of streams. These effects would be less under Alternative B with 70.8 miles of road and less still under Alternative C with 67.1 miles of open road. Alternative D would have the second greatest degree of impact due to its 74.6 miles of open road within 300 feet of streams. Under Alternative A there would be 17.1 miles of closed roads within 300 feet of streams. Alternatives B, C, and D would all reduce these impacts to varying degrees by closing or decommissioning 33.9, 37.6, and 30.2 miles of road within 300 feet of streams, respectively.

Special Status and Priority Wildlife, Fish, and Plants

Wildlife

Alternative A would provide no seasonal buffers for noise/human activity disturbance to raptor nests, or bald eagle roost and nest trees and would have the greatest disturbance due to motorized access. Alternative B would provide a seasonal buffer (from noise and human activity) to occupied ($\frac{1}{2}$ mile) raptor nests ($\frac{1}{4}$ mile) and reduce motorized disturbance to occupied nest sites more than Alternatives A and D. Alternative C would provide the greatest protection for raptor nests with a 1 mile buffer around occupied nests to protect nests from disturbance and loss of habitat. The buffers would be the smallest ($\frac{1}{4}$ mile for occupied nests) and motorized access reduced the least of the action alternatives in Alternative D.

Alternative A protects the least amount of habitat for grizzly bear by allowing the highest density of open roads within the distribution of grizzly bear and by not limiting the miles of road that could be built in grizzly bear habitat. Alternative B provides more protection for grizzly bears by providing for lower road densities in their habitat ($0.8 \text{ mi}/\text{mi}^2$ in distribution zone) than Alternatives A and D and reduces the potential for human-bear conflicts. Alternative B also improves and increases habitat for grizzly bear by allowing no net increase in permanent roads in grizzly habitat where the road density is $1 \text{ mi}/\text{mi}^2$ or less. Alternative C would protect the most habitat for grizzly bear from loss of habitat and disturbance from open roads by allowing no net increase in permanent roads in grizzly bear distribution area where open road densities are $1.5 \text{ mi}/\text{mi}^2$ or less. Alter-

native C has the most acres benefiting from low road densities, the fewest acres impacted by high road densities and provides the greatest benefit to grizzly bear habitat by reducing fragmentation, protecting larger blocks of habitat and reducing disturbance (road density of $0.6 \text{ mi}/\text{mi}^2$ in distribution zone). Of the action alternatives, Alternative D would restore and protect the fewest acres of habitat within the distribution of grizzly bear by allowing more open roads ($1.3 \text{ mi}/\text{mi}^2$ in distribution zone).

There would be approximately 49,000 acres unavailable for oil and gas leasing under Alternative A. This is more than under Alternatives B and D (28,777 acres) but less than Alternative C (600,650 acres). Alternative A would have No Surface Occupancy on 265,296 acres, which is less than Alternative B (292,171 acres) but more than Alternative C (26,109 acres) and D (104,069 acres). Alternative A would have fewer acres protected with timing limitations and controlled surface use (325,164 acres) than Alternative B (337,389 acres) and Alternative D (468,547 acres) but more than Alternative C (32,504 acres). Alternative B would protect the most acres with timing limitations for big game, sage grouse, and raptors and would have more acres under No Surface Occupancy (292,171) than any other alternative. Alternative C would protect the most habitats for all species by not allowing oil and gas leasing on over 600,000 acres. Alternative D would protect most species with controlled surface use and timing limitations.

There would be eight sensitive species given protection under all alternatives with oil and gas stipulations; prairie dog, sage grouse, ferruginous hawks, peregrine falcons, raptor breeding territories, westslope cutthroat trout, Yellowstone cutthroat trout, and arctic grayling.

Under Alternative A, all sensitive species could be protected with a No Surface Occupancy (NSO) stipulation up to $\frac{1}{4}$ mile with the exception of sage grouse which would have a smaller area protected around leks and timing restrictions in winter/spring habitat.

Alternatives B and D would have similar stipulations for sensitive species with only four stipulations that differ. Under Alternative D there would be Standard Lease Terms for raptor breeding territories compared to timing restrictions under Alternative B. Ferruginous hawks would be given a timing restriction under Alternative D but a NSO under Alternative B and westslope cutthroat trout, Yellowstone cutthroat trout and arctic grayling would have a Controlled Surface Use (CSU) stipulation within $\frac{1}{2}$ mile of their habitats with Alternative D but a NSO within $\frac{1}{2}$ mile of their habitats under Alternative B.

Alternative C would provide the most protection of all alternatives to sensitive species with either No Leasing or NSO stipulations throughout most of their habitats.

All federally listed species would be protected in habitats where they are found with a CSU stipulation under all alternatives. The action alternatives would provide

additional protection for four currently listed species (grizzly bear, gray wolf, bald eagle, and bull trout) through the use of NSO, timing restrictions or No Leasing. Of the action alternatives, Alternative C would provide the most protection to currently listed species and Alternative B would provide more protection than Alternatives A and D.

Big game habitat and state wildlife management areas would also be protected through the use of oil and gas stipulations. The stipulation for wildlife management areas would be more restrictive under Alternative A than Alternatives B or D but less restrictive than C. Alternatives A, B and C would have the same stipulation for big game winter/spring range (Timing Limitation) but Alternative C would be more restrictive with No Leasing. For elk calving areas, Alternative D would be the least restrictive (Standard Lease Terms) with the stipulation being a Timing Limitation for Alternatives A and B, while Alternative C would be most protective with No Lease in these areas. For bighorn sheep habitat, Alternative C is the most protective (No Lease) of all alternatives while Alternative B (Timing Limitation in Yearlong Range, NSO in Core Areas) is more protective than Alternatives A (Timing Limitation in Yearlong Range) and D (Timing Limitation in Yearlong Range).

Fish

Effects and relative degrees of protection for special status fish would generally be similar to those described in the general Fish section above. Bull trout habitat would be managed under the Interim Bull Trout Habitat Conservation Strategy (USDI BLM 1996a).

Alternatives B and C would protect habitat of genetically pure westslope cutthroat trout and other aquatic and riparian dependant species along approximately 2 miles of stream in the Muskrat Creek drainage through a proposed 180-acre locatable mineral withdrawal. This habitat would not be subject to direct effects from mineral exploration and development in these alternatives. This protection would not be in place as there would be no mineral withdrawal of these riparian areas in Alternatives A and D.

Oil and gas stipulations would protect special status fish species in affected streams by NSO within ½ mile of streams in Alternative B. Alternative C would have the greatest amount of protection with NSO or No Lease within ½ mile of streams affected for various species. Alternative D would be less protective than either Alternative B or C with a CSU stipulation within ½ mile of most special status fish species.

Plants

Vegetation treatments in Alternative A would provide less restoration and maintenance of special status plant habitat than Alternatives B and D because fewer acres would be treated. Alternative D would treat the most acres whereas Alternative C would treat the fewest with

corresponding effects on habitat. Potential short-term adverse impacts from vegetation treatments due to disturbance or crushing of special status plants would vary similarly to long-term potential benefits by alternative.

Off highway vehicle (OHV) use potentially affects special status plants and habitat through ground disturbance. More OHV use causes greater ground disturbance which can cause direct destruction of plants, and degradation or fragmentation of habitat. Motorized vehicle use can also facilitate increased noxious weed spread, potentially leading to special status plants being outcompeted by noxious weeds. The greatest amount of motorized vehicle use would be with Alternative A while the least amount of motorized use is proposed for Alternative C. Potential impacts on special status plant populations and habitat from motorized vehicle use would be the least for Alternative C and the most for Alternative A while Alternatives B and D fall in between with B having fewer potential impacts than Alternative D.

ISSUE 3: TRAVEL MANAGEMENT AND ACCESS

Travel Management

Alternative A has the greatest number of motorized opportunities and the most acres open to cross-country snowmobile use. User conflicts and the potential for accidents/injuries would be the greatest of all alternatives because motorized and non-motorized users would share the same routes. Road development associated with forest product removal could increase road density. Wildlife closures would have the fewest short-term impacts on travel and access due to fewer seasonal wildlife closures than other alternatives. Establishment of new permanent roads increasing public access is likely to be more widespread than with any other alternative.

Disallowing competitive motorized events under all action alternatives (B, C, and D) could cause long-term adverse effects on users who prefer these activities.

Alternative B (417 miles open yearlong or open w/restrictions) would have less motorized route use opportunities than Alternatives A (629 miles open yearlong or open w/restrictions) and D (479 miles open yearlong or open w/restrictions), but more than with Alternative C (372 miles open yearlong or open w/restrictions). Non-motorized opportunities under Alternative B would be greater than with Alternatives A and D but less than with Alternative C. Cross-country snowmobile use would be less with Alternative B than with either Alternative A or D, but would be greater than with Alternative C. User conflicts, accidents, and injuries would be reduced under Alternative B compared to Alternatives A and D due to more dispersed recreational opportunities. Illegal activities due to the size of the motorized route network may be less under Alternative B than Alternatives A and D, but may still occur more than Alternative C.

Route closures in Alternative C would result in the greatest decrease in motorized use opportunities and highest level of non-motorized opportunities of all alternatives. Cross-country snowmobile use would be the most limited of all alternatives. Potential user conflicts, accidents, and injuries would likely be the least of all alternatives due to the greatest opportunities for motorized and non-motorized uses to be separated. Due to greatest extent of route closures, Alternative C would likely have the least amount of illegal activity of all alternatives.

Alternative D provides the greatest motorized use opportunities and the least non-motorized opportunities of the action alternatives. Non-motorized opportunities would be more than Alternative A but less than Alternatives B and C. Cross-country snowmobile use would be slightly less than with Alternative A but greater than with either Alternatives B or C. Potential user conflicts, accidents, and injuries would likely be greater than with Alternatives B or C, but less than with Alternative A. Illegal activities would likely be less with Alternative D than with Alternative A, but may still occur more than with Alternatives B and C.

Helena Travel Planning Area

In Alternative A (52.2 road miles open yearlong), no non-motorized trails would be designated. Alternative B (13.6 road miles open yearlong) would have decreased opportunities for motorized users and increased opportunities for non-motorized users since motorized access would be restricted to routes leading to existing trailheads and one loop route in Scratchgravel Hills. Alternative C (7 road miles open yearlong) would provide 15 percent more non-motorized only route opportunities than Alternative B and 85 percent fewer motorized route opportunities than Alternative A. Alternative D (21.9 road miles open yearlong) would have greater opportunities for motorized users than with the other action alternatives because new loop routes would be created in Scratchgravel Hills.

Management costs under Alternative A would be mixed. Less personnel time would be required to monitor user compliance compared to other alternatives; however more effort would be required for signing designated routes than with any other alternative. Alternatives B and C would have increased costs for trailhead maintenance, gates, and signage associated with restricted motorized access, and compliance costs associated with dawn to dusk use of the Scratchgravel Hills. Alternative D would have higher costs than the other action alternatives due to costs for signage and maintenance of more open routes as well as costs associated with constructing new connector routes and reconstructing existing routes.

Under Alternative A, transportation facility costs would be higher than under the action alternatives. Alternative B would cost 74 percent less than Alternative A, Alter-

native C would cost 87 percent less, and Alternative D would cost 58 percent less.

East Helena Travel Planning Area

Alternative A (36.6 road miles open yearlong, 7.7 miles open w/restrictions) would provide 60 percent more motorized opportunities than Alternatives B (13.7 miles open yearlong) and C (12 miles open yearlong), and 15 percent more than Alternative D (36 miles open yearlong). Non-motorized only opportunities would increase under Alternative B compared to Alternatives A and D. Alternative B would also provide increased opportunities for disabled hunters. Alternative C would provide the least amount of motorized opportunities of all alternatives while providing the most non-motorized opportunities. Alternative D would provide over 55 percent more motorized opportunities than either Alternatives B or C. There would be fewer non-motorized dispersed opportunities with Alternative D than with Alternatives B or C.

Management costs under Alternative A would be mixed. Less personnel time would be required to monitor user compliance than with other alternatives; however more effort would be required for signing designated routes. Costs would increase under Alternatives B and C for new trailhead development, initial signing, and long-term compliance efforts. Costs with Alternative D would be less than with Alternative A, but more than with Alternatives B and C due to initial signing and long-term maintenance and compliance efforts.

Transportation facility maintenance, monitoring, compliance, and weed control costs would be 17 to 269 percent higher under Alternative A than under the action alternatives. Due to the overall reduction in maintained routes, transportation facility costs under Alternative B would cost 62 percent less than Alternative A, Alternative C would cost 73 percent less, and Alternative D would cost 14 percent less.

Lewis and Clark County NW Travel Planning Area

Alternative A (57.5 road miles open yearlong, 6.7 miles open w/restrictions) would provide 47 percent more motorized routes than the action alternatives. Non-motorized users would have fewer opportunities under Alternative A. Under Alternative B (13.8 road miles open yearlong, 14.3 miles open w/restrictions) opportunities for non-motorized users would be greater than under Alternatives A and D (19.6 miles open yearlong, 14.5 miles open w/restrictions). Alternative C (8 miles open yearlong, 11.7 miles open w/restrictions) would provide the least opportunities for motorized users and the greatest for non-motorized users. Closure of routes in the northwest corner of TPA would result in enhanced non-motorized opportunities. Alternative D would provide more motorized opportunities than other action alternatives.

Management costs under Alternative A would be mixed. Less personnel time would be required to monitor user compliance than with other alternatives; however more effort would be required for signing designated routes. Costs would increase under Alternatives B and C, for initial signing and long-term compliance efforts. Costs under Alternative D would increase as well due to initial signing and long-term maintenance and compliance efforts.

Transportation facility maintenance, monitoring, compliance, and weed control costs would be 88 to 128 percent higher under Alternative A than under the action alternatives. Due to the overall reduction in maintained routes, transportation facility costs under Alternative B would be 56 percent less than Alternative A, Alternative C would cost 69 percent less, and Alternative D would cost 47 percent less than Alternative A.

Boulder-Jefferson City Travel Planning Area

Alternative A (60.5 road miles open yearlong) would have 37 percent more routes open to motorized use than Alternative D (5.3 miles open yearlong, 32.8 miles open w/restrictions) and approximately 60 percent more than Alternatives B (3.7 miles open yearlong, 23.6 miles open w/restrictions) and C (3 miles open yearlong, 20.5 miles open w/restrictions). In addition, Alternative A would have no designated non-motorized routes, and fewer recreation opportunities for non-motorized users. Alternative B would provide more opportunities for non-motorized users than Alternative A. Alternative C would provide the fewest opportunities for motorized users since it has the least number of open routes. Opportunities for motorized users under Alternative D would be greater than under Alternatives B and C but less than under Alternative A.

Management costs under Alternative A would be mixed. Less personnel time would be required to monitor user compliance than with the other alternatives; however more effort would be required for signing designated routes. Costs would increase under Alternatives B and C for initial signing and long-term compliance efforts. Costs under Alternative D would be less than Alternative A, but more than under Alternatives B and C due to initial signing and long-term maintenance and compliance efforts.

Under Alternative A, transportation facility maintenance, monitoring, compliance and weed control costs would be 59 to 122 percent higher than under the action alternatives. Due to the overall reduction in maintained routes, transportation facility costs under Alternative B would be 55 percent less than with Alternative A, Alternative C would cost 61 percent less and Alternative D would cost 37 percent less than Alternative A.

Upper Big Hole River Travel Planning Area

Alternative A (70.6 road miles open yearlong, 88 miles open w/restrictions) would have at least 38 percent more

motorized routes than the other alternatives. Alternative A has the fewest non-motorized opportunities. Alternative B (21.1 miles open yearlong, 59.8 miles open w/restrictions) would reduce by half the motorized opportunities due to seasonal restrictions or road closures and non-motorized opportunities would be enhanced. Alternative C (19.2 miles open yearlong, 40.8 miles open w/restrictions) would provide the fewest opportunities for motorized users and the greatest opportunities for non-motorized users. Alternative D (26.8 miles open yearlong, 70.6 miles open w/restrictions) would provide fewer opportunities for motorized use than Alternative C, but more than Alternatives A and B.

Management costs under Alternative A would be mixed. Less personnel time would be required to monitor user compliance than under the other alternatives; however more effort would be required for signing designated routes. Costs would increase under Alternatives B and C for initial signing and long-term compliance efforts. Costs under Alternative D would be less than under Alternative A, but more than under Alternatives B and C due to initial signing and long-term maintenance and compliance efforts.

Under Alternative A transportation facility maintenance, monitoring, compliance, and weed control costs would be 62 to 163 percent higher than under the action alternatives. Due to the overall reduction in available routes, transportation facility costs under Alternative B would be 49 percent less than under Alternative A, Alternative C would cost 62 percent less, and Alternative D would cost 38 percent less than under Alternative A.

ISSUE 4: RECREATION

User Opportunities

Alternative A provides the most opportunities for motorized users, organized motorized events, boat-in camping, and snowmobile use. Alternative A also provides the fewest non-motorized use opportunities.

Alternative B provides more opportunities than Alternatives A and D for non-motorized users due to its greater number of closed roads. Under Alternative B there would be a reduction in boat-in camping opportunities as these would be limited to developed and designated undeveloped dispersed recreation sites along the Holter and Hauser Lake shorelines.

Alternative C would provide the most opportunities for non-motorized users and the least opportunities for motorized users due to its greatest number of closed roads of all alternatives. Opportunities for organized motorized events would be eliminated under Alternative C. Dispersed camping at Holter and Hauser Lakes would be reduced to the greatest extent due to closing of the entire shorelines to boat-in camping except at developed sites.

Alternative D would provide greater motorized and lower non-motorized use opportunities than either Alter-

native B or C. Alternative D would limit organized motorized events to non-competitive activities in the Pipestone area only. Boat-in camping opportunities would be the same as Alternative A.

User Conflicts and Violations

Alternative A would impose the fewest restrictions on motorized and non-motorized users within the Scratchgravel Hills and therefore motorized travel violations, user conflicts and illegal activities would likely be greater than with any other alternative. Alternatives B and C would have the greatest potential to reduce conflicts and violations compared to Alternatives A and D in the Scratchgravel Hills due to restricted motorized access and dusk to dawn closure. These effects under Alternative D would likely be slightly less than under Alternative A but greater than under Alternatives B and C.

Recreation Opportunity Spectrum

Alternative A could have negative impacts on recreation uses and experiences because there would be no ROS classifications. Management would be reactive rather than proactive. Alternative B would provide a balanced approach for managing recreation settings, opportunities and experiences compared to Alternatives C and D. Alternative C would provide the most acreage designated as ROS Semi-Primitive Non-Motorized creating the greatest non-motorized and the least motorized opportunities. Alternative D would manage 90 percent of the Decision Area under ROS settings allowing varying degrees of motorized activity.

ISSUE 5: SPECIAL DESIGNATIONS INCLUDING ACEC, NATIONAL TRAILS, WILD AND SCENIC RIVERS AND WSAS

Areas of Critical Environmental Concern

Under Alternative A the existing ACEC (Sleeping Giant) would be the only area managed as an ACEC. In Alternative B, all five potential areas would be managed as ACECs, the same number as Alternative C however a smaller portion of the Elkhorns would be designated in Alternative B. Alternative D would manage the least amount of acreage as ACECs of the action alternatives.

National Trails

The Continental Divide Trail (CDT) and the Lewis and Clark Historic Trail (L&CHT) would be managed cooperatively with the USFS and the NPS respectively, in accordance with national policy guidelines under all

alternatives. BLM would also continue managing the L&CHT with other established partners to promote collaborative planning under the Missouri/Madison Comprehensive Recreation Plan. Under the action alternatives, the two trails would be managed in accordance with final ROS, VRM, travel plan and other resource/resource use decisions. In addition BLM would coordinate with the FS to evaluate opportunities to re-route the CDT segment to enhance user experiences and reduce future needs for easements and/or acquisitions.

Wild and Scenic Rivers

Suitability studies for the four eligible river segments (Upper Big Hole River – 2.3 miles, Upper Missouri River – 3.1 miles, Moose Creek – 4.0 miles and Muskrat Creek – 2.6 miles) would not be completed and protective management would continue indefinitely for these segments under Alternative A. Under Alternative B, Muskrat Creek would be recommended as suitable and the Upper Missouri River segment would be recommended preliminarily suitable pending concurrence by the USFS (Helena National Forest) for inclusion in the NWSRS; interim protective management would continue for these two segments. The remaining segments, Upper Big Hole River and Moose Creek, would be identified as non-suitable. Alternative C provides the greatest protection for the four eligible river segments as they would all be recommended as suitable for Congressional designation. Alternative D provides the least protection for these eligible segments as all would be identified as non-suitable, and interim protective management would be discontinued.

Wilderness Study Areas

Under all alternatives, all six WSAs (Humbug Spires, Sleeping Giant, Sheep Creek, Black Sage, Elkhorn Tack-on, and the Yellowstone River Island) would continue to be managed under the Interim Management Policy and Guidelines for Lands under Wilderness Review until Congress either designates them as wilderness or releases them from further review. Under the action alternatives, Sleeping Giant, Sheep Creek, Humbug Spires and the Elkhorns Tack-on WSAs would be managed as ACECs should Congress release them from wilderness consideration. Should Congress release Black Sage and the Yellowstone River Island then they would be managed under the general guidelines established under each alternative.

PREFERRED ALTERNATIVE

At the time of publication, Alternative B is the preferred alternative.