WILDERNESS ENVIRONMENTAL IMPACT STATEMENT for the HEADWATERS RESOURCE AREA FINAL

Department of the Interior
Bureau of Land Management

Headwaters Resource Area Montana

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM-MT-ES-87-001-4332

WILDERNESS ENVIRONMENTAL IMPACT STATEMENT

for the

HEADWATERS RESOURCE AREA

JEFFERSON AND PARK COUNTIES
MONTANA

FINAL

Prepared by

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
BUTTE DISTRICT OFFICE

Dean Stepanek

STATE DIRECTOR
MONTANA STATE OFFICE

OCTOBER 1986

WILDERNESS
ENVIRONMENTAL IMPACT STATEMENT
for the
HEADWATERS RESOURCE AREA
BUTTE, MONTANA

Draft ( ) Final (X)

1. LEAD AGENCY: Bureau of Land Management

2. TYPE OF ACTION: Administrative ( ) Legislative (X)

3. ABSTRACT: This preliminary final environmental impact statement describes and analyzes the environmental, social, and economic effects of All Wilderness vs. No Wilderness for two Wilderness Study Areas (WSAs) in the Headwaters Resource Area. The study areas are Black Sage (5,926 acres) and the Yellowstone River Island (53 acres). The Preferred Alternative (proposed action) is No Wilderness for both WSAs.

4. The Draft Environmental Impact Statement was completed as part of the Headwaters Resource Management Plan. This draft plan received a ninety-day public review that included a public hearing. The comment period began on May 6, 1983 and closed on August 5, 1983. The public comments received from this review period have been incorporated into this document.

5. For further information contact:

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6. Date statement made available to EPA and the public:

Draft RMP	May 6, 1983
Final RMP	November 25, 1983
Final EIS (Wilderness)	October 1986

SUMMARY

PURPOSE OF STUDY

This study is required by Section 603 of the Federal Land Policy and Management Act of 1976 (FLPMA). Its purpose is to determine the suitability or unsuitability of the Wilderness Study Areas (WSAs) for designation as wilderness, in accordance with guidelines in the Wilderness Act of 1964. The study areas are located in Park and Jefferson counties and managed by the Bureau of Land Management (BLM) through its Headwaters Resource Area in the Butte District.

STUDY RECOMMENDATION

Based upon the Wilderness Study criteria and issues, the proposed action is No Wilderness for both Black Sage (5,926 acres) and the Yellowstone River Island (53 acres). The BLM recommends that Congress release these areas for uses other than wilderness. Management of these areas will be consistent with the Final Headwaters Resource Management Plan. (November 1983). All feasible mitigating measures to prevent undue and unnecessary environmental degradation will be applied to future management actions through the environmental analysis process.

ALTERNATIVES ADDRESSED

Alternatives used for each WSA were No Wilderness (Proposed Action) and All Wilderness. Partial Wilderness, although considered, was not developed since the alternative was not addressed by the public and did not improve wilderness quality, manageability concerns, or conflicts with other resources. A Wilderness Enhancement Alternative was considered for Black Sage whereby land acquisitions would be proposed to improve the area's configuration and expand its size. This alternative was dropped since the wilderness characteristics of the adjoining private lands are less natural in character and do not offer outstanding wilderness opportunities.

Black Sage

No Wilderness (Proposed Action)

The entire WSA (5,926 acres) is recommended as unsuitable for wilderness designation.

Nondesignation of the WSA would allow management of other resources that would be incompatible with wilderness, including oil and gas exploration, motorized vehicle access and a wildlife enhancement project. Under the oil and gas exploration scenario wilderness values would be irreversibly lost since the existing trail would be improved to road status and maintained in the future as such. Motorized vehicle use although light would create periodic disturbance to the area's solitude. The 2.5 mile fence to improve wildlife habitat for mule deer would permanently impair the natural values in the northern portion of the area.

All Wilderness

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

The two oil and gas exploratory wells would not be drilled. Effects of not drilling are considered insignificant due to the availability of alternative off-site areas possessing comparable geological characteristics. Livestock management costs, time and labor would increase slightly due to restrictions on motorized vehicle use. The 2.5 mile fence to improve wildlife habitat would not be allowed and consequently the opportunity to improve forage production for an additional 25 mule deer during the winter-spring season would be lost. Motorized recreation would be eliminated while opportunities for nonmotorized recreation would be enhanced. As a result, use of the area would be reduced by 35 visitor days per year.

Yellowstone River Island

No Wilderness (Proposed Action)

The entire WSA (53 acres) is recommended as unsuitable for wilderness designation.

Nondesignation will not subject the island's wilderness values to any significant degradation. The island will be managed custodially with emphasis on maintaining the current wildlife habitat and primitive recreation opportunities. Given the use restrictions placed on potential impacting activities and the inaccessibility of the island it is unlikely that any natural impairment will occur in the future.

All Wilderness

Designation of the entire WSA (53 acres) would best ensure long-term preservation of its moderate wilderness values. Under this alternative, fifty-three acres of the unrepresented Northern Floodplain Forest ecosystem would be added to the NWPS. It is projected that recreation use will increase from 80 to 96 visitor days per year. Environmental impacts from this slight increase in use is considered to be insignificant given the size of the island and the availability of undeveloped camp sites both on this island as well as others in the surrounding area.

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Department of the Interior
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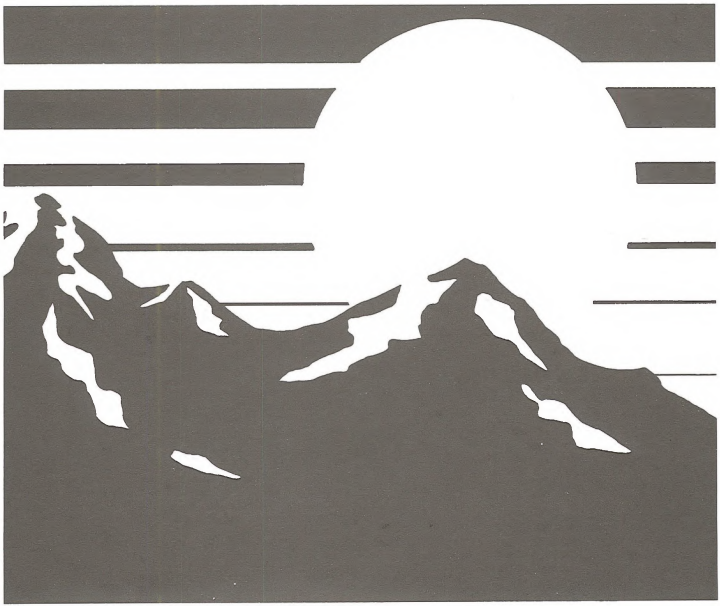
Headwaters Resource Area Montana



PURPOSE AND NEED FOR THE ACTION

Section 603 of FLPMA requires that Congress be provided with recommendations as to the suitability or nonsuitability of BLM WSAs (roadless areas greater 5,000 acres and roadless islands) for wilderness designation. Only Congress can ultimately decide which areas, if any, will be designated as wilderness and added to the National Wilderness Preservation System. Section 102(c) of NEPA requires that "major federal actions which would significantly affect the human environment" be analyzed and discussed in an EIS. It is BLM policy to subject all wilderness recommendations to the EIS process.

This Final Environmental Impact Statement (FEIS) is to document the environmental effects which are likely to occur if wilderness study areas in the Headwaters Resource Area are managed under a variety of alternative management strategies. The basic focus of the analysis is on effects of either designating each WSA as wilderness (under the provisions of the Wilderness Act of 1964), or on denying such designation and managing each WSA for other values and uses.

LOCATION

The two WSAs analyzed in this document are located in west central Montana (see State and WSA Location Maps). Basic information regarding these areas is summarized in Table 1-1.

TABLE 1-1

WILDERNESS STUDY AREAS
ANALYZED IN THIS DOCUMENT

WSA Name	Inventory Number	County	Acreage
Black Sage	MT-075-115	Jefferson	5926
Yellowstone River Island	MT-075-133	Park	53

OVERVIEW OF THE WILDERNESS REVIEW PROCESS

The wilderness review process developed by the BLM to carry out the wilderness mandate of Section 603 of FLPMA consists of three phases: inventory, study, and reporting.

Inventory

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 were set forth primarily in the BLM's Wilderness Inventory Handbook of 1978. The inventory was completed in September 1981.

Study

The study phase determined which WSAs would be recommended as suitable for wilderness designation and which would not. The study was conducted through the BLM's land use planning process and was documented in the Headwaters Resource Management Plan (RMP) and EIS, completed in May, 1984. The primary sources used to guide this study were the Wilderness Act of 1964, the BLM's planning regulations, and the BLM's final Wilderness Study Policy. The study phase itself includes several key steps which are summarized below and discussed in more detail elsewhere in this document.

Issue Identification. Land use planning is directed at solving problems or, in other words, at resolving issues. An issue may be defined as an opportunity, conflict, problem, or other concern regarding the use or management of public lands and resource. Issues are identified early in the process and influence all subsequent steps in the study.

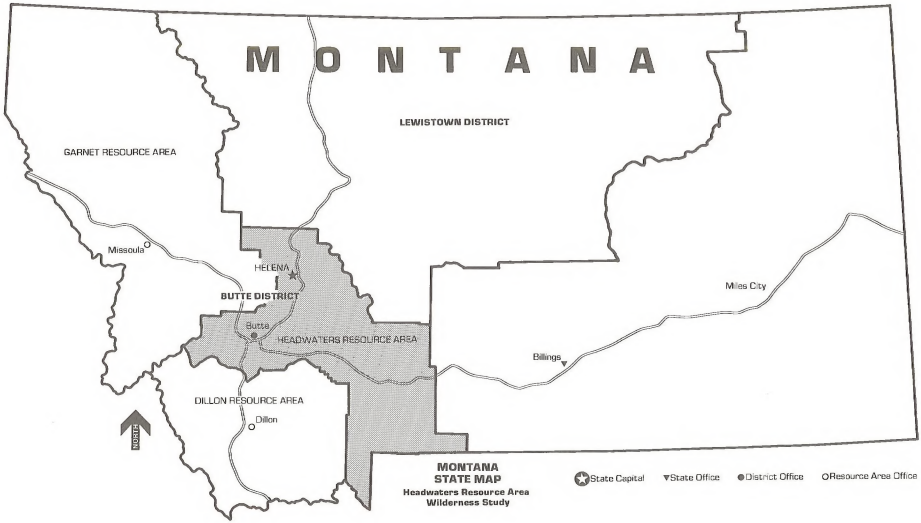
Alternative Formulation. Both NEPA and the planning regulations require the formulation and evaluation of alternatives prior to final decisionmaking. In the context of a wilderness study, this means that a decision to recommend a WSA for either designation or nondesignation as wilderness is reached only following consideration of one or more alternative management strategies.

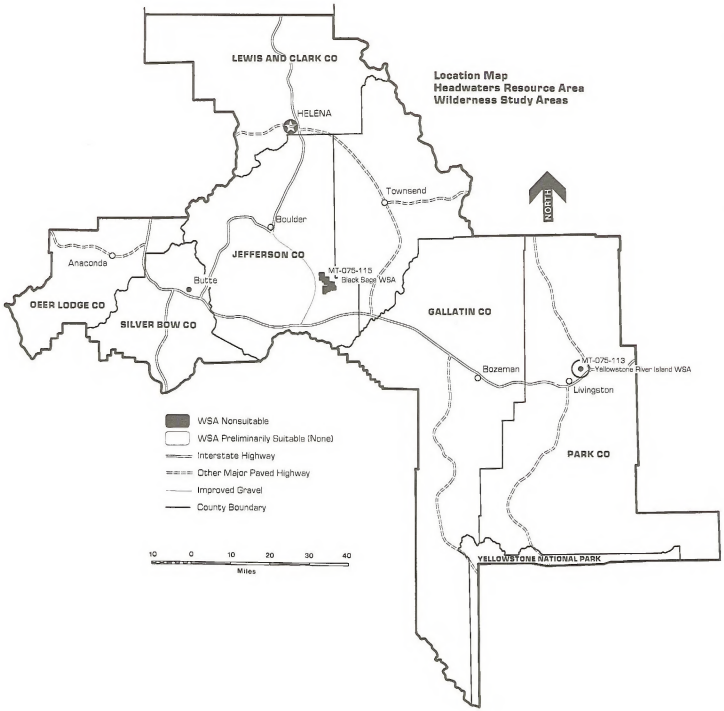
Evaluation of Environmental Consequences. The physical, biological, economic and social effect of implementing each alternative are estimated in order to allow for a comparative evaluation of impacts. The particular environmental parameters selected for evaluation are based on the issues identified for each WSA.

Reporting

The reporting phase begins when the BLM State Director forwards his preliminary wilderness recommendation to the BLM Director. The reporting process requires the administrative review of the Director, the Secretary of Interior, and the President. Recommendations for all wilderness study areas must reach the President no later than October 21, 1991.

Congress has the sole authority for designating any federal land as wilderness. Congress will take the recommendations submitted by the President along with other pertinent information and, after debate and counsel, will pass legislation that would formally designate WSAs as wilderness or release them for uses other than wilderness.


MONTANA
LEWISTOWN DISTRICT
GARNET RESOURCE AREA
Missoula
HELENA
BUTTE DISTRICT
Butte
HEADWATERS RESOURCE AREA
Miles City
Billings
DILLON RESOURCE AREA
Dillon
NORTH
MONTANA
STATE MAP
Headwaters Resource Area
Wilderness Study
State Capital
State Office
District Office
Resource Area Office


Location Map
Headwaters Resource Area
Wilderness Study Areas
LEWIS AND CLARK CO
HELENA
Townsend
Boulder
JEFFERSON CO
Anaconda
Butte
MT-075-113
Beck Spar WSA
DEER LODGE CO
SILVER BOW CO
GALLATIN CO
Bozeman
MT-075-113
Yellowstone River Island WSA
Livingston
PARK CO
YELLOWSTONE NATIONAL PARK
NORTH
WSA Nonsuitable
WSA Preliminarily Suitable (None)
Interstate Highway
Other Major Paved Highway
Improved Gravel
County Boundary
10 0 10 20 30 40
Miles

INTERIM MANAGEMENT OF WILDERNESS STUDY AREAS

In the case of WSAs being recommended for nonwilderness management, the proposed management direction may be inconsistent with the BLM Interim Management Policy for WSAs. Implementation of such direction will be deferred until Congress takes action on the final wilderness suitability recommendations.

RELATIONSHIP OF THIS WILDERNESS FEIS TO THE HEADWATERS RMP/EIS

The Headwaters RMP provides a comprehensive framework for managing and allocating all public lands and all resources including wilderness in the Headwaters Resource Area. The Headwater Draft RMP/EIS identified preferred nonwilderness management strategies for both the Black Sage and Yellowstone River Island WSAs. The draft was subject to 90 days of public review and comment, following which a Headwaters Final RMP/EIS was developed, incorporating appropriate changes based on the results of public review. No changes were made in proposed management for either of the two WSAs discussed in this Wilderness FEIS.

The Headwaters RMP/EIS also considered the alternative of wilderness designation for three additional areas (Blind Horse Creek, Chute Mountain, and Deep Creek/Battle Creek) which were not identified as WSAs under the authority of Section 603 of FLPMA, but which because of their contiguity with adjoining wilderness study areas on national forest lands were considered possible candidates for designation. These areas were studied under the authority of Section 202 of FLPMA, found nonsuitable for wilderness, and ultimately were designated as Outstanding Natural Areas by the State Director in May, 1984. They are not included in this Wilderness FEIS because Section 202 WSAs found nonsuitable for wilderness designation need not be reported to Congress.

SCOPING FOR THE TWO WSAs INCLUDED IN THIS EIS

Scoping, when viewed in the context of NEPA, is the first step in the EIS process. During scoping issues are identified, alternative management strategies are tentatively formulated and other concerns pertinent to the environmental analysis are addressed. The results of scoping are continually modified and refined during the EIS process based on public review, interdisciplinary team analysis and management involvement. The following discussion summarizes the results of scoping for each of the WSA's treated in this document.

Black Sage WSA

The issues identified for the Black Sage WSA are summarized in the form of the following questions:

1. How will the wilderness values of the Black Sage WSA be affected if the area is not designated as wilderness?

2. The Black Sage WSA lies within the Overthrust Belt, a geologic structure important for its oil and gas potential. How will opportunities for oil and gas production be affected if the area is designated as wilderness?

3. The Black Sage WSA contains important winter range for a sizable mule deer herd. How will this herd and habitat area be affected by either designation as wilderness or nonwilderness management?

4. How will recreation use especially hunting, be affected by either designation as wilderness or nonwilderness management?

5. How will grazing management and livestock forage production be affected by wilderness designation?

A number of other issues were considered but eventually dropped from detailed analysis. These include:

1. Effects on nonenergy mineral production — This issue was dismissed because of the low potential and lack of apparent interest in nonenergy minerals within the area.

2. Effects on water quality — This issue was dropped because there are no springs or other water resources within or close to the WSA.

3. Effects on threatened and endangered (T&E) species — This issue was dropped because there are no T&E species known or suspected within the WSA.

4. Effects on cultural resources — This issue was dropped since no significant sites were found to exist within the WSA. In addition, the standard operating procedures and mitigating measures which apply to both alternatives ensure that no significant impacts will occur. All proposed ground-disturbing projects will be cleared through surveys and investigation efforts in advance.

5. Effects on timber production — This issue was dropped because the Black Sage WSA has no sawtimber potential and is capable of producing only 15 cords of firewood annually. This is considered insignificant at both local and regional levels.

6. Effects on motorized recreation events—This issue was dropped because the area lacks legal public access, and is not physiographically suited for motorized events. Use applications will be denied in this area.

7. Effects on utility corridor development — This issue was dropped because future corridor development within the Black Sage WSA is extremely unlikely.

8. Effects on the local economy — This issue was dropped since the economic consequences between the two alternatives created insignificant effects. Projected recreation use levels differed by only 35 visitor days or $544.00 per year. The economic effects of drilling or not drilling for oil and gas is considered to be insignificant due to the projected scenario of no productive discoveries and the availability of similar off-site geological formations. Economic differences associated with livestock production levels do not change between alternatives and differences in management costs are insignificant given the small size, topography and limited range developments of the area.

Two alternative management strategies required by NEPA were formulated and analyzed for the Black Sage WSA: designating the entire area as wilderness, and designating none of the area as wilderness. Two other alternatives were considered but dropped from detailed analysis during scoping:

1. Partial Wilderness — This alternative was dropped because no portion of the WSA, standing on its own, could be identified which would possess wilderness attributes while eliminating significant conflicts with nonwilderness resource values or uses.

2. Land Acquisition — The alternative of acquiring adjoining private lands and thus enhancing the area's configuration as well as expanding its size for potential eligibility for wilderness designation was dropped because the wilderness characteristics of the adjoining private lands generally are less natural in character than the WSA itself and do not offer outstanding wilderness opportunities for solitude or primitive, and unconfined recreation.

Yellowstone River Island WSA

The issues identified for the Yellowstone River Island WSA are summarized in the form of the following questions:

1. How will the wilderness values of the Yellowstone River Island WSA be affected if the area is not designated as wilderness.

2. How will recreation use, especially camping and boating, be affected by either designation as wilderness or nonwilderness management?

A number of other issues were considered but eventually dropped from detailed analysis. These include:

1. Effects on oil and gas development. This issue was dropped because the area is considered low in oil and gas potential, and no surface occupancy would be allowed on the island even under non-wilderness management.

2. Effects on grazing management and livestock forage production. This issue was dropped because the area is closed to livestock use.

3. Effects on timber production. This issue was dropped because none of the island is classified as commercial forest land.

4. Effects on nonenergy minerals, especially sand and gravel. This issue was dropped because the demand for sand and gravel in the area can easily be met from other sources which are more accessible and less environmentally sensitive. It is estimated that the amount of sand and gravel associated with the island comprises less than one percent of the total in the surrounding vicinity. Requests for sand and gravel within this WSA would be denied given the availability of more feasible sites.

5. Effects on cultural resources. This issue was dropped since no significant sites exist on the island. In addition the standard operating procedures and mitigating measures which apply to both management alternatives essentially guarantee that no significant impacts will occur. All proposed ground disturbing activities will be cleared through surveys and investigation efforts in advance.

6. Effects on utility corridor development. This issue was dropped because future corridor development within the Yellowstone River Island WSA in extremely unlikely.

7. Effects on the local economy. This issue was dropped since the economic consequences between the two alternatives created insignificant effects. Projected recreation use changes amount to only 16 visitor days or a difference of $166.00 per year to the local economy.

Two alternative management strategies were formulated and analyzed for the Yellowstone River Island WSA: designating the entire island as wilderness, and designating none of the area as wilderness. A third alternative, partial wilderness, was dropped from detailed analysis during scoping because of the size of the island.

CHAPTER 2
Description of the Alternatives Including the Proposed Action

Department of the Interior
Bureau of Land Management

Headwaters Resource Area Montana

Description of Alternatives Including the Proposed Action

Two alternatives are considered for each of the two WSAs in this document: No Wilderness (Proposed Action) and All Wilderness. Partial wilderness and land acquisition alternatives, where considered, but dropped from detailed analysis during scoping. Rationale for eliminating these alternatives is presented in Chapter 1 (see Alternative Maps for each WSA).

For purposes of clarity and consistency in this wilderness EIS, the following points should be understood. The proposed action and the agency's preferred alternative are the same. No Wilderness and No Action are synonymous. The proposed action for both WSAs is No Wilderness and will be presented first throughout this document.

In the Headwaters Final RMP/EIS all issues including wilderness were studied using the following alternatives: Preferred, No Action, Protection, and Production. Under the Preferred, No Action, and Production Alternatives, Black Sage and the Yellowstone River Island were recommended for No Wilderness and all had the same environmental consequences. The Protection Alternative recommended All Wilderness for both areas.

ALTERNATIVE ANALYSIS BY WSA

Black Sage WSA (MT-075-115)

No Wilderness Alternative (Proposed Action)

Wilderness Management. The proposed action recommends that the entire 5,926-acre Black Sage WSA not be designated wilderness. The WSA would be managed primarily for livestock grazing, oil and gas activity, wildlife habitat, and recreation under the multiple use concept. Wilderness values would be lost due to surface disturbances from oil and gas development, motorized vehicle use, and range improvements.

Oil and Gas Management. All 5,926 acres will continue to be leased for oil and gas activity. The existing seven leases covering the entire area were issued post-FLPMA and will be released from wilderness stipulations if and when Congress designates the WSA nonwilderness. Since no other special stipulations were imposed, lease related activities will be subject to only standard stipulations until reissuement. These standard stipulations preclude surface occupancy on 3,851 acres where stable slopes are greater than 30 percent and where fragile slopes are greater than 20 percent (see Oil and Gas Map for Black Sage).

Any future leases issued for the entire WSA will have a seasonal, no surface occupancy stipulation from December 15 to April 30 in order to protect mule deer populations on crucial winter-spring habitat.

Although there is a relatively high potential for discovery of hydrocarbon deposits within the WSA, reservoirs are considered to be small in size and erratically distributed. It is difficult to predict the extent of exploration and development activity that will occur within the WSA over time. Nevertheless, given the WSA's topography, configuration, limited geological information and the nonexistance of any producing wells in the surrounding areas, the following activity scenario is deemed most likely to take place.

Two wildcat drilling explorations will occur in the southern portion of the WSA over that next twenty years. It is most likely that these drill sites will be located in sections 14 and 23 as mapped on the Oil and Gas Map. Neither well is likely to be producer and therefore no development of permanent activities are anticipated.

This exploratory activity will cause about five acres of surface disturbance at each drill site and will necessitate the improvement of an existing access trail for approximately on e mile. In addition, about 0.5 miles of new spur roads from the main access road to the drill sites would be needed. In total, this scenario would create about 12 acres of temporary surface disturbance.

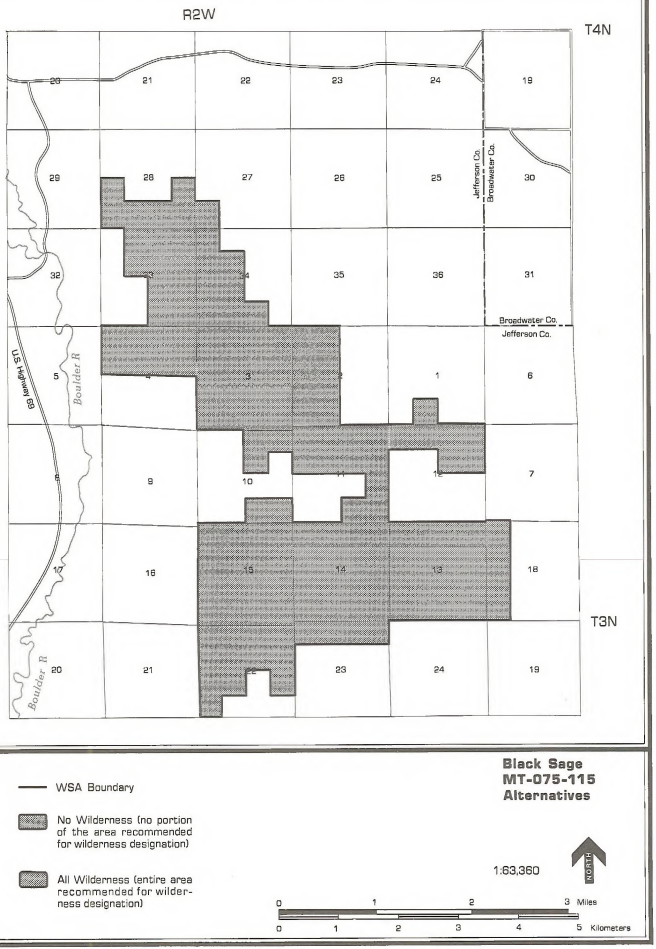
Livestock Grazing Management. Livestock grazing in the three allotments covering the entire WSA will continue to be managed at the current authorized level of 371 AUMs. Routine maintenance and reconstruction of range improvements will be permitted. Motorized access for livestock management duties will continue to be at the discretion of the range operators.

No new range improvements are planned in the WSA over the short term. Given the fact that range conditions are good overall, it is unlikely that any long-term improvements will be needed for livestock grazing management.

Wildlife Management. Under this alternative, management's objective would be to ensure satisfactory habitat for about 250 mule deer (winter-spring) and about 40 antelope (spring-summer) by establishing season stipulations on oil and gas activities and monitoring existing range and wildlife trend studies.

The only new wildlife project proposed is a 2.5 mile fence to create an additional pasture for rotational purposes and to improve unsatisfactory habitat conditions in the northern portion of the allotment.

Recreation Management. Antelope and mule deer hunting would continue. Associated motorized use will remain unrestricted providing existing resource conditions are not impaired. Given the lack of public access and the low visitor use levels, it is unlikely that conditions will deteriorate. However, if impairment accelerates then vehicle operators will be restricted to designated trails and possibly seasonal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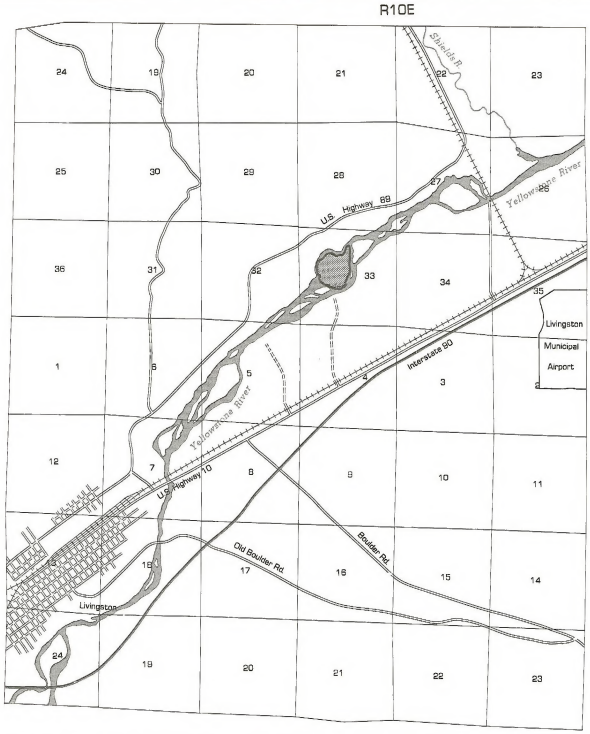
Jefferson Co.
Broadwater Co.
Broadwater Co.
Jefferson Co.
U.S. Highway 69
Boulder R.
Boulder R.
WSA Boundary
No Wilderness (no portion of the area recommended for wilderness designation)
All Wilderness (entire area recommended for wilderness designation)
Black Sage
MT-075-115
Alternatives
1:63,360
NORTH
0 1 2 3 Miles
0 1 2 3 4 5 Kilometers



WSA Boundary

No Wilderness (no portion of the area recommended for wilderness designation)

All Wilderness (entire area recommended for wilderness designation)

Yellowstone R. Island
MT-075-133
Alternatives

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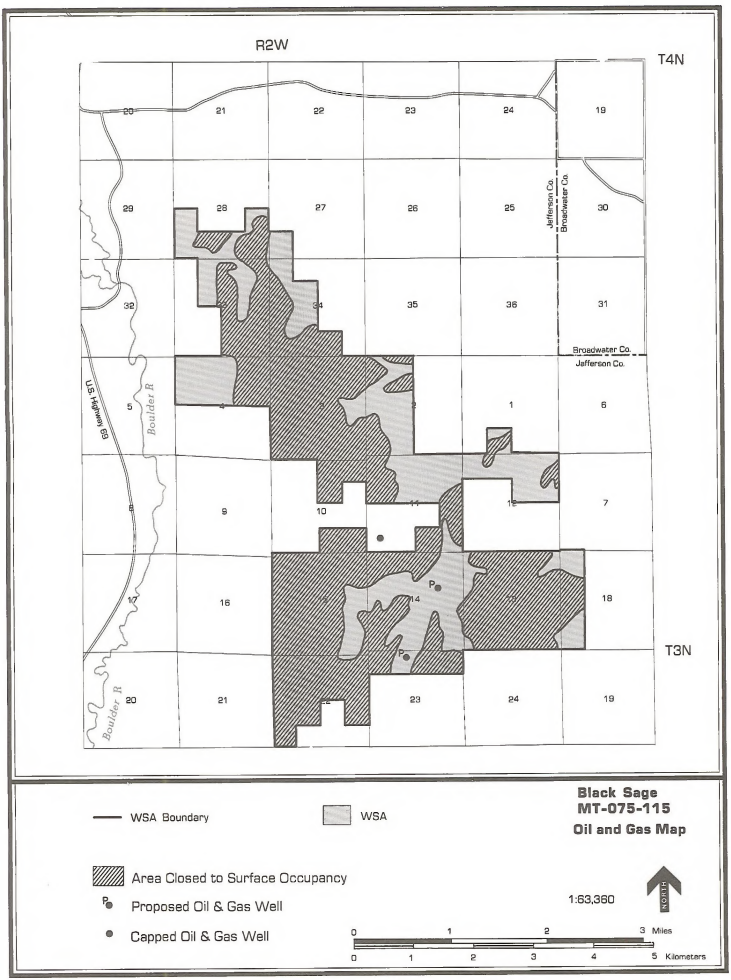
NORTH

0 1 2 3 Miles

0 1 2 3 4 5 Kilometers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Jefferson Co.
Broadwater Co.
Broadwater Co.
Jefferson Co.
US Highway 69
Boulder R
Boulder R
WSA Boundary
WSA
Area Closed to Surface Occupancy
Proposed Oil & Gas Well
Capped Oil & Gas Well
Black Sage
MT-075-115
Oil and Gas Map
1:63,360
NORTH
0 1 2 3 Miles
0 1 2 3 4 5 Kilometers

closures. No recreational facilities would be developed under this alternative.

All Wilderness Alternative

Wilderness Management. This alternative recommends that the entire 5,926-acre WSA be designated as wilderness. Designation would ensure long-term protection of the area's wilderness values.

Oil and Gas Management. The entire WSA (5,926 acres) would be closed to future oil and gas exploration and development. Since the entire area is under post-FLPMA leases, no surface occupancy would be allowed for existing leases. Upon expiration, leases would not be renewed.

Livestock Grazing Management. The current authorized grazing of 371 AUMs in the three allotments of the area would continue unchanged. Routine livestock management duties would be accomplished on horseback or foot. Motorized access would be allowed to permittees for resolving emergencies, reconstructing existing projects and maintaining the water pipeline project in the southern extremity of the area.

All existing range improvements (see Table 3-1) would be allowed to remain and may be replaced when necessary. Reconstruction projects would be limited to the provisions of the Wilderness Management Policy. No new projects are planned.

Wildlife Management. Construction of the 2.5 mile fence to improve unsatisfactory habitat conditions in the northern portion of the area would not be allowed.

Recreation Management. The area would be closed to all forms of motorized recreational use and open to nonmotorized uses such as hunting, horseback riding and hiking.

Yellowstone River Island (MT-075-133)

No Wilderness Alternative (Proposed Action)

Wilderness Management. The proposed action recommends that the entire 53-acre WSA not be designated wilderness. The WSA will continue to be managed to preserve its natural character despite nondesignation. Uses will be limited to nonmotorized forms of recreation. Given the use restrictions imposed on potential impacting activities and the inaccessibility of the island it is unlikely that any impairment will occur to the existing wilderness values of the island.

Wildlife Management. The excellent wildlife habitat of the island will continue to be protected through the restricted use of competing activities. No new projects are planned. Management will emphasize continuation of current conditions.

Recreation Management. Recreation use by floaters would continue. No developed recreational facilities would be built. Recreational uses will be limited to nonmotorized activities. Hunting, fishing, pull-out rests and camping will be allowed to continue.

All Wilderness Alternative

Wilderness Management. This alternative would designate all 53 acres of the island as wilderness. Designation will ensure long-term preservation of the island's solitude, naturalness and primitive recreation opportunities.

Wildlife Management. The wildlife habitat of the island would be protected over the long-term through statutory wilderness management. The management goal will be to allow natural processes to evolve free of human intervention.

Recreation Management. The types of recreation use by river floaters would be the same as under the No Wilderness Alternative.

SUMMARY OF IMPACTS

Table 2-1 lists the cumulative impacts for Black Sage WSA while Table 2-2 lists them for the Yellowstone Island WSA.

TABLE 2-1

COMPARATIVE SUMMARY OF CUMULATIVE IMPACTS FOR BLACK SAGE WSA

Issues	No Wilderness Alternative (Proposed Action)	All Wilderness Alternative
Wilderness Values	Naturalness and solitude permanently lost. Primitive recreation opportunities periodically impaired. Under represented ecotype not added to NWPS.	Wilderness values permanently protected on 5,926 acres. Ecotypes added to NWPS.
Oil and Gas Exploration and Production	Two exploratory wells would be drilled with no production potential.	Two exploratory wells would not be drilled. No production foregone.
Livestock Grazing and Management	371 AUM s of current grazing not affected in the long term. Uniform management of allotments both in and out of the area.	Livestock production of 371 AUMs not affected. Livestock management costs and time increased slightly due to the exclusion of motorized vehicles to conduct routine maintenance.
Wildlife	Temporary displacement of some resident mule deer and antelope. Creation of additional forage for about 25 mule deer during crucial winter-spring season.	Existing population of antelope and mule deer would continue. Additional forage production for 25 mule deer foregone.
Recreation	Seventy visitor days of motorized hunting will continue.	All motorized recreation eliminated. Nonmotorized recreation enhanced. Net effect is a loss of 35 visitor days.

TABLE 2-2

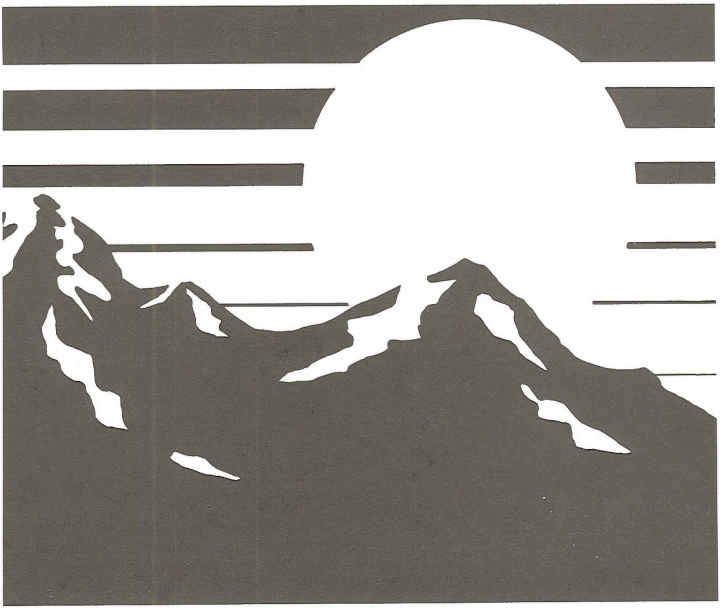
COMPARATIVE SUMMARY OF CUMULATIVE IMPACTS FOR THE YELLOWSTONE RIVER ISLAND WSA

Resource Values/Uses	No Wilderness Alternative (Proposed Action)	All Wilderness Alternative
Wilderness Values	Given the extent of use restrictions and the inaccessability of the island, no degradation to the natural or primitive recreation values is expected. The underrepresented ecotype not added to the NWPS.	Wilderness values permanently protected on 53 acres. The underrepresented ecotype added to the NWPS.
Recreation	Eighty visitor days of use by river floaters would continue. Primitive forms of recreational opportunities not anticipated to change.	Recreational use of the island by river floaters would increase by 16 visitor days. All recreational values preserved.
Wildlife	Quality of the wildlife values protected under custodial management. No change in wildlife populations or habitat conditions expected.	Wildlife values permanently preserved through long-term statutory management.

CHAPTER 3
The Affected Environment

Department of the Interior
Bureau of Land Management

Headwaters Resource Area Montana



The existing environment of the two WSAs, which is affected by the two alternatives, is described in this chapter.

Legal descriptions of the lands in each WSA are found in Appendix B. Additional factors that are common to all alternatives are found in Appendix D.

RESOURCES OF INDIVIDUAL WILDERNESS STUDY AREAS

Black Sage WSA (MT-075-115)

General Description

The Black Sage area consists of 5,926 acres of public land. There are no state, private, or other federal lands within the WSA. All boundaries of the area are established by private lands and do not correspond with topographic features.

The area is located in Jefferson County between Cardwell and Boulder east of the Boulder River some thirty-two miles east of Butte, Montana.

The configuration of this study area is highly irregular. The southern portion is one to three and one-quarter miles wide and from one to two miles long while the northern portion is one to two and one-half miles wide and from one to two miles long. These two extremities narrow to a one-quarter mile wide parcel in the lower, central portion of the WSA (see Black Sage Land Status Map).

The entire area is characterized by rolling hills with elevations ranging from 5,000 to 6,000 feet. Approximately forty percent of the unit is vegetated with juniper, mountain mahogany, and limber pine. Some stands of Douglas-fir exist on a few of the north and east aspects. The remainder of the area is covered with grasses and sagebrush. There are many intruding drainages throughout the area. No perennial water sources exist. This dry and broken terrain lacks a high degree of natural diversity due to its limited elevational changes. There are no dominant features except for the forested ridge face in the central portion of the area (see Black Sage Topographic Map).

Wilderness Values

Size. The Black Sage WSA contains 5,926 acres of public lands with no private, state, or other federal inholdings.

Naturalness. The area appears to be primarily natural. Signs of man-made features are present throughout portions of the area. These imprints are not overwhelming to the user due to their location, size and coloration.

Developments within the Black Sage WSA are primarily 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. Features 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. Table 3-1 lists the location of these features. (Appendix F, Black Sage Impacts Map.)

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

The northern 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.

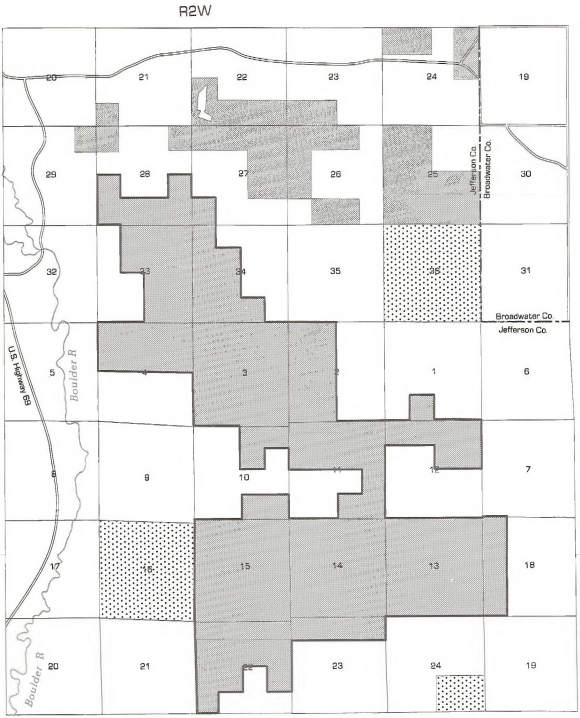
The southern extremity of the WSA contains denser vegetation, particularly on the north facing slopes where Douglas-fir dominates. The topography is more diverse with numerous drainages flowing in all directions. Here, users are much better screened from one another. The overall solitude within the area 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; and nature study.

Special Features. Scenic views of six different mountain ranges can be enjoyed from any of the area's high points. Ecologically, the unit provides crucial spring-winter habitat for mule deer.

Ecosystem Representation. The WSA consists of three different ecotypes as defined by Bailey and Kuchler (Kuchler 1964; USDA, FS 1976, 1978a, 1978b). Eighty-five percent or 5,048 acres is Gramma Needlegrass-Wheatgrass, nine percent or 542 acres is Sagebrush Steppe, and six percent or 336 acres is Douglas-fir forest.

Summary of Wilderness Quality. Although the area meets the mandatory criteria for wilderness, the quality of these overall characteristics is only moderate. Limiting factors are the area's poor configuration, lack of natural screening, and the number of widespread range improvements.



WSA Boundary

Private

Public

State

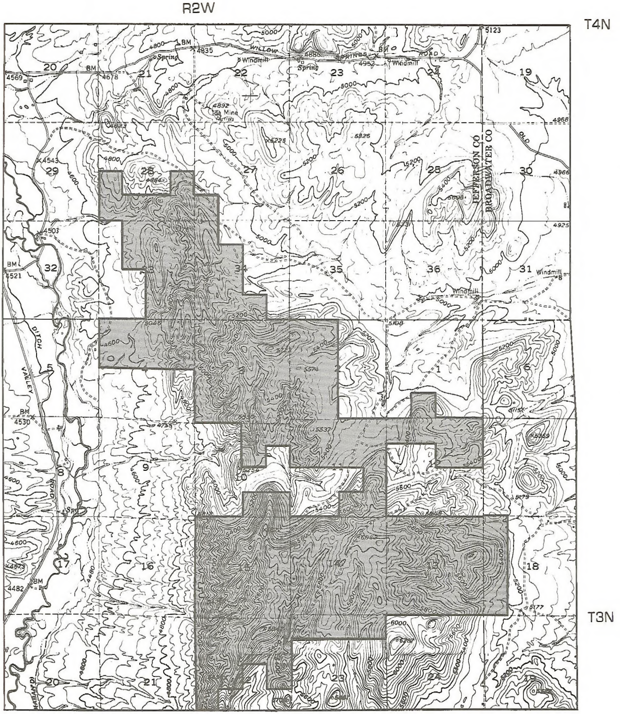
Black Sage
MT-075-115
Land Status

1:63,360

NORTH

0 1 2 3 Miles

0 1 2 3 4 5 Kilometers



Black Sage MT-075-115 Topographic Map

- WSA Boundary
- WSA
- Freeway
- Improved Road
- Unimproved Dirt or Vehicle Way

1:63,360

NORTH

0 1 2 3 Miles

0 1 2 3 4 5 Kilometers

TABLE 3-1

BLACK SAGE WSA
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.

Energy and Minerals

The Black Sage WSA includes rocks from Precambrian through Tertiary age. The stratographic 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 thirty degrees.

The potential for locatable minerals is low based on existing information, and there are no mining claims within the WSA.

The geological information available from the district specialist and the Geology, Energy and Minerals Resource Evaluation Report, suggests that there is a high potential for hydrocarbon deposits underlying Black Sage. The size and quality of these probable reserves are considered to be nonproductive in character.

There are no producing wells in the surrounding area of the WSA. Although no drilling activity has occurred within the boundaries of the unit an adjacent capped well is located in T3N, R2W, Section 11, SW¼ (see Oil and Gas Map). This well was drilled in 1969 to a depth of 1,005 feet. Since no development activity has taken place or is planned, it is presumed that no productive discovery was made.

The entire WSA is leased (post-FLPMA) for oil and gas. The seven leases covering the area were all issued after 1981. These leases have no special stipulations attached other than wilderness. Standard stipulations precluded surface occupancy on slopes greater than 30 percent and where slopes are considered to have fragile soils 20 percent. As a result of these restrictions, 2,075 acres are available to surface occupancy (see Oil and Gas map).

Wildlife

The primary wildlife species in the WSA are mule deer and antelope. The entire unit is crucial winter-spring range for approximately 250-300 mule deer. Portions of the area provide spring-summer habitat for about 40-50 antelope.

The area is occasionally used by elk, blue grouse and golden eagles. Suitable habitat exists for both bighorn sheep and the Merriam turkey. Potential for the establishment of these species is low given the availability of higher priority areas.

Recreation

The primary use in the area is that of mule deer and antelope hunting. The area provides opportunities for hiking, nature study and horseback riding. Motorized vehicle use is low and that which takes place is associated with hunting.

The area currently receives about 70 recreation days of use which is primarily attributed to hunting activities.

Livestock Grazing

The Black Sage WSA contains portions of three grazing allotments, two proposed for improvement and one proposed for maintenance of existing conditions. A breakdown of acres, AUMs, and seasons of use appears in Table 3-2.

TABLE 3-2

GRAZING ALLOTMENTS IN THE BLACK SAGE WSA

Allotment Name & Number	Livestock Number	Class	Season of Use From	To	AUMs (Public Land Only)	Acres Within WSA
Black Sage (0216)	40	C	6/21	9/08	161	1,669
County Line (0210)	200	C	5/16	7/15	132	3,206
	10	C	5/16	11/15	64	750
Boulder River (0212)	17	C	4/01	12/31	14	301

Allotments Proposed for Maintenance of Current Conditions. The Black Sage Allotment (0216) is a three pasture allotment with one pasture in the WSA. The pasture contains 1,669 acres of public land and is grazed from 6/21 to 9/08 each year for a total of 161 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 pumped water from the Boulder River to a large storage tank in Section 14. Water is then piped by gravity from the storage tank to three troughs located in the pasture.

Allotments Proposed for Improvement of Current Conditions. The County Line Allotment (0210) 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. The primary BLM pasture is grazed from 5/16 to 7/15 while the other three pastures are grazed from 5/16 to 11/15 each year. A total of 196 AUMs are authorized on 3,956 acres of public land.

The only improvement in this allotment is a 0.75 mile fence located in T4N, R2W, Section 34.

The Boulder River Allotment (0212) 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 authorized for grazing from 4/1 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.

The range condition of all three allotments is primarily in good condition and trend studies indicate that this rating is stable.

Yellowstone River Island WSA (MT-075-133)

General Description

The Yellowstone River Island totals approximately fifty-three acres of public land. There are no private, state, or federal lands within the WSA. The surrounding river frontage is private.

The area is located in Park County about two and one-half miles northeast of Livingston, Montana.

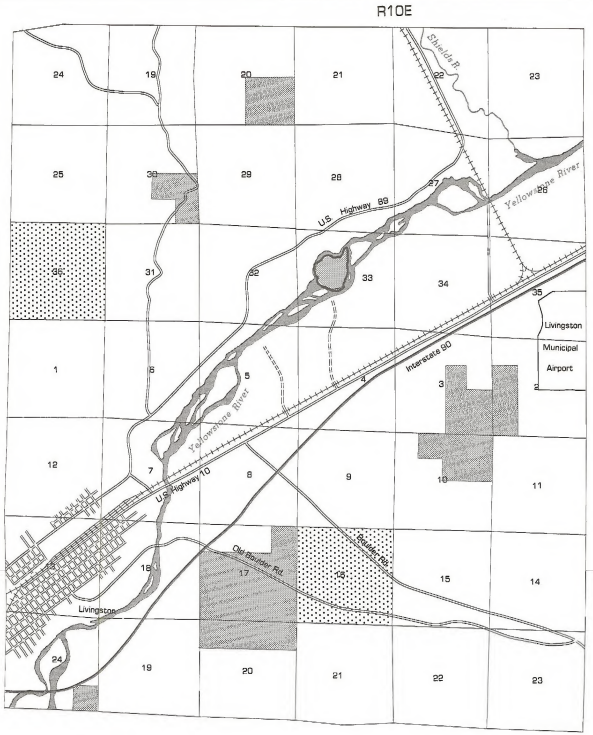
The WSA is roughly circular in shape. Core-to-perimeter distances are approximately one-third of a mile in all directions. The boundaries of this island are formed by a very active portion of the Yellowstone River and as a consequence they are constantly subject to change (see Yellowstone River Island Land Status Map).

The entire island is a relatively flat sand and gravel bar that varies from zero to ten feet about the river level (low flow). The average elevation is 4,415 feet. The topographic setting of the Yellowstone River Island is illustrated on the Yellowstone River Island Topographic Map.

The outer portions of the island consist of cut banks and alluvial deposits. These outer banks are constantly changing with variations in river levels. The major portion of the river now flows north of the island rather than south as shown on the 1952 topographic map (see Yellowstone River Island Topographic Map). Recent observations indicate that the island is growing in size due to alluvial deposits and that the southern boundary is rapidly becoming landlocked with the private frontage.

The vegetation of the island is diverse and consists of dense, pioneer shrubs (primarily willows) along the outer and more recently formed extremities of the area. The more stable and higher, interior portion comprises about 50% of the island and is vegetated with cottonwood stands intermixed with open, grassy areas.

There are several high water channels located within the WSA. Along the lower portions of these waterways are marshy areas supporting a wide array of



WSA Boundary

Private

Public

State

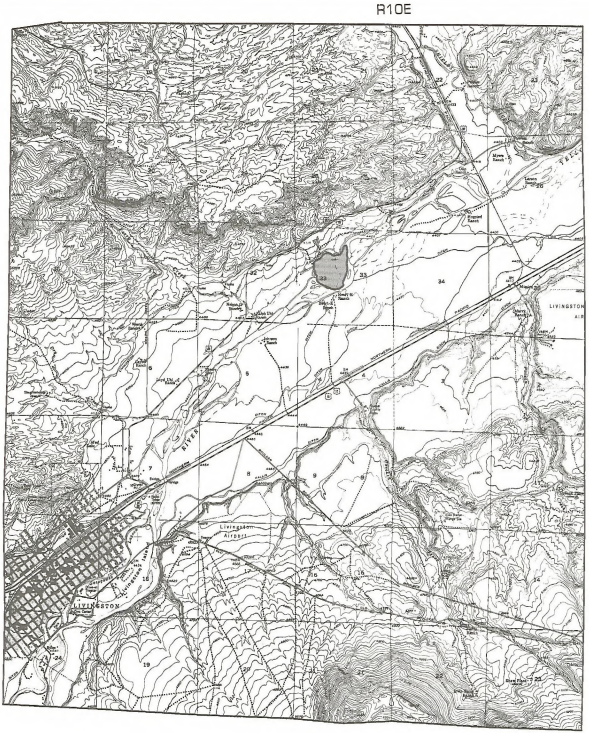
Yellowstone R. Island
MT-075-133
Land Status

1:63,360

NORTH

0 1 2 3 Miles

0 1 2 3 4 5 Kilometers



WSA Boundary

WSA

Improved Road

Unimproved Dirt or Vehicle Way

Yellowstone R. Island
MT-075-133
Topographic Map

1:63,360

NORTH

0 1 2 3 Miles

0 1 2 3 4 5 Kilometers

riparian vegetation. The major channel that disects the eastern end of the unit still had some water movement in late summer.

Wilderness Values

Size. The Yellowstone River Island contains fifty-three acres of public lands with no other private, state, or other federal inholdings.

Naturalness. The island appears to have been primarily affected by the forces of nature with human influences essentially absent. The only onsite impacts found were two old cars inconspicuously located on the east and west ends of the WSA. These cars could be removed with minimal effort. (Appendix F, Yellowstone River Island Impacts Map.)

Offsite development presents the most significant impact to the naturalness of the WSA. Immediate intrusions include two private homes directly across the river to the north and a ranch directly across the shallow channel to the south. Impacts within one mile of the island include three ranches, numerous homes, a paved county road, Interstate Highway 90, Highway 10, and the active Burlington Northern Railroad. In addition, Highway 89 is located about one and one-half miles away and the Livingston Municipal Airport is just two miles east of the island. The town of Livingston is two and one-half miles southwest and up river from the island (see Table 3-3).

Cumulatively, these intrusions degrade the naturalness of the island despite the noise of the river and its interior vegetative screening. Although the island itself is highly natural in character, offsite intrusions are noticeable and as a consequence degrade a user's appreciation of its primeval character. The island's overall naturalness quality is moderate.

Outstanding Opportunities. Opportunities for solitude in the WSA are high within its interior and fair on its outer extremities. The buffering effect of the river, coupled with the island's dense vegetative screening, enables visitors to avoid the sights and sounds of other users. Dispersal opportunities are good at this time due to the availability of landing sites and the number of isolated camping areas throughout the island. This quality could be significantly reduced if present conditions continue and the southern channel becomes unnavigable.

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.

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.

Ecosystem Representation. The WSA best represents the Northern Floodplain Forest as defined by Bailey and Kuchler. Although this ecotype is unique to the NWPS, the island would not be a good representative. The WSA is extremely small and more importantly lacks the potential, due to its high

TABLE 3-3

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

Feature	Legal Location	Length/Area	Overall Impact	Remarks
Two junked cars	T1S, R10E, Sec. 33	Less than 1 acre	Low	Washed onto island during spring high water
Immediate off-site intrusions	Various	Variable	Mod.-high	Two private homes to the north and a ranch to the south
Offsite intrusions within one mile	Various	Variable	Mod.-high	Three ranches, numerous homes, paved county road, Interstate Hwy. 90, Hwy. 10, and Burlington Northern Railroad
Offsite intrusions within two miles	Various	Variable	Mod.-high	Hwy. 89, Livingston Municipal Airport, and the town of Livingston

elevation, to ever represent the majority of plant species characteristic of this ecotype.

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).

Wildlife

This WSA contains excellent riparian habitat which provides security for a diverse array of river oriented wildlife species, both resident and migratory.

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 use, 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, 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).

Recreation Resources

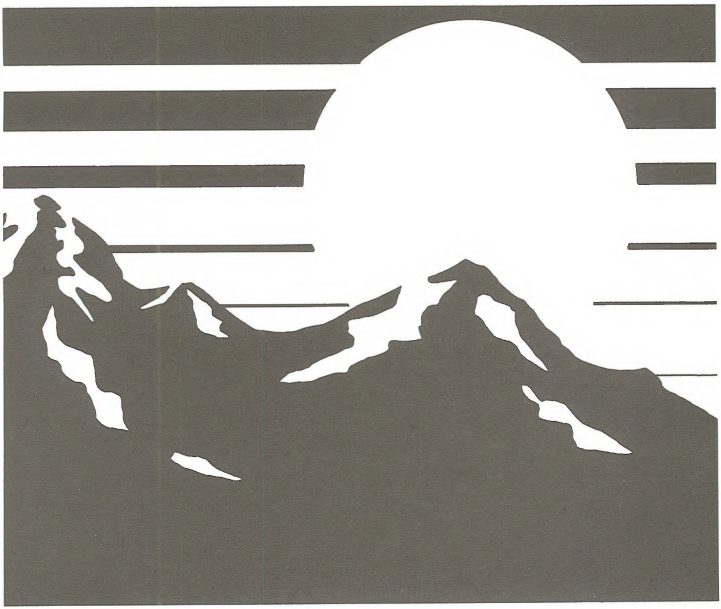
The primary recreation uses of the island are related to boater use of the Yellowstone River. All of the adjacent riverbank is in private ownership. The Yellowstone River is rated as a Class I fishery, which is the highest rating a river can receive. As a result of the fishing quality, the major recreational 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.

Use of the island is relatively light. Most use occurs during the floating season although some fall hunting also occurs. There are no constructed recreational facilities within the WSA.

CHAPTER 4
Environmental Consequences

Department of the Interior
Bureau of Land Management

Headwaters Resource Area Montana



This chapter evaluates the environmental, social, and economic impacts of the issue actions presented in Chapter 2 under both the No Wilderness and All Wilderness alternatives. The impacts are analyzed under each alternative by WSA with the proposed action presented first.

Evaluation of the manageability issue under the All Wilderness Alternative is presented in Appendix E for both WSAs.

ALTERNATIVE ANALYSIS BY WSA

Black Sage WSA (MT-075-115)

No Wilderness Alternative (Proposed Action)

Effects on Wilderness Values. Under the proposed action there would be no special legislative authority to protect the natural values on 5,926 acres. The natural quality of the WSA plus its ability to provide solitude will be irreversibly lost as a result of the exploration scenario for oil and gas and the installation of the 2.5 mile fence.

Under the oil and gas scenario a one mile segment of an existing vehicle way in the southern extremity of the area would be permanently upgraded to a road status. This road would not be returned to its former condition for it would provide future access to the existing stock water facilities. Construction of the 2.5 mile fence to improve wildlife habitat would permanently impair the existing natural values in the northern portion of the area. This new fence combined with those in existance would be substancially noticeable in the area. The cumulative effert of these intrusions would degrade the area's naturalness and opportunities for solitude and primitive, unconfined recreation.

Temporary impacts on wilderness values would be created by the unrestricted use of motorized vehicles; the drilling of the two wildcat wells; and the associated surface disturbance of 12 acres. Motorized vehicle use throughout the area will periodically disturb the area's ability to provide solitary experience due to their sights and sounds. Expected levels of use in the Black Sage area would remain relatively low (70 visits/year) based on current use and the lack of public access.

The drilling of the two wildcat wells and the associated surface disturbance of 12 acres would significantly impact the area's wilderness values during the duration of the actual drilling. The southern extremity of the area would be subjected to the sights and sounds of the drilling activity for six months at each site (see Oil and Gas map in Chapter 3) with a resulting loss of solitude values. Surface disturbance at the well sites would be noticably visible for about one year. Upon rehabilitation (seeding, recontouring, etc.) of these impacts, the net long-term effect on wilderness values would be minimal.

Nonwilderness would not significantly effect the diversity of the NWPS. Although the Grama-Needlegrass-Wheatgrass ecotype is currently underrepresented, numerous areas of this type are under wilderness consideration.

In conclusion, the naturalness and solitude of the area would be permanently lost as a result of oil and gas exploration and construction of the 2.5 mile fence.

Effects on Oil and Gas Exploration and Production. Election of the No Wilderness Alternative would allow the continued leasing of all 5,926 acres. Approximately 2,075 acres would remain available for surface occupancy from 5/1 to 12/15 each year. Under the projected scenario, the two wildcat wells would be drilled and both are expected to be nonproductive or dry holes.

Effects on Livestock Grazing and Management. The temporary surface disturbance of the twelve acres from oil and gas exploration would insignificantly reduce livestock forage production by two AUMs for one year. The improvement of the existing access route into the southern extremity would benefit livestock management operations such as salting, fence maintenance and water facility supervision. The unrestricted use of motorized vehicles would allow permittee's greater flexibility and easier livestock monitoring.

In conclusion, short-term livestock production would be reduced by 2 AUM s by the surface disturbance of two oil and gas drilling operations. Management and operating costs would be uniform on all portions of the allotments. In the long-term, there would be no effect on livestock grazing from selection of the nonwilderness alternative.

Effects on Wildlife. Oil and gas exploration would have little effect on wildlife. The sights and sounds of drilling activity, road construction, and vehicle traffic during the 5/1 to 12/15 season will cause temporary displacement to an unquantifiable number of resident mule deer and antelope. The more significant, winter-spring herd of about 250 mule deer will not be affected by future oil and gas leases since exploration activities will be restricted during the 5/1 to 12/15 season of use. The loss of 12 acres of wildlife forage for 2 years from surface disturbances will be minimal and easily compensated by surrounding areas.

Existing leases not covered by the seasonal stipulations do present some potential conflicts to mule deer. However, if an application to drill is received from one of these lessees, opportunities to negotiate a compatible season of occupance do exist. Given the exploratory nature of the drilling, the anticipated depths, and the favorable season it is unlikely that a company could not accomplish its goal during the preferred open season of 5/1 to 12/15. If voluntary compliance could not be negotiated the worst that could happen is that some 10 to 15 mule deer would be displaced to proximity areas two times in the next 20

years during the 12/15 to 5/1 season. As a result, mule deer populations are not anticipated to change.

Construction of the 2.5 mile fence will improve habitat and increase forage for mule deer. It is estimated that this improved condition will ensure forage for an additional 25 mule deer during the crucial winter-spring season.

In conclusion, this alternative will cause temporary displacement to a limited number of antelope, resident mule deer and possibly some winter-spring mule deer. Additional forage for about 25 mule deer during the winter-spring season will be created.

Effects on Recreation. The current level of 70 visitor days would continue. Hunting and the associated use of motorized vehicles will remain the principal recreational use of the area. Under the oil and gas scenario, vehicle access into the southern portion of Black Sage will be improved. This will not have a significant effect on hunting opportunities for antelope and mule deer since use levels are expected to remain low and there will continue to be no legal access to the area via this route. Management of this activity is not expected to change.

The quality of less popular forms of recreation in the area such as horseback riding and hiking would be degraded. These environmentally sensitive activities will no longer occur in a natural, nonimpaired environment; instead they will be subjected to the sights and sounds of periodic motorized vehicles, improved roads, temporary drilling activity and the new 2.5 mile fence.

In conclusion, the primary recreational use in the area would continue unchanged while the quality of less popular, nonmotorized uses would be degraded. The net result is a continuation of the 70 visitor days of use in the area.

All Wilderness Alternative

Effects on Wilderness Values. Designation of the entire WSA (5,925 acres) would ensure both short-term and long-term protection of its wilderness values. Benefits would include preserving opportunities for solitude and primitive forms of recreation and protection of the natural character of the area. Under this alternative, 5,037 acres of the Grama-Needlegrass-Wheatgrass ecotype would be added to the NWPS.

Effects on Oil and Gas Exploration and Production. This alternative would close the entire 5,926 acres to oil and gas entry since there are no pre-FLPMA leases. The two wildcat wells would not be drilled in the area. The effects of no drilling in Black Sage are not considered significant due to the absence of produceable quantities of oil and gas.

Effects on Livestock Grazing and Management. Designation would have no effect on livestock production since the annual authorization of 371 AUMs would continue to be allocated. Grazing management on these portions of the grazing allotments within the wilderness boundary would be affected by restrictions on motorized vehicle use. As a result, horses would be necessary to accomplish most routine operations such as distributing salt, inspecting general conditions, and performing minor repairs to existing facilities.

The use of motorized vehicles would be allowed for duties such as hauling heavy materials and performing major repairs to fences or stock water facilities. Based on the management requirements of the grazing allotments in Black Sage and the small size of the area, it is estimated that the labor, time, and overall costs of managing livestock would increase insignificantly as a result of wilderness designation.

In conclusion, livestock production would continue at 371 AUMs per year while livestock management costs, time, and labor would increase slightly.

Effects on Wildlife. The closure of the area to oil and gas exploration activities and the restricted use of motorized vehicles will reduce adverse impacts on wildlife. Construction of the 2.5 mile fence to improve wildlife habitat would not be built and the potential to create forage for an additional 25 mule deer would be foregone.

The 40 antelope (spring-summer) and the 250 mule deer (winter-spring) numbers would remain relatively constant over both the short term and long term since the essential supporting habitat would remain at about the same condition.

In conclusion, existing populations of antelope and mule deer would remain constant. The opportunity to improve forage production for an additional 25 mule deer during the winter-spring season would be lost.

Effects on Recreation. Although hunting, the primary recreational use in the area, would continue public motorized access would not. This would decrease big game hunting use by one-half or about 35 visitor days even though the quality of hunting opportunities would be enhanced. Opportunities for primitive and unconfined forms of recreation would be preserved. Related uses such as nonmotorized hunting, horseback riding, and hiking are currently very low but would increase under this alternative.

In conclusion, motorized recreation would be eliminated and the quality of nonmotorized recreation would be enhanced. The net effect of this action would be a loss of 35 visitor days.

Yellowstone River Island WSA (MT-075-133)

No Wilderness Alternative (Proposed Action)

Effects on Wilderness Values. Selection of the No Wilderness Alternative will not subject the island's wilderness values to any significant degradation, even though there will be no statutory wilderness protection. There are no BLM actions planned or any outside actions proposed or expected on the island in the future. The only uses which are anticipated to occur on the island are nonmotorized forms of recreation. These activities do not present

any significant impacts to the island's wilderness qualities given the low use and the availability of other comparable areas. Despite the lack of future protection no degradation is foreseen. The island's Northern Floodplain Forest ecotype would not be added to the NWPS.

Effects on Wildlife. Nondesignation presents no foreseeable impacts to the wildlife values of the island. Custodial management which entails a low level of supervision could allow trespass actions to go undetected for longer periods of time. Given the inaccessibility of the island, the probability of habitat degradation is expected to be very low and insignificant.

Effects on Recreation. The quality and types of nonmotorized recreation would be unchanged under the proposed action. Use of the island by river floaters would continue at about 80 visitor days per year.

All Wilderness Alternative

Effects on Wilderness Values. Designation of the island would guarantee long-term preservation of its wilderness values. Fifty-three acres of the underrepresented Northern Floodplain Forest ecotype would be added to the NWPS.

Effects on Wildlife. Designation will ensure long-term preservation of the existing natural habitat. Increase in visitor use levels are not expected to degrade wildlife values. Higher levels of supervision will better ensure against trespass or restricted actions.

Effects on Recreation. All existing forms of recreation would be preserved. Wilderness designation would attract additional visitor attention to the island. Designation will increase visitation from 80 to about 96 visitor days. This slight increase in recreational use would not cause any additional environmental impacts to the island. The island is well suited to accommodate higher levels of camping use than that projected given the distribution and availability of undeveloped sites.

CHAPTER 5
Consultation, Coordination, and Public Involvement

Department of the Interior
Bureau of Land Management

Headwaters Resource Area Montana

DOCUMENT PREPARATION

The RMP/Final EIS for the Headwaters Resource Area served as the primary information source for this document. The RMP and this Wilderness FEIS were prepared by an interdisciplinary team. Tables 5-1 and 5-2 list the names, responsibilities, and qualifications of these team members.

TABLE 5-1
LIST OF BUTTE DISTRICT PREPARERS

Name	Position	Qualifications
Dan Lechefsky	Project Manager RMP	B.S., Forest Management, BLM—6 years planning staff specialist, 2½ years outdoor recreation planner
Brad Rixford	Project Manager Wilderness EIS, Forestry, Wilderness	B.S., Outdoor Recreation, BLM—4 years natural resource specialist, 3 years outdoor recreation planner
Dave Barney	Access	B.S., Forest Management, BLM—6 years realty specialist (ATROW), 6 years forester
Scott Billing	Fire	B.S., Forest Management, BLM—7 years district fire management officer, USFS—6 years fire control technician
Clif Fanning	Soils	B.S., Soil Science, BLM—9 years soil scientist
Gary Gerth	Range (technical review)	B.S., Range Management, BLM—5 Years Chief of the Division of Planning and Environmental Assistance, 7 years Area Manager, 4 years range conservationist, USFS—5 years range conservationist.
George Hirschenberger	Range, Vegetation	B.S., Forestry, BLM—11 years range conservationist, 1 year range technician
Mark Koski	Maps and Graphics	B.S., Geography, BLM—6 years visual information specialist, 2 years cartographic technician
David Lomas	Hydrology, Air Quality	B.S., Forestry (Hydrology Option), M.S., Watershed Science, BLM—8 years hydrologist, USGS—6 months hydrologist
Carole Mackin	Writer/Editor	B.S., Zoology, BLM—2 years Environmental Coordinator, 3 years Safety Specialist, State of Alaska—1 year soil scientist, Private Industry—2 years agricultural research biologist
David Nelson	Economics, Social Analysis	B.S., Economics, M.S., Agricultural Economics, BLM—9 years economist and planning specialist
Bob Rodman	Lands	B.S., Biology, BLM—7 years realty specialist
MaryAlice Stoner	Recreation, Visual Resources	B.S., Geography, M.S., Park and Recreation Resources, BLM—8 years outdoor recreation planner, USFS—5 years wilderness research
John Taylor	Cultural Resources,	B.A., Anthropology, M.A., Anthro-Paleontology pology, BLM—10 years archeologist
Bill Torgersen	Forestry	B.S., Forest Resource Management, BLM—23 years forester
Delores Vavas	Sup. Clerk/Typist (Word Processing)	BLM—6 years lead operator
Dick Ward	Technical Coordinator	B.S., Natural Resources, BLM—2 years writer/editor, 3½ years outdoor recreation planner

Ted Wenzel	Wildlife, Fisheries	B.S., Wildlife & Fisheries Biology M.S., Ecology, BLM—7 years wildlife management biologist
David Williams	Energy and Minerals	B.S., Geology, M.S., Geology, BLM—9 years geologist, Private Industry—3 years geologist

TABLE 5-2

MONTANA STATE OFFICE SUPPORT TEAM

Name	Title
Robert Allen	Visual Information Specialist
James Chapman	Offset Photographer
Larry Davis	Illustrator
Corla DeBar	Cartographic Technician
Kathy Ives	Printing Technician
Bill Keiffer	Cartographic Technician
Rick Kirkness	Printing Specialist
Bob Lund	Outdoor Recreation Planner
Larry Pointer	Planning Coordinator
Chuck Sigafoos	Supervisory Cartographic Technician
Phyllis Smith	Editorial Clerk
Brenda Takes Horse	Editorial Clerk

This document was prepared within the context of the BLM wilderness inventory completed in 1981 and the Headwaters Final RMP completed in 1983. The associated documents that contributed to this PFEIS are described below in chronological order:

Wilderness Inventory Handbook, September 27, 1978, U. S. Department of the Interior, Bureau of Land Management. This handbook contains the policy, direction, procedures, and guidance for conducting wilderness inventory on the public lands.

BLM: Initial Wilderness Inventory — Final, August 1979. In this report, public lands administered by the BLM that clearly and obviously do not have wilderness characteristics are identified. Existing information, such as maps and aerial photos, and input received from the public were used to make this decision. Three criteria had to be met during this stage for an area to be recommended for intensive inventory. Each area had to be (1) at least 5,000 acres in size or contiguous to a proposed or existing wilderness, (2) roadless, and (3) substantially free of human imprints.

BLM: Intensive Wilderness Inventory — Proposed Wilderness Study Areas, September 1979. This report documents the intensive inventory. In this stage, field surveys were conducted, and areas were examined for wilderness qualities listed in the Wilderness Act: opportunities for solitude or primitive and unconfined recreation, naturalness, and the presence of supplemental values. Areas having these characteristics were identified as proposed WSAs.

Interim Management Policy and Guidelines for Lands Under Wilderness Review, December 1979, U. S. Department of the Interior, Bureau of Land Management. The interim management policy describes the temporary management of WSAs and applies only during the time an area is under wilderness review and until Congress acts on WSAs.

BLM: Intensive Wilderness Inventory — Final Wilderness Study Areas, September 1981. This document contains the same information as the Proposed Wilderness Study Areas report, except this document includes a thorough analysis and evaluation of public comments and any changes to the WSA recommendations made as a result of public comment. This document represents the completion of the wilderness inventory.

Wilderness Management Policy, September 1981. This document describes how BLM will manage lands that are designated by Congress as part of the National Wilderness Preservation System.

Wilderness Study Policy, February 1982. This document discusses policies, criteria, and guidelines for conducting wilderness studies on public lands.

Headwaters Resource Management Plan, November 1983. The RMP is the land use plan that identifies the management priorities of the public lands. The RMP for Headwaters was completed in November 1983.

These documents are available for review at the Headwaters Office in Butte, Montana.

CONSULTATION AND COORDINATION

An overview of the planning process from which this document was prepared is explained in Chapter 1. Public consultation and coordination efforts were encouraged throughout the wilderness study process as mandated by the BLM planning regulations (43 CFR Part 1601), the Council on Environmental Quality (CEQ) regulations (430 CRF 1501.7 and 1506.6) and the Wilderness Act (Section 3d). The goal of the BLM throughout this study was to prepare a plan that would be as consistent as possible with public concerns at all levels. Public information was solicited during the Wilderness Study for each WSA in order to identify key issues, important resource values, and ultimately a sound wilderness suitability recommendation.

Consultation and coordination efforts that the BLM used to involve the public in the Headwaters RMP and the wilderness were numerous and are listed in chronological order in Table 5-3.

TABLE 5-3
PUBLIC INVOLVEMENT EFFORTS

Date	Action	Purpose
4/79	Newsletter (800 sent)	Preliminary identification of RMP issues, public involvement requested.
4/79	Formation of Citizen Advisory Group (9 Members)	Assist in defining RMP issues.
5/79	Open house session	Issue identification
3/80	Federal Register Notice, local news release, television interview	Initiation of Headwaters RMP effort
9/80	Newsletter (1,000 sent)	Proposed issues and criteria, public comments requested
5/81 - 9/81	Open house sessions (5)	Exchange information on resource plan and other matters of concern
8/82	Newsletter (2,732 sent), local news release	Issues, criteria, and alternatives; public comments requested
9/82	Western Environmental Trade Association Meeting	Headwaters RMP information update and exchange of information
9/82	Governor's Natural Resource Council Meeting	Headwaters RMP coordination update
10/82	Park Co. Commission Meeting	RMP coordination
10/82	Jefferson Co. Commission Meeting	RMP coordination
10/82	MT Dept. of Fish, Wildlife, and Parks Meeting	RMP coordination update
3/83	Governor's Natural Resource Council Meeting	RMP coordination update
5/83	Federal Register Notice, local news release	Notification of Draft RMP availability
5/83	Draft RMP mailing (900 sent)	Public review, comments requested
6/83	Hearing, open house	Receive public comments on Draft RMP
9/83	Governor's Natural Resource Council Meeting	Draft RMP coordination
11/83	Federal Register Notice, local news release	Notification of Final RMP availability
11/83	Final RMP mailing (900 sent)	Public review and future reference

PUBLIC COMMENTS ON THE DRAFT RMP

After the Draft RMP/EIS was filed with the Environmental Protection Agency (EPA) and released to the public on May 6, 1983, a period of ninety days was provided for public review and comment. The Federal Register publication and local news releases notified the public that the Draft RMP was available and announced the public hearing and workshop at Helena on June 15, 1983.

Approximately 900 copies of the Draft RMP were sent to federal, state, and local governments; private groups and organizations; and individuals for review and comment. Government agencies, businesses and organizations who were sent copies of the Draft RMP/EIS are listed in Table 5-4. Those who then commented are indicated with an asterisk.

A total of sixty-two public comments (five oral and fifty-seven written) were received on the Headwaters Draft RMP. Of this total, sixteen comments (three oral and thirteen written) included information and/or opinions on the preliminary wilderness recommendations for the two reportable WSAs in the Draft Plan.

Analysis of Wilderness Related Comments Received on Draft RMP

During the public hearing, three people orally presented general testimony concerning the wilderness study portions of the Draft RMP. Two supported No Wilderness (proposed action) and one supported All Wilderness.

Only thirteen written comments were received that addressed the two WSAs analyzed in this document. The majority of comments received were general in character. Of the thirteen comments received, four supported No Wilderness (proposed action); eight supported All Wilderness; and one was split, favoring All Wilderness for Yellowstone Island and No Wilderness for Black Sage.

TABLE 5-4

DISTRIBUTION LIST

Federal Agencies

Bonneville Power Administration
Council on Environmental Quality
*Department of Agriculture
  Forest Service
  Soil Conservation Service
*Department of the Air Force
*Department of the Army
  Corps of Engineers
Department of Energy
  Federal Energy Regulatory Commission
Department of the Interior
  Bureau of Indian Affairs
  *Bureau of Mines
  Bureau of Reclamation
  *Fish and Wildlife Service
  Geologic Survey
  *National Park Service
Environmental Protection Agency
Farmers Home Administration
Federal Highway Administration
National Advisory Council For Historic Preservation

Congressional Offices

Office of Congressman Marlenee
Office of Congressman Williams
Office of Senator Baucus
Office of Senator Melcher

State Agencies

Bureau of Mines and Geology
Department of Commerce
Department of Fish, Wildlife, and Parks
Department of Health and Environmental Sciences
Department of Highways
Department of Military Affairs
Department of Natural Resources and Conservation
Department of State Lands
Environmental Quality Council
*Office of the Governor
Oil and Gas Commission
State Clearinghouse
*State Historic Preservation Officer
State Library

County Commissioners and Planning Boards

Broadwater County
Cascade County
Gallatin County
Jefferson County
*Lewis and Clark County
Meagher County
Park County
Pondera County
Silver Bow County
*Teton County

Businesses

Amax Coal Co.
American Petrofina
Anderson Exploration Co.
Atlantic Richfield
Big Sky Land and Leasing Service
Bouma Post Yards
Burlington Northern Inc.
Champion Petroleum Co.
Chevron Resources Co.
Chevron USA Inc.
Conoco Inc.
*Consolidated Georex Geophysics
Consolidated Coal Co.
El Paso Exploration Co.
Elanco Products Co.

Exxon Coal Res. USA Inc.
Kerr McGee Corp.
Louisiana Pacific Corp.
Malon Oil and Gas Co.
Meridian Land & Minerals Co.
Montana Power Co.
Montco
Multitech
Natural Gas Corporation of California
NTEC
Phillips Petroleum Co.
Polar Marine
*Shell Oil Co.
Shelton Land and Cattle Co.
Shelton Ranches Inc.
Sohio Petroleum Co.
Texaco Inc.
Wesco Resources Inc.
Westech
Western Energy Co.
Wexpro Co.
Williams Exploration Inc.
ZK Resources Inc.

Organizations

*Audubon Society
Boulder River Sportsmen's Club
Continental Divide Trail Society
*Defenders of Wildlife
Ducks Unlimited
E. Montana Distance Riders Assn.
Elkhorn Citizens Organization
Fishing and Floating Outfitters Assn. of Montana
Flathead River Basin Study
*Inland Forest Resource Council
Int. Snowmobile Ind. Assn.
Laurel Saddle Club
League of Women Voters
Marysville Pioneers
Montana Assn. of Conservation Districts
Montana Association of Counties
Montana Association of Grazing Districts
Montana Cattlemen's Association
Montana Environmental Information Center
*Montana 4X4 Association
Montana Historical Society
Montana Mining Assn.
Montana Oil Journal
Montana Petroleum Assn.
Montana Snowmobile Assn.
Montana Stockgrower's Assn.
Montana Water Development Assn.
*Montana Wilderness Assn.
Montana Wildlife Fund
Montana Women in Timber
Montana Woolgrower's Assn.
National Trails Council
Natural Resources Defense Council
Nature Conservancy
Northern Plains Resource Council
Rocky Mountain Front Advisory Council
Rocky Mountain Oil and Gas Assn.
Sierra Club
Skyline Sportsmen
Sun River Teton Resource Forum
Sunny Vista Homeowners Assn.
The Wilderness Society
Trail Riders
West Yellowstone Ski Club
Western Environmental Trade Assn.
Western Forest Industries Assn.
Western Montana Ghost Town Preservation Society
Wildlands Resource Assn.
Wildlife Society

There were no written comments received from local, state, or federal government agencies that addressed the two reportable WSA s in the Draft RMP.

This document contains only those comments that are required by CEQ and BLM regulations. All letters received from local, state and federal agencies relating to the Draft RMP are included, irregardless of whether or not they contained comments on the two WSA s being reported. Only substantive wilderness comments from individuals and organizations are displayed. The transcript of the public hearing conducted on the Draft RMP is not enclosed since there were no substantive wilderness related comments.

A complete list of contributors is presented in Table 5-5. All local, state and federal agencies that responded to the Draft RMP are listed while only those individuals and organizations who addressed the two WSAs being analyzed are shown. All wilderness related commenters are indicated by an asterisk. Furthermore, those organizations which presented substantive comments for which BLM prepared responses are in bold print. The index numbers correspond to the comment numbering system used in the Headwaters Final RMP/EIS.

All comments were reviewed and considered. Table 5-6 shows BLM responses to those substantive comments that relate to inaccuracies in the analysis used; identify new significant impacts; recommend reasonable new alternatives; involve disagreements on interpretations of significance; or indicate significant misconceptions or misinterpretations of BLM programs and policies.

All appropriate comment letters received during the comment period on the Draft RMP are presented in Table 5-7. A vertical bar and a corresponding number (left margin) identify portions of comment letters displayed in Table 5-6.

TABLE 5-5

LIST OF CONTRIBUTORS

Index Number	Contributors
	Federal Agencies
1	Advisory Council On Historic Preservation, Washington, D.C.
2	Department of Agriculture, Forest Service, Missoula, MT
3	Department of the Air Force, Air Force Regional Civil Engineer, Dallas, TX
4	Department of the Army, Omaha District Corps of Engineers, Omaha, NE
5	Department of the Interior, Bureau of Mines, Spokane, WA
6	**Department of the Interior, Fish and Wildlife Service, Billings, MT (Dated 7/15/83)**
7	Department of the Interior, Fish and Wildlife Service, Billings, MT (dated 7/19/83)
8	Department of the Interior, National Park Service, Denver, CO
9	Department of Transportation, Federal Highway Administration, Denver, CO
10	Environmental Protection Agency, Denver, CO
	State Agencies
12	Montana Historical Society, Historic Preservation Office, Helena, MT
13	State of Montana, Office of the Governor, Helena, MT
	Local Agencies
14	*Lewis and Clark County, Board of County Commissioners, Helena, MT (oral)
15	Teton County Conservation District, Choteau, MT
	Organizations
20	***Defenders of Wildlife, Missoula, MT**
23	*Inland Forest Resource Council, Missoula, MT (oral)
24	*Minerals Exploration Coalition, Denver, CO
25	*Montana Audubon Council, Helena, MT
26	*Montana Farmers Union, Great Falls, MT (oral)
27	*Montana 4x4 Association, Inc., Dillon, MT
28	***Montana Wilderness Association, Helena, MT**
30	***National Wildlife Federation, Northern Rockies Natural Resource Center, Missoula, MT**
36	***Shell Oil Company, Houston, TX**
	Individuals
50	*David and Linnie Cough, Helena, MT
62	*Mildred Leonard, Cambridge, MA
73	*Everett H. Newman, Choteau, MT
76	*William V. Peterson, Litchfield, MN
82	*Reed Secord, Lighthouse Point, FL
83	*John R. Swanson, Berkeley, CA

*Indicates all contributors who commented on the Black Sage and/or Yellowstone River Island WSAs. Contributors who provided substantive comments to which the BLM prepared responses are in bold print.

TABLE 5-6
COMMENTS AND RESPONSES

Public Comment	BLM Response
1. Because of the importance of the three areas known as Deep Creek/Battle Creek, Blind Horse Creek, and Chute Mountain to wildlife, including endangered species, we suggest that you very seriously consider recommending these areas to Congress as suitable for wilderness. Some of the impacts to wildlife are eliminated or dampened when the provisions for wilderness management are in place, and due to the potential for resource extraction in these areas, wilderness designation may well be the best option available to insure long-term protection of these areas and their associated wildlife, particularly the grizzly. If you decide that you are unable to recommend these areas for wilderness, then we request that they be managed as roadless areas. Comment Letter 6: Page 51.	1. These areas were studied under the authority of Section 202 of FLPMA through the RMP, found unsuitable for wilderness, and ultimately designated as Outstanding Natural Areas by the State Director in May 1984. They are not included in this Wilderness FEIS because Section 202 WSA s found unsuitable for wilderness designation need not be reported to Congress.
2. On the other hand, the Black Sage and Yellowstone River Island areas don't have nearly the wilderness potential as the Front areas. Nevertheless, as important roadless areas their wild nature should be preserved. Clearly, the roadless attributes of the Black Sage area aren't very highly valued in the DEIS. Comment Letter 20: Page 68.	2. The roadless attributes of the Black Sage area were one of the two criteria and six quality standards that were used in the study process that ultimately lead to the nonsuitable recommendation. The many impacts on naturalness did detract from the overall wilderness quality. The primary reasons Black Sage was recommended for nonwilderness were due to its highly irregular configuration, poorly identified boundaries, high potential for oil and gas, and its only moderate overall wilderness qualities including its inability to significantly contribute to the quality or diversity of the NWPS. The wilderness values of the Yellowstone River Island are not expected to change as a result of nondesignation. The Black Sage area will be available for all resource opportunities. Although some environmental impacts may result, significant degradation is unlikely since future development proposals will be subject to environmental assessments and the unnecessary and undue degradation prevention mandate.
3. Yellowstone River Island (MT-075-133) would be an ecologically unique addition to the National Wilderness Preservation System and should be so designated. Comment Letter 28: Page 71.	3. Although the Yellowstone River Island would increase the ecological diversity of the NWPS, its contribution would not be significant due to its small size and poor representative qualities as defined by Bailey and Kuchler. In addition, this is only one factor that must be considered in determining an area's wilderness suitability. The island's small size, offset impacts, and manageability problems outweighed its contribution to the ecosystem diversity.
4. The rationale presented on page 115 and in Appendix L for designation of the Blind Horse, Deep Creek/Battle Creek, Black Sage, Chute Mountain, and Yellowstone River Island as Outstanding Natural Areas rather than Wilderness Areas is invalid. Comment Letter 30: Page 72.	4. Black Sage and the Yellowstone River Island are not recommended as outstanding Natural Areas. The preferred alternative for the two areas is nonwilderness.

5. In the Blind Horse, Deep Creek/Battle Creek and Black Sage areas public comment favored either wilderness designation or further study. Comment Letter 30: Page 72.	5. The public comments analyzed in the Draft: RMP/EIS were received during the 1978-1980 wilderness inventory process. During that time, two public comment periods were established so that interested people could comment on whether or not these inventoried units should be studied further for wilderness as WSAs. During the wilderness study process, public comments were one of the eight factors used to determine wilderness suitability.
6. In any alternative selected in this plan, two critical points should be addressed: (1) In what way will the agency gather information in order to adequately evaluate the energy and mineral resource potential within the planning areas, and (2) In areas where there is moderate to high potential for deposits of energy or minerals, how is the agency going to develop land use allocations which will be compatible with possible exploration for the development of these resources. Comment Letter 36: Page 75.	6. Information on the energy and mineral resource potential in the Headwaters Resource Area was obtained from willing companies and individuals active in the area and, in the case of areas being studied for wilderness, from Geology, Energy, and Mineral (GEM) reports prepared under contract for the BLM. Additional information was provided by the U.S. Geological Survey, U.S. Bureau of Mines, and the Montana Bureau of Mines and Geology. The proposed action for the Black Sage WSA is entirely compatible with the exploration and development of energy resources. However, as noted elsewhere in this document, the chances of discovering commercial amounts of oil or gas in the area are considered remote.

1a

Advisory Council On Historic Preservation

1522 K Street, NW
Washington, DC 20005

Reply to:

730 Simms Street, Room 450
Golden, Colorado 80401

TABLE 5-7
APPROPRIATE PUBLIC COMMENT LETTERS ON DRAFT RMP

May 20, 1983

Mr. Dan Lechefsky
Project Manager
Butte District Office
Bureau of Land Management
P.O. Box 3388
Butte, Montana 59702

Dear Mr. Lechefsky:

On May 16, the Council received the Bureau of Land Management's "Headwaters Resource Area Resource Management Plan/Environmental Impact Statement" for the Butte District, Montana. In accordance with section 102(2)(c) of the National Environmental Policy Act of 1969, we have reviewed the environmental statement regarding the adequacy of its consideration of historic properties (historic, archeological, architectural, and cultural properties).

We note that historic properties do exist in Butte District, but the environmental statement does not demonstrate that the Bureau is aware of its responsibilities for the protection of such properties pursuant to Section 110 of the National Historic Preservation Act of 1966, as amended in 1980, nor does it identify a commitment to comply with Section 106 of that Act for those historic properties that would be affected by the actions taken to implement the management program. In-point-of-fact, the descriptions of Bureau historic properties management on pages 23 and 67 imply an independent management program which does not conform to the congressionally mandated program detailed in the National Historic Preservation Act and the Council's regulations. For these reasons we consider the treatment of historic properties in the environmental statement to be inadequate, and we suggest substantial revision of the final environmental statement to ensure that the management program established for the Headwaters Resource Area is in conformance with applicable Federal laws and regulations. In particular, we would like to point out that management decisions regarding historic properties should only be made after consultation with the Montana State Historic Preservation Officer and the Council (as appropriate) in accordance with the steps detailed in 36 CFR 800.

1b

If you have any questions please contact Brit Storey of my staff at (303) 234-4946, an FTS number.

Sincerely,

Louis S. Wall
Chief, Western Division
of Project Review

2a

United States Department of Agriculture
Forest Service
Federal Building
P.O. Box 7669
Missoula, MT 59807

Reply to: 2700

Date: JUL 28'83

Jack McIntosh, District Manager
Bureau of Land Management
Box 3388
Butte, MT 59702

Dear Mr. McIntosh:

We have reviewed the Headwaters Resource Areas Resource Management Plan and have the following comments:

Several parcels of Bureau of Land Management (BLM) land are adjacent to our Elkhorn Wildlife Management Unit which is being established in accordance with the recommendations contained in the congressionally mandated Elkhorn Wilderness Study Report. Several BLM management areas influence widlife in that area on the Helena National Forest.

Management Unit 9. The deer-elk winter range values are very high in the portions of this unit that are adjacent to our Elkhorn Wildlife Management Unit and endorse the preferred alternative that allows for restrictions on motorized access. These BLM lands are important to the total wildlife habitat in the Elkhorn area and hope that more specific road management guidelines can be developed. We will supply all resource information we have and work with BLM land managers in developing these guidelines. We support the effort to improve conditions in the Devils Fence Allotment.

Management Unit 23. The portion of this management unit in the Golconda Creek area adjacent to our Elkhorn Wildlife Management Unit currently provides excellent elk spring-summer habitat. Although our monitoring activities are not complete, early indications are that this area is key to elk in the Elkhorns. Because of the importance of this area to elk, and to be compatible with our management of the Elkhorns, any timber harvest should be restricted to that which maintains or improves elk summer habitat. This would most likely change the high priority for forest management that the area currently has to something else. Specific road management guidelines for this area would be helpful. We support the efforts to improve range conditions in the Muskrat Allotment.

Management Unit 31. The habitat is very important to the elkhorn wildlife populations, especially deer and elk during the winter. We will continue to provide information from monitoring to BLM land managers and work with them in preparing specific road management and other guidelines to assure compatibility with our adjacent wildlife management unit.

2b

The following comments are relative to areas adjacent to or in close proximity of the Gallatin NF:

T. 5 N., R. 9 E., Section 14: BLM lands occupies most of the W½ of this section, and the National Forest owns the entire E½. This area is in the Three Peaks grazing allotment and both Agencies have the same permittee (Mr. George Hirscheaberger). Our proposed management prescription for this area is for wildlife and livestock. BLM has identified this tract as Catagory II for disposal through sale, exchange or transfer. We believe that this tract should be eventually included in a transfer program to the National Forest and included within our management area 17.

Canyon Mountain Further Study Area - T. 3 S., R. 8 and 9 E.: Realizing that this area will require further study by BLM, our comment at this time is that these lands should be included in a transfer program since they are important in providing future access and would also be valuable as trading stock in consolidating public ownership in this area.

Study Area Adjacent to National Forest in East Side of Yellowstone Valley: The majority of these lands is adjacent to National Forest ownership and have high wildlife and recreational values. We strongly support that these BLM lands be retained in public ownership and eventually be included in a transfer program.

The remaining BLM lands in the immediate vicinity of National Forest System lands in both the disposal and further study catagories are generally scattered parcels not adjacent to Forest boundaries. Our comment is that in many cases these tracts could be utilized as key trading stock to block up within the Forests.

We appreciate the opportunity to comment on this plan.

Sincerely,

TOM COSTON
Regional Forester

3a

DEPARTMENT OF THE AIR FORCE
AIR FORCE REGIONAL CIVIL ENGINEER CENTRAL REGION (AFESC)
1114 COMMERCE STREET
DALLAS, TEXAS 75242

15 Aug 83

Mr. Dan Lechifsky, Project Manager
Butte District Office, BLM
P.O. Box 3388
Butte, Mt 59702

Dear Mr. Lechefsky:

We have reviewed the draft Resource Management Plan/Environmental Impact Statement (RMP/EIS) for the Headwaters Resource Area.

Review of the RMP/EIS indicates several Minuteman launch control and launch facilities within the Headwaters Resource Area. The hardened intersite communications cable system also passes through areas identified as private surface ownership and public land declared acceptable for further consideration for coal development.

The Malmstrom AFB Cable Affairs Officer has discussed the hardened intersite communications cable routing with your Great Falls field office. It is the Air Force understanding that the Great Falls Field Office plans to annotate the location of the cable on their working drawings and coordinate with the Cable Affairs Officer whenever an oil/gas lease application is received which could impact on the hardened intersite communications system or a launch control/launch facility.

For specific location of the launch control/launch facilities, the Cable Affairs Officer at Malmstrom AFB can be contacted through your Great Falls field office.

Sincerely,

Paul D. Garcia

PAUL D. GARCIA Major, USAF
Deputy Chief, Environmental Planning Division

Cy to: SAC/DEPVQ
15 AF/DE
47 AD/LG
2153 CS/LGMN
341 CSG/DEL
341 CSG/DEEV

4a

DEPARTMENT OF THE ARMY
OMAHA DISTRICT CORPS OF ENGINEERS
6014 U.S. Post Office and Courthouse
Omaha, Nebraska 68102

REPLY TO
ATTENTION OF:

June 27, 1983

Planning Division

Mr. Dan Lechefsky
Project Manager
Butte District Office
Bureau of Land Management
P.O. Box 3388
Butte, Montana 59702

Dear Mr. Lechefsky:

We have reviewed the draft Resource Management Plan/Environmental Impact Statement for the Headwaters Resource Area. We find the document to be informative, but we have no comments to offer at this time on the Plan. Thank you for this review opportunity.

Sincerely,

Gerard E. Mick

for Richard D. Gorton
Chief, Environmental Analysis Branch
Planning Division

5a

United States Department of the Interior

BUREAU OF MINES

WESTERN FIELD OPERATIONS CENTER
EAST 360 3RD AVENUE
SPOKANE, WASHINGTON 99202

August 4, 1983

Memorandum

To: Jack A. McIntosh, District Manager, Bureau of Land Management, Butte, Montana

From: Supervisor, Minerals Involvement Section

Subject: Headwaters Resource Area Resource Management Plan (RMP)

A search of our Mineral Industry Location System (MILS) indicates about 10% of the total number of mineral properties in the state of Montana lie within government land tentatively categorized for disposal in the Headwaters Resource Area. The entire resource area contains nearly 50% of the total number of mineral properties in the state that are entered in the MILS system.

We are enclosing a MILS printout for your information. We have been informed by your staff that lands categorized for possible disposal which are mineral-in-character will be reclassified to the retention category. We hope this will aid you in your analysis.

If we can be of further assistance, please contact us.

D'Arcy P. Banister

Enclosure

6a

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Ecological Services
Federal Building, Room 3035
316 North 26th Street
Billings, Montana 59101-1396

IN REPLY REFER TO:
ES

July 15, 1983

Memorandum

To: Headwaters RMP Project Manager, Bureau of Land Management, Butte District Office, P. O. Box 3388, Butte, MT 59702

From ACTING Field Supervisor, USFWS, Billings, MT (ES)

Subject: Review of Headwaters Resource Area RMP Draft Environmental Impact Statement

We have reviewed the subject statement and the following constitute the comments of the U.S. Fish and Wildlife Service (FWS).

Endangered Species

Our Endangered Species Team personnel have discussed the need for and benefits of preparing a biological assessment on the RMP/DEIS with your staff and will provide assistance to them throughout the Section 7 compliance process described in the Endangered Species Act (ESA).

Generally, we view the plan as a document which projects certain improvements or safeguarding mechanisms for endangered and threatened species habitats within the planning area. Overall, the information about listed species is noteworthy and direct in indicating where either adverse or beneficial effects may result from proposed resource allocations or projected use and development of resources.

Our concern is that a major fault of the planning process and the document arose because endangered species were not identified as an issue during the "issue driven" planning process, and hence, no goals for these species or their habitats over the planning period are presented in the plan. Lacking these goals, the plan is unable to describe these habitats in any detail. Therefore, resources cannot be allocated directly for management and improvement of those seasonal or year-long habitats of importance to endangered and threatened species in the planning area over the life of the plan.

6b

Because of these concerns, we recommend that an effort be made during the Section 7 consultation process at establishing long-term goals for endangered and threatened species, their recovery, and identification or documentation of known important and manageable habitats. With this base, the biological assessment can be structured to examine alternatives and their impacts (direct, indirect, and cumulative). The final step needed is the identification and use of various criteria which will be followed in resource use prescriptions to evaluate both case-by-case and area-wide development actions in the future. By establishing these procedures and criteria now, we can then assess whether the action proposed in the RMP/DEIS is or is not likely to affect endangered or threatened species over the long-term. Moreover, funding and manpower resources can be identified in advance of development so that EAR's and other site review processes can be adequately accomplished.

Since the purposes of ESA (Section 2(b)) requires Federal agencies to "provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved," we believe that comprehensive plans for resource allocation must take a comprehensive look at how, where, and when allocations can be made to meet the purpose of the Act. We will help you to the best of our ability to meet our shared responsibilities as directed by ESA and hopefully, to meet the timetables established for the Headwaters RMP Record of Decision.

We hope that the biological assessment serves as a mechanism for evaluating and documenting the endangered and threatened species goals, objectives, and management direction for this resource area. We recommend that BLM incorporate this information into the RMP/FEIS. Our concern for species listed in this area is great, especially in those habitats along the Rocky Mountain Front and in riparian/wetland areas. We realize that several public agencies and private entities are involved in managing these habitats and recognize the need for total cooperation if habitats are to be maintained for these species in this area. We recommend continued use of recovery plans now available for the wolf and grizzly bear in an effort to achieve a cooperative recovery of these species and to help direct your thinking in long-term resource planning.

Range Resources

Under the preferred alternative (Alternative A), seeding and interseeding is proposed for 2,560 acres. On page 118 of the draft, we note that the BLM is proposing to utilize native and introduced plants. We are very concerned if the introduced species to be utilized is crested wheatgrass. This type of conversion results in monotypic vegetation, essentially useless to wildlife. Even if other species such as alfalfa or sweetclover are included in the mixture, they are generally eliminated over time due to the competitive nature of crested wheatgrass and the high livestock utilization rates typically used to maintain the "pasture" in palatable condition. We feel that these conversions (to crested wheatgrass) should not be undertaken on public lands that are managed for multiple use. If undertaken at all, they should be developed on private lands included in an AMP in order to defer use on the native public range until mid-June or early July. Thus, the livestock operator would still

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have the necessary spring grazing and the native public range would be maintained. We feel this is critically important because of the negative wildlife implications resulting from the loss of native range in Montana due to "plow-out" in recent years.

Regarding range reseeding, on page 237 (item #11) the draft states that all areas where vegetative manipulations are to occur will be rested at least two years after treatment. It has been our experience (and we recommend) that these areas should be rested for three growing seasons, to obtain good ground cover, plant vigor and wildlife habitat.

Riparian Habitat

We were pleased to see the special emphasis given to riparian habitat in the draft. However, we feel that more needs to be done, in a timely manner, to preserve this extremely valuable habitat. As you know, the BLM, at the national level, has recognized the importance of riparian-wetland habitat, and special emphasis has been given to the protection and enhancement of these areas, in terms of general policy. On February 5, 1980, the BLM published in the Federal Register (Volume 45, No. 25, pages 7889-7895), Final Guidelines; Wetlands-Riparian Area Protection and Management; Policy and Protection Procedures. Therein it is stated that, "Riparian areas which presently or potentially support broad-leaf vegetation in arid and semi-arid ecosystems are of special management concern" (emphasis added). One of the stated objectives is to, "implement a management system to protect, maintain, and enhance all wetland-riparian areas administered by BLM" (emphasis added). The guidelines further state that BLM policy will be to, "Avoid the long and short-term adverse impacts associated with the distribution, loss, or degradation of wetland-riparian areas"... and, "Preserve and enhance the natural and beneficial values of wetland-riparian areas which may include constraining or excluding those uses that cause significant, long-term ecological damage." Having reviewed the Headwaters DEIS, we do not believe that these guidelines have yet been adequately observed. We recommend that during preparation of the Final EIS, more adequate attention be given to wetland-riparian habitat protection needs, especially regarding the time over which protective measures are to be implemented. According to the draft, the proposal is to improve 58.5% (22.6 miles) of the unsatisfactory riparian habitat on priority 1 allotments over a period of 20 years; another 20 years would presumably be required to improve the 29.5% (11.3 miles) of unsatisfactory riparian habitat on priority 2 allotments. Thus, forty years would be required to reach the desired goals. The issue of moose habitat (page 126) emphasizes our concern that not enough is being done soon enough to protect riparian habitat. Under Alternative A, moose habitat would only improve from 40% unsatisfactory to 34% unsatisfactory; only four of twelve allotments containing moose habitat would improve, the remaining eight would experience little change. Therefore, we recommend that the scheduling required to implement the AMP goals for riparian habitat be shortened significantly because of its importance to both wildlife and water quality.

Livestock Grazing

On the issue of grazing, we found almost no details in the draft of how grazing will be managed for the benefit of wildlife. The inference made is that bettering the range condition will increase wildlife benefits. Although we too believe that wildlife can benefit from bettering the range condition, we feel that other issues must also be considered to determine whether wildlife resources will receive any net benefits. Often times the range improvements (water, fencing, grazing systems) associated with intensive management have substantial negative impacts. For example, one ramification of intensive management is the intrusion of livestock into areas that previously were not utilized because of lack of water. After water developments are installed, livestock/wildlife competition will be spread over a broader area than was previously possible. Another impact is the often intensive utilization of forage in one or more of the pastures in a grazing system which leaves little or no residual cover for wildlife in these pastures. We feel these, as well as other pertinent issues, must be discussed in the final EIS before the assertion can be made that the proposed grazing management will benefit wildlife. As written, the draft does not discuss the negative implications of intensive management. Inasmuch as the draft indicates that grazing income to the U.S. Treasury from public lands in the Headwaters is about $58,000 and that wildlife related resources, through hunter-day use, result in $255,000 of economic stimulation, it appears that more attention should be given to addressing the impacts of grazing upon wildlife.

Land Tenure

On the issue of land tenure adjustments, we wish to commend you on your goal of utilizing exchanges (see page 112) as the primary means of disposal rather than sales. The outright sales of public lands could have severe consequences upon the wildlife values of the lands and the public's use thereof. Furthermore, we encourage you to pursue, on a priority basis, providing access to those public lands where such access does not now exist, except in those areas important to the recovery of endangered or threatened species.

Wildlife Unsuitability Criteria

We have reviewed the application of the unsuitability criteria on the federal mineral estate within the Great Falls Coal Field. We believe that the rationale used in the draft document for application of several or the unsuitability criteria are not consistent with regulations pertaining to the management of federally-owned coal (43 CFR 3400) and may result in unnecessary conflict or delays if leasing of these coal reserves is initiated in the future.

In general, we have found, during past leasing efforts in the Powder River and Fort Union Coal Regions, that completion of four-six season wildlife inventories and application of unsuitability criteria well in advance of coal leasing activities minimizes the conflict between wildlife and coal development initiatives. Section 3461.3-1(a)(1) of the Federal

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Coal Management Regulations states that, "Each of the unsuitability criteria shall be applied to all coal lands with development potential identified in the comprehensive land use plan or land use analysis. For areas where one or more unsuitability conditions are found and for which the authorized officer of the surface management agency could otherwise regard coal mining as a likely use, the exceptions and exemptions for each criterion may be applied."

Section 3461.3-1(b)(1) requires that, "The comprehensive land use plan or land use analysis shall include an indication of the adequacy and reliability of the data involved. Where either a criterion or exception (when under subsection (a) of this section the authorized officer decides that application of an exception is appropriate) cannot be applied during the land use planning process because of inadequate or unreliable data, the plan or analysis shall discuss the reasons therefor and disclose when activity planning, or, in the case of criterion 19, prior to approval of a permit, the data needed to make an assessment with reasonable certainty would be generated."

Section 3461.3-1(2) states that, "No lease tract shall be analyzed in a final regional lease sale environmental impact statement prepared under Section 3420.4-5 of this title without significant data material to the application to the tract of each criterion described in Section 3461.1 of this title, except, where necessary, criterion 19."

Section 3461.4-1(b) further emphasizes that, "The unsuitability criteria shall be initially applied either:

(1) During land use planning or the environmental assessment conducted for a specific lease application; or

(2) During land use planning under the provisions of Section 3420.1-4 of this title."

In summary, the regulations require that the unsuitability applications be based on adequate data and that they be completed prior to leasing of the federal coal.

Analysis for Criterion No. 11 in Appendix H documents the limited data available on golden and bald eagle nest sites in the planning area. A lease stipulation requiring additional raptor survey is recommended. In our opinion, issuing a lease with a stipulation requiring additional inventory does not meet the cited regulations. Adequate inventory and application of Unsuitability Criteria No. 11 prior to issuance of the lease is required.

Rationale expressed in the draft planning document for Unsuitability Criteria No. 13 and No. 14 suggesting inventories of cliff sites at the time of leasing for criteria No. 13 and leases with stipulations requiring inventories of high priority habitat for migratory birds of high Federal interest for Criteria No. 14 also do not appear to be consistent with the coal planning regulations. These inventories and subsequent application of unsuitability criteria are necessary and are required prior to issuance of Federal coal leases.

6f

The Fish and Wildlife Service is ready to assist in the identification of migratory birds of high Federal interest for coal resources contained in the Headwaters Resource Area. We are also willing to assist in identifying inventory needs and, depending upon financial resources available, may be able to assist in the completion of required inventories.

Wilderness

Because of the importance of the three areas known as Deep Creek/ Battle Creek, Blind Horse Creek, and Chute Mountain to wildlife, including endangered species, we suggest that you very seriously consider recommending these areas to Congress as suitable for wilderness. Some of the impacts to wildlife are eliminated or dampened when the provisions for wilderness management are in place, and due to the potential for resource extraction in these areas, wilderness designation may well be the best option available to insure long-term protection of these areas and their associated wildlife, particularly the grizzly. If you decide that you are unable to recommend these areas for wilderness, then we request that they be managed as roadless areas.

Specific Comment

We note that there is a discrepancy between figures presented in the body of the RMP/DEIS and reference to data contained in Figure 3-3.

We appreciate the opportunity to comment on the DEIS.

Dennis M. Christopherson

cc: State Director, BLM, Billings, MT
Robert Stewart, Department of Interior, Denver, CO
Environment Coordination, Washington, D.C.

7a

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Billings Office
316 North 26th Street
Billings, Montana 59101-1396

IN REPLY REFER TO: (SE)

July 19, 1983

Memorandum

To: District Manager, Bureau of Land Management, Butte, MT

From: Field Supervisor, Endangered Species, Billings, MT

Subject: Headwaters Resource Management Plan EIS

This responds to your July 13, 1983, memorandum regarding the proposed Headwaters Resource Management Plan EIS covering BLM lands in Jefferson, Broadwater, Gallatin, Park, Meagher, Cascade, Lewis and Clark, Teton, and Pondera Counties, Montana.

In accordance with Section 7(c) of the Endangered Species Act as amended, we have determined that the following listed and proposed threatened and endangered species may be present in the project area.

Listed Species	Expected Occurrence
Bald eagle (Haliaeetus leucocephalus)	Resident, migration
Peregrine Falcon (Falco peregrinus)	Migration, possible resident
Grizzly Bear (Ursus arctos horribilis)	Resident
Gray Wolf (Canis lupus)	Resident
Black-Footed Ferret (Mustela nigripes)	Possible resident of prairie dog towns

Proposed Species

None

We do not believe that we have data on the listed species in your area which is unknown to you. However, we encourage you to contact us, while developing the biological assessment, if you believe we can provide assistance in assessing impacts, clarifying formalities, or identifying data unknown to you.

7b

Upon completion of your assessment, if you determine that the project will affect any of the above listed species, formal consultation with the FWS through my office should be initiated. Sectin 7(d) of the Act requires that during the consultation process, the Federal agency and the permit or license applicant shall not make any irreversible or irretrievable commitment of resources which would preclude the formulation of reasonable and prudent alternatives.

Please contact us if we can be of further assistance.

Wayne H. Brewster

cc: Regional Director, FWS, Region 6 (FA/SE)

8a

United States Department of the Interior
NATIONAL PARK SERVICE
ROCKY MOUNTAIN REGIONAL OFFICE
655 Parfet Street
P.O. Box 25287
Denver, Colorado 80225

IN REPLY REFER TO:
L7619 (RMR-PC)

JUL 7 1983

Memorandum

To: Project Manager, Butte District Office, Bureau of Land Management, Butte, Montana

From: Associate Regional Director, Planning and Resource Preservation, Rocky Mountain Region

Subject: Review of Headwaters Resource Area Resource Management Plan/Draft Environmental Impact Statement, Butte District, Broadwater, Cascade, Gallatin, Jefferson, Lewis and Clark, Meagher, Park, Pondera, and Teton Counties, Montana (DES 83/18)

The National Park Service has reviewed the subject document and has the following comments.

The Headwaters Resource Area contains one designated and 12 potential National Natural Landmarks. They are:

Designated	
Gallatin County	Middle Fork Canyon
Potential	
Cascade County	Crown Butte
	Sluice Boxes State Monument
Jefferson County	Dry Hollow
	Lewis and Clark Caverns
Lewis and Clark County	Gates of the Rocky Mountains
	Green Timber Basin-Beaver Creek
	Red Mountain
	Sun River Game Range
Park County	Crazy Peak-Big Timber Creek
	Granite Peak Glaciers
Teton County	Freezeout Lake Game Management Area
	Pine Butte Swamp

Further planning for the Headwaters Resource Area should consider these official and potential designations and avoid impacts that could adversely affect the ecological and geological features of these areas. Further information can be obtained from Ms. Carole Madison, National Park Service,

8b

Rocky Mountain Regional Office, Division of Recreation Grants and Review, P.O. Box 25287, Denver, Colorado 80225 (Phone: 234-6443).

The Headwaters Resource Area also contains a portion of the Flathead Wild and Scenic River, a component of the National Wild and Scenic River System. Impacts which would adversely affect this resource should also be avoided. Further information can be obtained from Mr. Duane Holmes at the same address and phone as Ms. Madison.

The plan identifies significant resource issues on land lying within 2 to 3 miles of the north boundary of Yellowstone National Park. Oil and gas leasing and lease application activity is ongoing on National Forest lands immediately adjacent to those lands on and near the park boundary. However, oil and gas leasing, a significant issue to Yellowstone, has not been identified in the plan. If oil and gas leasing occurs near Yellowstone National Park, we request that the final environmental impact statement discuss and analyze impacts on air quality, groundwater, and wildlife habitat (including that of the threatened grizzly) in the Yellowstone ecosystem.

for / Carl Shoppman

Richard A. Strait

10a

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION EIGHT
555 ZANG STREET, BOX 25246
DENVER, COLORADO 80225

IN REPLY REFER TO

U.S. Department of the Interior
Bureau of Land Management
Mr. Dan Lechefsky, Project Manager
Butte District Office
P.O. Box 3388
Butte, Montana 59702

June 3, 1983

Dear Mr. Lechefsky,

Thank you for the opportunity to review the draft Resource Management Plan/Environmental Impact Statement for the Headwaters Resource Area, Montana.

Our review indicates that the document satisfactorily addresses our concerns. We are pleased to note that the Montana State Highway Department has received a copy of this document for review.

Sincerely,

Robert L. Jacobsen
Office of Environmental Programs

JUN 07 1983

Bureau of Land Management
Butte District Office

11a Butte DO

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80295-0699

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AUG 8 1983

Ref: 8PM-EA

Mr. Michael J. Penfold
State Director
Bureau of Land Management
U.S. Department of Interior
222 North 32nd Street
P.O. Box 30157
Billings, Montana 59107

Dear Mr. Penfold:

We have completed our review of your agency's draft environmental impact statement on the "Resource Management Plan - Headwaters Resource Area".

The major issue with this EIS appears to be management of lands along the Rocky Mountain front. Your proposed alternative for management of this area offers protection to water quality but would not offer the degree of long-term protection to wildlife, especially the grizzly bear, as would official wilderness designation of these important habitat areas.

Although we agree with the EIS that air quality impacts from your proposed alternative would generally be minimal, we would point out that production of "sour" gas found in this area might well require a sweetening plant. Such facilities would have to be carefully scrutinized, especially in light of the designation of the Bob Marshall Wilderness Area as a Class I airshed. We believe this should be mentioned in the final EIS.

We support all efforts to improve watersheds, protect riparian areas, and to control indiscriminate use of off-road vehicles. All these aspects should help protect water quality in the study area.

According to EPA's rating system for draft impact statements, this EIS is rated LO-2 (lack of objections - insufficient information). The "2" rating is in reference to our comments on air quality. If you have any questions, please contact Mr. Gene Taylor in our Helena Montana Office at (406) 449-5486 or FTS 585-5486.

Sincerely yours,

John G. Welles
Regional Administrator

12a

MONTANA HISTORICAL SOCIETY

HISTORIC PRESERVATION OFFICE

225 NORTH ROBERTS STREET • (406) 449-4584 • HELENA, MONTANA 59601

May 18, 1983

Dan Lechefsky, Project Manager
Butte District Office, B.L.M.
P.O. Box 3388
Butte, MT 59702

Dear Mr. Lechefsky:

RE: Headwaters Resource Area Resource Management Plan/
Environmental Impact Statement.

Thank you for the opportunity to review the above-named document. The document seems to be well written and cultural resources are presented clearly. I recommend that the final document specify your personnel needs under each of the alternatives and present your proposed programs for the survey of those portions of the study area which have not yet been surveyed for historic properties as well as your program for the timely evaluation and nomination to the National Register of Historic Places of identified historic properties.

Sincerely,

Marcella Sherfy
Deputy SHPO

TAF:md

13a

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DEPARTMENT OF THE INTERIOR
BUR. OF LAND MANAGEMENT
1983 AUG 20 PM 12:32

State of Montana
Office of the Governor
Helena, Montana 59620

TED SCHWINDEN
GOVERNOR

August 5, 1983

Mr. Michael Penfold, State Director
U.S. Bureau of Land Management
P.O. Box 30157
Billings, MT 59107

Dear Mr. Penfold:

On behalf of the Governor's Planning Task Force I want to thank you for the opportunity to review and comment on the BLM Headwaters Resource Area Resource Management Plan (RMP). I have attached specific comments about range management, soil and water management, land tenure adjustment, weed control, grazing, fire management and wildlife.

Although the Headwaters Plan is well organized and easy to read, it is very general. Future allotment or project management plans should be specifically described. The effects of each proposed action and the monitoring methods to be used should be identified in the Plan.

I look forward to receiving the final Headwaters RMP and continuing our good working relationship.

Sincerely,

TED SCHWINDEN
Governor

Enc.

SPECIFIC COMMENTS

A. RANGE MANAGEMENT

1. Monitoring of range conditions and trends will be very important in the Headwaters Resource Area, because 20,173 acres of grazing lands have not been inventoried and only 10 allotment Management Plans are now in existence. The BLM should conduct range surveys on the 20,173 unsurveyed acres whenever possible.

2. The State supports targeting range improvements for allotments with the greatest potential for improved range, watershed and wildlife value and the reduction of stocking rates to proper use. The guidelines for livestock grazing in important grizzly bear habitat should help to ease livestock/bear conflicts. However, the operators affected by such action should be given ample time to adjust to the new management guidelines.

3. The State supports the Outstanding Natural Areas designation for the four Rocky Mountain Front areas as being protective of resource and wildlife values without excluding all resource activity. The management flexibility afforded by this designation should not be an impediment to continued livestock use of these areas.

4. The BLM did not provide projected percentages of expected improvements in range conditions over the entire resource area. By not providing this information the question of the cost-benefits of their objectives arises. A time frame for implementation should be provided to give credence to their objectives. Without these answers the cost benefits of their objective can be unrealistic.

5. Changes in lessee management is not discussed. If management is retained with the operator, will objectives be accomplished on a wide scale? This should be addressed in the Final RMP.

B. SOIL/WATER MANAGEMENT

1. Appendix C states that the Best Management Practices were selected to avoid rather than mitigate impacts to water quality and soils. The prevention of adverse impacts is clearly desirable, but, mitigative measures should also be developed in case adverse impacts do occur.

2. On pages 48-50, Table 2-16, the impacts to soil and water resources range from minor deterioration to moderate-high improvement. However, riparian, waterfowl and fisheries habitat range from a major decrease to minor increase. How can soil and water resources experience improvements and habitats deteriorate?

3. Grazing management, oil and gas development and coal mining are concerns for water quality impacts. Streambank protection should be considered when evaluating grazing allotments. Oil and gas development should consider stipulations for wastewater and sludge disposal in areas where surface and ground water will not be polluted (reference Montana Surface Water Quality Standards - 16.20.601 and Montana Groundwater Standards - 16.20.1003).

C. LAND TENURE ADJUSTMENT

1. The State supports the land ownership adjustment categories shown on the Management Unit Map and the Land Ownership Adjustments map. All tracts within the disposal category should be carefully screened for resource values before being slated for exchange or sale. We support the emphasis on exchange as the primary method for disposal. Land exchange can be used to improve public access to rivers and other recreational-sportsman conflicts.

2. It is unclear how the boundary between Management Units 9 and 10 was drawn, particularly in the Horseshoe Hills and the Smith and Musselshell River drainages. Several large blocks of public lands with high wildlife values occur within Management Unit 10 in these areas but have been placed in the disposal category. Several of these areas are contiguous with Management Area 9, a retention area. These tracts should be carefully evaluated before disposal is considered. These lands should have a high priority for exchange, as opposed to sale, because they could be valuable for increasing public access in Management Unit 9 and along the Smith and Missouri Rivers.

3. The "sodbusting" in Montana could jeopardize BLM's asset management program. We support the exchange of lands for isolated tracts where there is potential irrigable lands and in areas that make good land management sense. These lands are principally rangeland and should not be broken up unless they are classified as tillable land by the Soil Conservation Service. We suggest that a "statement of intent" and a soil conservation plan accompany any person's or company's offer to buy or exchange BLM land.

D. WEED CONTROL

1. The BLM should commit to cooperative efforts with county weed boards, private landowners and state and federal agencies.

2. Weeds and their control cost Montana producers $25-27 million annually. The loss to producers from weed competition, water and nutrient loss and shading is estimated at $2 million. This is after Montana producers have spent $23-25 million on control. Due to these facts, more attention should be given to the identification, mapping and control of noxious weeds in the BLM management plan.

E. GRAZING

1. The State is concerned about possible substantive negative impacts to certain grazing permittees under the preferred alternative. The DEIS cites a 5-year horizon for phasing in livestock reductions. The State believes that where proposed actions threaten the viability of the livestock operator that every effort should be made to ameliorate this situation. The BLM might consider extending time frames, scaling down the proposed decrease in AUMs, helping locate alternate public rangelands or implementing more intensive management plans on these allotments.

2. The Range Program set forth in the RMP provides relative objectives and how the differing alternatives will cut or add AUM's to grazing. However, no time frames were provided of when they expect to meet those objectives. No time frames were presented of when new allotment management plans would be planned, initiated or completed. No time frames were presented on how range improvements would be established to meet planned objectives. Such time frames should be provided in the Final RMP.

3. The State has read with great interest the new Cooperative Management Agreement (CMA) program for selected livestock operations on the public lands. The sketchy details received to date indicate that only those permittees whose allotment is in the "M" (maintain) category will be eligible.

Appendices D and E of the DEIS show that many allotments are in good repair in terms of vegetation and riparian areas, yet are categorized as "I" (improve) allotments solely for wildlife reasons. How does the BLM reconcile the seeming penalty of ineligibility for the CMA program for the livestock operators in these instances?

4. In grazing allotments targeted for a short term decrease in AUMs, the grazing permittee should receive consideration in the allocation of any long term increased forage production.

F. FIRE MANAGEMENT

1. The fire program is defined under "mangement guidance common to all alternatives," but little detail is provided concerning implementation. Given the scattered nature of BLM lands, the policy regarding cooperation with the Department of State Lands,

and the USDA Forest Service should be explained. Also, the existence of the County Cooperative Fire Program should be acknowledged, and coordination with the participating counties explained.

2. No mention is made of the impacts associated with the prescribed burning of logging debris and sagebrush. The preferred alternative indicates that prescribed burning is planned on both forest and range lands, but no measures are given for mitigating smoke impacts. Reference should be made to the Montana Cooperative Smoke Management Agreement and Plan.

G. WILDLIFE

1. In reviewing the selected issues we noted that wildlife and wildlife related recreation was not identified as an issue. The basis for identification of the various issues was judgement of the planning team members, inter-agency consultation, public input, and review by BLM managers. We understand that wildlife was discussed under several of the eleven issue headings, but we strongly feel that if issues are to be a major part of the planning format, wildlife and wildlife related recreation warrants comparable status with grazing, timber, minerals, etc.

2. We endorse the utilization of the guidelines from the Montana Cooperative Elk Logging Study in the formulation of forest activity. Page 24, Paragraph 1 of the RMP, Silvicultural Guidelines and Harvesting Techniques--emphasis should be placed on minimizing public access into areas that have significant security values for elk and other wildlife species.

3. We support the seasonal wildlife restrictions as indicated in Table 2-2. But, we do object to the exclusion of timber harvest, regarding consultation opportunities provided the Department of Fish, Wildlife and Parks. Timber harvest activities have the same potential for adverse impacts to wildlife as other cultural practices involving vegetative manipulation.

4. The Elkhorn Mountains have been designated by the U.S. Forest Service as a prototype wildlife management area. Because of this, they have been withdrawn from the regulated timber base. To be consistent with Forest Service planning the BLM should withdraw all areas adjacent to Forest Service lands in the Elkhorns from proposed regulated timber harvest, which is indicated in all alternatives. This does not mean that some timber harvest will not be allowed, but that it should be coordinated with the Forest Service so as not to conflict with the planning direction taken in their wildlife management area.

14a

City-County Building
316 North Park
Helena, Montana 59623
Telephone 406/443-1010

LEWIS AND CLARK COUNTY

Board of County Commissioners

June 15, 1983

Mr. Dan Lechefsky, Project Manager
Butte District Office
Bureau of Land Management
Box 3388
Butte MT 59702

Dear Mr. Lechefsky:

We would like to offer the following comments on your draft Headwaters Resource Area Management Plan/ Environmental Impact Statement:

1. We are supportive of Management Alternative C: the Protection Alternative. We believe that emphasis on the protection of environmental values is in the best interests of the citizens of Lewis and Clark County. We expect some resource use and development on public lands but feel that preservation of these lands' unique natural characteristics should be preserved in the process.

2. We appreciate the opportunity to comment on this RMP/EIS. We are very concerned that BLM's communication and public involvement efforts be of the highest priority in any of its land management decisions.

3. We are also quite sensitive to the potential land use and socio-economic impacts that may accrue to BLM's land management policies.

4. Management issues numbered 6, 7, and 8 as they relate to the Scratchgravel Hills are addressed in the county's recently completed Scratchgravel Hills Comprehensive Management Plan. (A copy of this draft document has been sent to Mr. Lyle Fox in your office.)

5. As indicated in our April 19, 1983, letter to your state director, Mr. Mike Penfold, we are very interested in management issue No. 5. We recently supported the successful grant application of a local consultant to conduct an extensive study of possible public and private land trades to preserve agriculture and to help protect land determined to be of significant public value. We are very

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appreciative of BLM's efforts to utilize land trades to acquire additional lands for public benefit. The lengthy process by which BLM recently acquired former Oxbow Ranch land on the Missouri River is a good example of the policies which we support.

In summary, we believe that BLM should play a stewardship role for lands which have been entrusted to its management. The public should always have sufficient time to comment on any proposed changes in BLM's land management policies.

Thank you for the opportunity to comment on your RMP/EIS. We look forward to continued cooperation and coordination with your office.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
LEWIS AND CLARK COUNTY

not available for signature
John H. Wilkinson, Chairman

Bob Decker

Bob Decker

Linda Stoll-Anderson

c Lyle Fox
Jack McIntosh
APO

ch/ck

15a

TETON COUNTY CONSERVATION DISTRICT

CHOTEAU, MONTANA 59422

May 27, 1983

Dan Lechefsky
Project Manager
Butte District Office
BLM
P.O. Box 3388
Butte, Montana 59702

Dear Sir:

At the recent Board of Supervisors meeting your proposed RMP/EIS draft was reviewed. The Board will like to inform you that they are in agreement with Alternative A, regarding wilderness areas in our county.

If you have further questions, or more information is needed please call our office at 466-5651.

Sincerely,

CHARLES W. PROFF
Chairman

20a

Defenders OF WILDLIFE

July 12, 1983

Mike Penfold, State Director
Bureau of Land Management
Box 30157
Billings, MT 59107

Dear Mike,

Please note the following comments on behalf of Defenders of Wildlife concerning the Headwaters Resource Area Management Plan/Environmental Impact Statement.

Of all the lands managed by the Bureau in Montana, perhaps none are more important to wildlife--and particularly to threatened and endangered species--than those in the Headwaters Resource Area, and especially the lands along the Rocky Mountain Front. While this plan does a great deal to protect those resource values, it does have some critical flaws, particularly in regard to oil and gas leasing and the designation of roadless areas.

I'd like to start, however, by making it clear that the Headwaters document is the most intelligible BLM grazing document I've read to date. The charts and maps are extremely helpful, and the struture of the EIS is such that it's easy to follow specific issues and concerns throughout each chapter. One thing that wasn't so clear, however, was how specific concerns would be addressed on an allotment-by-allotment basis. For instance, in Appendix E (Opportunities For I Allotments) you might state "XYZ Allotment: riparian vegetation in unsatisfactory condition, excessive soil erosion, elk and deer winter range in unsatisfactory condition." You would then state in the Resource Management Objectives column something like improve riparian habitat, decrease erosion, improve elk and deer winter range. What seems to be lacking is the specific management action that needs to be taken to achieve some of these objectives, because in comparing Appendix N (Stocking Rate Adjustments) to Appendix E, it's not always clear how the improvements will be accomplished. Further, I'd like to have a better sense of what the priorities are for making these improvements. Given the reduced federal funds in recent years, it would appear many of the improvements that involve intensive management may not get funded; it would have been helpful if the EIS would have looked at ways to meet resource objectives given possible budget constraints, which appear to be a reality.

The following are my comments on specific issue areas:

Oil and Gas Leasing and Development

The oil and gas issue has the potential to impact wildlife to a far greater degree than livestock grazing unless the Bureau adopts a conservative stance from the start and then loosens restrictions as found permissible or as necessity demands. Oil and gas leasing and development is particularly crucial to the welfare of both the threatened grizzly bear and endangered northern gray wolf. Conservative management at this time--and that means the adoption of sufficient no leasing and no surface occupancy areas--will greatly reduce the number of future conflicts. Rather than delaying decisions and allow grizzly and wolf habitat to be eroded a little at a time, the Bureau should protect those areas important for endangered species now.

1244 NINETEENTH STREET, NW • 84 HINGTON, DC 20036 • (202) 659-9510

The amount of acreage suggested for no leasing and no surface occupancy in the preferred alternative is simply not enough to adequately protect the grizzly or wolf. As the Fish and Wildlife Service noted in its biological opinion on the Rocky Mountain Front plan several years ago, simultaneous development in adjacent drainages could jeopardize both the grizzly and the wolf. The Bureau needs to adopt a plan that takes into account such a possibility.

Under the preferred alternative, the main areas protected from oil and gas leasing and development would be the three roadless areas along the Rocky Mountain Front (Blind Horse, Chute Mountain, Deep Cr./Battle Cr.). This would seem to suggest that the Bureau is picking those lands that are convenient to protect, because they lack roads and development isn't imminent. Rather, the Bureau should identify those lands that are critical to these species and place them in a no leasing or no surface occupancy category. It would appear that Alternative C comes much closer to fulfilling the BLM's obligation to protect and enhance the habitat of endangered species. The preferred alternative seems like a minimal effort, geared toward keeping the grizzly from becoming endangered, rather than what's mandated by the Endangered Species Act--recovery.

Grazing Allotment and Riparian Habitat Management

The DEIS makes it clear there are some problem areas regarding grazing, particularly regarding erosion, riparian areas and the loss of wildlife habitat. Appendix E points out these problems clearly, and the BLM deserves commendation for putting forth the problems in a way that's understandable. Appendix E makes it plain to me that good vegetative condition doesn't necessarily mean good condition for wildlife. It's not reassuring to a ground nesting bird to know the range is in excellent condition if it's only two inches high. Similarly, an allotment may be in good condition yet the riparian areas--the key spots for wildlife--may be badly overutilized. Appendix E provides a good narrative on what's happening in the category I allotments, and it also makes the case for the need for improved management. My main criticism, again, is the failure of the plan to say how these improvements will be made.

Given that more than a fourth of the riparian habitat in the Resource Area is in unsatisfactory condition (and particularly since much of this is critical grizzly habitat), Defenders of Wildlife supports the proposal to improve this situation. It's not clear from the plan that correcting this situation has been given a high enough priority in the plan. It would seem those areas with large percentages of riparian in unsatisfactory condition (particularly if they're in grizzly areas) should be the highest priority I areas. I also find it unacceptable that the unsatisfactory riparian areas in the M and C categories won't be improved.

While it's possible to gain AUM's via the kind of intensive management the DEIS recommends, if those funds aren't available, it may be necessary to make the kinds of stocking reductions proposed in Alternative C in order to meet wildlife objectives for various allotments. This is a tradeoff that often takes place, but is seldom mentioned in planning documents.

Wilderness Study Recommendations

The BLM recommendations to Congress regarding possible wilderness designation of study areas was one of the more disappointing aspects of the Headwaters plan. The DEIS makes the case very well for why these areas qualify for wilderness, and in fact, would be exceptional additions to the wilderness system--particularly the areas along the Rocky Mountain Front. All three of these areas are not only exceptionally scenic, but they also have wildlife values that make them exceptional. While the

DEIS points all this out, as well as the exceptional nature of the Forest Service roadless areas adjacent to the BLM study areas, it falls short of making a wilderness recommendation to Congress, suggesting instead that an "Outstanding Natural Area" administrative designation would provide similar protection as wilderness while maintaining "management flexibility."

I found the discussion of the ONA concept one of the most disappointing aspects of the Headwaters plan; the concept was discussed as if it were readily understood by all, an administrative management tool commonly used. To the best of my knowledge it's not, and as a person who commonly follows these issues, I must confess to not fully understanding what can and can't be done in an ONA, nor how quickly one can be changed or undone. Certainly all of these questions should have been answered in full in the DEIS; if they were, I couldn't find them.

While an ONA classification at least recognizes that the three Rocky Mountain Front roadless areas have special values, it doesn't provide the stable, long-term management direction a wilderness recommendation would. The Bob Marshall Alliance, of which Defenders of Wildlife is a member, has submitted a proposal to Montana's Congressional delegation recommending both the Deep Creek and Teton River High Peaks areas for addition to the National Wilderness Preservation System. These are the Forest Service roadless areas that border the BLM study areas. The Alliance feels these BLM areas are a key part of the Bob Marshall ecosystem, tieing together important transitional habitat between the prairie and the mountains.

An ONA classification based on speculative energy values seems like flimsy protection for areas with such proven wilderness and wildlife values.

2 On the other hand, the Black Sage and Yellowstone River Island areas don't have nearly the wilderness potential as the Front areas. Nevertheless, as important roadless areas their wild nature should be preserved. Clearly, the roadless attributes of the Black Sage area aren't very highly valued in the DEIS.

Forest Management

The DEIS doesn't really present enough information to analyze whether or not the proposed timber harvest level is reasonable. I couldn't find any economic data on the relative value and accessibility of timber on BLM lands, nor was there much of a discussion of how BLM forest management might impact wildlife. While the document made the generalization that timber harvest could improve wildlife habitat, it should be noted that on many BLM lands in the Headwaters area security and thermal cover are more of a limiting factor than forage. The number of miles of roads proposed to facilitate timber harvest is another concern that I didn't feel was adequately addressed; I didn't get a feeling of the BLM road management policy.

I'm also quite concerned about potential intensive timber activity on BLM land in the Roger's Pass area, which is quite critical for grizzlies and potentially important for wolves. I never did find a discussion of the management tradeoffs involved in logging this area. It should be noted that most logging along the Rocky Mountain Front is marginal at best, and the market for the timber is small. When these limited timber values are weighed against the wildlife values, they fare rather poorly.

Land Ownership Adjustments

We firmly oppose any accelerated program to dispose of public lands. There are opportunities for the BLM to trade public lands in the Headwaters Area to public advantage, but we oppose the outright sale of lands. The DEIS suggests as many as 26,000 acres might be considered for disposal in the Headwaters Area. For the Bureau to even suggest such a massive land sale program demonstrates someone is badly out of touch with how people in Montana feel about public lands.

Rather, the BLM should be consider purchasing or trading for tracts of land known to be critical to threatened and endangered species. The Endangered Species Act directs federal agencies to take all actions necessary to recover species, and acquiring land seems like a logical action to take.

Coal Leasing

It seems illogical to lease the Great Falls coal field at a time when the demand is so low. It seems wise to take more time to study the impacts of leasing this coal before moving forward. Leasing this coal, along with possible development, has the potential to seriously affect the Smith River.

Special Designations

Designation of the Sleeping Giant Area as an Area of Critical Environmental Concern demonstrates the BLM recognizes the unique values of the area, but a wilderness designation would protect the area far better; such a designation would complement the Gates of the Mountains Wilderness.

General Comments

While this DEIS does a good job of analyzing impacts, it does so primarily from a livestock viewpoint; the plan is heavily weighted toward maintaining and developing proper levels of AUM's. While cattle grazing is an important use of the public lands, there are other uses equally important. Defenders of Wildlife feels that specific targets for these values should also be estblished; the plan should try and provide habitat for x number of grizzly bears, for example, and x number of bighorn sheep.

It's simply not enough to say that once the range is in good or excellent condition, everything will be fine for wildlife, because it isn't true. This plan fails to quantify in any way the quality and relative abundance of various kinds of wildlife habitat in the Headwaters Area.

Thank you for considering these comments.

Sincerely,

Hank Fischer

HANK FISCHER, Montana Rep.
Defenders of Wildlife
1534 Helena Ave.
Missoula, MT 59801

MONTANA WILDERNESS ASSOCIATION

June 28, 1983

Mike Penfold
State Director
Bureau of Land Management
P.O. Box 30157
Billings, MT 59107

Dear Mike:

On behalf of the Montana Wilderness Association (MWA) I wish to comment on the draft Environmental Impact Statement and Management Plan for the Headwaters Resource Area. I regret that a conflict prevented me from testifying at the June 15 hearing in Helena. However, I trust that this letter will suffice for the time being.

Without question, this document is the most detailed and thorough RMP that I have yet reviewed. The Plan is well organized with a wealth of information. The maps are very useful, especially those which display the various oil & gas lease stipulations. However, despite the completeness of the RMP I find it difficult to determine the actual differences between the four alternatives in terms of what will actually occur to and on the land. In reading the RMP it appears that differences in management practices would not be significant, although in practice I'm sure that the actual differences would be much greater. The RMP should therefore be revised so as to better identify the differences in management practices under the various alternatives.

Although there are many positive aspects to the Preferred Alternative "A" the MWA supports the more protective Alternative "C" as a better means of balancing resource production demands with the outstanding wildland/wildlife values within the Headwaters Resource Area. In particular, we support statutory wilderness designation of the three Rocky Mountain Front WSA's: Blind Horse Creek, Chute Mountain, and Deep Creek/Battle Creek. The Bob Marshall Alliance, of which the MWA is a member, has endorsed Teton and Deep Creek national forest additions to the Bob Marshall Wilderness along the eastern front national forest boundary so as not to leave a strip of unprotected national forest land between the Bob Marshall and the BLM WSA's. Congress will soon consider the Bob Marshall additions. We are hopeful that the Bob Marshall Wilderness boundary will soon be expanded to protect as much of this great ecosystem as possible.

From strictly a wildlife and wildlife habitat protection standpoint the BLM WSA's in the critical transition zone between the prairie and mountainous forest zones are more significant than most of the national forest roadless country to the west. I have visited each of the Rocky Mountain Front BLM WSA's several times and it would indeed be difficult to find public land anywhere with a higher degree of wilderness suitability, diverse wildlife values and overall scenic beauty. In reading the RMP it was obvious to me that the Bureau was grasping for excuses to recommend against wilderness for these magnificent remnants of our wilderness heritage.

The Outstanding Natural Area (ONA) recommendations might be a good interim means of protection and I commend the Bureau for at least going that far. However, ONA designation is no substitute for the permanent enduring protection afforded only by the 1964 Wilderness Act.

By contrast, Black Sage is not nearly as high quality of an area in terms of wilder-

P.O. Box 635 • Helena, Montana 59624 • (406) 442-0597

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ness, but the area does deserve a higher degree of protection than would be provided by the Preferred Alternative. Several years ago I participated in a BLM/grazing permittee tour of the area in which we worked out a water pipeline project within the area that would be in keeping with the IMP. Black Sage is a small "island" of roadlessness that should be maintained in a semi-wild, natural condition.

Yellowstone River Island (MT-075-133) would be an ecologically unique addition to the National Wilderness Preservation System and should be so designated.

Although the ACEC recommendation for Sleeping Giant is definitely a step in the right direction the MWA strongly recommends wilderness management for this unique wild area. I personally use the are extensively for day hikes and have never failed to see wildlife there ranging from antelope to mountain goats. A Sleeping Giant Wilderness would complement beautifully the adjoining Gates of the Mountains Wilderness as well as the BLM's commitment to resource protection along the Missouri River from its headwaters to the Wild & Scenic Missouri all the way the Fork Peck. The Montana conservation community has based much of its' support for the recent 3-way Sleeping Giant land exchange on the hope that the area would eventually receive wilderness classification. With this thought in mind, we urge you to recommend wilderness for Sleeping Giant even though the area has technically been dropped from section 603 FLPMA wilderness consideration. Of course, we feel strongly that the dropping of this potential WSA was based on a legally-flawed interpretation of FLPMA and other applicable laws.

The Elkhorns (Management Unit 23) should be protected as roadless in order to complement and enhance the Elkhorns Wildlife Management Unit on the adjacent national forest land. The BLM Elkhorns unit is a contiguous part of a national prototype wildlife management area and, as such, it is far too sensitive of an area to be allocated to maximum timber production.

The oil & gas prescriptions along the Rocky Mountain Front, especially those for No Leasing and No Surface Occupancy are fully justified in terms of the key values which should be protected. However, the MWA would prefer the stronger and more encompassing stipulations of Alternative C. The Rocky Mountain Front is too special, too wild and too important for its unsurpassed surface values to be subjected to indiscriminate oil & gas activity. This wild and spectacular country--the last occupied plains habitat for the threatened grizzly bear--represents our last and best opportunity to recover the grizzly and endangered gray wolf.

I'll conclude with a brief discussion of "Asset Management", more appropriately termed "asset liquidation". Under no circumstances should any scattered "surplus" tracts of public lands be sold. These isolated tracts should either be retained in public ownership for wildlife habitat protection and public recreational access or else used as valuable "trading stock" where consolidation of public lands is needed to protect public resource values within the Headwaters Resource Area.

I ask that this letter be included in the official record of public comment on the proposed Headwaters RMP. Thank you for the opportunity to comment.

Sincerely,

Bill Cunningham

Bill Cunningham
Conservation Director

cc: Dan Lechefsky, EIS Project Manager

30a

NATIONAL WILDLIFE FEDERATION

NORTHERN ROCKIES NATURAL RESOURCE CENTER
240 N. Higgins, Missoula, Montana 59801
(406) 721-6705

Mr. Dan Lechefsky, Project Manager
Butte District Office, BLM
P.O. Box 3388
Butte, Montana 59702

Dear Mr. Lechefsky:

The following comments regarding the plans for resource management activities in the Headwaters Resource Area are based on BLM's Draft Environmental Impact Statement Preferred Alternative A. The comments are being submitted with the understanding they will become part of the official public record on BLM's plans for the Headwaters Resource Area lands. These comments should be viewed as supplemental to those filed by Charles Griffith, the National Wildlife Federation's regional executive for the Northern Rockies.

Generally we found the DEIS preferred alternative to provide a balanced approach to management in the Headwaters Resource Area. Several items are troubling however.

4 The rationale presented on page 115 and in Appendix L for designation of the Blind Horse, Deep Creek/Battle Creek, Black Sage, Chute Mountain, and Yellowstone River Island as Outstanding Natural Areas rather than Wilderness Areas is invalid. Short-term protection of these areas is simply not equivalent to the long-term protection which wilderness designation would provide. It is inconsistent to protect an area with high wilderness values only until a commercially viable product is discovered thereon. The justification that some of these areas may have high oil and gas potential fails to recognize that in some cases higher values exist than those associated with production of oil and gas.

5 In the Blind Horse, Deep Creek/Battle Creek and Black Sage areas public comment favored either wilderness designation or further study. Public comments relating to the Chute Mountain and Yellowstone River Island areas were inconclusive. See Appendix L. In view of these results BLM seems to be ignoring public opinion in favor of oil and

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gas and mineral production. This approach benefits mainly privately owned oil companies at the expense of irreplaceable public resources. In light of the preceeding discussion, the decision on wilderness designation for these areas should be left to Congress, not made internally by the agency. As the DEIS makes clear, if Congress were to include these lands in the wilderness system, BLM would still manage them as natural areas. Thus, Congress not the agency should make the choice of short-term versus long-term protection.

The proposed leasing plan ends to maximize oil and gas production at the expense of important wildlife habitat including that of threatened and endangered species. The leasing proposal should be rewritten to prohibit leasing on key ranges of threatened and endangered species. Further, the lease stipulations presented on pages 206 and 209 should be rewritten to protect key habitat even in the event of oil and gas discovery. As they now stand, protections are afforded only so long as oil and gas are not found. In any event, grizzly bear and grey wolf habitat should receive high priority and be improved with all due haste in accordance with the provisions of the Endangered Species Act.

The potential for viable production and the effects of coal production in the Great Falls Coal Field are spread throughout the DEIS. These factors should be consolodated and coal leasing reconsidered in that light. The factors are:

1. Removal of the coal may prove to be costly and difficult - page 60.
2. Due to high sulpher and ash content the quality of the coal is poor - page 90.
3. The production potential of the area is questionable - page 60.
4. Production will adversely affect air quality and brings with it the potential of acid rain in the Great Falls area - page 109.
5. Production may cause cyanide leaks in Helena Valley resources which are used by some homeowners for domestic water - page 110.

Consideration of these factors makes justification of coal leasing in the Great Falls Coal Field difficult.

Further, it is impossible to determine from the DEIS whether the no surface occupancy stipulations proposed for the Great Falls Coal Field and mentioned in Criteria No. 15 of Appendix H create unuasable islands of land. To provide viable habitat for the sharp-tailed grouse, elk, antelope, and mule deer proper buffers and corridors must also be

provided for.

The DEIS offers no economic justification for the timber harvest leases proposed. Past experience on Eastern Montana National Forest lands has shown even moderate sivicultural management to be economically inefficient. NEPA requires costs and benefits to be displayed, yet nowhere in the DEIS are the economics of timber analyzed. Expecially in the Rodgers Pass area which contains summer and fall grizzly bear habitat the scale tips in favor of wildlife and against timber harvesting.

Likewise, the DEIS offers inadequate justification for sagebrush control/burning projects mentioned on page 125 and again on page 127. There are high wildlife values associated with sagebrush including the elkcalving habitat mentioned on page 125. With the increasing potential of private landowners intensifying management of their land it seems that BLM has an increasing responsibility to manage for the benefit of wildlife.

Allowing motorcycle events in the Black Sage area is inconsistent with the wilderness values present there. See p. 115. Prohibition should be considered to mitigate the noise, erosion and concentration of people which these events cause.

The visual resource classification presented on page 67 of the DEIS is arbitrary and represents an unjustified value judgment. Plains areas cannot be said to be inherently lacking in scenic value. Where management decisions are based on arbitrary classifications such as this serious errors are likely to be made.

Finally, and in regard to the proposed sales and exchanges of some tracts of BLM land discussed on page 112, we believe that BLM has the authority and the obligation to transfer jurisdiction of some of its lands to other appropriate state and federal agencies rather than to put these lands up for sale. We believe that a need does exist to exchange land under BLM's stewardship which have low public values for lands which have higher public values. However, we do not believe that isolation, small size or difficult management in and of themselves render a parcel of low public value. In fact, these may be the very factors which make the property important for wildlife. In almost every case, exchange is preferable to sale of public lands.

We thank you in advance for your consideration of these comments and their inclusion in the public record.

Sincerely,

Wendy Holton

Legal Intern

36a

Shell Oil Company

P.O. Box 831
Houston, Texas 77001

July 7, 1983

Bureau of Land Management
Butte District Office
ATTN Dan Lechefsky, Project Manager
P. O. Box 3388
Butte, MT 59702

Gentlemen:

PUBLIC COMMENT
RESOURCE MANAGEMENT PLAN (RMP)
HEADWATERS RESOURCE AREA
BUTTE DISTRICT, MONTANA

Reference is made to your recent request for public comment on the subject matter. As we understand it, the RMP will be an all encompassing plan which directs a course of management for use and protection for all resource values which cover the entire Resource Area.

6 In any alternative selected in this plan, two critical points should be addressed: (1) In what way will the agency gather information in order to adequately evaluate the energy and mineral resource potential within the planning areas, and (2) In areas where there is moderate to high potential for deposits of energy or minerals, how is the agency going to develop land use allocations which will be compatible with possible exploration for the development of these resources.

Areas which contain these resource values should be allocated to lands uses which would minimize the restrictions placed on exploration and development of these resources. Shell Oil has the following areas of specific concern, although we do not presently have any active operations therein:

Blind Horse Creek	MT-075-012
Chute Mountain	MT-075-105
Deep Creek/Battle Creek	MT-075-106
Black Sage	MR-075-115

All of the above listed areas have considerable potential for oil and gas being located within the Montana Folded Belt. We would support any alternative which would <u>not</u> preclude these areas from hydrocarbon exploration and production.

Shell Oil appreciates this opportunity to express our concerns and views in this matter. Also, we wish to be updated on your progress in this area.

36b

Please place Shell Oil Company, at the above address, on your mailing list for all communications and notices pertinent to this subject.

Yours very truly,

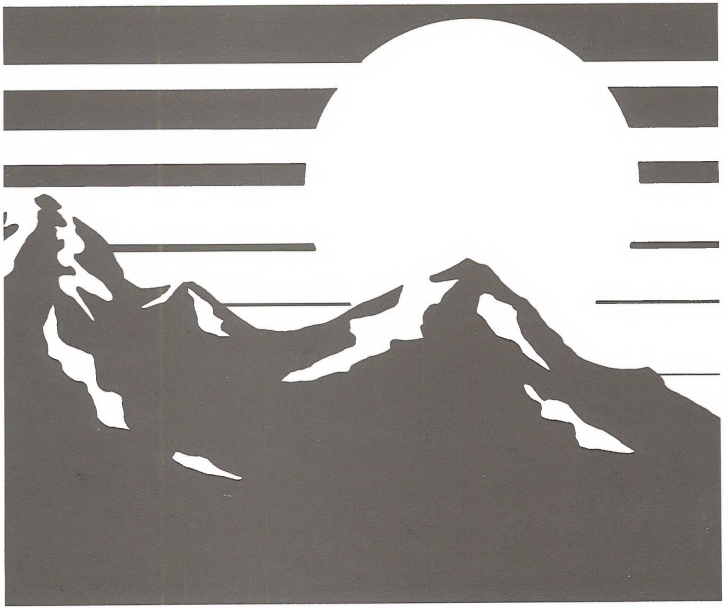
Larry G. Svab
Land Department
Rocky Mountain Division

LGS:lbh

Appendixes, Glossary, References, and Index

Department of the Interior
Bureau of Land Management

Headwaters Resource Area Montana



APPENDIX A

SUMMARY OF WILDERNESS STATUS THROUGHOUT MONTANA

TABLE A-1

COMPLETED MONTANA BLM WILDERNESS STUDIES AWAITING PRESIDENTIAL RECOMMENDATIONS

District	Resource Area	Plan Name	Unit Name	Unit Number	Total Acreage	Preliminary Recommendations (State Director)
Butte	Headwaters	Humbug Spires ISA Suitability Report/EIS	Humbug Spires	—	11,175	8,791 ac. suitable 2,384 ac. nonsuitable
Butte	Headwaters	Headwaters RA Resource Management Plan/EIS	Blind Horse Creek	MT-075-102	4,927	4,927 ac. nonsuitable
Butte	Headwaters	Headwaters RA Resource Management Plan/EIS	Chute Mtn.	MT-075-105	3,205	3,205 ac. nonsuitable
Butte	Headwaters	Headwaters RA Resource Management Plan/EIS	Deep Cr./Battle Cr.	MT-075-106	3,086	3,086 ac. nonsuitable
Butte	Headwaters	Wilderness Planning Amemdment/EIS for the Headwaters RA	Black Sage	MT-075-115	5,926	5,926 ac. nonsuitable
Butte	Headwaters	Wilderness Planning Amendment/EIS for the Headwaters RA	Yellowstone River Island	MT-075-133	53	53 ac. nonsuitable
Miles City	Billings	Billings RA Resource Management Plan/EIS	Twin Coulee	MT-067-212	6,870	6,870 ac. nonsuitable
Miles City	Billings	Billings RA Resource Management Plan/EIS	Pryor Mountain	MT-067-206	16,927	16,927 ac. suitable
Miles City	Billings	Billings RA Resource Management Plan/EIS	Burnt Timber Canyon	MT-067-205	3,955	3,430 ac. suitable 525 ac. nonsuitable
Miles City	Billings	Billings RA Resource Management Plan/EIS	Big Horn Tack-on	MT-067-207	4,550	2,550 ac. suitable 2,000 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Ruby Mountains	MT-076-001	26,611	15,615 ac. suitable 10,996 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Blacktail Mtns.	MT-076-002	17,479	10,986 ac. suitable 6,493 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Farlin Creek	MT-076-034	1,139	610 ac. suitable 529 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	E. Fork Blacktail Deer Cr.	MT-076-007	6,180	6,180 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Hidden Pasture Creek	MT-076-022	15,475	15,475 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Bell Limekiln Canyons	MT-076-026	9,588	9,588 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Henneberry Ridge	MT-076-028	9,756	9,756 ac. nonsuitable
Butte	Dillon	Wilderness Planning Amendment/EIS for the Dillon RA	Axolotl Lakes	MT-076-069	6,578	6,578 ac. nonsuitable

TABLE A-1

COMPLETED MONTANA BLM WILDERNESS STUDIES
AWAITING PRESIDENTIAL RECOMMENDATIONS

District	Resource Area	Plan Name	Unit Name	Unit Number	Total Acreage	Preliminary Recommendations (State Director)
Lewistown	Phillips	Missouri Breaks Wilderness Suitability Study/EIS	Cow Creek	MT-066-256	34,050	21,590 ac. suitable 12,460 ac. nonsuitable
Lewistown	Phillips	Missouri Breaks Wilderness Suitability Study/EIS	Antelope Creek	MT-066-266	9,600	9,600 ac. suitable
Lewistown	Valley	Missouri Breaks Wilderness Suitability Study/EIS	Burnt Lodge	MT-065-278	13,730	13,730 ac. suitable
Miles City	Big Dry	Missouri Breaks Wilderness Suitability Study/EIS	Seven Blackfoot	MT-024-657	20,250	5,710 ac. suitable 14,540 ac. nonsuitable
Miles City	Powder River	Missouri Breaks Wilderness Suitability Study/EIS	Terry Badlands	MT-024-684	43,165	29,020 ac. suitable 14,145 ac. nonsuitable
Lewistown	Judith	Missouri Breaks Wilderness Suitability Study/EIS	Woodhawk	MT-068-246	8,100	8,100 ac. nonsuitable
Lewistown	Havre	Missouri Breaks Wilderness Suitability Study/EIS	Ervin Ridge	MT-066-253	10,200	10,200 ac. nonsuitable
Miles City	Big Dry	Missouri Breaks Wilderness Suitability Study/EIS	Bridge Coulee	MT-024-675	5,900	5,900 ac. nonsuitable
Miles City	Big Dry	Missouri Breaks Wilderness Suitability Study/EIS	Musselshell Breaks	MT-024-677	8,650	8,650 ac. nonsuitable
Lewistown	Valley	Bitter Creek Wilderness Suitability Study/EIS	Bitter Creek	MT-064-356	59,660	59,660 ac. nonsuitable
Miles City	Powder River	Powder River Resource Management Plan/EIS	Zook Creek	MT-027-701	8,438	8,438 ac. nonsuitable
Miles City	Powder River	Powder River Resource Management Plan/EIS	Buffalo Creek	MT-027-702	5,650	5,650 ac. nonsuitable
	TOTAL BLM		NUMBER OF AREAS 30		380,875 ACRES	138,559 ACRES SUITABLE

TABLE A-2

MONTANA STATUTORY WILDERNESS (ALL AGENCIES)

Agency	County(s)	Unit Name	Unit Number	Unit Acreage
BLM[1]	Madison	Bear Trap Canyon	—	6,000
	TOTAL BLM	NUMBER OF AREAS	1	6,000 ACRES
FS	Carbon, Stillwater, Sweet Grass, Park	Absaroka-Beartooth	NF 106	920,377
FS	Granite, Ravalli, Deer Lodge, Beaverhead	Anaconda-Pintlar	NF 003	157,874
FS	Flathead, Teton, Lewis & Clark, Powell	Bob Marshall	NF 005	1,009,356
FS	Lincoln, Sanders	Cabinets	NF 010	94,272
FS	Lewis & Clark	Gates of the Mtns.	NF 027	28,562
FS	Flathead Lake	Great Bear	NF 107	286,700
FS	Missoula	Mission Mtns.	NF 050	73,877
FS	Missoula	Rattlesnake	1-801	20,119
FS	Lewis & Clark, Powell	Scapegoat	NF 073	239,296
FS	Ravalli	Selway-Bitterroot	NF 074	248,893
FS	Granite	Welcome Creek	NF 103	28,135
FS[1]	Madison	Lee Metcalf	—	226,133
	TOTAL FS	NUMBER OF AREAS	12	3,333,594 ACRES
FWS	Beaverhead	Red Rock Lakes	WR-036	32,350
FWS	Sheridan	Medicine Lake National Wildlife Refuge	WR-027	11,800
FWS	Phillips	UL Bend National Wildlife Refuge	WR-047	20,847
	TOTAL FWS	NUMBER OF AREAS	3	64,997 ACRES
NPS	N/A	N/A	N/A	N/A
State Administered	N/A	N/A	N/A	N/A

[1]The 6,000-acre BLM-managed Bear Trap Canyon is one component of the 259,000-acre Lee Metcalf Wilderness. The other units in the wilderness are managed by the Forest Service.

TABLE A-3

MONTANA WILDERNESS RECOMMENDATIONS PENDING BEFORE CONGRESS (ALL AGENCIES)

Agency	County(s)	Unit Name	Unit Number	Unit Acreage
FWS	Garfield	East Seven Blackfoot	FW-923-1	12,184
FWS	Phillips	Mickey Butte	FW-923-2	17,413
FWS	Phillips, Valley	Burnt Lodge	FW-923-3	22,976
FWS	Garfield	Billy Creek	FW-923-4	11,556
FWS	Garfield	West Seven Blackfoot	FW-923-5	7,096
FWS	Phillips	Antelope Creek	FW-923-6	5,382
FWS	Garfield	West Mill Creek	FW-923-7	11,896
FWS	Petroleum	Fort Musselshell	FW-923-8	8,303
FWS	Garfield	Sheep Creek	FW-923-9	12,424
FWS	Phillips	West Beauchamp	FW-923-10	6,736
FWS	Garfield	Wagon Coulee	FW-923-11	10,528
FWS	Petroleum	Alkali Creek	FW-923-12	6,592
FWS	Petroleum	Crooked Creek	FW-923-13	6,842
FWS	Garfield	East Hell Creek	FW-923-14	15,984
FWS	Garfield	East Beauchamp	FW-923-15	5,568
	TOTAL FWS	NUMBER OF AREAS	15	161,480 ACRES
NPS	Flathead, Glacier	Glacier	NP-915	917,600
NPS	Park, Gallatin	Yellowstone	NP-928	167,060
	TOTAL NPS	NUMBER OF AREAS	2	1,084,660 ACRES

TABLE A-4

OTHER AGENCY AREAS IN MONTANA UNDER WILDERNESS STUDY OR WITH PRELIMINARY RECOMMENDATIONS

Agency	County(s)	Unit Name	Unit Number	Net Unit Acreage	Acres Recommended
FS	Ravalli	Tolan Creek	X1070	7,088	—
FS	Ravalli	Sleeping Child	X1074	21,423	—
FS	Ravalli	Swift Creek	1065	744	—
FS	Ravalli	Needle Creek	1066	1,085	—
FS	Ravalli	Selway-Bitterroot	1067	109,711	48,305
FS	Ravalli, Granite	Stony Mtn.	1808	103,266	—
FS	Ravalli	Blue Joint	1941	65,370	28,500
FS	Ravalli	Allan Mtn.	1946	102,286	—
FS	Lake	Swan River Island	LIFAA	550	—
FS	Flathead	Benchmark	X1126	6,490	—
FS	Flathead	Coal Ridge	X1127	16,480	—
FS	Flathead	Deadhorse	X1128	23,550	—
FS	Flathead	Standard Peak	X1129	7,770	—
FS	Flathead	Mt. Hefty	1481	13,720	—
FS	Flathead, Lincoln	Tuchuck	1482	19,820	—
FS	Flathead, Lincoln	Mt. Thompson Seton	TS483	71,750	—
FS	Lake, Missoula	Mission Additions	1500-1506	2,340	—
FS	Flathead	Lebeau Creek	L1507	6,210	—

TABLE A-4

OTHER AGENCY AREAS IN MONTANA UNDER WILDERNESS STUDY OR WITH PRELIMINARY RECOMMENDATIONS

Agency	County(s)	Unit Name	Unit Number	Net Unit Acreage	Acres Recommended
FS	Flathead, Lake, Missoula, Powell, Lewis & Clark, Teton, Pondera, Glacier	Bear-Marshall-Scapegoat-Swan	1485	865,178	164,945
FS	Lincoln	Zulu Creek	X166	6,400	—
FS	Lincoln	Marston Face	X172	6,000	—
FS	Lincoln	Mt. Willard-Lake Estelle	1173	256	—
FS	Lincoln	Gold Hill (West)	X176	10,200	—
FS	Lincoln	Flagstaff Mt.	X690	9,500	—
FS	Lincoln	Roberts Mt.	X691	2,700	—
FS	Sanders	West Fork Elk Cr.	X692	819	—
FS	Sanders	Rock Creek	X693	400	—
FS	Lincoln	Buckhorn Ridge	1661	27,000	—
FS	Lincoln	Scotchman Peaks	1662	64,280	36,380
FS	Lincoln	Northwest Peaks	1663	19,100	—
FS	Sanders	Trout Creek	1664	31,400	—
FS	Sanders	Cataract	1665	27,600	—
FS	Lincoln	Grizzly Peak	1667	6,000	—
FS	Lincoln	Gold Hill	1668	10,700	—
FS	Sanders, Lincoln	Cabinet Face West	1670	10,900	8,000
FS	Sanders, Lincoln	Cabinet Face East	1671	50,400	20,500
FS	Sanders	Berray Mtn.	1672	8,300	—
FS	Sanders	Government Mtn.	1673	8,600	—
FS	Sanders	Lone Cliff Smeads	1674	6,600	—
FS	Sanders	McNeeley	1675	7,700	—
FS	Sanders	McKay Creek	1676	13,500	6,700
FS	Sanders	Galena	1677	15,500	—
FS	Sanders	East Fork Elk Cr.	1678	5,000	—
FS	Sanders	Chippewa Creek	1682	2,300	400
FS	Lincoln	Ten Lakes & Contiguous Areas	1683-1683A	41,100	31,800
FS	Lincoln	Roderick	1684	24,800	—
FS	Granite	Emerine	X1423	16,161	—
FS	Granite	Sapphires	1421	116,530	—
FS	Granite	Silver King	1424	65,767	—
FS	Granite	North Carp	1425	12,042	—
FS	Granite	Upper East Fork	1426	7,361	—
FS	Deer Lodge	Storm Lake	1427	7,481	5,918
FS	Granite, Powell	Flint Range-Dolus Lake	1428-1429	60,297	—
FS	Silver Bow	Basin Creek	1430	9,888	—
FS	Silver Bow, Madison	Highlands	1431	20,921	—
FS	Jefferson, Silver Bow	O'Neil Creek	1432	6,511	—
FS	Jefferson	Whitetail-Haystack	1433-1434	71,249	—
FS	Granite	Fred Burr	1435	6,643	—
FS	Sanders	McGregor-Thompson	LILAQ	27,850	—
FS	Missoula	Petty Mtn.	X1202	16,980	—
FS	Missoula	Deep Creek	X1814	7,970	—
FS	Missoula	Rattlesnake	X1204	2,700	—
FS	Missoula	Reservation Divide	X1205	16,300	—
FS	Sanders	Baldy Mtn.	X1209	6,680	—
FS	Granite, Missoula	Ward Eagle	X1220	8,570	—
FS	Sanders	Teepee-Spring Cr.	X1786	14,890	—
FS	Sanders	Evans Gulch	X1811	8,830	—
FS	Sanders	Clear Creek	X1812	5,470	—
FS	Sanders	Maple Peak	1141	7,860	—
FS	Mineral	Stevens Peak	1142	600	—
FS	Mineral	Wonderful Peak	1152	1,600	—
FS	Mineral, Missoula	Hoodoo	1301	98,500	81,500

TABLE A-4

OTHER AGENCY AREAS IN MONTANA UNDER WILDERNESS STUDY OR WITH PRELIMINARY RECOMMENDATIONS

Agency	County(s)	Unit Name	Unit Number	Net Unit Acreage	Acres Recommended
FS	Mineral	Meadow Cr-Upper N. Fork	1302	7,200	—
FS	Missoula	Marshall Peak	1781	9,400	—
FS	Sanders	Cube-Iron-Silcox	1784	38,100	—
FS	Sanders	Sundance Ridge	1785	7,220	—
FS	Sanders, Mineral	Mount Bushnell	1790	43,070	—
FS	Sanders, Mineral	Cherry Peak	1791	39,640	—
FS	Mineral	Gilt Edge-Silver Creek	1792	11,200	—
FS	Sanders	Patricks Knob-N. Cutoff	1794	17,200	—
FS	Sanders	South Siegel-S. Cutoff	1795	14,800	—
FS	Sanders	North Siegel	1796	10,000	—
FS	Mineral	Marble Point	1798	13,170	—
FS	Mineral	Sheep Mtn.-St. Line	1799	40,500	—
FS	Missoula	Stark Mtn.	1800	14,140	—
FS	Missoula	Burdette	1803	16,380	—
FS	Missoula, Ravalli	Lolo Creek	1805	15,247	—
FS	Granite	Welcome Creek	1806	1,100	—
FS	Granite	Quigg	1807	81,985	60,830
FS	Missoula	Garden Point	1809	6,500	—
FS	Park, Sweetgrass, Stillwater	North Absaroka	1371	181,759	—
FS	Meagher, Park	Crazy Mtns.	1541	87,100	—
FS	Gallatin	Bridger Mtns.	1543	45,402	—
FS	Park	Republic Mtn.	1545	700	500
FS	Park	Chico Peak	1547	10,855	—
FS	Gallatin	Gallatin Divide-Hyalite	1548	158,109	—
FS	Gallatin	Dry Canyon	1550	2,160	—
FS	Park	Beartooth	1912	5,900	—
FS	Park	Reef	1914	2,200	—
FS	Park	Lionhead	1963	32,780	22,800
FS	Lewiw & Clark, Broadwater	Hedges Mtn. & Middleman Mtn.	X1613 & 1612	32,865	—
FS	Lewis & Clark, Broadwater	Hellgate Gulch	X1614	18,196	—
FS	Lewis & Clark, Broadwater, Meagher	Cayuse Mtn.	X1615	18,550	—
FS	Lewis & Clark, Powell	Lincoln Gulch	1601	8,125	—
FS	Lewis & Clark	Anaconda Hill	1602	17,461	—
FS	Lewis & Clark	Specimen Creek	1603	11,281	—
FS	Lewis & Clark	Crater Mtn.	1604	8,991	—
FS	Lewis & Clark, Powell	Ogden Mtn.	1605	12,140	—
FS	Lewis & Clark, Powell	Nevada Mtn.	1606	49,530	—
FS	Lewis & Clark, Powell	Jericho Mtn.	1607	8,968	—
FS	Lewis & Clark	Lazyman Gulch	1608	11,928	—
FS	Powell, Jefferson	Electric Peak	1609	46,497	—
FS	Lewis & Clark	Gates of the Mtns.	1610	11,717	9,974
FS	Lewis & Clark	Devils Tower	1611	7,018	—
FS	Broadwater, Meagher	Camas Creek	1616	28,286	—
FS	Broadwater, Meagher	Mount Baldy	1617	16,114	—
FS	Broadwater, Meagher	Grassy Mtn.	1618	6,444	—
FS	Meagher	Ellis Canyon	1619	8,636	—
FS	Broadwater, Meagher	Irish Gulch	1621	7,330	—
FS	Carbon	Lost Water Canyon	1362	9,800	9,800
FS	Carbon	Red Lodge Creek-Hellroaring	1363	14,760	—
FS	Carbon	Burnt Mtn.	1364	9,320	—
FS	Carbon, Stillwater	Fishtail-Saddleback Mtn.	1366	16,560	—
FS	Stillwater-Sweetgrass	West of Woodbine	1369	2,000	—
FS	Carbon	Black Butte	1368	880	—
FS	Powder River	Cook Mtn.	1370	11,700	—

TABLE A-4

OTHER AGENCY AREAS IN MONTANA UNDER WILDERNESS STUDY OR WITH PRELIMINARY RECOMMENDATIONS

Agency	County(s)	Unit Name	Unit Number	Net Unit Acreage	Acres Recommended
FS	Rosebud	King Mtn.	1372	11,700	—
FS	Carbon	Line Cr. Plateau	1911	20,680	—
FS	Carbon	Rock Creek	1913	200	—
FS	Lewis & Clark	Sawtooth	1721	15,500	—
FS	Cascade, Meagher	Tenderfoot-Deep Creek	1726	88,400	—
FS	Cascade	Pilgrim Creek	1727	49,500	—
FS	Cascade, Judith Basin	Paine Gulch	1728	8,500	—
FS	Cascade	Sawmill Creek	1729	12,800	—
FS	Judith Basin	TW Mtn.	1730	8,500	—
FS	Judith Basin, Cascade	Big Baldy	1731	44,000	—
FS	Judith Basin	Granite Mtn.	1732	10,580	—
FS	Judith Basin	Tollgate-Sheep	1733	26,800	—
FS	Judith Basin	Mount High	1735	32,300	—
FS	Choteau, Cascade, Judith Basin	Highwood-Baldy	1737	15,600	—
FS	Choteau, Judith Basin	Highwoods	1738	24,100	—
FS	Meagher, Wheatland	Bluff Mtn.	1740	37,120	—
FS	Meagher	Spring Creek	1741	19,800	—
FS	Meagher	Box Canyon	1742	11,647	—
FS	Meagher	Castle Mtns.	1743	29,600	—
FS	Meagher	North Fork of Smith	1744	8,800	—
FS	Meagher	Calf Creek	1745	11,020	—
FS	Meagher	Eagle Park	1746	6,300	—
FS	Beaverhead	Beaver Lake	X1003	13,474	—
FS	Beaverhead	Saginaw Creek	X1004	8,493	—
FS	Beaverhead	Tash Peak	X1005	62,119	—
FS	Beaverhead	West Pioneers	X1006	90,750	—
FS	Beaverhead	Call Mtn.	X1009	10,179	—
FS	Beaverhead	Cattle Gulch Ridge	X1010	18,891	—
FS	Beaverhead	Fleecer	X1011	36,873	—
FS	Deer Lodge, Beaverhead	Granulated Mtn.	X1012	16,266	—
FS	Beaverhead	Bear Creek	X1015	8,252	—
FS	Beaverhead	Mckenzie Canyon	X1016	33,652	—
FS	Beaverhead	Sourdough Peak	X1017	14,838	—
FS	Beaverhead	Timber Butte	X1018	5,018	—
FS	Beaverhead	Dixon Mtn.	X1019	3,982	—
FS	Beaverhead	Four Eyes Canyon	X1020	6,856	—
FS	Madison	Sheep Mtn.	X1021	32,115	—
FS	Madison	Crockett Lakes	X1022	6,830	—
FS	Madison	Cherry Lakes	X1023	12,940	—
FS	Madison	Vigilante	X1024	16,458	—
FS	Madison, Beaverhead	Snowcrest Mtn.	X1025	97,630	—
FS	Madison	Black Butte	X1026	39,787	—
FS	Madison	Big Horn Mtn.	X1027	50,390	—
FS	Madison	Lone Butte	X1028	14,138	—
FS	Madison, Beaverhead	Freezeout Mtn.	X1029	95,098	—
FS	Beaverhead	Anderson Mtn.	X1942	48,451	—
FS	Beaverhead	Goat Mtn.	X1944	9,454	—
FS	Deer Lodge, Beaverhead	North Big Hole	1001	56,779	6,571
FS	Beaverhead	East Pioneer	1008	144,558	80,273
FS	Madison	Middle Mtn.-Tobacco Roots	1013	93,327	—
FS	Madison	Potosi	1014	5,465	—
FS	Beaverhead	West Big Hole	1943	130,660	55,014

FS	Beaverhead	Italian Peak	1945	90,917	12,907
FS	Beaverhead	Garfield Mtn.	1961	42,777	—
FS	Beaverhead	Mt. Jefferson	1962	4,474	—
	TOTAL FS	NUMBER OF AREAS	180	5,611,789 ACRES	691,617 ACRES
NPS	Big Horn	Big Horn Canyon	—	7,645	—
	TOTAL NPS	NUMBER OF AREAS	1	7,645 ACRES	—

"X" before the unit number indicates a new roadless area that was identified through the forest planning process, not through RARE II.

APPENDIX B

LEGAL DESCRIPTION OF LAND IN THE WILDERNESS STUDY AREAS

Wilderness Study Area	Township	Range	Section	Description	Acres Public Land
Black Sage MT-075-115	3N	1W	18	Lots 1-4	126.97
	3N	2W	1	Lot 11	41.19
			2	Lots 3, 4, S½NW¼, SW¼	329.24
			3	Lots 1-13, S½NW¼, NW¼SW¼	663.71
			4	Lots 1-4, S½N½	328.87
			10	Lots 1, 2, SW¼NE¼, S½, SE¼	185.99
			11	N½, E½SE¼, SW¼SE¼	440.00
			12	Lots 1-4, S½NE¼	248.88
			13	All	640.00
			14	All	640.00
			15	Lots 1-7, NE¼, E½NW¼, NE¼SE¼, N½SE¼	649.67
			22	Lots 1-6, W½W½, SE¼NW¼, NE¼SW¼	472.87
			23	Lot 1, NE¼NW¼, N½NE¼	159.06
	4N	2W	27	SW¼SW¼	40.00
			28	NW¼SW¼, S½S½, NE¼SE¼	240.00
			33	E½, E½NW¼	400.00
			34	W½W½, SE¼NW¼, E½SW¼, SW¼SE¼	320.00
TOTAL WSA					5926.45
Yellowstone River Island MT-075-133	1S	10E	33	That surveyed island located in the west-central portion of the section.	52.59
WSA TOTAL					52.59

APPENDIX C
ECOSYSTEM REPRESENTATION

The following is a brief description of each ecosystem represented in the areas under study. These ecosystems are from *Bailey-Kuchler Ecosystem Classification System* (Kuchler 1964 and USD, FS 1976).

DOUGLAS-FIR FOREST (*Pseudotsuga*).

Physiognomy. Medium dense forest of medium tall needleleaf evergreen trees.

Dominants. Douglas-fir (*Pseudotsuga menziesii*).

Other Components. *Abies concolor, Larix occidentalis, Physocarpus malvaceous, Picea pungens, P. glauca* (northern part), *Pinus contorta, P. ponderosa* (lower elevations), *Populus tremuloides*.

Occurrence. Northern Rocky Mountains and Washington.

SAGEBRUSH STEPPE (*Artemisia-Agropyron*)

Physiognomy. Dense to open grassland with dense to open shrub synusia.

Dominants. Bluebunch wheatgrass (*Agropyron spicatum*); Big sagebrush (*Artemisia tridentata*).

Other Components. *Artemisia arbuscula* (western part), *A. nova* (eastern part), *Balsamorrhiza sagittata, Festuca idahoensis, Lithospermum ruderale, Lupinus sericeus, Oryzopsis hymenoides, Phlox* spp., *Poa nevadensis, P. secunda, Purshia tridentata, Sitanion* spp.

Occurrence. Pacific northwest and eastward to Rocky Mountains.

GRAMA-NEEDLEGRASS-WHEATGRASS (*Bouteloua-Stipa-Agropyron*).

Physiognomy. Rather short, open to fairly dense grass.

Dominants. Western wheatgrass (*Agropyron smithii*); Blue grama (*Bouteloua gracilis*); Needle-and-thread grass (*Stipa comata*).

Other Components. *Agropyron spicatum, Andropogon scoparius, Artemisia frigida, Carex filifolia, Chrysopsis villosa, Gutierrezia sarothrae, Koeleria cristata, Liatris punctata, Muhlenbergia cuspidata, Poa secunda, Sporobolus cryptandrus, Stipa viridula*.

Occurrence. Montana, Wyoming.

NORTHERN FLOODPLAIN FOREST (*Populus-Salix-Ulmus*).

Physiognomy. Low to tall broadleaf diciduous forest, open to dense, often with lianas.

Dominants. Cottonwood (*Populus deltoides*); Black willow (*Salix nigra*); American elm (*Ulmus americana*).

Other Components. *Acer negundo, A. rubrum, A. saccharinum, Betula nigra (eastern part), Celastrus scandens, Celtis occidentalis, Clematis virginiana, Fraxinus americana, F. pennsylvanica, Gleditsia triacanthos, Juglans nigra (southern part), Parthenocissus quinquefolia, Platanus occidentalis (southern part), Populus sargentii, Rhus radicans, Salix amygdaloides, S. interior, Smilax hispida, Symphoricarpos orbiculatus, Ulmus rubra*.

Occurrence. North Dakota to Oklahoma.

Sources

Kuchler, A. W., *Potential Natural Vegetation of the Conterminous United States*, Special Publication No. 36 New York: American Geographical Society, 1964; U.S. Department of Agriculture, Forest Service, *Ecoregions of the United States*, by Robert G. Bailey (map) Ogden, UT. 1976.

TABLE C-1
TOTAL ACRES BY ECOSYSTEM

Area	Douglas-Fir Forest	Sagebrush Steppe	Gramma-Needlegrass-Wheatgrass	Floodplain Forest
Black Sage (MT-075-115)	336	542	5,048	—
Yellowstone River (MT-075-133)	—	—	—	53

APPENDIX D
ADDITIONAL FACTORS CONSIDERED

WILDERNESS OPPORTUNITIES

National and Regional Opportunities

The National Wilderness Preservation System (NWPS) was comprised of 263 units as of December 31, 1980. These units covered a total acreage of 79,810,741 acres. Of this, 56,393,201 acres (about 70%) is in Alaska; 23,417,540 acres are in the lower forty-eight states and Hawaii.

A three-state area — Montana, Idaho, and Wyoming — is considered the affected region for purposes of this study. Table D-1 summarizes by state the designated wilderness areas, areas that have received presidential recommendations for wilderness designation, and areas that are to be studied further for possible wilderness designation. The three-state region, which essentially encompasses the northern Rocky Mountains, contains some of the most extensive opportunities in the country in designated and de facto wilderness areas (see Regional Wilderness Opportunities map).

Opportunities in Montana

Montana contains 3,431,339 acres in sixteen designated wilderness areas, 1,246,140 acres in seventeen presidentially endorsed areas, and 446,446 acres in thirty-six further study units. About 98 percent of the acreage in further study areas in the state is on BLM-administered land. The BLM has one designated wilderness area in Montana.

There are two cities that qualify as standard metropolitan statistical areas (SMSAs) within five hours driving time of the two study areas being considered here. Billings, Montana has a metropolitan population of 108,035. Great Falls has a metropolitan population of 80,696.

The two cities are near unusually rich wilderness opportunities (see Table D-2). Within five hours of Billings there are five designated wilderness areas totaling 2,007,274 acres. Within five hours of Great Falls are thirteen designated wilderness areas totaling 4,387,934 acres. Appendix A contains a summary of the status of wilderness and wilderness study areas in Montana.

Supply and Demand Factors

The National Wilderness Preservation System contains 50 of the 241 basic ecosystems recognized by the Bailey-Kuchler classification system as existing in the United States and Puerto Rico. Sixty-two more ecosystems are represented in presidentially endorsed areas, and seventy-eight additional ecosystems are represented in further study areas. None of the areas that have received presidential endorse-

TABLE D-1

REGIONAL WILDERNESS OPPORTUNITIES

	Designated Wilderness Areas			Presidentially Endorsed Areas			Further Study Planning Areas		
State	Agency	Number of Areas	Acres	Agency	Number of Areas	Acres	Agency	Number of Areas	Acres
Montana	FS	12	3,360,342	NPS	2	1,084,660	BLM	35	438,801
	FWS	3	64,997				NPS	1	7,645
	BLM	1	6,000	FWS	15	161,480			
	Total	16	3,431,339	Total	17	1,246,140	Total	36	446,446
Idaho	FS	5	3,825,069						
	NPS	1	42,243	NPS	1	69,880	BLM	58	1,534,116
	Total	6	3,867,312	Total	1	69,880	Total	58	1,534,116
Wyoming	FS	6	2,193,220						
	NPS	2	1,848,744	BLM	35	542,046	BLM	35	542,046
	Total	6	2,193,220	Total	2	1,848,744	Total	35	542,046

FS — Forest Service
BLM — Bureau of Land Management
FWS — Fish and Wildlife Service
NPS — National Park Service

Regional Wilderness Opportunities

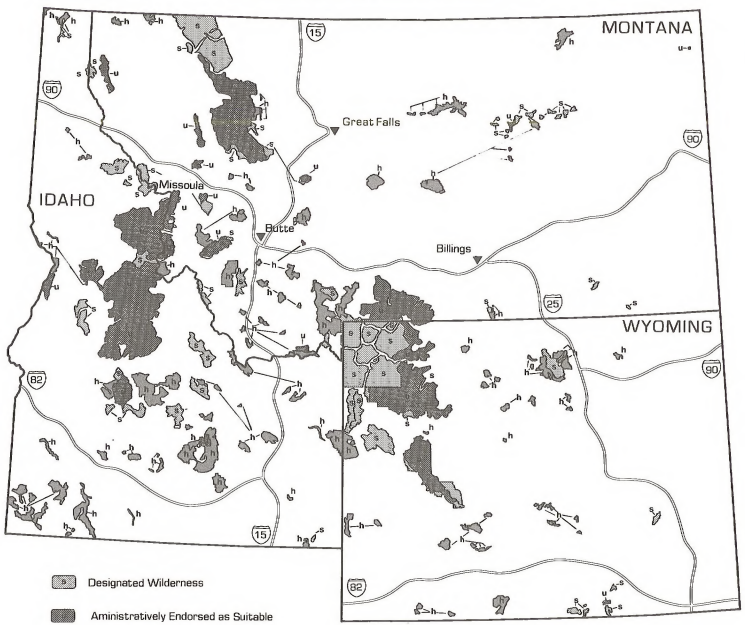


TABLE D-2
PROXIMITY OF WILDERNESS TO POPULATION CENTERS

Status	Population Center	Total Wilderness Acres Within a 5-Hour Travel Time	State	BLM Number of Areas	BLM Acres	Other Agencies Number of Areas	Other Agencies Acres
Statutory Wilderness	Billings, MT	2,007,274	Montana	1	6,000	3	969,786
			Wyoming	—	—	2	1,037,483
	Great Falls, MT	4,387,934	Montana	1	6,000	2	3,292,917
			Idaho	—	—	1	1,089,017

ment or are under study contain the remaining fifty-one ecosystems (Davis 1980; Kuchler 1964; USDA, FS 1976, 1978a). In general, the existing wilderness system includes a relatively large number of examples of high elevation mountain ecosystems and alpine, subalpine, and glacial landscapes.

Both designated wilderness and undesignated, de facto wilderness areas contribute to the supply of primitive recreation opportunities. While the supply of congressionally designated wilderness has increased since passage of the Wilderness Act of 1964, the supply of de facto wilderness areas has been declining. While one factor in this decline is the conversion of de facto wilderness to designated wilderness, other factors are involved as well. An indication of the overall decrease in de facto wilderness areas is the loss of Forest Service trail mileage, chiefly to roads for resource extraction. A loss of more than one-third of the total mileage is documented for the period between 1946-1971 (Spencer et al. 1980). While other factors may be involved in this loss, it still indicates a decrease in supply of de facto wilderness opportunities.

The demand for recreation opportunities and the need to provide diverse, high quality recreation are factors in wilderness decisions, although by themselves they do not clearly indicate that wilderness is or is not needed. In general, primitive recreation has shown tremendous growth since the mid-1960s. Various surveys show that there was a threefold or fourfold increase in hiking and backpacking from the 1960s to the late 1970s. This growth apparently has leveled off since the late 1970s, but it is expected that there will be major growth in the 1980s in snow-based activity, day use, and family hiking and backpacking (Spencer et al. 1980).

When a large number of persons seek a wilderness experience, the opportunities for such an experience can decrease. It has been documented that this happened as early as 1971, when a study of three wilderness areas revealed that more than half of the hikers using the areas were dissatisfied with the opportunities for solitude (Stankey 1971). A recent survey of managers of existing wilderness areas found that crowding was perceived as a problem in 49% of those areas (Cole and Washburne 1981).

An additional factor in the demand for wilderness opportunities is the fact that existing wilderness use is concentrated in the summer, since most areas currently in the NWPS are suited to summertime use. The system contains relatively few low elevation areas in which environmental conditions are not harsh in all seasons but summer.

While primitive recreation use has grown, the same can be said of potentially competing uses such as motorized recreation. For example, snowmobile registrations in Montana were increasing at an annual rate of about 15% in the late 1970s. The growth in both motorized and primitive recreation is reflected in an analysis of the relative need for additional opportunities in the Montana Fish, Wildlife, and Parks regions (MDF&G 1978). Region 3 and 4, which include the area under study here, are listed as having the second and third highest relative need for additional nonmotorized trail opportunities and the first and third highest relative need for additional cross-country ski opportunities. Region 3 and 4 also are listed as having high relative needs for additional motorized recreation opportunities; they are first and second in snowmobiling, second and third in four-wheel driving, and second and third in motorcycling needs.

Wilderness in the Local Area

One of the areas covered in this report is in Jefferson County and one is in Park County. Approximately 5,926 acres addressed in this study are in Jefferson County, and 53 acres are in Park County.

In addition to the units addressed above, the two counties contain one designated wilderness area, three proposed wilderness areas, and three areas under further study. Table D-3 shows the existing, proposed, and further study areas by county. Federal land comprises a significant percentage of the land in the two-county area. Approximately 53% of the total land within Jefferson County, and 54% of the total in Park County is managed by federal agencies. Roughly 10% of the land administered by BLM in the two counties is involved in this study.

TABLE D-3

EXISTING AND PROPOSED WILDERNESS AREAS AND AREAS UNDER WILDERNESS STUDY

Type	Area Name	Acres[1]
	Jefferson County	
Existing Wilderness	None	—
Proposed Areas[2]	None	—
Further Study Areas[3]	Elkhorn (FS)	64,522
	Park County	
Existing Wilderness	Absorka Beartooth (FS)	518,376
	Total — 1 area	518,376
Proposed Areas	Yellowstone 928 (NPS)	91,452
	Republic Mountain (FS)	700
	Reef (FS)	2,200
	Total — 3 areas	104,352
Further Study Areas	Hyalite H (FS)	7,473
	Gallatin Divide G (FS)	51,687
	Total — 2 areas	59,160

NPS — National Park System
FS — Forest Service

[1]Acreages shown are those in affected counties only.
[2]"Proposed Areas" may refer to areas that the administering agency has recommended for wilderness designation or to areas with presidential endorsement.
[3]"Further Study Areas" does not include any areas for which the administering agency has made a final recommendation to Congress.

Table D-4 shows the percentage of federal land in the two counties that is designated as wilderness or under wilderness consideration. With the HRA, there are four designated wilderness areas totaling about 1,000,000 acres and ten recommended areas pending before Congress totaling about 300,000 acres.

Conclusion

Presently there is a large supply of wilderness available within five hours driving time of Billings and Great Falls. Designation of the two areas discussed in this document would not have a significant impact on the total wilderness supply. Designation would increase the diversity of the NWPS by adding fifty-three acres of Northern Floodplain Forest ecosystem.

TABLE D-4

PERCENTAGE OF LAND AFFECTED BY WILDERNESS OR WILDERNESS STUDY

	Designated Wilderness		Proposed Wilderness		BLM Study Area		Other Agency Study Areas	
County	% Federal Land	% County Land	% Federal Land	% County Land	% Federal Land	% County Land	% Federal Land	% County Land
Jefferson[1]	0	0	0	0	1	1	11	6
Park[2]	57	30	11	6	0	0	6	3

[1]Federally administered lands in Jefferson County comprise about 563,962 acres of the 1,071,557 county total acreage.
[2]Federally administered lands in Park County comprise about 911,999 acres of the 1,700,280 county total acreage.

SOCIOECONOMIC OVERVIEW

Demographic Information

The Black Sage WSA is located in Jefferson County. The county had a 1980 population of 7,029 most of which was located in northern Jefferson County between Helena and Boulder and in the Whitehall area in the southern part of the county. Population density is 4.2 persons per square mile. Population growth between 1970 and 1980 was 34.2%. This growth was primarily in the northern portion of the county as workers from Helena moved their homes into Jefferson County. Primary income of residents comes from employment outside the county. A gold mine, which opened in Whitehall in 1983, and the Boulder River School in Boulder are the primary employers in the county.

The Yellowstone Island WSA is located in Park County, which had a 1980 population of 12,660. The largest population center in the county is Livingston with a population of 6,998. Population density is 4.8 persons per square mile. Employment in the county consists primarily of services related to tourism, the Burlington Northern railroad shops, and the lumber industry.

Social Well-being and Attitudes

Both Jefferson and Park Counties have per capita incomes lower than the state average. The quality of housing in these counties is close to the state average. Generally, people in this part of Montana are satisfied with their present lifestyle.

A survey done by the Bureau of Business and Economic Research (Montana Business Quarterly Summer, 1982) at the University of Montana in 1982 found that 40% of all Montanans favored more wilderness in the U.S., but only 25% felt Montana needed more wilderness. The poll also found that approximately 25% of all Montanans had visited a wilderness area.

APPENDIX E
MANAGEABILITY CONCERNS BY WSA UNDER ALL WILDERNESS

BLACK SAGE WSA (MT-075-115)

All Wilderness Alternative

Manageability

The area would be difficult to manage as wilderness over the long term. The highly irregular configuration of the unit, its poorly identified boundaries that adjoin private land, and its open terrain would make user orientation and inadvertent trespass a continuous problem. In addition, vehicle access for the numerous range improvements would adversely affect the area's ability to provide primitive experiences.

YELLOWSTONE RIVER ISLAND WSA (MT-075-133)

All Wilderness Alternative

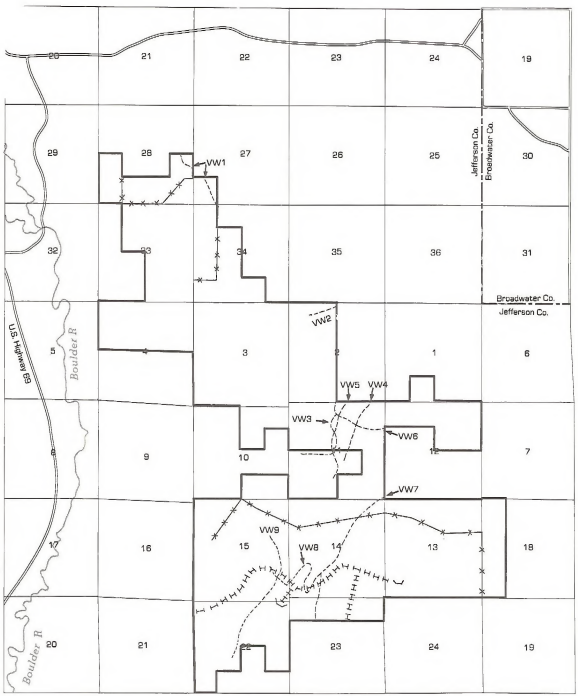
Manageability

Long-term management of the WSA as wilderness would be difficult. The island is small and, despite its vegetative screening, has a low carrying capacity. This problem will become more critical if the southern river channel ceases to flow as recent trends indicate will happen. Access or pull-over sites would be limited to the northern half of the island thereby significantly concentrating visitor use. Another related concern is that of cattle trespass from the adjoining ranch.

The surrounding land on both sides of the river is in demand for residential subdivisions. The addition of more proximity developments, although offsite, would further degrade the island's naturalness and opportunity for solitude.

APPENDIX F
IMPACTS MAPS

Black Sage Impacts Map



WSA Boundary

Vehicle Way

Pipeline

Fence Line

Stockwater Tank

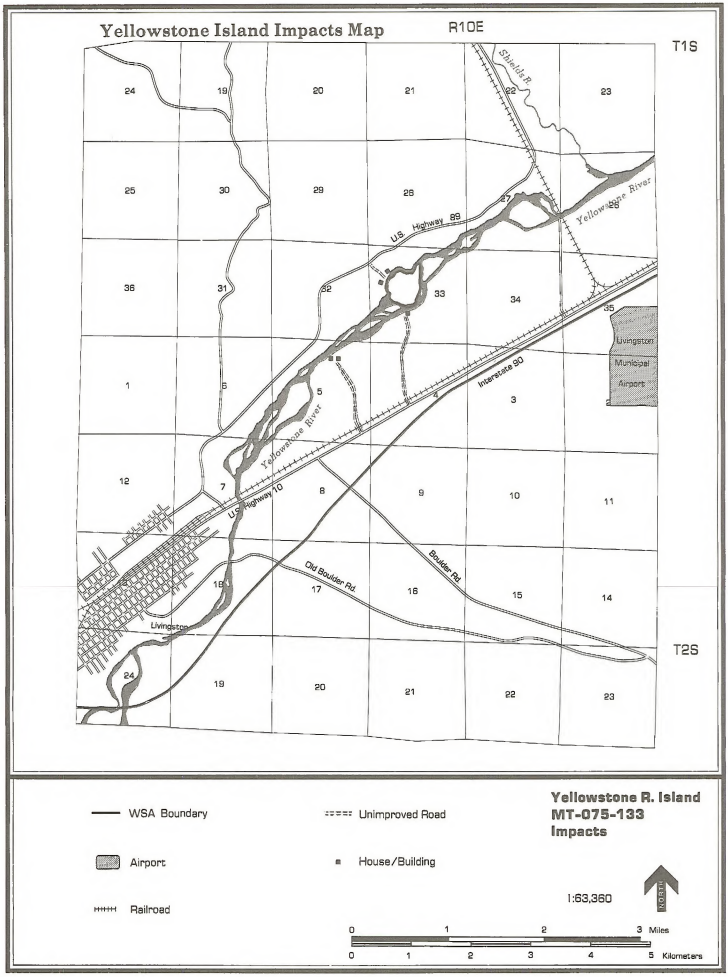
Black Sage
MT-075-115
Impacts

1:63,360

NORTH

0 1 2 3 Miles

0 1 2 3 4 5 Kilometers


Yellowstone Island Impacts Map
R10E
T1S
T2S
Shields R.
Yellowstone River
U.S. Highway 89
Interstate 90
Livingston Municipal Airport
U.S. Highway 10
Old Boulder Rd
Boulder Rd
Livingston
24
19
20
21
22
23
25
30
29
28
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3
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12
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14
24
19
20
21
22
23
WSA Boundary
Airport
Railroad
Unimproved Road
House/Building
Yellowstone R. Island
MT-075-133
Impacts
1:63,360
NORTH
0 1 2 3 Miles
0 1 2 3 4 5 Kilometers

GLOSSARY

(Including Acronyms and Abbreviations)

ALLOTMENT. An area designated and managed for grazing of livestock.

AMP. Allotment Management Plan. A concisely written program of livestock grazing management, including any required supportive measures, designed to attain specific management goals in a grazing allotment.

AUM. Animal Unit Month. A standardized unit of measurement of the amount of forage necessary for the complete subsistence of one animal unit (one cow or one horse or five sheep, all over six months old) for one month; also, a unit of measurement of grazing privilege that represents the privilege of grazing one animal for a period of one month.

BAILEY-KUCHLER SYSTEM. A land classification system that divides the United States into various ecosystems based upon an integration of the natural factors of climate, vegetation, soils, and landform.

CEQ. Council on Environmental Quality.

COMMERCIAL FOREST LAND. Forest land that is capable of yielding at least twenty cubic feet of wood per acre per year of commercial coniferous tree species. Lodgepole pine, Engelmann spruce, Douglas-fir, and ponderosa pine comprise this group in the Headwaters Resource Area.

CRUCIAL WINTER RANGE. That portion of the winter range to which a wildlife species is confined during periods of heaviest snow cover.

ECOSYSTEM. Collectively, all populations in a community, plus the associated environmental factors.

FEIS. Final Environmental Impact Statement.

FLPMA. Federal Land Policy and Management Act of 1976.

FORAGE. All browse and herbaceous foods that are available to grazing animals.

IMPACT. The effect, influence, alteration, or imprint of an activity.

INHOLDING. A parcel of nonpublic land surrounded by public land.

LOCATABLE MINERALS. Minerals or materials subject to disposal and development through the Mining Law of 1872 (as amended). Generally includes metals such as gold and silver and other materials not subject to lease or sale (Some bentonites, limestone, talc, some zeolites, etc.).

MBF. Thousand board feet; a measure of timber volume.

MULTIPLE RESOURCE VALUES AND USES. The present and potential uses of the various resources administered through multiple use management on the public lands and any public values associated with such uses.

MULTIPLE USE MANAGEMENT. The management of public lands and their various resource values so that they are used in the combination that will best meet the present and future needs of the American people.

NATURALNESS. Refers to an area that "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable" (from Section 2 (c), Wilderness Act).

NWPS. National Wilderness Preservation System.

OFF-ROAD VEHICLE (ORV). Any motorized vehicle capable or designed for travel on or immediately over land, water, or other natural terrain.

OUTSTANDING. Unusual among others of its kind; conspicuous; prominent. Superior to others of its kind, distinguished, excellent.

PFEIS. Preliminary Final Environmental Impact Statement.

PLANNING AREA. The area for which resource management plans are prepared and maintained. In most instances, it is the same as the resource area, which is a geographic portion of a BLM District, under the supervision of an area manager.

PLANNING CRITERIA. The factors used to guide development or revision of the resource management plan to ensure that it is tailored to the issue previously identified and to ensure that unnecessary data collection and analysis are avoided. Planning criteria are developed to guide the collection and use of inventory data and information, the analysis of the management situation, the design and formulation of alternatives, the estimation of the effects of alternatives, the evaluation of alternatives, and the selection of the preferred alternative.

POPULATION CENTER. See Standard Metropolitan Statistical Area.

POST-FLPMA. After October 21, 1976, the date of approval of the Federal Land Policy and Management Act.

PRE-FLPMA. Before October 21, 1976, the date of approval of the Federal Land Policy and Management Act.

PRIMITIVE AND UNCONFINED RECREATION. Nonmotorized and nondeveloped types of outdoor recreational activities.

PRODUCTIVE FOREST LAND. Forest land that is capable of yielding at least twenty cubic feet of wood per acre per year of any tree species.

PUBLIC LAND. Vacant, unappropriated, and unreserved lands that have never left federal ownership; also, lands in federal ownership which were obtained by the government in exchange for public lands or for timber on public lands. Land administered by the Bureau of Land Management.

REGION. A homogenous geographical area generally larger than the planning area under study, whose boundaries are determined through the EIS scoping process and the identification of issues. Its boundaries should encompass all lands that would be affected by the land use allocations proposed for the planning area, and all lands that have an effect on the activities occurring in the planning area.

RMP. Resource Management Plan. The Bureau's basic land use plan after 1979.

ROAD. Vehicle routes that have been improved and maintained by mechanical means to ensure relatively regular and continuous use.

SCENIC QUALITY. The inherent scenic values of the landscape; the overall impression retained after driving or walking through an area.

SCORP. (Montana) Statewide Comprehensive Outdoor Recreation Plan.

SOLITUDE. The state of being alone or remote from habitations; isolation. A lonely, unfrequented or secluded place.

SMSA. Standard Metropolitan Statistical Area. A county that contains at least one city of 50,000 inhabitants plus any adjacent urban territory.

SUITABILITY. As used in the Wilderness Act and in the Federal Land Policy and Management Act, refers to a recommendation by the Secretary of the Interior or the Secretary of Agriculture that certain federal lands satisfy the definition of wilderness in the Wilderness Act and have been found appropriate for designation as wilderness on the basis of an analysis of the existing and potential uses of the land.

VISITOR DAY. The presence of one or more persons on an area of land or water for the purpose of engaging in one or more recreational activities for a period of time aggregating twelve hours.

VRM. Visual Resources Management.

WILDERNESS. An area formally designated by Act of Congress as part of the National Wilderness Preservation System.

WILDERNESS CHARACTERISTICS. Identified by Congress in Section 2(c) of the 1964 Wilderness Act (78 Stat. 891): Namely, size, naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation, and supplemental values such as geological, archeological, historical, ecological, scenic, or other features. It is required that the area possess at least 5,000 acres or more of contiguous public land or be of a size to make practical its preservation and use in an unimpaired condition, be substantially natural or generally appear to have been affected primarily by the forces of nature, with the imprint of man being substantially unnoticeable, and have either outstanding opportunities for solitude or a primitive and unconfined type of recreation. Congress stated that a wilderness may also have supplemental values; which include ecological, geological or other features of scientific, educational, scenic, or historical values.

WILDERNESS INVENTORY. An evaluation of the public lands in the form of a written description and map showing those lands that meet the wilderness criteria as established under Section 603(a) of FLPMA and Section 2(c) of the Wilderness Act, which will be referred to as wilderness study areas (WSAs).

WILDERNESS MANAGEMENT. The management of human use and influence on lands that have been designated by Act of Congress as wilderness areas.

WILDERNESS MANAGEMENT POLICY. A policy document presenting the general objectives, policies, and specific activity guidance applicable to all designated BLM wildernesses. Specific management objectives, requirements, and decisions implementing administrative practices and visitor activities in individual wildernesses are developed and described in the wilderness management plan for each unit.

WSA. Wilderness Study Area. A parcel of public land that through the BLM's wilderness inventory process has been found to possess the basic wilderness characteristics of being at least 5,000 acres in size, being primarily natural, and having outstanding opportunities for solitude or primitive and unconfined recreation.

WILDERNESS SUITABILITY RECOMMENDATIONS. A recommendation by the Bureau of Land Management, the Secretary of the Interior, or the President, with respect to an area's suitability or unsuitability for preservation as wilderness.

WILDERNESS REPORTING. The process of preparing the reports containing wildeness recommendations on wilderness study areas and transmitting those reports to the Secretary of the Interior, the President, and Congress.

WILDERNESS REVIEW. The term used to cover the entire wilderness inventory, study, and reporting process of the wilderness program of the Bureau of Land Management.

WILDERNESS VALUES. The wilderness characteristics and multiple resource benefits of an area.

WOODLAND. Forestland not capable of producing twenty cubic feet of timber per acre per year.

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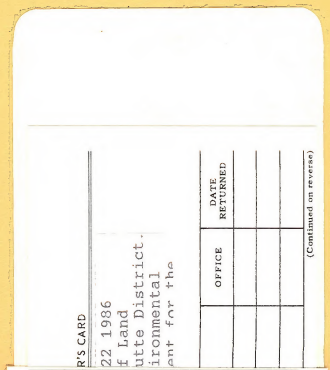

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