

APPENDIX L

DETAILED DISCUSSION OF AREAS BEING STUDIED FOR WILDERNESS

INTRODUCTION

PURPOSE AND NEED

The purpose of this study is to determine the suitability or nonsuitability of five areas for designation as wilderness, in accordance with the guidelines in the Wilderness Act of 1964. The need for this study/EIS results from Sections 603 and 202 of the Federal Land Policy and Management Act of 1976 (FLPMA). It directs the BLM to review all public land for its wilderness potential. The review process developed by BLM has three phases: inventory, study, and reporting.

The inventory phase identified areas that possess wilderness characteristics, as defined in the Wilderness Act of 1964, and designated them as wilderness study areas (WSAs). Guidelines for conducting the inventory phase were set forth primarily in the BLM's Wilderness Inventory Handbook of 1978. Nine WSAs were identified through the inventory, which was completed in September 1981.

A decision by the Secretary of the Interior on December 30, 1982 said that areas of public land that were less than 5,000 acres in size, or which had split estate ownership, were not subject to wilderness review under Section 603 of FLPMA. However, areas less than 5,000 acres in size could be studied for wilderness under authority of Section 202 of FLPMA. Based on this decision, four of the nine areas identified during the inventory phase were dropped from further wilderness study. Three other areas identified as WSAs during the inventory, but which are less than 5,000 acres in size, are being studied under authority of Section 202 of FLPMA, instead of under Section 603. These areas are Blind Horse Creek, Chute Mountain, and Deep Creek/Battle Creek. The two remaining WSAs are Black Sage (MT-075-115) and the Yellowstone River Island (MT-075-133). Boundaries and land status of each area are illustrated on the Land Status maps for the areas being studied for wilderness.

The purpose of the study phase is to determine through careful analysis which study areas will be recommended as suitable for wilderness designation and which will not. Recommendations for the five areas being studied for wilderness (see the Wilderness Resources section of the Affected Environment chapter) will be made through the BLM's multiple resource planning process, using the criteria and quality standards listed in Appendix R. The BLM's planning regulations and its final wilderness study policy were used to guide the study process.

The reporting phase begins after the completion of the Draft Resource Management Plan/EIS. A Wilderness Study Report (WSR) will be prepared that addresses the results of the study and contains the preliminary wilderness recommendations. The report will summarize the planning documents, EIS, and the results of public participation. All suitable recommendations, and nonsuitable recommendations for WSAs (areas that were studied under Section 603 of FLPMA) will be reported through the Director of the BLM, the Secretary of the Interior, and the President, to Congress. Nonsuitable recommendations for former WSAs (areas that were studied under Section 202 of FLPMA) will not be reported beyond the Director of the BLM.

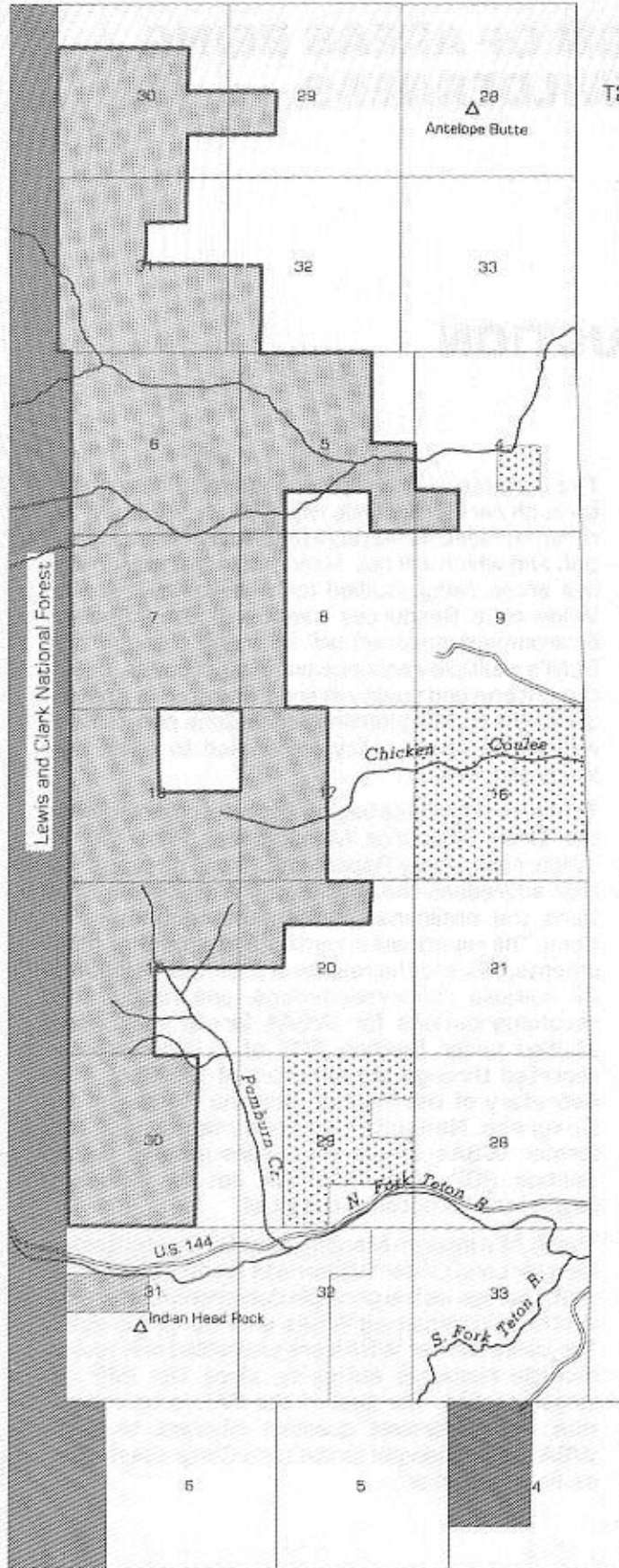
The BLM's Interim Management Policy and Guidelines for Land Under Wilderness Review (IMP) currently serves as the principle document for managing the two remaining WSAs until Congress acts. The three former WSAs are protected only under multiple resource authority, since the IMP no longer applies. The goal of the IMP is to ensure that the wilderness qualities inherent to each WSA are unchanged at the time Congress makes its final decisions.

RBW

Blind Horse Cr.

Land Status

T26N



— WSA Boundary

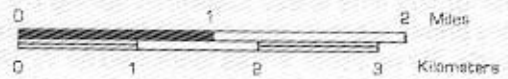
Public

Forest Service

State

Private

T25N




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T24N

R8W



— WSA Boundary

 State

Chute Mtn.

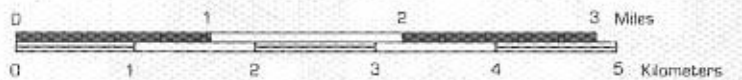
Land Status

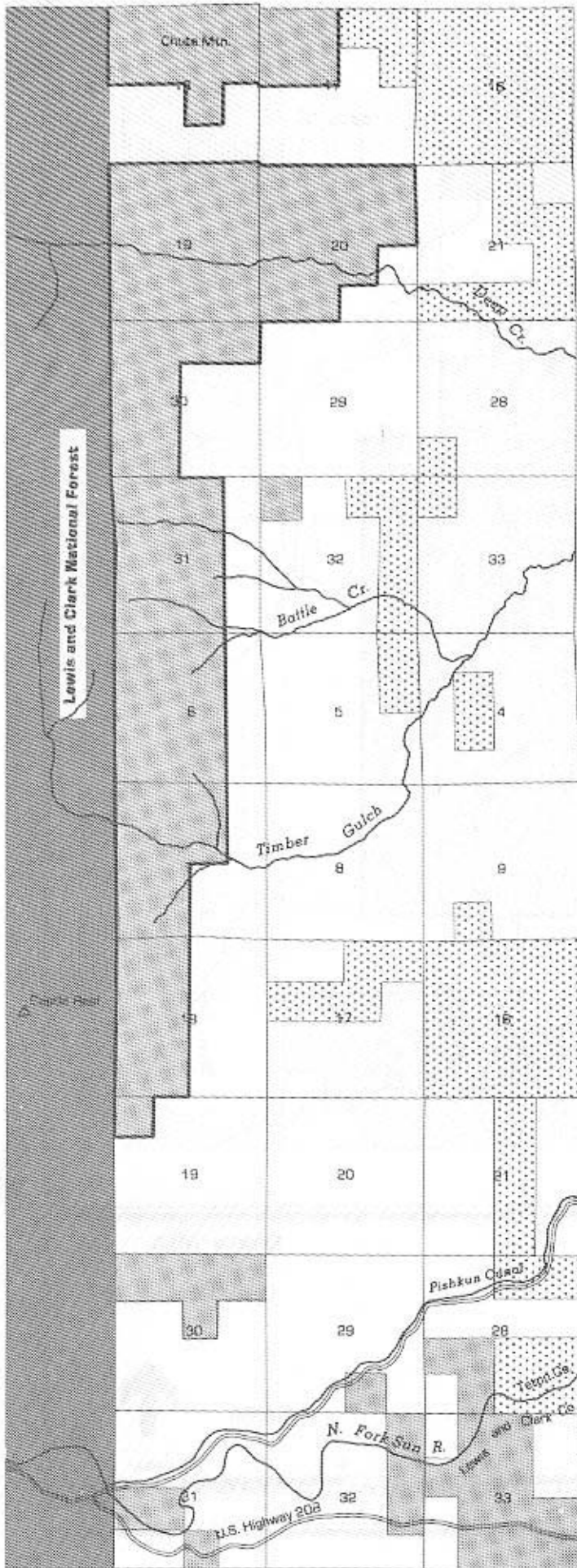
 Public

 Private

 Forest Service

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Deep Cr./Battle Cr.
Land Status

T23N

— WSA Boundary

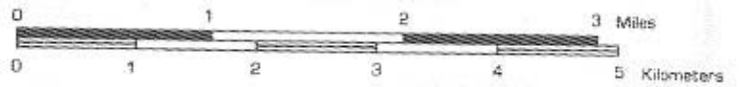
Public

Forest Service

State

Private

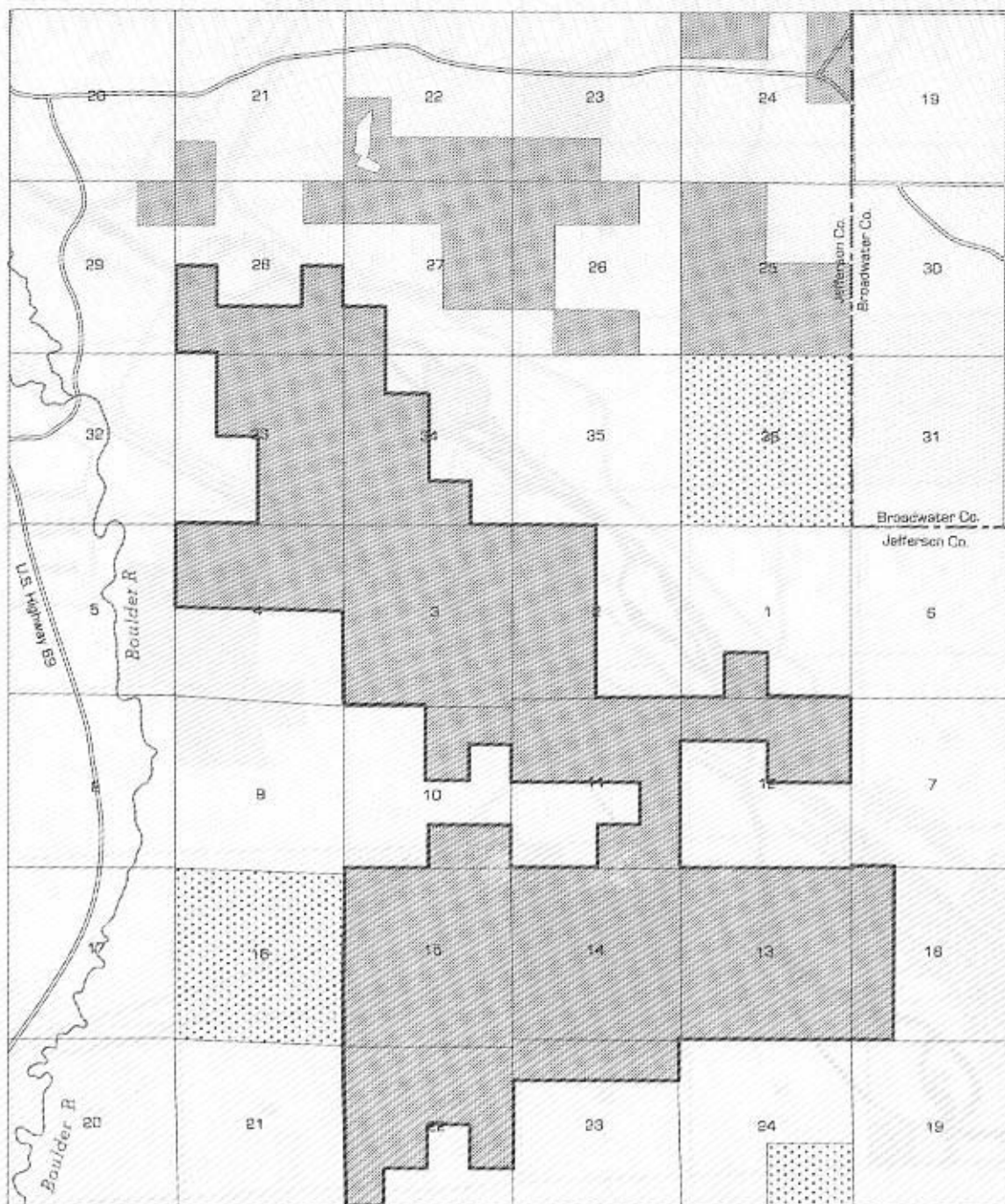
T22N



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R2W

T4N



T3N

— WSA Boundary

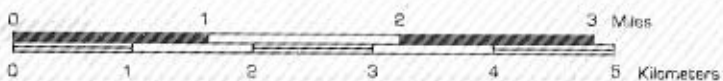
□ Private

■ Public

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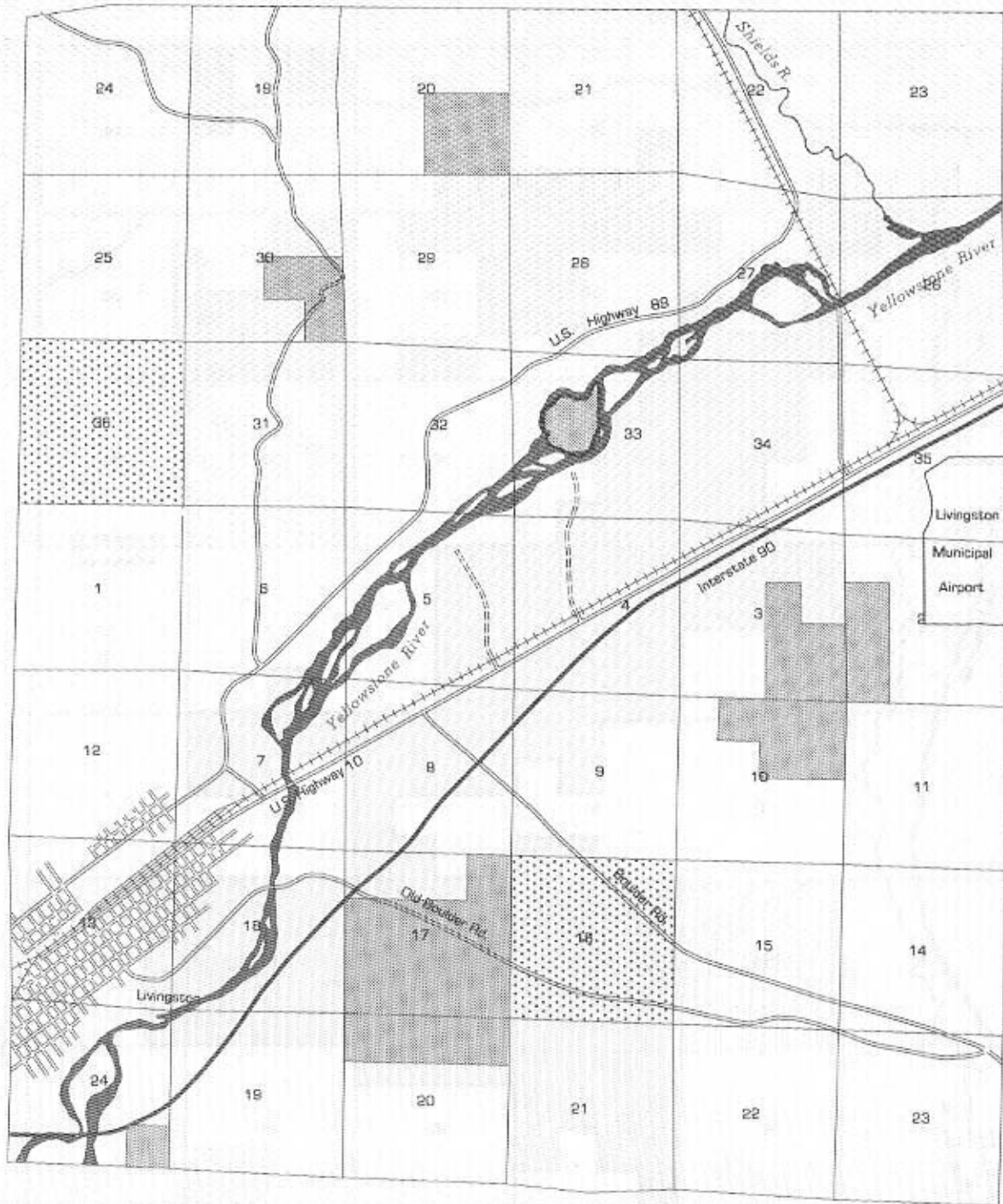
**Black Sage
MT-075-115
Land Status**

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R10E

T15



T2S

— WSA Boundary

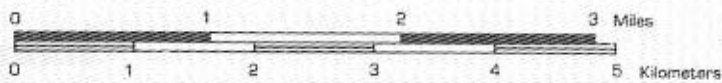
□ Private

■ Public

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**Yellowstone R. Island
MT-075-133
Land Status**

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ALTERNATIVES, INCLUDING THE PROPOSED ACTION

APPENDIX L

FORMULATION OF ALTERNATIVES

The RMP developed four major alternatives that projected different combinations of public land uses and management practices that respond to the planning issues. Within these four major alternatives, an alternative was developed for each area being studied for wilderness. As required by the wilderness study policy, an alternative for all wilderness, no wilderness, and no action was examined for each area being studied. For some of the areas being studied there is more than one no wilderness alternative. This is because the overall goals of the different RMP alternatives would project different management for the areas being studied if they are not recommended for wilderness.

ALTERNATIVES ELIMINATED FROM DETAILED STUDY

Partial Wilderness Designation for Individual Study Areas

A partial wilderness alternative was examined for each area being studied for wilderness. However, because of their size, configuration, topographic layout, and resource characteristics, none of the areas were found to have logical partial wilderness alternatives.

ACEC Designation for Areas on the Rocky Mountain Front

The three areas being studied for wilderness on the Rocky Mountain Front also met the criteria for identification as potential areas of critical environmental concern (ACECs). These areas also fit the definition for outstanding natural areas (ONAs). Since the management would be similar under either designation, and either designation could adequately protect the resources involved, it was decided that only one designation needed to be examined in detail through the planning process. It was felt that the particular resources of concern in these areas, i.e., scenic values, threatened and endangered wildlife, unique geologic features, primitive recreation opportunities, and natural ecosystems, lend themselves more to an ONA designation than an ACEC designation.

Therefore, an alternative for an ACEC designation was not carried forward and examined in detail.

ALTERNATIVES CONSIDERED IN DETAIL

Alternative A: Preferred

Under this alternative, none of the five areas being studied for wilderness would be recommended as suitable for wilderness designation. However, Blind Horse Creek, Chute Mountain, and Deep Creek/Battle Creek would be recommended for designation as outstanding natural areas. The specific management direction for each of the five areas is shown in the description of management units 03, Blind Horse Creek, Chute Mountain, and Deep Creek/Battle Creek; 29, Black Sage; and 30, the Yellowstone River Island, contained in Appendix A.

Alternative B: No Action

Under this alternative none of the five areas being studied would be recommended as suitable for wilderness designation. In addition, none of the areas would be recommended for any special designation. The specific management direction for each of the areas is shown in the description of management units 03, 29, and 30, contained in Appendix A.

Alternative C: Protection

All five areas would be recommended as suitable for wilderness designation under this alternative. If Congress were to disagree with these recommendations and not designate one or more of the areas as wilderness, the management of the area would revert to the management described under Alternative A.

Alternative D: Production

No areas would be recommended as suitable for wilderness under this alternative. In addition, no areas would be recommended for any special designation. Specific management direction for each area is shown in the descriptions of management units 03, 29, and 30, contained in Appendix A.

SELECTION OF THE PREFERRED ALTERNATIVE

The preferred alternative for each area was selected through the BLM's multiple use planning process, by applying the criteria and quality standards contained in the BLM's wilderness study policy. The preferred alternative of the RMP, Alternative A, recommends all five areas as nonsuitable for wilderness designation. However, it also recommends three of the areas, Blind Horse Creek, Chute Mountain, and Deep Creek/Battle Creek, for outstanding natural area designations.

Rationale

The rationale for the selection of the preferred alternative for each area is summarized in Table L-1. A detailed discussion of the rationale for each area is found below.

Blind Horse Creek



The preferred alternative for Blind Horse Creek is to recommend it as not suitable for wilderness designation. The major reasons for this recommendation are that the area's small size and configuration and the presence of the 160-acre private inholding would make its management as wilderness difficult over the long term. In addition, the area has high potential for oil and gas, which could be forgone if the area is designated as wilderness. If existing leases with valid existing rights are developed, they could impair wilderness values over the short term.

**TABLE L-1
SUMMARY OF THE RATIONALE FOR THE SELECTION OF THE PREFERRED ALTERNATIVE**

Area	Preferred Alternative	Rationale
Blind Horse Creek	Nonsuitable—ONA designation	Its configuration and relatively small size would make management as wilderness difficult. ONA designation would adequately protect resource values, including wilderness values, but would provide greater management flexibility.
Chute Mountain	Nonsuitable—ONA designation	Its relatively small size would make management as wilderness difficult. ONA designation would adequately protect resource values, including wilderness values, but would provide greater management flexibility.
Deep Creek/Battle Creek	Nonsuitable—ONA designation	Its relatively small size would make management as wilderness difficult. ONA designation would adequately protect resource values, including wilderness values, but would provide greater management flexibility.
Black Sage	Nonsuitable	The quality of its wilderness values is only moderate, and it would be very difficult to manage as wilderness. It would not add significantly to the quality or diversity of the NWPS.
Yellowstone River Island	Nonsuitable	Its small size and existing and potential offsite impacts would make management as wilderness very difficult.

Under the preferred alternative, Blind Horse Creek would be recommended for designation as an outstanding natural area. This designation would be more manageable than wilderness and would adequately protect wilderness values.

Chute Mountain



The preferred alternative for Chute Mountain is to recommend it as not suitable for wilderness designation. Because of its small size the area would only be manageable as wilderness when considered as part of the Forest Service's RARE II further planning areas. It would not enhance the manageability or configuration of the larger RARE II area. In addition, Chute Mountain has high potential for oil and gas, which could be forgone if the area is designated as wilderness. If existing leases with valid existing rights are developed, they could impair wilderness values over the short term.

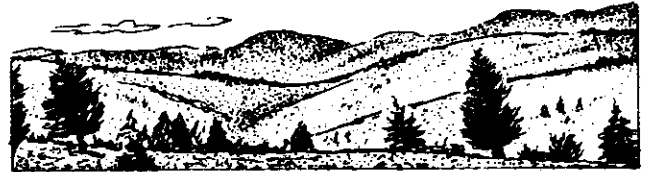
Under the preferred alternative, Chute Mountain would be recommended for designation as an outstanding natural area. This designation would be more manageable than wilderness and would adequately protect wilderness values.

Deep Creek/Battle Creek



The preferred alternative for Deep Creek/Battle Creek is to recommend it as not suitable for wilderness designation, but it would be recommended for designation as an outstanding natural area. The rationale for the preferred alternative is the same as the rationale for the preferred alternative for Chute Mountain.

Black Sage



The preferred alternative for the Black Sage WSA is to recommend it as not suitable for designation as wilderness. The major reason for this recommendation is that the area would not be manageable as wilderness over the long term. The highly irregular configuration of the unit, its poorly identified boundaries, and its open terrain would make inadvertent trespass by motorized vehicles a problem. In addition, vehicle access for the numerous range improvements would adversely affect the area's ability to provide primitive experiences. The overall quality of the wilderness characteristics are only moderate, and would not contribute significantly to the quality or diversity of the NWPS.

Yellowstone River Island



The preferred alternative for the Yellowstone River Island is to recommend it as not suitable for wilderness designation. The major reason for this recommendation is that the island would not be manageable as wilderness over the long term. The area is extremely small (53 acres) and is very susceptible to offsite impacts. The island has a low carrying capacity and would contribute little to the quality or diversity of the NWPS.

BLIND HORSE CREEK



The Blind Horse Creek area contains 4,927 acres of public land, and it is located on the Rocky Mountain Front, approximately twenty-five miles northwest of Choteau, Montana. There is a 160-acre inholding in the area.

Wilderness Resources

Quality of the Wilderness Resource

Naturalness. The unit contains approximately eight and one-half miles of vehicle ways and three miles of fences. The rest of the impacts detailed in Table L-2 are of very low significance. Vehicle ways 1 and 3 provide the primary access into the unit from the Clark Fork of Muddy Creek and Chicken Coulee drainages. All trails within the area are characterized by two wheel tracks with vegetation in the middle (see the Blind Horse Creek Impacts map). Overall, the area is nearly pristine, except for a few imprints of insignificant consequence. Approximately 435 acres in the very northern tip of the unit is unleased for domestic livestock grazing. The functional fences and the developed spring are associated with livestock grazing activities and would continue to be maintained. Vehicle access to the private inholding would continue to be allowed. The remaining impacts are returning to a natural condition on their own and with some minimal hand labor will be virtually unnoticeable within ten years.

Outstanding Opportunities. The configuration of this small unit is rectangular with an irregular east boundary, that causes the width to vary from one-half to two miles. The core-to-perimeter air distance is approximately one-half mile east to west and three miles north to south, although actual travel distance is greater because of irregular terrain.

The dominant feature of the unit is the high north-south ridge, which is characterized by ledges, cliffs, and numerous talus slopes. The entire unit is influenced by drainages intersecting this dominant ridge. Foot and horseback travel throughout the area is relatively unlimited, except in a few areas of

dense timber. The unit is diverse in vegetation, and is generally characterized by Douglas fir on the north slopes, limber pine on the south slopes, and a mixture on the east slopes. The open meadows are made up of fescue grasses, shrubby cinquefoil, and numerous flowering forbs. The wetter drainage bottoms are vegetated with pockets of aspen, subalpine fir, and some occasional spruce. Offsite views greatly enhance the quality of the unit. The open prairie extends to the east. North and south vistas exemplify the unique upthrust terrain of the Rocky Mountain Front, while the higher national forest lands give the visitor a spectacular background to the west.

In general, topography and vegetation combine to provide excellent screening throughout the area. Despite the small core-to-perimeter distance, visitors can easily disperse and find secluded spots within the area. Outstanding opportunities abound for solitude as a result of these qualities. The diversity of the area provides many opportunities for primitive and unconfined forms of recreation. The limestone cliffs, together with open, grassy meadows and intermittent coniferous slopes, provide excellent opportunities for backpacking, climbing, sightseeing, photography, hunting, day hiking, and nature study. The major attractions would be those of viewing wildlife and hunting grizzly bear. The lack of public access and the remoteness of the area are the main factors that limit use. At the same time these factors enhance the sense of challenge.

Special Features. The area provides habitat for both migrant and resident populations of grizzly bear, black bear, bighorn sheep, mountain goat, mule deer, gray wolf, elk, eagle, raptors, and ruffed and blue grouse.

The area is especially scenic, with views of the distant prairies to the east and the spectacular hogback ridges to the north, south, and west. Views within the unit are typified by flowered meadows, cliffs, and forested creek drainages.

Summary of Wilderness Quality. With the exception of the area's limited size, the overall wilderness quality of this area is high. Its remote setting, generally undisturbed natural condition, and excellent opportunities for solitude and primitive recreation contribute to the overall quality. Although manageability considerations (a private inholding, irregular east boundary, etc.) reduce the

TABLE L-2
EFFECTS ON NATURALNESS
BLIND HORSE CREEK

Feature	Legal Location	Length / Area	Overall Impact	Remarks
Vehicle Way 1	T25N, R8W, Sec. 5 & 6	1.5 miles	Low	Two wheel track with vegetated mid-strip. Traverses unit through sparse timber in an east-west direction. Enters along the Clark Fork of Muddy Creek.
Vehicle Way 2	T25N, R8W, Sec. 6, 7, 18 & 19	3.5 miles	Low to Moderate	Jeep trail with vegetated mid-strip. Connects vehicle ways 1&3. Traverses unit in a north-south direction from Pamburn Creek. Quite visible through open, alpine meadows.
Vehicle Way 3	T25N, R8W, Sec. 17&18	1.0 mile	Low	Unmaintained Jeep trail up Chicken Coulee through both timbered and open areas. Intersect vehicle way 2 in Section 18.
Vehicle Ways 4, 5, & 6	T25N, R8W, Sec. 17-20	2.0 miles	Low to Moderate	Unimproved two-wheel tracks diverging from vehicle way 3 in Sec. 18. All pass through open slopes and benches.
Vehicle Way 7	T25N, R8W, Sec. 7	0.6 miles	Low	Enters unit along a northern tributary of Blind Horse Creek through timbered terrain.
Fences	T25N, R8W, Sec. 6, 17, & 18	3.0 miles	Low	Roughly half are no longer functional. Represented by fallen posts, missing wire and in some cases fallen snow fence.
Exclosure	T25N, R8W, Sec. 6	1 acre	Very Low	Fenced area screened by vegetation.
Diversion Canal	T25N, R8W, Sec. 7 & 8	0.5 miles	Very Low	Extends west to east. Appears as a gravel creek bed.
Log Cabin	T25N, R8W, Sec. 5	Less than 1 acre	Very Low	Deteriorated frame with no roof. Located in timber.
Developed Spring	T25N, R28W, Sec. 7	Less than 1 acre	Very Low	Steel tank with fenced out head box at edge of timber.

quality somewhat, the degree of reduction is marginal.

Ecosystem Representation

As shown in Appendix S the area contains four major ecotypes: 53% is Douglas fir Forest, 23% is Foothills Prairie, 16% is Western Spruce-Fir Forest, and the remaining 8% is Alpine Meadows and Barren.

Soil and Water Resources

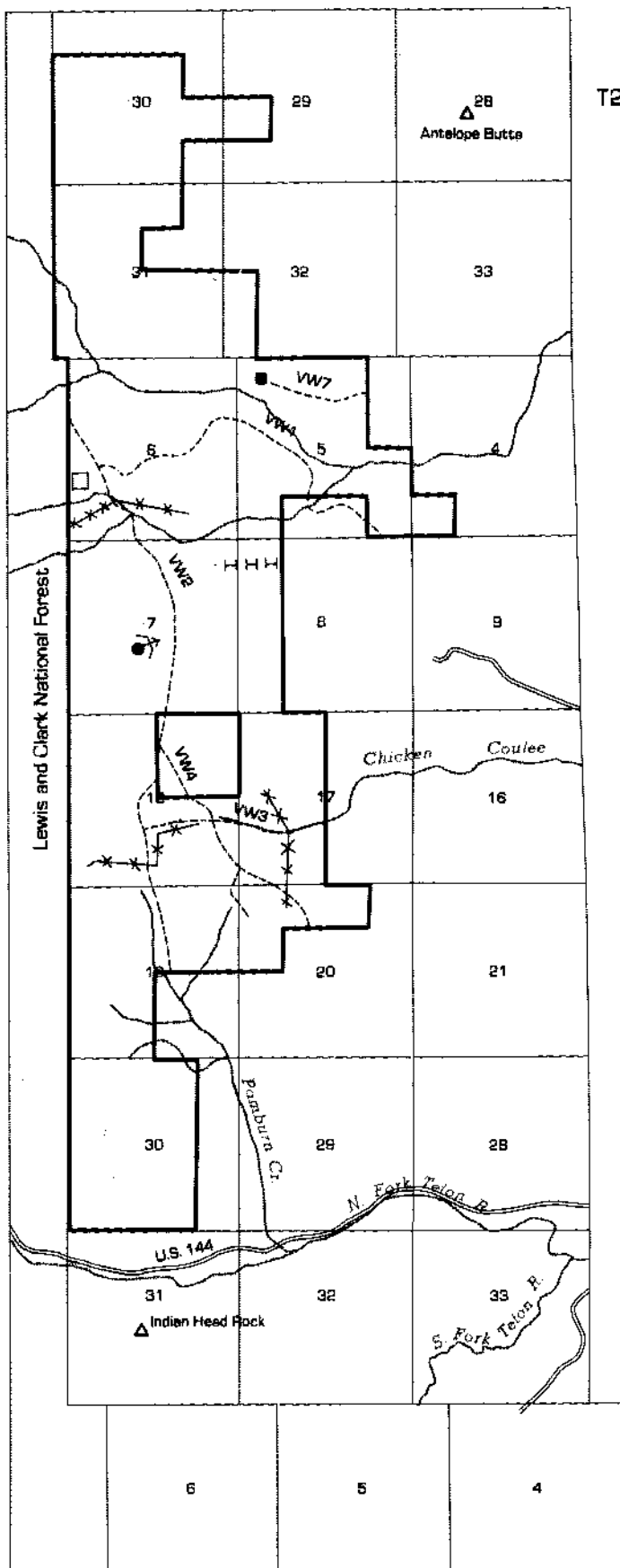
This area contains portions of the Blind Horse Creek and Chicken Coulee drainages. These ultimately drain into the North Fork of the Teton River. Blind Horse Creek is a perennial stream within the unit, while Chicken Coulee is intermittent.

R8W

Blind Horse Cr.

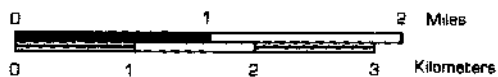
Impacts

T26N



- WSA Boundary
- Vehicle Way
- Pipeline
- Fence Line
- Exclosure
- Improved Spring/Stocktank
- Cabin

T25N



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The soils in the Blind Horse Creek area are deep, dark, cold, mostly clayey subsoils, with loamy surface textures. They occur on rolling to steep slopes. These soils are productive with cover alternating between mixed conifer and mountain rangeland shrub and grass species. The erosion potentials are moderate to severe due to slope, and water infiltration rates are moderate to slow.

Energy and Minerals

The geology of the Blind Horse Creek area is typical of the Rocky Mountain Front. Ridges and escarpments are formed by Mississippian Madison Limestone that has been thrust to the east over mesozoic shales and siltstones. These shales and siltstones characteristically form valleys in between the ridges of Madison limestone. The thrust sheets of Madison limestone dip 25°-45° to the west and strike generally northwest.

The entire Blind Horse Creek area has been leased for oil and gas. Potential for hydrocarbons (primarily natural gas) is considered high. The unit has a low potential for locatable minerals, with the possible exception of limestone. There are no unpatented mining claims.

For additional detailed information refer to the Geology, Energy, and Minerals (GEM) Report available at the Butte District Office.

Recreation Resources

Fall hunting is the primary recreational use of the area, but there are excellent opportunities for sightseeing, backpacking, and day hiking as well. In addition, there is potential for a certain amount of ORV use, particularly motorcycle and four-wheel drive use in association with fall hunting. Opportunities for photography, nature study, and rock climbing also are available in this area.

In addition to big game such as elk, deer, and black bear, and game birds such as grouse, this unit provides a unique hunting experience, in that it is one of the few areas in the contiguous United States in which there is a hunting season for grizzly bear.

There are no recreation facilities or vehicle way closures in the area.

Cultural Resources

The limited cultural resource inventory conducted within the Blind Horse Creek area has yielded one historic and two prehistoric sites. The prehistoric sites consist of a mass elk kill and butchering site

from the late Middle Period and a temporary occupation from the middle portion of the same period.

The historic site relates to seasonal grazing and perhaps seasonal hunting and trapping from around the turn of the century. The patterns of use derived from this small sample typifies that of the Rocky Mountain Front region.

The earliest known use of the east front area is from the Clovis Phase 12,000 years ago, and use continued into the historic period when the area was used by the Flathead and Blackfoot groups. During the later period the area received heavy pressure from mounted hunters. The abundance of resources and the spectacular scenic qualities of the east front imbued the region with religious significance. Native American cemeteries exist on the borders of the Blind Horse Creek and other study areas, and such sites may exist inside the areas. Vision quest sites were preferentially situated on the crags of the east front and are likely to occur in every study area on the east front.

Historic usage of the east front was comparatively minor. In the late 1800s, a few cabins were constructed within the various areas being studied for wilderness. None of these homestead attempts were patented. Blind Horse Creek contains no mining related sites.

Timber Resources

The forests in this study area are considered to be of low priority due to their limited size, poor access, fragile soils, rugged terrain, and dry aspects. These timbered stands (800 acres) consist of Douglas fir, limber pine, and small pockets of Engelmann spruce, and have been removed from the commercial base by the TPCC inventory. However, these stands could provide opportunities for low priority sales of forest products (firewood, posts, christmas trees, and possibly some saw timber).

Range Resources

The Blind Horse Creek area contains one allotment currently under an AMP, two allotments proposed for maintenance management, and one allotment not leased or categorized. AUMs, acres, and season of use for each allotment are summarized in Table L-3.

Present AMP Allotments

The Chicken Coulee Allotment (6303) includes national forest and private land that lie outside the area boundary. Cattle graze the allotment from July 1 through September 30 each year under a four pasture rest-rotation system. Proposed

**TABLE L-3
GRAZING ALLOTMENTS IN BLIND HORSE CREEK**

Allotment Name & Number	Livestock		Season of Use		AUMs (public land) Only	Acres Within Area
	Number	Class	From	To		
Chicken Coulee (6303)	235	C	07/01	9/30	279	3,340
Cowtrack (6306)	10	H	06/01	06/30	10	360
	9	H	09/01	11/30	26	
Choteau Mountain (6304)	*	*	*	*	12	240
Rinker Creek (6301) unallotted	—	—	—	—	—	—

*Livestock numbers and season of use are not regulated for the Choteau Mountain Allotment. Nearly all of the public land in the allotment is unsuitable for livestock grazing. Use is minimal.

improvements include one spring development, three stock tanks, three miles of water pipeline, and one mile of fence.

Proposed AMP Allotments

The Cowtrack Allotment (6306) has .75 miles of boundary fence on public land that is common with the Chicken Coulee Allotment. There are no proposed improvements. The allotment is grazed from June 1 to June 30 and September 1 to November 30 each year.

The Choteau Mountain Allotment (6304) has no improvements, present or proposed. Livestock numbers and season of use are not regulated for this allotment.

Unleased and Uncategorized Allotments

The Rinker Creek Allotment (6301) has no improvements, present or proposed, and it is currently unleased for livestock grazing.

Wildlife and Fisheries

Threatened and Endangered Species

Four wildlife species that are officially listed under the authority of the Endangered Species Act of 1973, as amended, occur or are suspected to occur in the Blind Horse Creek area. These species are the grizzly bear (threatened), bald eagle (endangered), gray wolf (endangered), and peregrine falcon (endangered). This area contains seasonally important occupied habitat for the grizzly bear and bald eagle, and the gray wolf and peregrine falcon have been documented to occur in or near it on an occasional basis. However, much of the habitat is suitable for future recovery efforts.

Although grizzly bear usage within this area occurs during the spring, summer, and fall periods, the most important season is spring. The Rocky Mountain Front, of which this unit is a part, is the last place in the lower forty-eight states where grizzly bears inhabit and seasonally use the plains grassland habitat.

Bald eagle occurrence in the RMF is mostly confined to the major rivers such as the Sun, Teton, and Dearborn. Intensive use by spring migrants moving north to breeding areas in Canada and Alaska occurs along the foothills of the east front. No nesting activity is known to occur at the present time.

The Wolf Ecology Project estimates that from zero to six wolves utilize the area from Sun River north to Birch Creek (of which the Blind Horse Creek area is a part). This area is not only considered essential habitat, but is crucial to any further wolf recovery efforts.

Suitable but unoccupied habitat for the peregrine falcon also exists in the Blind Horse Creek area. No nesting has been documented, although some areas are considered to be suitable for reintroduction efforts.

Big Game and Upland Game Birds

The Rocky Mountain Front, as a geographical area, is the home of the largest bighorn sheep herd in the forty-eight contiguous states. The Sun River herd is considered to be a wildlife resource of national significance and numbers approximately 1,000 head. The Blind Horse Creek area provides seasonal habitat for an estimated twenty to thirty animals.

This area also contains crucial mule deer habitat (primary winter range and fall/spring transitional range) for the Blackleaf-Teton herd segment. Populations are presently high and are estimated at 400-500 animals (Kasworm 1980 and Ihle 1981).

Elk habitat is relatively minor with the exception of lightly used yearlong habitat on the north end of the area near the Blackleaf Wildlife Management Unit.

A portion of the area is considered crucial mountain goat habitat for the Choteau Mountain herd segment. Predominate usage of the area is spring (nursery) and summer range. Two salt licks, impor-

tant to both mountain goats and bighorn sheep are found in the area.

The area provides excellent habitat for black bear, blue grouse, ruffed grouse, and Franklin's spruce grouse. Heavily used nesting and brood-rearing blue grouse habitat is found in the area.

Social and Economic Conditions

Public Comments

The majority of comments received during the inventory process supported wilderness study of the unit. Those that opposed further consideration cited the evidence of human imprints as justification to exclude it. These imprints are: a fence, a road, water pipelines, deep ruts, and seismic pits resulting from oil and gas exploration. It was pointed out that the area has outstanding oil and gas potential, has not been assessed for minerals, and abutts the Blackleaf field to the north.

Reasons cited for studying the area were: habitat for grizzly bear, black bear, wolves, bighorn sheep, mountain goats, and bald and golden eagles, sightings of grizzly bear and wolf, and the first discovery of dinosaur eggs in the United States.

CHUTE MOUNTAIN



The Chute Mountain area contains 3,205 acres of public land, and it is contiguous to the 41,960-acre Deep Creek Further Study Area (FS RARE II areas A1-485 and P1-485). There are no nonpublic inholdings.

Wilderness Resources

Quality of the Wilderness Resource

Naturalness. The Chute Mountain unit appears to be in a natural condition and to have been affected primarily by the forces of nature. As shown in Table L-4, the two short vehicle ways, the irrigation canal, and the two short pack trails all have very little influence on the apparent naturalness of the area. These minor impacts affect no more than 5% of the total area (see the Chute Mountain Impacts map). Old log chutes were identified by the intensive inventory, but while these are visible from the air, they are not apparent to the visitor on the ground. The irrigation canal has a

valid existing right, and it will be retained, along with its associated vehicle way. The remaining impacts are revegetating naturally and with only a minimum of hand labor would be virtually unnoticeable in ten years.

Outstanding Opportunities. This rectangular area has a core-to-perimeter air distance of approximately three-quarters of a mile east-west and almost two miles north-south. The entire unit slopes primarily to the east. The terrain is quite irregular due to numerous drainages and scattered benches. The dominant features of the unit are the upper slopes of Chute Mountain and the rugged cliffs of the North Fork of Deep Creek. The Deep Creek canyon is not passable by horseback or foot, thus preventing visitors from traversing the unit north and south. Approximately 60% of the unit is forested by Douglas fir and limber pine. Rock outcroppings and the steep cliff walls of the Deep Creek and Willow Creek areas comprise 20% of the total area. The final 20% is made up of mountain shrubs, fescue grasses, and forbs.

The solitude of the area is enhanced by the surrounding offsite views of the prairie to the east and rugged terrain to the north, south, and west.

The remoteness of this area combined with the screening qualities provided by the diverse vegetation and topography, create ample spots for seclusion. The outstanding opportunities for solitude provided by the unit are greatly enhanced when considered in conjunction with the contiguous Forest Service study area.

Quality, diversity, and challenge combine to make the opportunities for primitive recreation in the unit excellent. Horseback riding, hiking, rock climbing, hunting, backpacking, wildlife observation, snowshoeing, and swimming are among the activities possible.

The limestone canyon of the North Fork of Deep Creek is an outstanding natural feature within the unit. The pinnacles at the mouth of the canyon are unique to the Rocky Mountain Front and present an element of challenge.

The primitive and unconfined forms of recreation provided by the area are outstanding. This is achieved both through the diversity of opportunities and the quality of several of them.

Special Features. The area provides habitat for both migrant and resident populations of grizzly bear, black bear, bighorn sheep, mountain goats, elk, mule deer, eagles, raptors, wolves, and ruffed and blue grouse. The area is especially scenic. Among the many views are the distant prairies to the east and the spectacular hogback thrusts to the north, south, and west. Views within

TABLE L-4
CHUTE MOUNTAIN
EFFECTS ON NATURALNESS

Feature	Legal Location	Length/Area	Overall Impact	Remarks
Vehicle Way 1	T23N, R8W, Sec. 18	0.5 miles	Very Low	Two wheeled track through an open, grassy bench. Tracks resemble cattle paths.
Vehicle Way 2	T23N, R9W, Sec. 17	0.25 miles	Low	Rutted two wheeled track with vegetation growing in center. It is associated with the water canal along the southern boundary.
Irrigation Canal	T23N, R8W, Sec. 17 & 18	0.40 miles	Low	Originates from the North Fork of Deep Creek and runs in a northeast direction toward Willow Creek along the unit's southern boundary.
Pack Trail 1	T24N, R8W, Sec. 30	0.20 miles	Very Low	Old seismic way along the northern boundary of unit. Passable by horse or foot only.
Pack Trail 2	T23N, R8W, Sec. 7&8	1.25 miles	Very Low	Old seismic route no longer passable by vehicles. Enters unit from east and goes up into the timbered slopes.

the unit are highlighted by the steep cliffs associated with the South Fork of Willow Creek and the North Fork of Deep Creek. Additional inspirational sights are the flowering meadows and forested creek drainages.

Summary of Wilderness Quality. The wilderness quality of this unit is outstanding on its own merits, and in conjunction with the adjoining Forest Service study area, it is even higher. While the area is relatively small, there are few areas of that size that provide such quality wilderness attributes. As a tack-on to the Forest Service unit, the Chute Mountain area would add somewhat to the diversity and scenic quality of the RARE II area.

Ecosystem Representation

The area contains four major ecotypes: 44% of the unit is Douglas fir Forest, 24% is Alpine Meadows and Barren, 17% is Western Spruce-Fir Forest, and 15% is Foothills Prairie (see Appendix S for specific acres).

Soil and Water Resources

This unit contains the North Fork of Deep Creek, Edwards Creek, and the South Fork of Willow Creek. The North Fork of Deep Creek is perennial and is a fishery. Edwards Creek and the South Fork

of Willow Creek are both perennial streams as well.

There is also a diversionary canal that takes water from the North Fork of Deep Creek and runs through the southernmost portion of the unit.

The soils in the Chute Mountain area are mostly deep, dark to light colored, cold, loamy soils on rolling to steep slopes. These soils are fairly productive with cover alternating between mixed conifer and mountain rangeland shrub and grass species. The erosion potential is moderate to severe due to slope. There are substantial areas of steep rock outcrop and talus slopes.

Energy and Minerals

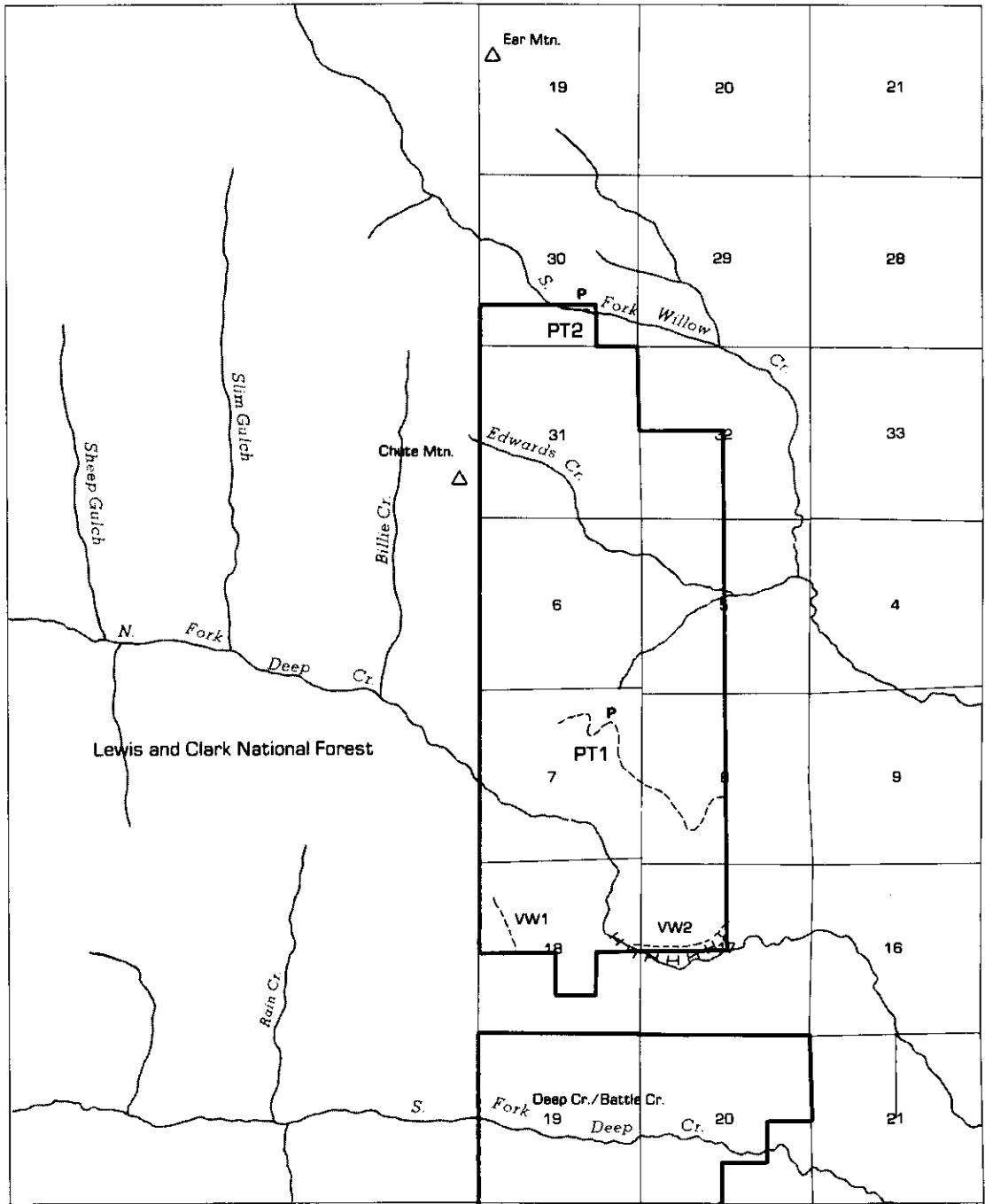
The geology of the Chute Mountain area is similar to that of the Blind Horse Creek area, and the discussion of energy and minerals for that area is also applicable to Chute Mountain.

Recreation Resources

Recreation opportunities in this unit are outstanding. The cliff walls and unique geologic features provide for unusual scenic views. Hunting potential is high, with numerous wild game species available.

T24N

R8W



T23N

— WSA Boundary

H H Pipeline

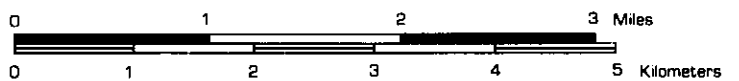
- - - Vehicle Way

- - - P Packtrail

Chute Mtn.

Impacts

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APPENDIXES

A unique hunting experience is provided, in that it is one of the few areas in the contiguous United States in which there is a hunting season for grizzly bear. Other recreational experiences that this unit offers include rock climbing, camping, fishing, nature study, bird watching, day hiking, backpacking, horseback riding, snowshoeing, and cross-country skiing.

The dominant use of the area is fall hunting. ORV use along the existing vehicle ways is light. There are no recreation facilities or vehicle way closures in this area.

Cultural Resources

No cultural resource inventory has been conducted within the Chute Mountain area. The area does contain similar resources to the Blind Horse Creek area and probably contains the same types of cultural resources.

Timber Resources

The forests in this study area are considered to be of low priority due to their limited size, poor access, fragile soils, rugged terrain, and dry aspects. These timbered stands (500 acres) consist of Douglas fir, limber pine, and small pockets of Engelmann spruce, and have been removed from the commercial base by the TPCC inventory. However, these stands could provide opportunities for low priority sales of forest products (firewood, posts, christmas trees, and possibly some saw timber).

Range Resources

The Chute Mountain area lies completely within one allotment, East Front (6307), for which an AMP is proposed. The current authorization is for 136 cattle to graze the allotment from June 15 to October 15 yearly, for a total of 304 AUMs. Approximately one mile of boundary fence has been built and an additional two miles are proposed.

Wildlife and Fisheries

Threatened and Endangered Species

The same threatened and endangered species that are found in the Blind Horse Creek area are also found in the Chute Mountain area. See the discussion of threatened and endangered species for Blind Horse Creek.

Other Species

The discussion of bighorn sheep under the Blind Horse Creek area is applicable to the Chute Mountain area as well. The area provides yearlong habitat with concentrated winter and spring (lambing) use on the portion of the Deep Creek plateau that is within the unit. It is assumed that the area is used by both the Ear Mountain and Deep Creek herds. These are estimated at 60 to 80 and 180 to 210 animals, respectively.

The Chute Mountain area contains mostly transitional fall/spring mule deer range with some secondary winter range usage. Portions of two mule deer herds utilize this area. These are the Long Ridge and Ear Mountain herds, and populations are estimated at from 1,000 to 1,300 and 400 to 500 animals, respectively (Kasworm 1980 and Ihle 1981).

The Chute Mountain area is lightly used by mountain goats and elk. It also provides excellent habitat for black bear, blue grouse, ruffed grouse, and Franklin's spruce grouse. The North Fork of Deep Creek has the potential for fisheries, including cut-throat trout, but at present very few trout are found.

Social and Economic Conditions

Public Comment

The majority of public comment supported further study for this area. Several comments addressed the presence of timber, grazing leases, and oil and gas leases. Seismic work and ORV use has left pits and ruts. Some indicated numerous sightings of grizzly bear, mountain goat, and wolf. Several cited the area as valuable for hunting, especially when used in conjunction with adjacent national forest land.

DEEP CREEK / BATTLE CREEK



The Deep Creek/Battle Creek area contains 3,086 acres of public land, with no nonpublic inholdings. It is adjacent to the 41,960-acre Deep Creek Further Study Area (FS RARE II areas A1-485 and P1-485).

Wilderness Resources

Quality of the Wilderness Resource

Naturalness. Within the Deep Creek/Battle Creek unit the impacts are limited to five short vehicle ways, three structures, and one section of disconnected steel pipe.

Most of these are located in the northern region around the South Fork of Deep Creek. Three of the five vehicle ways, as well as the three structures, are found here. As shown in Table L-5 these impacts are minor and exhibit very little influence on the apparent naturalness of the area. All of the vehicle ways are revegetating successfully. There is no evidence that vehicle ways 1, 2, 4, or 5 have been used recently. Vehicle way 3 is used periodically by a rancher. There are no impacts significant

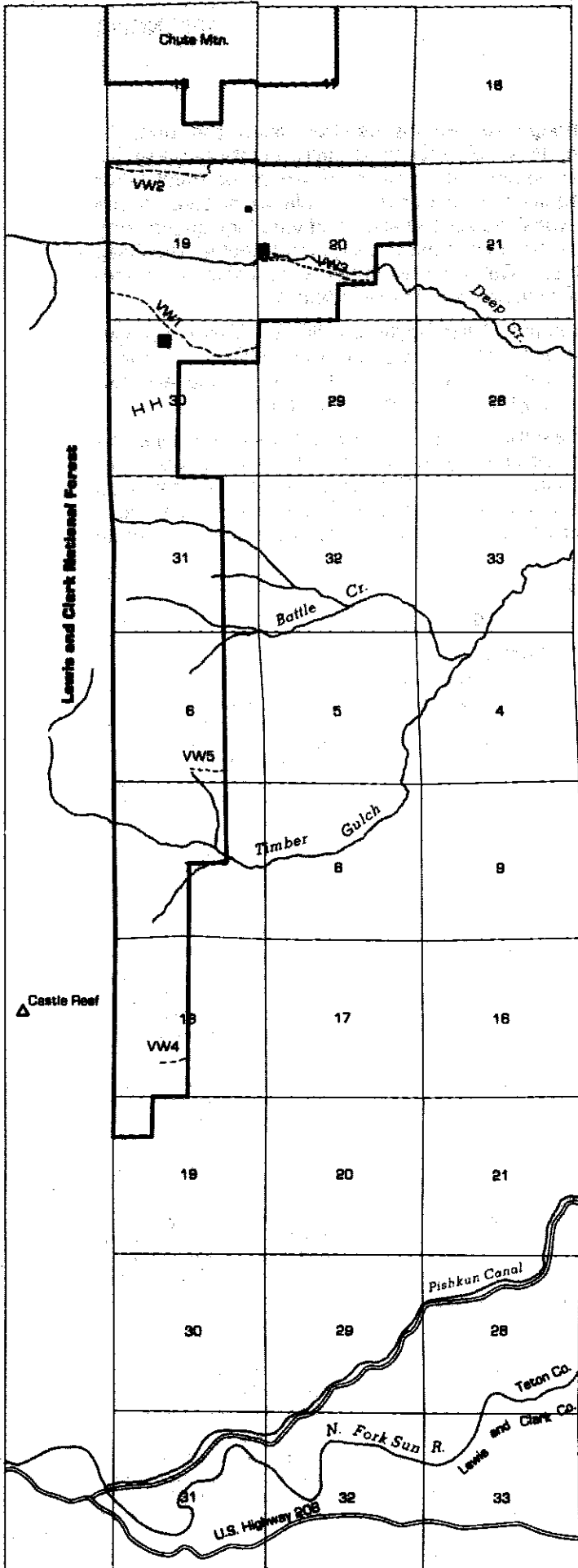
enough to require deletion from the unit. All impacts will become virtually unnoticeable within ten years with only a minimum of hand labor required on one of the vehicle ways. Overall, the naturalness of the area is of very high quality with human imprint essentially unnoticeable. The Deep Creek/Battle Creek Impacts map shows the specific locations of these impacts.

Outstanding Opportunities. This rectangular unit has a core-to-perimeter distance of less than a one-half mile east to west and approximately three miles north to south.

The entire length of the unit is dissected by some fifteen drainages, creating a diverse array of topographic features. The unit possesses no drainages that restrict foot travel. Once south of the South Fork of Deep Creek, visitors within the area would

TABLE L-5
EFFECTS ON NATURALNESS
DEEP CREEK/BATTLE CREEK

Feature	Legal Location	Length/Area	Overall Impact	Remarks
Vehicle Way 1	T23N, R8W, Secs. 19 & 30	1.25 miles	Low-Moderate	Not passable by vehicles. Two wheel track across rolling bench of limber pine and grass. Well revegetated with signs of cut and fill.
Vehicle Way 2	T23N, R8W, Sec. 19	0.75 miles	Low	Located in northern extremity of unit. Well revegetated on level areas. Gravel composition along its east slope.
Vehicle Way 3	T23N, R8W, Sec. 20	0.75 miles	Low	Two wheel track with vegetated mid-strip. Enters along South Fork of Deep Creek ending near log cabin. A spur leads to creek from trail.
Vehicle Way 4	T22N, R8W, Sec. 18	0.25 miles	Very Low	Well vegetated two wheel track. Leads through timber to undeveloped hunter's camp.
Vehicle Way 5	T22N, R8W, Sec. 6	0.25	Very Low	Well vegetated trail leading west through timber.
Cabin 1	T23N, R8W, Sec. 30	Less than 1 acre	Very Low	One room and porch. Miner's cabin with partial roof. Located adjacent to timbered area. 25'x12'x10'.
Clareman Cabin	T23N, R8W, Sec. 20	Less than 1 acre	Very Low	Located among Douglas fir trees along South Fork of Deep Creek. 40'x25'x10'.
Water Pipeline	T23N, R8W, Sec. 30	300 feet	Very Low	Disconnected and unused steel pipe leading from a spring south of Cabin 1.
Small Storage Cabin	T23N, R8W, Sec. 19	Less than 1 acre	Very Low	Approximately 10'x10'x4'. The low log structure is covered by rose bushes and visible only within 250'.



Deep Cr./Battle Cr.

Impacts

T23N

T22N

- WSA Boundary
- - - Vehicle Way
- HHH Pipeline
- Cabin
- Storage Cabin



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be channeled primarily in a north-south direction. This is due to barrier reefs along the west boundary and private lands to the east.

Approximately 70% of this landscape is covered by stands of Douglas fir and limber pine. The remaining 30% of the area is primarily composed of grasses and forbs, pockets of aspen, talus slopes, and rock outcroppings. The timber does not significantly hinder movement and it decreases the likelihood of encountering other users.

Views of the higher ridges to the west and the open prairie to the east are highly natural. The sights and sounds of these surrounding landscapes do not adversely affect one's solitude; but to the contrary, they enhance one's feeling of isolation and removal from the modern world.

Despite the area's relatively small size, the combined vegetative and topographic screening provides excellent opportunities for solitude.

The area offers a variety of quality recreation opportunities. Presently, the area is used primarily by hunters. The spectacular landforms and variety in both terrain and vegetative cover provide outstanding opportunities for scenic photography, hiking, backpacking, and rock climbing. Additional activities of high quality include wildlife observation, geological and cultural study, snowshoeing, and horseback riding. The South Fork of Deep Creek supports a population of rainbow and native cutthroat trout, and provides the additional opportunity of fishing.

The outstanding solitude and primitive recreation opportunities provided by the unit are greatly enhanced when considered in conjunction with the adjoining 41,960-acre Deep Creek Further Study area.

Special Features. The unit possesses ecological, geological, and cultural values of significant importance. It provides habitat for the threatened grizzly bear, and the endangered gray wolf and bald eagle. In addition, populations of bighorn sheep, mountain goats, mule deer, elk, black bear, grouse, various raptors, and rainbow and native cutthroat trout are found within the area.

Geologically it is important not only because it lies within the overthrust belt, but specifically because of the limestone cliffs associated with the South Fork of Deep Creek.

Summary of Wilderness Quality. The area is highly natural, offers outstanding opportunities for solitude and primitive recreation, and provides a diverse array of supplemental values. The Deep Creek/Battle Creek area would add to the diversity of the adjoining Deep Creek Study Area.

Ecosystem Representation

Deep Creek/Battle Creek contains three major ecotypes: 51% is Douglas fir Forest, 30% is Foothills Prairie, and 19% is Alpine Meadows and Barren (see Appendix S).

Soil and Water Resources

The unit contains various drainages dominated by the deep canyons of Green Timber Gulch and the South Fork of Deep Creek. Both Green Timber Gulch and the South Fork of Deep Creek are perennial streams. In addition, the South Fork of Deep Creek is a fishery.

The soils in the Deep Creek/Battle Creek area are essentially the same as those found in the Blind Horse Creek area, and the discussion on soils for that area is also applicable to Deep Creek/Battle Creek.

Energy and Minerals

The geology of the Deep Creek/Battle Creek area is similar to that of the Blind Horse Creek area, and the discussion of energy and minerals for that area is also applicable to Deep Creek/Battle Creek.

Recreation Resources

The quality of recreation opportunities is high in this unit. The landforms are spectacular and provide a scenic backdrop that enhances most dispersed recreational activities. It also provides excellent photographic opportunities. Hunting potential is high, with numerous wild game species available. The area offers a unique experience since it is one of the few areas in the contiguous United States in which there is a hunting season for grizzly bear.

The opportunities for backpacking are outstanding. The type of terrain and the vegetation provide excellent opportunities for isolation from other recreationists. Horseback riding, hiking, camping, fishing, snowmobiling, nature study, photography, and cross-country skiing are other activities to which the area is well suited.

The dominant use of the area is that of fall hunting. ORV use is light and restricted to existing vehicle ways. There are no recreation facilities or vehicle way closures in this area.

Cultural Resources

Although no cultural resource inventory has been conducted within the Deep Creek/Battle Creek area, it is known to contain the site of a failed

homestead attempt and another historic site related to trapping and seasonal hunting. Deep Creek may have also served as a prehistoric travel corridor into the valleys west of the Rocky Mountain Front. Again, the Deep Creek/Battle Creek area shares common resource values with other areas in this region and was subject to the same prehistoric and historic utilization.

Timber Resources

The forests in this study area are considered to be of low priority due to their limited size, poor access, fragile soils, rugged terrain, and dry aspects. These timbered stands (350 acres) consist of Douglas fir, limber pine, and small pockets of Engelmann spruce, and have been removed from the commercial base by the TPCC inventory. However, these stands could provide opportunities for low priority sales of forest products (firewood, posts, christmas trees, and possibly some saw timber).

Range Resources

The Deep Creek/Battle Creek area contains part of one proposed AMP allotment and one allotment proposed for maintenance management. AUMs, acres, and seasons of use are summarized in Table L-6.

Proposed AMP Allotments

The East Front Allotment (6307) lies partly within the area boundaries. Cattle graze this allotment from June 15 to October 15 yearly. There are no range improvements on public land present or proposed.

Proposed Maintenance Management Allotments

The Sun River Allotment (6308) is grazed by cattle from July 1 to September 30 yearly. There are no range improvements on public land at the present, however, approximately two miles of boundary fence are proposed.

Wildlife and Fisheries

Threatened and Endangered Species

The same threatened and endangered species that are found in the Blind Horse Creek area are also found in the Deep Creek/Battle Creek area, and the discussion of threatened and endangered species for that area applies to Deep Creek/Battle Creek as well.

Other Species

The discussion of bighorn sheep under the Blind Horse Creek area is applicable to the Deep Creek/Battle Creek area as well. This area provides year-long habitat with concentrated winter and spring use. The Deep Creek herd is currently estimated at approximately 200 sheep.

This area contains both transitional fall/spring range and crucial winter range for mule deer. Mule deer use is considered heavy with approximately 1,100 to 1,300 animals (Kasworm 1980). The steep, timbered portions of the area are valuable fall transitional, or staging, areas for mule deer moving from summer to winter range.

Elk habitat is primarily limited to a small area near Green Timber Gulch that is lightly used winter/spring habitat.

The steep slopes and cliff areas of the Deep Creek/Battle Creek area are lightly used by mountain goats and provide nesting areas for prairie falcons and golden eagles.

The South Fork of Deep Creek, although subject to periodic flooding, provides some habitat for fish species. A small population of cutthroat and rainbow trout presently exists.

The area provides excellent habitat for black bear and blue and ruffed grouse, including heavily used nesting and brooding habitat.

**TABLE L-6
GRAZING ALLOTMENTS IN DEEP CREEK/BATTLE CREEK**

Allotment Name & Number	Livestock		Season of Use		AUMs (public land) Only	Acres Within Area
	Number	Class	From	To		
East Front (6307)	136	C	6/15	10/15	238	2,238
Sun River (6308)	*	C	7/1	9/30	180	848

*Livestock numbers are not regulated.

Social and Economic Conditions

Public Comment

The majority of comments favored wilderness for this unit. They pointed out existing opportunities for primitive and unconfined recreation, as well as the presence of scenic and geologic values. The most prevalent concern referred to the area's existing habitat for big game, the threatened grizzly bear, and the endangered wolf.

One family stressed the detrimental impacts wilderness would place on their ranching operation and specifically, expressed concern about reduced allotments and complications from public access across their private lands. Several comments emphasized the potential for oil and gas discoveries within this area.

BLACK SAGE (MT-075-115)



The Black Sage WSA contains 5,926 acres of public land with no nonpublic inholdings. It is located between Cardwell and Boulder, approximately thirty-two miles from Butte.

Wilderness Resources

Quality of the Wilderness Resource

Naturalness. The human impacts within the Black Sage WSA are for the most part all associated with livestock grazing and hunting. Nine vehicle ways, totaling seven and one-half miles are dispersed throughout the unit, as are six miles of wood and steel post fence. Impacts associated with a water pipeline project exist in the southern portion. Project developments include subsurface PVC pipe, three stock tanks, and a 23,000 gallon water storage tank. The apparent influences of these improvements although noticeable, are not significant due to their location and natural colors.

Although the area appears to have been primarily affected by the forces of nature, signs of human imprints are noticeable throughout the unit. The cumulative effect of these imprints reduce the quality of the area's naturalness, which is rated low to moderate.

Not all of the impacts will return to a natural condition over time.

The nonfunctional check dams could be reconditioned and seeded to a natural state in five years. All functional fences and the water pipeline project will be retained. Portions of vehicle ways 1, 5, 7, and 9, totaling almost two miles, will be managed to ensure vehicle access to grandfathered range projects. The remaining vehicle ways will revegetate naturally within ten years.

See Table L-7 for specific impact descriptions, and the Black Sage Impacts map for their locations.

Outstanding Opportunities. The poor configuration of the unit makes its core-to-perimeter distance not only small but hard to evaluate, since it lacks a consolidated central portion. The north and south extremities do not possess core-to-perimeter distances greater than one and one-half miles in any direction.

The north portion of the unit offers little in the way of vegetative screening. Vegetation is sparse, consisting of shrub juniper, mountain mahogany, sagebrush, and various grasses. The topographic relief is created by limestone ridges and intruding drainages. Elevational changes are minor. From any high point a person can easily see several other ridges, which are virtually without screening qualities. The natural tendency for visitors to travel along the higher areas, because of a lack of attractive features within the dry gullies, would make other users that much more visible.

The southern extremity of the WSA contains denser vegetation, particularly on the north facing slopes where Douglas fir dominates. The topography is more diverse with numerous drainages flowing in all directions. Here, users are much better screened from one another. The overall solitude within the area is good, as long as visitor numbers stay low and dispersal rates are adequate. Although the WSA is surrounded by private land, there are no offsite developments that would negatively influence a user's experience. To the contrary, panoramic views of the distant mountain ranges are an enhancement.

The Black Sage WSA offers high quality opportunities for antelope and mule deer hunting. There are also a variety of other primitive recreation activities including hiking, horseback riding, nature study, and, during favorable winters, cross-country skiing.

Special Features. Scenic views of six different mountain ranges can be enjoyed from any of the area's high points. Ecologically, the unit provides important deer winter range.

Summary of Wilderness Quality. Although the area meets the required criteria for wilderness, the quality of these overall characteristics is

TABLE L-7
BLACK SAGE WSA (MT-075-115)
EFFECTS ON NATURALNESS

Feature	Legal Location	Length / Area	Overall Impact	Remarks
Fences	T4N, R2W, Sec. 28&34 T3N, R2W, Sec. 13, 14 & 15	6 miles	Low-Moderate	Wood and steel post. Majority located in drainages with remainder on gentle slopes.
Check dams	T3N, R2W, Sec. 14&15	2-3 acres	Very Low	Three dams, largest is 15x25x12 feet. Nonfunctional and revegetated. Located in drainages.
Vehicle Ways 1-9	T4N, R2W, Sec. 1 T3N, R2W, Sec. 2, 11, 14, 15, & 22	7.50 miles	Moderate	Nine in number. Used seasonally by ranchers and hunters. Only one-fourth mile of vehicle way 8 revealed signs of construction.
Water Pipeline	T3N, R2W, Sec. 13, 14, & 15	5-6 miles	Low-Moderate	Project includes buried PVC and 1-1/2" galvanized pipe. Two stock tanks and one 23,000 gallon capacity storage tank. All surface materials have been painted to blend in with the surroundings.

only moderate. Limiting factors are the area's configuration, lack of natural screening, and the number of widespread range improvements.

Ecosystem Representation

The WSA consists of three different ecotypes: 85% is Grama-Needlegrass-Wheatgrass, 9% is Sagebrush Steppe, and 6% is Douglas fir Forest (see Appendix S for acreages).

Soil and Water Resources

The Black Sage unit has a pipeline on it to pump water from the Boulder River to a large (23,000 gal.) storage tank. Three stock tanks are gravity fed from the tank. There is no natural surface water in the unit.

The soils in the Black Sage WSA are shallow to moderately deep, dry, calcareous loamy soils on rounded limestone ridges and planar fan slopes, that have limestone bedrock close to the surface. These soils have low productivity with up to 60 percent gravels and 25 percent cobbles in the surface foot. Limestone outcrops are common throughout the unit. The erosion hazard is moderate to severe from water and wind because of slopes and limy soils.

Energy and Minerals

The Black Sage WSA includes rocks from Precambrian through Tertiary age. The stratigraphic section in the WSA is a typical one for southwest Montana, ranging from the Precambrian Greyson shale through the Peruvian Phosphoria. The WSA occupies the nose of the north-south trending anticline which plunges to the south at approximately 30 degrees.

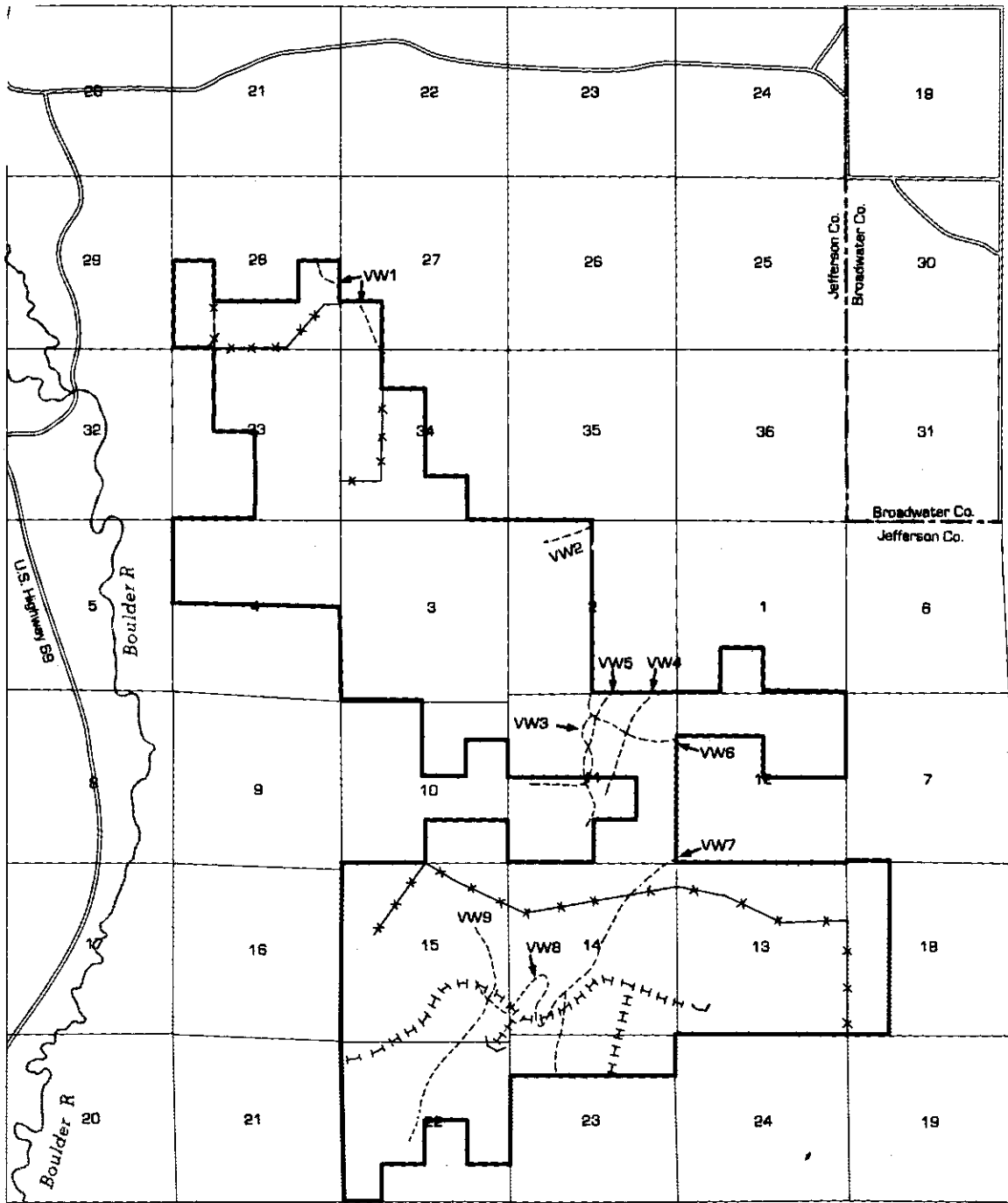
The potential for locatable minerals is low based on existing information, and there are no mining claims within the WSA. The Butte District Office has received information suggesting the area has high potential for oil and gas, and the entire WSA is leased (post-FLPMA) for oil and gas.

Recreation Resources

Recreational opportunities are limited in both quality and quantity. The primary activity is antelope hunting in the fall, but some deer hunting also occurs. The area provides some dispersed recreation in the form of hiking and horseback riding, but does not receive a large amount of use. ORV use has potential in the area, especially four-wheel driving on the vehicle ways, and motorcycle use throughout the area. The unit is relatively open and

R2W

T4N



T3N

— WSA Boundary

-*- Fence Line

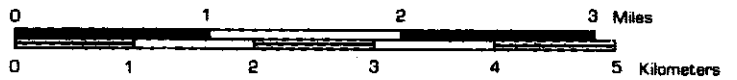
--- Vehicle Way

- Stockwater Tank

HH Pipeline

**Black Sage
MT-075-115
Impacts**

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APPENDIXES

cyclists could utilize the area for cross-country riding.

There are no vehicle way closures in effect in this area, nor are there any constructed recreational facilities.

Cultural Resources

A sample inventory of the Black Sage WSA has yielded six prehistoric sites, one homestead, and a pre-World War I historic camp, probably related to sheep grazing. This wilderness study area consists of portions of a limestone mountain rising above the surrounding lower valleys on the divide between the Boulder and Missouri Rivers. This rise in elevation captures moisture and has created a topoedaphic habitat of interspersed meadows and forest that may have been used by bison. Although the area is dry today, there is an indication that springs were once present, but have been sealed by seismic activity. Numerous outcrops of chert and siltstone are present, providing raw materials for prehistoric peoples. This grouping of resources led to extensive prehistoric utilization of the Black Sage WSA during the last 3,000 years, and probably before.

Historic usage as summer pasture somewhat parallels prehistoric. A cairn associated with historic debris indicates probable sheep grazing. A homestead, present in the 1910-1930 period, attempted to utilize the higher local rainfall for agriculture but failed. Tree stumps indicate some historic utilization of the forests, probably for ranching or farm use.

Timber Resources

Timber stands in this WSA are restricted due to dry and hot aspects, poor soils, rugged terrain, and low moisture. The 300 acres of scattered stands are a mixture of limber pine and Douglas fir. This indicates fragile sites, and the TPCC inventory classified these stands as woodland.

Range Resources

The Black Sage WSA contains three grazing allotments, two proposed for improved management and one proposed for maintenance management. A breakdown of acres, AUMs and seasons of use appears in Table L-8.

Proposed Maintenance Management Allotments

The Black Sage Allotment (O216) is a three pasture allotment, with one pasture in the WSA. Both private and state lands are fenced within the pasture. The pasture contains 1,725 acres of public

land, and is grazed from 5/1 to 5/15 and 11/1 to 12/20 each year for a total of seventy AUMs.

Four miles of fence are located along a prominent ridge on public land in T3N, R2W, Sections 13, 14 and 15, separating this allotment from the County Line Allotment to the north.

The Black Sage pipeline carries water piped from the Boulder River to a large water tank that will store the water. Water will be piped from the tank to three troughs located in the pasture.

Proposed Improved Management Allotments

The County Line Allotment (O210) is made up of five pastures, four of which have land included in the WSA. Both private and state lands are fenced within the allotment. One pasture is grazed from 5/16 to 7/15 and three pastures are grazed from 5/16 to 11/15 each year. A total of 196 AUMs are authorized on 3,900 acres of public land.

One-half mile of fence occurs in T3N, R2W, Section 12 NE1/4, and there is three-quarters of a mile of fence in T4N, R2W, Section 34.

The Boulder River Allotment (O212) is a four pasture allotment, one of which has public land in the WSA. Private land is intermingled with public land in this pasture. The pasture contains 301 acres of public land, and is grazed from 6/1 to 12/31 for a total of fourteen AUMs. Three-quarters of a mile of fence is located in T4N, R2W, Section 28, separating this allotment from the County Line Allotment to the south.

Wildlife and Fisheries

This WSA provides summer habitat for a small population of mule deer. Winter utilization increases dramatically and the entire unit is crucial winter range for approximately 250 to 300 mule deer.

Elk occasionally use the area but primary seasonal elk habitats are found outside of the WSA. There is potential, however, for increased usage of the area by elk.

Bighorn sheep presently do not occur in the WSA, although the unit does contain suitable habitat for establishment of a small herd. Antelope are found on portions of the WSA, particularly in the summer season. Primary antelope habitats, however, are outside of the unit. Occasional blue grouse are found in the unit but population numbers are small.

The WSA provides excellent yearlong hunting habitat for golden eagles. Several nesting territories are also located within the unit. Merriam's turkeys

TABLE L-8
GRAZING ALLOTMENTS IN THE BLACK SAGE WSA

Allotment Name & Number	Livestock		Season of Use		AUMs (public land) Only	Acres Within Area
	Number	Class	From	To		
Black Sage (0216)	40	C	5/11	5/15	12	1,725
	60	C	11/1	12/20	58	
County Line (0210)	200	C	5/16	7/15	132	3,150
	10*	C	5/16	11/15	84	
Boulder River (0212)	8	C	6/1	12/31	14	301

*Livestock numbers are not regulated if use is not detrimental to condition of public land.

do not presently occur in the WSA, but some suitable habitat does exist, and there is potential for the establishment of this species.

Social and Economic Conditions

Public Comment

All comments that were received favored further study of this area for wilderness. The public emphasized that the area was primarily natural; provided excellent opportunities for solitude; and possessed unique geologic, scenic, and wildlife (antelope) values. Problems with the unit's configuration and the need to control vehicle access were cited. Many went on to say that the area could add diversity to the wilderness system due to its natural characteristics.

YELLOWSTONE RIVER ISLAND (MT-075-133)



The Yellowstone River Island is about fifty-three acres in size. It is located about two and one-half miles northeast of Livingston, Montana.

Wilderness Resources

Quality of the Wilderness Resource

Naturalness. The only onsite impacts found were two old cars inconspicuously located on the east and west ends of the unit. These cars could be removed from the island with minimum effort. Offsite intrusions are evident in the form of two private homes to the north and one small ranch to the south. Impacts within one mile of the island include a secondary, paved road to the north and

Interstate 90 and the Burlington Northern Railroad to the south. Although these intrusions are detectable at times within the unit, their impacts are not significant, because of the noise of the river and the vegetative screening on the island. The cumulative effect of these impacts reduces the quality of the area's naturalness to a moderate degree. Table L-9 contains specific impact descriptions, and the Yellowstone River Island Impacts map shows their locations.

Outstanding Opportunities. Opportunities for solitude in the WSA are high in quality despite the offsite intrusions. Reasons for this are the dense vegetative screening, the buffering effect of the river, and the size of the island. Visitors can easily avoid the sights and sounds of other users because of the availability of access points and the number of isolated sites throughout the unit. Dispersal qualities of the island are good due to its configuration and the vegetative composition.

Besides the tranquil effects of the river, distant panoramic views of the Absaroka Mountains to the south and the Crazy Mountains to the north enhance the opportunities for solitude.

Opportunities for primitive and unconfined recreational activities are numerous and of high quality. The island presently is used for bird and white-tailed deer hunting, overnight camping, and fishing. Perhaps the best known, and most popular, activity is the quality fishing provided along its shores. The Montana Stream Classification Committee has designated this portion of the Yellowstone River Class 1 (highest value fishery resource). This is the highest rating given to fishing waters in the state.

The wide diversity of plant life and associated animal populations (white-tailed deer, grouse, beaver, waterfowl, blue heron, and other bird species) ensures visitors of nature study and photographic opportunities. There is potential for canoeing, floating, and overnight camping also associated with the island.

TABLE L-9
EFFECTS ON NATURALNESS
YELLOWSTONE RIVER ISLAND WSA (MT-075-133)

Feature	Legal Location	Length/Area	Overall Impact	Remarks
Junked cars	T1S, R10E, Sec. 33	Less than 1 acre	Low	Washed onto island during spring high water.
Offsite intrusions	Various	Variable	Moderate-High	Secondary paved road one-fourth mile north. Two private homes immediately to north. One small ranch immediately to north. One small ranch immediately to south. Interstate 90 and Burlington Northern Railroad one mile to the south.

Special Features. Ecological features of educational and scenic value are provided by the unit. Due to the island's diverse vegetation, a wide range of wildlife can be seen. The cattail marsh areas, willow thickets, cottonwood stands, and open areas support a wide variety of songbirds. In addition to these onsite values, scenic views of the Absaroka Mountains to the south and the Crazy Mountains to the north further enhance the quality of the unit.

Summary of Wilderness Quality. The most important wilderness qualities of this WSA are its opportunities for primitive recreation and solitude, and its supplemental values. The major limiting factors are its offsite impacts, relatively low carrying capacity, and its constantly changing boundaries (due to river channeling).

Ecosystem Representation

The entire WSA is best represented by the Northern Floodplain Forest ecotype (see Appendix S for acreage).

Soil and Water Resources

There are numerous high water channels located throughout the island, with small ponds, marshy areas, and riparian vegetation along the lower sections. The major channel, that bisects the eastern end of the unit, has some year-round water movement over its rocky bed.

The soils in this area are deep sandy soils underlain by coarse sand and gravel on a nearly level island. Surface soils are fine sandy loams to gravelly sandy loams. There is substantial willow and cottonwood growth on the island indicating that it is somewhat stable. The unit is subject to flooding however, and any change in the course of the river could erode or increase the size of the island.

Although the erosion potential is slight under normal circumstances, the sandy soil texture and the fact that islands are subject to periodic flooding would raise the erosion potential to at least moderate.

Energy and Minerals

The Yellowstone River Island is composed entirely of Quaternary alluvium. Adjacent geology is the Upper Cretaceous Livingston Group and the Fort Union Formation. Mineral potential is low. Further information can be found in the GEM Report, which is on file in the Butte District Office.

Recreation Resources

The primary recreation uses of the island are related to boater use of the Yellowstone River. All of the adjacent riverbank is in private ownership. The Yellowstone River is rated as a Class 1 fishery, which is the highest rating a river can receive. As a result of the fishing quality, the major recreational use is by boaters who stop to fish from the shore of the island on their way down the river. Associated recreational uses that also occur include camping, picnicking, photography, and nature study. There is a diverse representation of wildlife on the island that attracts some users. White-tailed deer are present and attract some hunters. In addition, grouse, beaver, waterfowl, blue heron, and other bird species provide wildlife viewing opportunities.

The scenic resources on the island and the surrounding area also attract recreational users. The Crazy and Absaroka mountains are easily seen from the island. The island itself is covered with a wide range of diverse vegetation including cattail

marshes, willow thickets, cottonwood stands, and open, grassland areas.

Use of the island is relatively light. Most use occurs during the floating season, with some fall hunting also occurring. There is some potential for casual winter use, but none is documented. There are no constructed recreational facilities within the WSA.

Cultural Resources

Historic documents indicate that the Yellowstone River Island was formed after 1886. During extreme high water periods, the island has been inundated, and although cultural items are present, these items have been washed into the area and have no cultural values.

Timber Resources

The WSA contains no commercial tree species. No further timber evaluation is needed.

Range Resources

There is no authorized grazing use in this WSA. There will be no further evaluation of grazing.

Wildlife and Fisheries

This WSA contains excellent riparian habitat and provides habitat for a diverse array of wildlife species, particularly nongame species. Fisheries habitat is similarly excellent.

Rainbow trout, cutthroat trout, whitefish, and brown trout occur in this stretch of the river, with rainbows and browns predominating.

White-tailed deer occur on the island, as do ruffed grouse and pheasants.

Canada geese occur year-round and the island provides excellent nesting and winter habitat. The island also provides nesting, migratory, and winter habitat for other waterfowl species.

Nongame species that nest on, or seasonally utilize, the island are especially diverse. Many species that inhabit the area are classified as sensitive, and/or are listed on the National Audubon Society's Blue list. Examples are white pelicans, ospreys, several tern species, yellow-billed cuckoos, double-crested cormorants, great blue herons, yellow-breasted chats, and screech owls.

The WSA also provides winter, nesting, and migratory habitat for the endangered bald eagle. At present, no nesting exists, but suitable habitat is present and a pair of eagles is establishing a new nesting territory near the island. Winter and migratory usage of the area by bald eagles is especially high, and the Yellowstone River in general supports one of the largest wintering populations of bald eagles in the state (National Wildlife Federation, Midwinter Bald Eagle Census).

Social and Economic Conditions

Public Comment

Comments received for this unit were few in number and equally balanced. Letters favoring further study addressed the area's natural attributes, opportunities for solitude, scenic values, and wildlife habitat as being positive characteristics. Those in opposition stressed the island's limited size, ease of accessibility by boat, and potential for conflicting with future development projects along the Yellowstone River. There were no comments opposed to further study that pertained to the unit's wilderness characteristics.

ENVIRONMENTAL CONSEQUENCES

BLIND HORSE CREEK



Alternative A: Preferred

Under this alternative, short-term degradation of the area's wilderness values will be prevented, since this unit would be managed as an Outstanding Natural Area, with emphasis on resource preservation. The diversity of the NWPS would be somewhat affected since 1,130 acres of the under-represented Foothills Prairie ecotype would not be added to the system. Due to the small size of the unit and the abundant local supply of wilderness, nondesignation will have little effect on providing wilderness opportunities close to metropolitan areas, or on expanding the geographical distribution of the NWPS. Although it is unlikely that any significant degradation would occur to the area's outstanding values over the short-term under this alternative, long-term protection would not be as secure as it would be with wilderness designation.

Although they would not be provided the same long-term protection that wilderness designation would provide, visual resources, soil and water resources, wildlife habitat, and primitive recreation opportunities would all benefit under this alternative. Restrictions on the use of motorized vehicles by livestock operators would not be as severe as they would under wilderness designation, but most motorized recreation opportunities would still be forgone. Approximately 800 acres of woodland would not be available for the limited harvest of forest products under this alternative.

The impacts on energy and minerals could be significant because the whole area would be zoned for no surface occupancy or no leasing. The potential for natural gas is high, and these stipulations would limit exploration and development. However, the potential would not necessarily be forgone over the long-term, as it would be with wilderness designation.

Alternative B: No Action

Under this alternative, the entire area would not be designated as wilderness and as a result, long-term protection of its wilderness values would not

be ensured. In addition, the diversity of the NWPS would be adversely affected, since the 1,130 acres of the under-represented Foothills Prairie ecotype would not be added to the system.

Oil and gas exploration and other surface disturbing activities would be allowed to occur over the long term. Impacts such as access roads, drilling pads, pipelines, and storage areas are possible, and would adversely affect the naturalness, solitude, and scenic values of this unit. Forest management would be of low priority, but timber resources would not be withdrawn. Small cash sales of woodland timber would be allowed, thus creating some surface and visual impacts. Motorized vehicle use would be restricted, but impacts on naturalness might not be eliminated. Although few grazing improvements are planned, there are no guarantees that long-term developments or vegetative manipulations would not occur.

Although long-term protection of visual resources, soil and water resources, wildlife habitat, and primitive forms of recreation would not be guaranteed through wilderness designation, other management actions would serve to protect these resources, at least over the short term. Not designating this area as wilderness would not have any significant impacts on energy and minerals, range resources, or timber resources.

Alternative C: Protection

Designation of the Blind Horse Creek area as wilderness would best preserve 4,927 acres of high quality wilderness values. This alternative would add 1,130 acres of the under-represented Foothills Prairie ecotype to the National Wilderness Preservation System (NWPS). The naturalness of the area would be ensured over the long term and natural ecological changes would continue to occur. The area's exceptional opportunities for solitude and primitive recreation would be best guaranteed for future visitor enjoyment. Preservation of wilderness values would in turn protect the area's high scenic and wildlife values.

There are some manageability concerns associated with this alternative. Most of the unit boundaries are irregular, and defined by legal subdivisions that are not readily identifiable on the ground. There is a 160-acre private inholding in the south-central portion of the unit.

The entire area is leased for oil and gas, with approximately 60% of the unit covered by pre-FLPMA leases. Since the Interim Management Policy (IMP) no longer applies for this area, the

distinction between potential impacts from pre-FLPMA and post-FLPMA leases is no longer critical. Neither are subject to nonimpairment criteria.

Under this alternative, visual resources, soil and water resources, primitive recreation opportunities, and wildlife habitat would all benefit from wilderness designation. Conversely, there would be significant adverse impacts on energy and minerals if the Blind Horse Creek area is designated as wilderness. There is a strong likelihood that the Blackleaf Gas Field extends under a corner of this area, and the potential for natural gas is high in the rest of the area as well. This potential could be forgone over the long term if this area is designated as wilderness.

Opportunities for motorized recreation would be forgone with wilderness designation, and 800 acres of woodland would not be available for the limited harvest of forest products. Some additional restrictions would be placed on the use of motorized vehicles by livestock operators.

Alternative D: Production

Recommending the entire area as nonsuitable for wilderness would have the same impacts as Alternative B, with the exception that the entire area would be open to oil and gas occupancy. This could have some additional impact on wilderness resources.

CHUTE MOUNTAIN



Alternative A: Preferred

Under this alternative, short-term degradation of the area's wilderness values would be prevented, since the unit would be managed as an Outstanding Natural Area, with emphasis on resource preservation.

The opportunity for the Forest Service to consider this tack-on as an addition to their RARE II Further Planning area would be forgone. Although Chute Mountain would add to the diversity and scenic quality of the adjoining national forest land now under wilderness study, it would not enhance its manageability or boundary configuration.

Although it is unlikely that any significant degradation would occur to the area's high natural quali-

ties over the short term, long-term protection would not be as secure as it would be with wilderness designation.

The beneficial and adverse impacts to other resources under this alternative would be the same as for the Blind Horse Creek area, with the exception that 500 acres of woodland would be set aside.

Alternative B: No Action

Under this alternative, the entire area would be recommended as nonsuitable for wilderness, and consequently, long-term protection of its wilderness values would not be guaranteed. Since the area is entirely leased and has a high potential for oil and gas, there is potential for exploration and development activities to occur in the area. Impacts such as access roads, drilling sites, pipelines, and storage areas are possible and could adversely affect the solitude and naturalness of the area. Forest management would be of low priority, but would not be set aside. Small cash sales of forest products would create some surface and visual disturbances. Mineral entry and its associated impacts would be unlikely, since the area has a low potential for locatable minerals. Grazing impacts would be slight since no improvements are proposed within the unit and little maintenance of existing facilities is needed. Motorized vehicle use would be restricted, thereby mitigating disturbances. Sights and sounds associated with these vehicles would have some impacts on the area's solitude. Visual and surface disturbances as a result of utility and transportation corridors would be unlikely due to the remoteness of the area.

The opportunity for the Forest Service to consider this tack-on as an addition to their RARE II Further Planning area would be forgone. Although Chute Mountain would add to the diversity and scenic quality of the adjoining national forest land now under wilderness study, it would not enhance its manageability or boundary configuration.

The beneficial and adverse impacts of nondesignation to other resources would be the same as for the Blind Horse Creek area.

Alternative C: Protection

Designation of the Chute Mountain area (3,205 acres) as wilderness would ensure long-term protection of its wilderness values. It would preserve the area's outstanding opportunities for both solitude and primitive forms of recreation, as well as its exceptional scenic and wildlife values.

This area is not manageable as wilderness on its own and must be considered as a tack-on to the adjoining Forest Service area. All unit boundaries are established by legal subdivisions, which are not readily identifiable on the ground. The unit has no nonpublic inholdings and its configuration is well consolidated.

Although this tack-on would improve the diversity and scenic quality of the adjoining RARE II Further Planning area to some degree, it would not enhance the overall manageability or boundary configuration of the larger RARE II area. Chute Mountain is entirely leased for oil and gas, and these leases could impact wilderness values over the short term (1983) since they have valid existing rights and are not subject to the nonimpairment criteria.

If this area is designated as wilderness, administrative responsibilities for the area should be transferred to the Forest Service in order to provide consistent wilderness management.

The beneficial and adverse impacts to other resources under this alternative would be the same as for the Blind Horse Creek area, with the exception that 500 acres of woodland timber would be unavailable for harvest.

Alternative D: Production

Designating the entire area as nonwilderness would have the same environmental consequences as Alternative B, with the exception that the whole area would be available for oil and gas occupancy. This could have some additional impact on wilderness resources.

DEEP CREEK / BATTLE CREEK



Alternative A: Preferred

Nondesignation of the Deep Creek/Battle Creek study area could have long-term adverse impacts on wilderness values. Short-term degradation would be prevented since the unit would be managed as an Outstanding Natural Area with emphasis on resource preservation. Nine hundred and twenty acres of the under-represented Foothills Prairie ecotype would not be added to the NWPS. Due to the small size of the unit and the abundant local supply of wilderness, nondesignation will have

little effect on providing wilderness opportunities close to metropolitan areas, or on expanding the geographical distribution of the NWPS.

The opportunity for the Forest Service to consider this tack-on as an addition to their RARE II Further Planning area would be forgone. Although Chute Mountain would add to the diversity and scenic quality of the adjoining national forest land now under wilderness study, it would not enhance its manageability or boundary configuration.

Under this alternative, it is unlikely that any significant degradation would occur to the area's high natural qualities.

The beneficial and adverse impacts to other resources under this alternative would be the same as for the Blind Horse Creek area, with the exception that 350 acres of woodland would be set aside.

Alternative B: No Action

Under this alternative, the entire area would be designated as nonwilderness and consequently, long-term protection of its wilderness values would not be guaranteed. In addition, the diversity of the NWPS would be negatively affected since 1,130 acres of the under-represented Foothills Prairie ecotype would not be added to the system.

Due to the high potential for oil and gas, and the fact that the area is entirely leased, there exists a potential for exploration and development activities over at least part of the area. Impacts such as access roads, drill pads, pipelines, and storage areas are possible, and could adversely affect the qualities of naturalness and solitude in the area. Forest management would be of low priority but not set aside. Small cash sales of forest products would create some surface and visual disturbance. Impacts from mineral entry would be unlikely due to the low potential of the area for locatable minerals. Grazing impacts would be slight, since no improvements are proposed within the unit and little maintenance is needed on existing improvements. Motorized vehicle use would be restricted, thereby mitigating disturbances. The sights and sounds associated with these vehicles would impair the solitude of the area.

Visual and surface disturbances associated with utility and transportation corridors would be unlikely due to the remoteness of the area.

The opportunity for the Forest Service to consider this tack-on as an addition to their RARE II Further Planning area would be forgone. Although Deep Creek/Battle Creek would add to the diversity and scenic quality of the adjoining national forest land,

it would not enhance its manageability or boundary configuration.

The beneficial and adverse impacts to other resources under this alternative would be the same as for the Blind Horse Creek area.

Alternative C: Protection

Designation of the Deep Creek/Battle Creek area (3,086 acres) as wilderness would ensure long-term protection of wilderness values in the area. It would preserve its outstanding opportunities for both solitude and primitive types of recreation, as well as its exceptional scenic and wildlife values. In addition it would add 920 acres of the under-represented Foothills Prairie ecotype to the NWPS. Although this tack-on would add to the diversity and quality of the adjoining RARE II Further Planning area, it would not improve the area's boundary configuration or manageability. The area is not manageable on its own, and must be considered as a tack-on to the adjoining Forest Service area.

All unit boundaries are established by legal subdivisions, which are not readily apparent on the ground. While it contains no private inholdings or natural impacts of significance, the entire area is leased for oil and gas. These leases present potential impacts on wilderness values over the short term, because they are not subject to the nonimpairment criteria.

Since management of this tack-on is dependent upon the adjoining national forest lands, administrative responsibility should be transferred in order to improve consistency if it is designated as wilderness.

The beneficial and adverse impacts to other resources under this alternative would be the same as for the Blind Horse Creek area, with the exception that 350 acres of woodland would be unavailable for harvest.

Alternative D: Production

Recommending the entire area as nonsuitable for wilderness would have the same impacts as Alternative B, with the exception that the entire area would be open to oil and gas occupancy. This could have some additional impact on wilderness resources.

BLACK SAGE (MT-075-115)



Alternative A: Preferred

Nondesignation of the entire Black Sage WSA (5,926 acres) could have some long-term adverse impacts on wilderness values. The diversity of the wilderness system would be affected since 5,037 acres of the currently under-represented Grama-Needlegrass-Wheatgrass ecotype would not be added to the system. The degree of impact is impossible to assess at this time since there are numerous other areas with this ecosystem still under consideration for wilderness. Because of the WSA's limited size and the abundance of surrounding wilderness areas, nondesignation would not be detrimental in providing wilderness opportunities within one day's drive of major metropolitan areas or expanding the geographic distribution of wilderness.

Although future management would be less restrictive than under wilderness status, no major impacts are anticipated in the short or long term. Increased motorized access and grazing activities present the most likely impairments.

A nonsuitable recommendation for the area will subject visual resources, soil and water resources, wildlife habitat, and primitive forms of recreation to some degradation over both the short and long term. Energy and minerals, timber, range, and motorized recreation activities would be unaffected.

Alternative B: No Action

Nondesignation of the entire study area would have the same consequences as Alternative A.

Alternative C: Protection

Designation of the entire WSA (5,926 acres) would ensure long-term protection of its moderate wilderness values. This alternative would add 5,037 acres of the Grama-Needlegrass-Wheatgrass ecosystem, a relatively under-represented type, to the wilderness system. Designation would protect the area's wildlife, scenic, and primitive recreation values, since impairing activities would be prohibited.

APPENDIXES

The WSA's values of naturalness, solitude, and primitive recreation are only moderate, and would add little to the national wilderness system. The benefits of designation are not considered significant enough to offset the manageability problems. The highly irregular configuration of the unit and its poorly identified boundaries would make inadvertent trespass a problem. The open terrain and lack of physiographic features would increase the area's vulnerability to offsite intrusions and cross-country motorized travel. In addition, vehicle access for the maintenance of the numerous range developments would adversely affect the area's ability to provide primitive experiences.

Wilderness designation would benefit visual resources, soil and water resources, wildlife habitat, and primitive forms of recreation, since their protection would be ensured. Conversely, there would be some adverse impacts on other resources. Energy and mineral development would be forgone. Range developments and the use of motorized vehicles by livestock operators would be subject to additional restrictions. Opportunities for motorized recreation would be eliminated, as would the potential for limited harvest of forest products from 300 acres of woodland.

Alternative D: Production

The impacts under this alternative would be the same as for Alternative A.

YELLOWSTONE RIVER ISLAND (MT-075-133)



Alternative A: Preferred

Under this alternative, the Yellowstone River Island (53 acres) would not be designated as wilderness, and consequently, its wilderness values would be subject to less restrictive management. Nondesignation would have virtually no effect on the diversity of the NWPS due to the unit's small size and location.

Nondesignation could adversely affect visual resources, soil and water resources, wildlife habitat, and primitive forms of recreation, since development, although unlikely, could occur.

Alternative B: No Action

The impacts under this alternative would be the same as for Alternative A.

Alternative C: Protection

Designation of the entire Yellowstone River Island (53 acres) would best ensure long-term preservation of its moderate wilderness values, including wildlife and scenic supplemental values. Due to the area's small size and location, it would add little to the diversity of the NWPS.

Long-term management would be a problem due to the instability of the island's boundaries (that results from river fluctuations), the area's low carrying capacity, and its offsite intrusions.

Although wilderness designation would eliminate development on the island, adverse impacts would be minimal. Utility corridors would be eliminated from consideration and recreational developments would be restricted. Conversely, the visual, soil, water, wildlife, and primitive recreation resources would be preserved.

Alternative D: Production

Under this alternative, the impacts would be the same as for Alternative A.