United States Department of the Interior
Bureau of Land Management

Vale District Office
100 Oregon Street
Vale, Oregon 979 18

December 1993

Environmental*Assessment **OR-030-94-02** for Leslie Gulch Area of Critical Environmental Concern (ACEC)

Draft Amendment of the Northern Malheur Management Framework Plan and Draft ACEC Management Plan

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 interest 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/OR/WA/PL-94/5+1792

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Vale District Office
100 Oregon Street
Vale, Oregon 97918

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
1613

DEC 30

Dear Concerned Citizen:

Thank you for your continued interest in the development of a management plan for the Leslie Gulch Area of Critical Environmental Concern (ACEC).

Enclosed for your review and comment is an Environmental Assessment (EA) of a Draft Amendment for the Northern Malheur Management Framework Plan (MFP) and Draft ACEC Management Plan. They are depicted in Alternative D (preferred alternative). The four alternatives analyzed provide a range of management options for the ACEC.

We need your comments within 45 days from the date of this letter in order for them to be considered in the next phase of planning.

The purpose of the EA is to disclose the probable environmental impacts of the alternatives analyzed for management of the ACEC. Based on information contained in the EA, a preliminary finding of no significant impact is presented and concludes that an environmental impact statement is not necessary and will not be prepared,

As a result of two formal solicitations for comment on management of Leslie Gulch ACEC in March and September 1993, we received letters from 60 individuals, government agencies, and organizations. Concern and suggestions identified in the letters have been incorporated into this EA. We feel this document portrays a complete range of alternative management scenarios for the ACEC.

The next phase of the planning process will be to develop a proposed decision on amending the MFP and proposed ACEC management plan. These documents should be available for public review in March 1994. A final decision is expected in June 1994. It is not anticipated there will be any formal public meetings or hearings, all comments are expected to be in writing.

Sincerely,

Ralph Heft
Malheur Resource Area Manager

Enclosure (as stated)

U.S. Department of the Interior
Bureau of Land Management
Vale District Office
100 Oregon Street
Vale, Oregon 97918

Environmental Assessment OR-030-94-02
for
Leslie Gulch
Area of Critical Environmental Concern (ACEC)

Draft Amendment of the
Northern Malheur Management Framework Plan
and
Draft ACEC Management Plan

for Dean Bibles, State Director
Oregon State Office — 12/23/93 Date

James E. May, District Manager
Vale District Office — 12 12/93 Date

Ralph Heft, Area Manager
Malheur Resource Area — 12/1/93 Date

Table of Contents‘

Maps and Tables

Acronyms

ACEC - Area of Critical Environmental Concern

AUM - Animal Unit Month

BOR - Bureau of Reclamation

CA - Conservation Agreement

EA - Environmental Assessment

EIS - Environmental Impact Statement

FLPMA - Federal Land Policy and Management Act

HMA - Herd Management Area

HMP - Habitat Management Plan

IMP - Interim Management Policy and Guidlines for Lands under Wilderness Review

MFP - Management Framework Plan

MOU - Memorandum of Understanding

NEPA - National Environmental Policy Act

ODFW - Oregon Department of Fish and Wildlife

OHV - Off Highway Vehicle

PUP - Pesticide Use Proposal

RNA - Research Natural Area

ROS - Recreation Opportunity Spectrum

RPS - Range Program Summary

SRMA - Special Recreation Management Area

VRM - Visual Resource Management

WSA - Wilderness Study Area

Chapter 1 - Background

Areas are designated as ACECs when special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and provide safety from natural hazards, The Federal Land Policy and Management Act requires that the BLM give-priority to the designation and protection of ACECs.

To be designated as an ACEC, an area must meet the criteria of 'Relevance" and "Importance". To meet the "relevance" criterion for ACEC designation, an area must have characteristics such as significant scenic values or habitat for sensitive or threatened animal or plant species. The relevant values or resources identified must also have substantial significance to meet the "importance" criteria for ACEC designation. This means that the values identified must be more than locally significant and must have qualities which make the area fragile, sensitive, unique or vulnerable to adverse change.

Leslie Gulch was designated an Area of Critical Environmental Concern (ACEC) in 1983 in the Northern Malheur Management Framework Plan (MFP). This 11,900-acre ACEC was identified to protect the relevant and important values of high quality scenery, California bighorn sheep habitat and special status plant species habitat. The objectives for management within the ACEC are to protect, conserve and enhance these values while authorizing the various activities which occur within the area.

Purpose and Need

The purpose of this document is two fold. First, alternative management actions to provide management direction for the Leslie Gulch ACEC are presented and analyzed. Secondly, those potential management actions which are not in conformance with the Northern Malheur Management Framework Plan (MFP) and thus require a land use plan amendment are also reviewed.

This draft ACEC management plan, the proposed plan amendments and associated Environmental Assessment (EA) are required by the Federal Land Policy and Management Act (FLPMA) of 1976 and the National Environmental Policy Act (NEPA) of 1969 which provides for public involvement and state and local government coordination. The management plan will provide guidance for management of the ACEC for the next ten to twenty years. The MFP amendments will remain in effect until a new comprehensive resource management plan is developed for the Malheur Resource Area.

Management guidance for the ACEC is provided by the MFP for the Malheur Resource Area, approved in 1983 and the Northern and Southern Malheur Rangeland Program Summary (RPS), approved in 1984. The following is a summary, by activity, of the management guidance from these plans that is relevant to this plan amendment:

Lands. The MFP identified that BLM will consider acquiring private lands within WSAs, ACECs or RNAs in exchange for public lands outside those areas. Access or easements may be obtained to provide for public access or maintain scenic quality.

Minerals. The MFP recommends that the ACEC be withdrawn from surface occupancy for leasable minerals and be closed to the general mining laws for locatable and saleable minerals.

Livestock. Forage was allocated among competing uses. Pastures or areas to be excluded from livestock use were identified. Within the ACEC livestock use was allocated and objectives were identified for the Leslie Gulch and Bannock pastures of the Mahogany Allotment (0500).

Wild Horses. The current boundary and wild horse management numbers for the Three Fingers Herd Management Area (HMA) were identified. The HMA is to provide for between 75 and 150 wild horses and contains portions of the Leslie Gulch ACEC.

Conformance Statement

With the following exceptions, all of the alternatives considered in this environmental assessment are consistent with existing land use planning documents. Those management actions which do not conform and which, if selected, would require amendment of the Northern Malheur MFP are the following: 1) pursuit of public acquisition of the 40 acre private parcel at the junction of Dago and Leslie Gulches by any means other than exchange; 2) locatable mineral withdrawal of any acreage less than the full ACEC; 3) removal of livestock grazing from the Leslie Gulch pasture of the Three Fingers temporary allotment; and, 4) removal of the ACEC from the Three Fingers Wild Horse Herd Management Area. All of these actions, with the exception of a mineral withdrawal of less than the full ACEC, are included in the preferred alternative.

Chapter 2 - Existing Environment

Setting

Leslie Gulch drains into the Owyhee Reservoir approximately 50 miles south of Ontario, Oregon, and 60 miles southwest of Boise, Idaho. The mouth of the gulch is at approximately 2600 feet above sea level, and the highest elevation is approximately 5300 feet on the eastern boundary of the ACEC. The boundary of the ACEC is generally defined by the watershed boundaries of Leslie, Slocum, Juniper, Dago and Runaway Gulches and their tributaries. The ACEC covers approximately 11,900 acres. Much of the southern boundary of the ACEC is the boundary between public and private lands to the south on Mahogany Mountain. Bureau of Reclamation (BOR) lands abut the west boundary of the ACEC near the Owyhee Reservoir.

The climate of the area is similar to that of the Great Basin and is one of extremes. Winter low temperatures can range well below zero, but typically are between IO and 30 degrees. During the summer, highs generally are near or above 100 degrees daily. While average annual precipitation is near eight inches, actual rainfall amounts are unpredictable. Storm events can bring several inches of rainfall within a few hours. During these times, the otherwise dry gulches can turn into raging torrents which can block or wash out roads and trails. With the exception of a short section below Mud Spring, none of the drainages within the Leslie Gulch ACEC contain perennially flowing water. Surface water typically flows in the drainages for only a short time in the spring or following storm events.

The rugged, scenic topography of the ACEC area has formed primarily by the differential weathering of the Leslie Gulch Ash Flow Tuff. These rocks were deposited 15 million years ago by a rhyolite pyroclastic flow. This violent volcanic explosion, which can be compared to the 1980 Mount Saint Helens eruption, resulted in the filling of the geographic low created by the formation of the Mahogany Mountain caldera. This mobile, molten froth contained hot volcanic gases, volcanic ash and larger volcanic debris. As the deposit cooled and lithified into rock, gases were trapped forming the pitted, “honeycomb” appearance of many of the rocks. Subsequent uplift, faulting and erosion has created the striking canyon vistas present today.

The variable soil types within the ACEC are primarily determined by landform and geologic type. The weathering of volcanic rocks in Leslie Gulch develop soils which are rich in clays and highly erosive. Many drainages have well formed gullies, and rills are common on some hillsides. This erosiveness is due to the steepness of the landforms, the unconsolidated nature of the weathered volcanic ash, the precipitation pattern, and the poor vegetative cover which occurs in the desert setting. Young, shallow soils have developed on outcrops of soft ash deposits, which provide unique conditions needed for many of the special status plants.

The canyons of the Leslie Gulch ACEC support the highest concentration of rare plant species in eastern Oregon, five of which are candidates for listing under the Endangered Species Act. The general ecological setting encompasses a wide variety of plant communities. An unusual pattern of northern, mesic flora represented by a relict stand of Ponderosa pine, mountain mahogany, and rocky mountain maple are in close association to a southern, xeric flora composed of greasewood, shadscale, and spiny hopsage. When combined with the rare plant species, the vegetative elements of the ACEC give a floristic variety unexcelled in Malheur County.

The Mahogany Ridge Research Natural Area (RNA), designated in the Northern Malheur MFP in 1983, covers 320 acres in the southeast portion of the ACEC. This area contains dense stands of mountain mahogany in complex vegetative associations with sagebrush and Oregon grape and was designated to protect these unusual plant communities.

Mule deer, Rocky Mountain elk and California bighorn sheep are found in the upland habitats of the ACEC and in adjacent lands. Upland game birds such as chukar partridge and California quail occupy much of the area. The rugged canyons also provide habitat for coyote, bobcat, and a variety of non-game migratory birds. Raptors, northern flickers and white-throated swifts use the numerous cliff crevices and cavities, which also provide potential habitat for bats. The area also provides excellent reptile habitat.

Leslie Gulch is popular for recreational use. Developed recreational opportunities include boating, fishing, camping and sightseeing. The boat launch facility is a favored takeout point for floaters on the Owyhee Wild and Scenic River and provides the only launch facility on the upper Owyhee Reservoir. Dispersed recreational opportunities include biking, rockclimbing, bunting, outdoor photography and wildlife watching. Leslie Gulch and the surrounding area provides one of the few places in Oregon where bighorn sheep can be hunted. The rockclimbing routes within the ACEC are highly challenging.

Most of the ACEC is made up of portions of three Wilderness Study Areas (WSAs). The Slocum Creek,

Honeycombs and Upper Leslie Gulch WSAs have all been recommended by the BLM for wilderness designation. The Oregon Wilderness Environmental Impact Statement identified all three WSAs as having a high degree of naturalness and outstanding opportunities for solitude or primitive and unconfined types of recreation.

The Leslie Gulch pasture of the Three Fingers temporary allotment makes up approximately 90 percent of the ACEC. The remainder of the ACEC is within the Bannock pasture of the same allotment.

The lands contained within the ACEC are public lands administered by the Bureau of Land Management. One 40-acre, privately owned parcel is located in T26S R45E Sec. 18 SW1/4 SE1/4, at the confluence of Leslie and Dago gulches. This property is not part of the ACEC. There is a cabin and perennially flowing Mud Spring is on the parcel. A 100 foot wide public easement crosses this private land, providing public access to the shore of Owyhee Reservoir.

The lands surrounding Owyhee Reservoir are withdrawn for the use of the Bureau of Reclamation (BOR). Approximately 340 acres of these lands are currently managed by the BLM under a Memorandum of Understanding (MOU). These lands which are located at the mouth of Leslie Gulch are neither part of the ACEC nor part of the wilderness study areas, but are managed for compatibility with the ACEC.

Relevant and Important Values

Special Status Plants

Five plant species found within the canyon are candidates for listing under the federal Endangered Species Act. All are associated with the highly unusual ash formations found in the area. Two of these species, Ertter's groundsel (*Senecio ertterae* - Category 1) and Packard's blazing star (*Mentzelia packardiae* -Category 2), grow predominantly on the greenish-yellow ash-tuff talus slopes. Grimy ivesia (*Ivesia rhypara* var. *rhypara* - Category 2) and Owyhee clover (*Trifolium owhyeense* - Category 2) grow on a shallow ash substrate. Sterile milk-vetch (*Astragalus sterilis* - Category 2) also is found scattered on ash deposits throughout the region. Three uncommon plant species; Packard's sagebrush (*Artemisia packardiae),* Mackenzie's phacelia (*Phacelia lutea* var. *mackenziorum*) and bare-stemmed buckwheat (*Eriogonum novonudum*) are also found in the canyons and bluffs of the ACEC. Ertter's groundsel and Packard's blazing star have been listed by the state of Oregon as threatened, and grimy ivesia and sterile milk-vetch are proposed for addition to the state list in 1993.

Based on numbers and total acreage, grimy ivesia is the rarest species in the ACEC. Its geographical distribution includes two small sites in northern Nevada and another small site in Lake County, Oregon. In addition to the Leslie Gulch sites, a site in northern Nevada has also been identified for Packard's blazing star. Ertter's groundsel grows in the Leslie Gulch vicinity and at two restricted sites near Birch Creek, a tributary of the Owyhee River approximately six miles southwest from Leslie Gulch Owyhee clover and sterile milk-vetch are endemic to the larger Owyhee region, with the clover known only on sites east of the Owybee River.

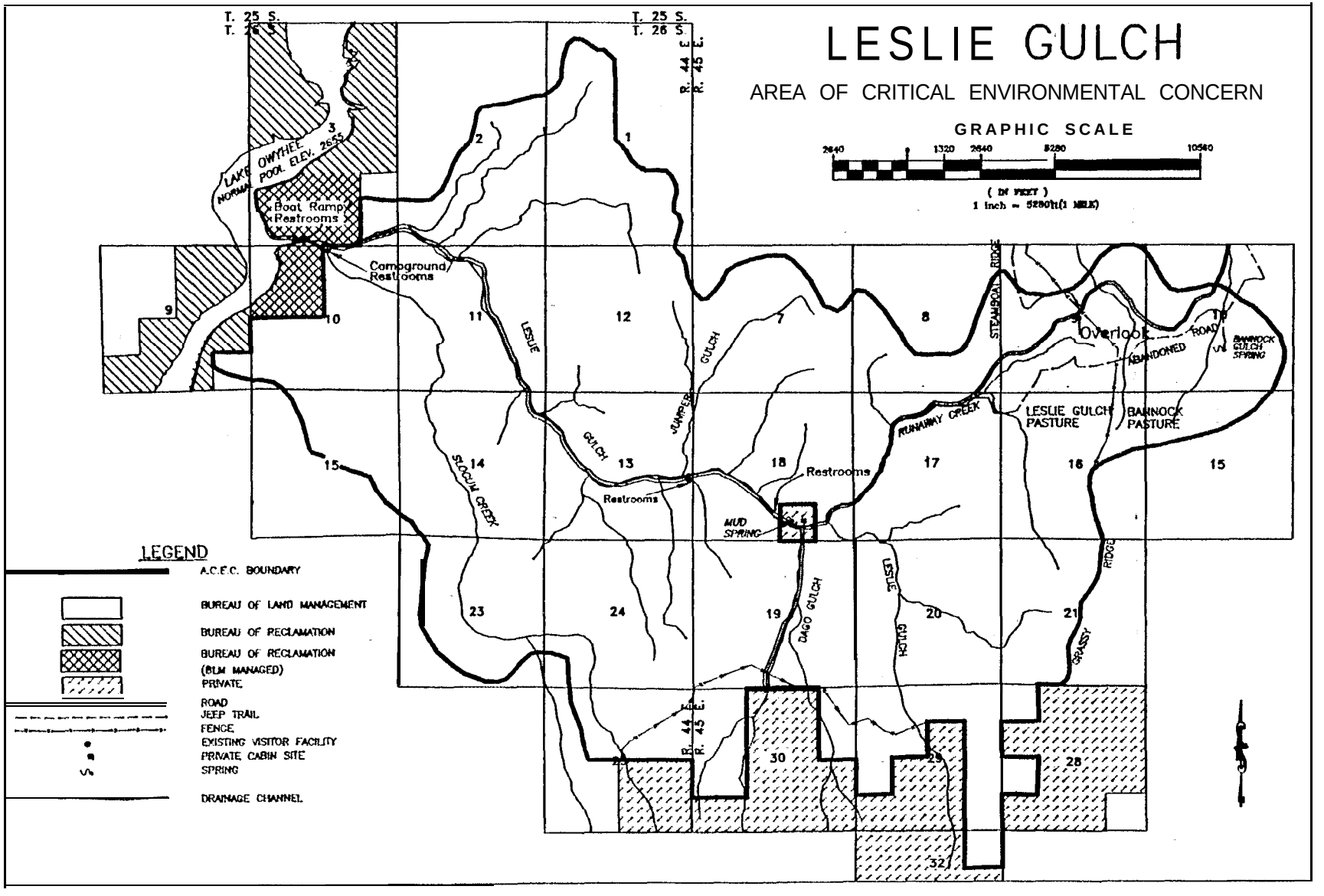
Scenic Values

The scenery within the ACEC is dominated by spectacular geologic formations created by the differential weathering of the Leslie Gulch Ash-Flow Tuff member of the Succor Creek formation. The tuff may be 2,000 feet thick in some places. Its great thickness, uniformity and relative resistance to weathering formed the impressive cliffs, outcrops and spires that characterize the area. As the volcanic rocks cooled, gases trapped inside led to the creation of the eerie and spectacular "honeycombing" effect in some areas, and is responsible for many skyline windows in the rock formations. The various ash layers present a variety of colors ranging from yellow to green and multiple shades of red. The areas's vegetation and intrusions of more resistant rhyolite dikes, frequently columnar in appearance, provide additional contrasting texture and color to the inspiring landscape.

Under the BLM Visual Resource Management (VRM) program, the ACEC is within a designated Class II area (See Glossary).

Bighorn Sheep Habitat

California bighorn sheep (*Ovis canadensis californiana*) are a Category 2 candidate for listing under the Endangered Species Act. In the early 1900s, bighorn sheep in Leslie Gulch were extirpated due to domestic sheep diseases and unregulated hunting. Seventeen bighorns were reintroduced in Leslie Gulch in 1965 and a second release of 15 bead was made north of the ACEC in 1987. The herd has grown to a population of approximately 200-240


LESLIE GULCH
AREA OF CRITICAL ENVIRONMENTAL CONCERN
GRAPHIC SCALE
2640 1320 2640 5280 10560
(IN FEET)
1 inch = 5280ft(1 MILE)
T. 25 S.
T. 26 S.
R. 44 E.
R. 45 E.
LAKE OWYHEE
NORMAL POOL ELEV. 2655
Boat Ramp
Restrooms
Campground
Restrooms
LESLIE GULCH
JUMPER GULCH
STEAMBOAT RIDGE
Overlook
ROAD
ABANDONED
BANNOCK GULCH SPRING
RUNAWAY CREEK
LESLIE GULCH PASTURE
BANNOCK PASTURE
SLOCUM CREEK
Restrooms
Restrooms
MUD SPRING
DAGO GULCH
LESLIE GULCH
GRASSY RIDGE
LEGEND
A.C.E.C. BOUNDARY
BUREAU OF LAND MANAGEMENT
BUREAU OF RECLAMATION
BUREAU OF RECLAMATION (BLM MANAGED)
PRIVATE
ROAD
JEEP TRAIL
FENCE
EXISTING VISITOR FACILITY
PRIVATE CABIN SITE
SPRING
DRAINAGE CHANNEL

animals which range outside of the ACEC, utilizing a 120-square mile area on the east side of Owyhee Reservoir and the Owyhee River,

Leslie Gulch provides excellent habitat for bighorn sheep. The steep cliffs of the canyon offer escape cover for the animals, and the small natural shelters along the rock faces provide thermal cover. Grasses, forbs and shrubs provide ample forage. Mud Spring and Owyhee Reservoir provide perennial water. The remote, rugged wilderness study areas extending beyond the ACEC provide a large area with a low potential for human harassment of the bighorns.

Other Values

Access and Roads

The Leslie! Gulch Road was originally constructed in the early 1900s as a wagon road from the community of Watson and the farming area along the Owyhee River for access to the east. At the urging of the Malheur County Commissioners, the present road was constructed from the Succor Creek Road to the Owyhee Reservoir in the late 1960's. This newly constructed road parallels the Leslie Gulch creek bed and follows a route with improved visibility and grade parallel to Runaway Creek.

Today, the Leslie Gulch Road provides public access to one of only four boat launch sites on Owyhee Reservoir, as well as recreational access to the Leslie Gulch area. A lockable gate near the ACEC's eastern edge could be closed if necessary for public safety in the event of water-caused road damage.

Two primitive roads are present within the ACEC, one up the bottom of Dago Gulch and the other along the top of Steamboat Ridge.

Mineral Resources

The mineral potential of the ACEC was analyzed by the U.S. Geological Survey in 1989 as part of the Wilderness Study Area evaluation process.

Portions of the ACEC have a moderate potential for occurrence of the locatable minerals uranium, thorium, gold, silver, lithium, arsenic, zeolite, mercury and zinc. Other areas are rated as having a low potential for zinc, The northern portion of the ACEC has been rated as having a high potential for the occurrence of gemstones (picture jasper). No economic deposits have been identified and there is no direct evidence of their occurrence. No mines, prospects, or mining claims are located within the ACEC and only casual use, non-surface disturbing activity can be expected.

The ACEC is not open for mineral leasing and no current mineral leases exist within the area. Portions of the ACEC have a moderate potential for geothermal resources and the ACEC has been rated as having no potential for other leasable mineral resources.

The salable minerals of sand, gravel and stone are not available for sale within the ACEC and no developments are located there. While large volumes of these materials exist, these would not be considered a resource since similar deposits exist elsewhere which are more accessible and closer to markets

Livestock Grazing

The public land within the ACEC has been grazed by livestock for many years. The name Leslie Gulch was derived from Hiram Leslie, a early rancher in the area. Historically, the first grazing by livestock began in the late 1800s and was unregulated. The Owyhee River was the base of operations for a number of ranches near the ACEC. Early accounts describe extensive, yearlong use by sheep, cattle and horses. Livestock grazing continues to be an important part of the local economy and culture.

Approximately 800 acres of the Bannock pasture and all of the Leslie Gulch pasture are in the ACEC. The Bannock Pasture is on the eastern edge of the ACEC. Both pastures are within the Three Fingers temporary allotment. This allotment has 9,981 active and 4,653 suspended Animal Unit Months (AUMs) with four grazing permittees. Currently, the two pastures are used by two of the permittees, who use the Leslie Gulch pasture with 132 head of cattle and 264 AUMs from March 1 to April 30. The Bannock pasture is used by approximately 450 cattle from May 1 to October 31 in a deferred rotation grazing system with three additional pastures. Grazing use in the Bannock Pasture is deferred until after the critical growth period of key forage species (approximately July 1) two out of three years.

Recreation

The Leslie Gulch area has long attracted recreationists in search of a high quality outdoor experience. Elements of its attractiveness are its remote location with reasonable vehicular access and the opportunity to pursue outdoor recreation activities in a setting with relatively few man-made impacts.

Within the ACEC, the area's natural attractions provide for exceptional scenic, geologic, botanical, wildlife, and general sightseeing activities and outstanding opportunities for nature photography.

Under the Recreation Opportunity Spectrum of describing recreational settings, the majority of the lands within the ACEC provide a setting for primitive types of recreational use, while those corridors adjacent to and including the existing roads provide for roaded natural and semiprimitive nonmotorized types of recreation opportunities (see Glossary).

The 1985 development at Owyhee Reservoir of a concrete boat ramp with parking, fish cleaning station and the Slocum Creek campground with vault restrooms, has provided increased recreational use opportunities. The boat ramp is one of only four ramps developed on the reservoir and serves as the only boating access for the upper Owyhee Reservoir area. All improvements except the campground are located on BOR land outside of the ACEC. Through a Memorandum of Understanding (MOU) with the BOR, the BLM manages this area. Two additional vault restrooms are located within the Leslie Gulch canyon adjacent to the Leslie Gulch Road.

Higher recreational use of the area typically occurs before and after the hot summer season. The river floatboating season, the greening up of the desert, and higher water levels of Owyhee Reservoir typically attract the highest use levels during the spring. During the fall when day time temperatures begin to cool and hunting activities increase there is also increased use. Based on limited available seasonal road traffic information, indications are that an upward trend in nonboating visitation is occuring in the Leslie Gulch area. During those years when water storage in Owyhee Reservior has provided reasonable boat ramp access from Leslie Gulch, approximately 50 percent of the area's visitation has occurred from April through June. The remaining 50 percent of annual recreational use occurs mostly from July through approximately mid-November. From 1976 through 1987, the average annual number of visitors to Leslie Gulch has been an estimated 8,360 persons. During the drought years of 1988 through 1992 total visitation was slightly lower, with a higher percentage of use occurring later in the season.

Leslie Gulch remains the primary takeout point for river floaters who put in at Rome on the Owyhee National Wild River. The latter part of the river floating season coincides with the reservoir boating use season, occasionally straining existing parking capabilities.

The multitude of side canyons and various ridge systems within the ACEC beckon the more adventurous visitor, The Leslie Gulch Road through the main canyon has made such nonmotorized recreational use opportunities more accessible than in most other areas of the Owyhee Breaks country. Dispersed primitive recreation activities include day hiking; geologic, botanic and wildlife viewing; general sightseeing; and hunting.

"Upland bird and big game hunters seeking primarily chukar partridge and mule deer visit the area. A selected few people are annually licensed by the Oregon Department of Fish and Wildlife (ODFW) to hunt the prized bighorn sheep.

The Leslie Gulch bighorn sheep herd has been hunted since 1973, with 94 hunters taking 87 bighorn rams. This is one of 11 areas where California bighorn sheep are hunted in Oregon, and one of only four areas in Oregon where a nonresident bighorn tag is offered. There are presently two hunts in September with three hunters each season.

Historically, most recreational horse use has been by big game hunters. Hunters with horses travel along the Owyhee River canyon when the reservoir level is low, taking them outside of the ACEC.

Hikers and equestrians have expressed interest in development of a nonmotorized Owyhee Breaks Trail along the east side of the Owyhee Reservoir. This point-to-point corridor trail would extend from near the state park at the north end of the reservoir to Leslie Gulch and further south. Such a trail route would aid recreationists in navigating through an extensive region of public lands located in the Honeycombs and Wild Horse Basin Wilderness Study Areas. Leslie Gulch would be a likely location for providing trailhead amenities since the road provides access through the canyon.

Sport rock climbing has increased since 1990. Before then, only one climbing route was known in the area. Current climbing routes are within existing wilderness study areas, notably in or near the upper Leslie Gulch canyon, "Einstein" is the most developed climbing site with 14 summit anchor points and a combination of 26 climbing routes each with permanent (fixed) anchors. The site is on a vertical to overhanging rock face accessed by a 0.25 mile hike up upper Leslie Gulch canyon. A second popular climbing site is "Asylum", which is located on a rock wall at the junction of Runaway Creek and upper Leslie Gulch. This climbing site has 7 climbing routes, each with fixed anchors.

The ACEC is within a designated "limited" off-highway vehicle (OHV) use area. This designation restricts the use of all motorized vehicles yearlong on BLM public lands to three existing routes: the Runaway Creek/Leslie Gulch main road, Dago Gulch Road, and the route on Steamboat Ridge.

While vehicle-accompanied campers are encouraged to limit their activities to the Slocum Creek campground, there are no specific restrictions related to camping activity within the ACEC. Occasionally [illegible] vehicle camp sites are established off the main roads in the ACEC, particularly in Dago Canyon and along the main Leslie Gulch Road. The Dago Gulch/Leslie Gulch junction area is also a preferred vehicle camping and parking area, some on the private 40-acre parcel and some on adjacent public land. Dispersed vehicle camping activities has resulted in increased damage and destruction of woody vegetation for use in campfires, and impacts on vegetation, soil, and on some rare plant habitats neighboring the Leslie Gulch Road.

Wilderness

Approximately 85 percent of the ACEC has been designated as wilderness study areas (WSAs). Included is all of the 3,000-acre Upper Leslie Gulch WSA (OR-3-74), about 55 percent of the 7,600-acre Slocum Creek WSA (OR-3-75), and about 8 percent of the 39,000-acre Honeycombs WSA (OR-3=77A).

Wilderness values identified within the three WSAs are outstanding opportunities for solitude and primitive and unconfined recreation, a high degree of naturalness and a number of special wilderness features.

Special wilderness features within the ACEC include their spectacular scenery, the presence of several species of special status plants, bighorn sheep, winter habitat for northern bald eagles, Rocky Mountain elk, a disjunct stand of ponderosa pine and an outstanding population of curl-leaf mountain mahogany.

Wildlife

Mule deer, Rocky Mountain elk and California bighorn sheep are found in the upland habitats of the ACEC and lands adjacent to the ACEC. Mule deer also utilize Runaway Gulch during the early winter and lower Leslie Gulch in the late winter and early spring. Elk use varies with the severity of the winter. Upland game birds such as chukar partridge and California quail occupy much of the area. The rugged canyons also provide habitat for coyote, bobcat, hawks, lizards, and a variety of non-game migratory birds. Raptors, northern flickers, and white-throated swifts use the numerous cliff crevices, which also provide potential habitat for bats.

Special status animal species in the ACEC other than California bighorn sheep include bald eagles (*Haliaeetus leucocephalus*), listed as threatened under the 'Endangered Species Act, which winter along the Owyhee River corridor. Mountain quail (*Oreortyx pictus*), a Category 2 candidate for listing, have been rare in Malheur County for many years. The last recorded observation in the county was in the ACEC in 1981. Alcoves and crevices in the cliff walls provide potential roosting habitat for Townsend's big-eared bat (*Plecotus townsendii*), a Category 2 candidate for listing. Reptile species found in the area include the Mojave black-collared lizard (*Crotaphytus bicinctores*), a Bureau Sensitive species, and the western ground snake (Sonora *semiannulata*), a Bureau tracking species. The white-tailed antelope squirrel (*Ammospermophilus leucurus*) is another Bureau tracking species that has been observed in the ACEC.

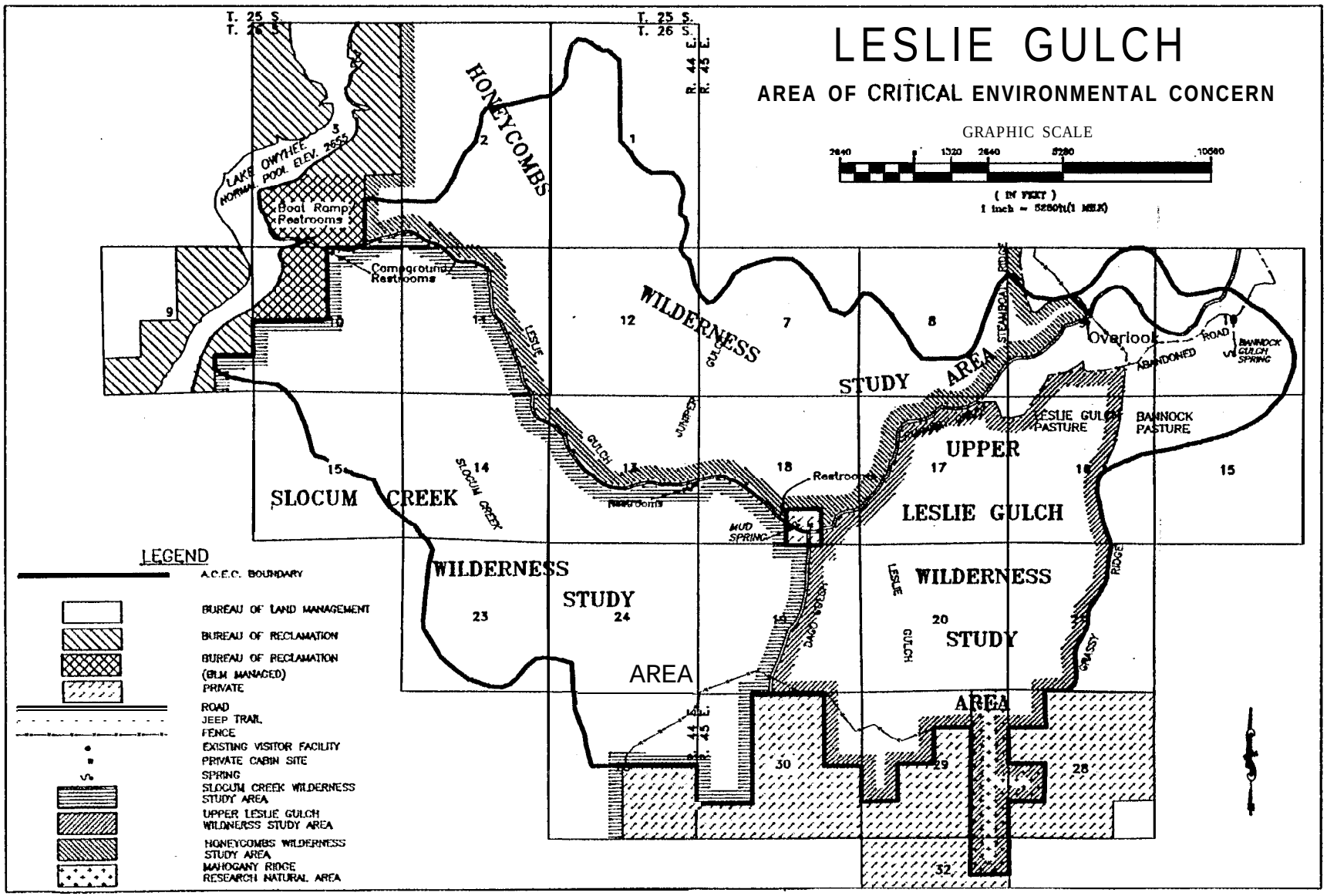
Wild Horses

Approximately 7,700 acres (10 percent) of the Three Fingers Wild Horse Herd Management Area (HMA) are within the Leslie Gulch ACEC. Wild or feral horses have used the HMA since the late 1800s. Accounts from the early 1900s estimated over 5,000 feral horses inhabited the general area from Cow Creek on the south, to Adrian on the north, the Owyhee River on the west, and the Idaho state line on the east. Today there are between 75 and 150 wild horses within the 76,933 acre HMA, but wild horses use of Leslie Gulch is currently infrequent.

Other Botanical Resources

Contributing to the biological divisity of the ACEC are two significant sites which support notable examples of botanical communities.

A small disjunct population of ponderosa pine (*Pinus* ponderosa) is found at the southern boundary of the ACEC. The stand occurs on the crest of a ryolitic ridge approximately 70 miles from the nearest ponderosa pine forests. Nearly 100 trees varying in age from seedlings to two trees over 200 years old have been identified. There is no evidence indicating that this is a relict population, and origins from the west or northwest have been advanced. Because of


LESLIE GULCH
AREA OF CRITICAL ENVIRONMENTAL CONCERN
GRAPHIC SCALE
(IN FEET)
1 inch = 5280ft(1 MILE)
T. 25 S.
T. 26 S.
R. 44 E.
R. 45 E.
HONEYCOMBS
WILDERNESS STUDY AREA
SLOCUM CREEK WILDERNESS STUDY AREA
UPPER LESLIE GULCH WILDERNESS STUDY AREA
LAKE OWYHEE
POOL ELEV. 2655
Boat Ramp
Restrooms
Campground
Restrooms
Overlook
ROAD ABANDONED
BANNOCK GULCH SPRING
LESLIE GULCH PASTURE
BANNOCK PASTURE
Restrooms
MUD SPRING
JUNIPER GULCH
SLOCUM CREEK
LESLIE GULCH
MAHOGANY RIDGE
LEGEND
A.C.E.C. BOUNDARY
BUREAU OF LAND MANAGEMENT
BUREAU OF RECLAMATION
BUREAU OF RECLAMATION (BLM MANAGED)
PRIVATE
ROAD
JEEP TRAIL
FENCE
EXISTING VISITOR FACILITY
PRIVATE CABIN SITE
SPRING
SLOCUM CREEK WILDERNESS STUDY AREA
UPPER LESLIE GULCH WILDERNESS STUDY AREA
HONEYCOMBS WILDERNESS STUDY AREA
MAHOGANY RIDGE RESEARCH NATURAL AREA

its inaccessibility, the stand shows little to no sign of visitation by livestock or humans.

The Mahogany Ridge Research Natural Area (RNA) is on the northern side of Mahogany Mountain. Much of the RNA shows little use by domestic livestock and is considered to show undisturbed examples of several extensive curl-leaf mountain mahogany (*Cercocarpus ledifolius*) stands. Several differences in soil types and communities represent variations in which the mahoganycan grow. The RNA site appears to be a transition area between mountain mahogany and western juniper (*Juniperus occidentalis*) with a good mosaic of the two species. The area is remote and can be accessed only through cross-country hiking. Management for RNAs is to preserve the identified values in their existing states for research opportunities. All actions associated with this plan will be consistent with this management objective.

Major Management Issues

Activities Affecting Special Status Plants

Grazing

Livestock grazing may impact the relevant and important values of special status plants by trampling the plants and their habitat, and to a lesser extent by consuming the plants. Many of the known plant sites are situated on the lower slopes where cattle usually graze. Some plant sites have well developed trails through them which preclude plant growth due to continuing disturbance and soil compaction.

The 264 AUMs of grazing provided by the Leslie Gulch pasture provides income for the grazing permittees and helps support the customary life style of the local ranching community.

The special status plant populations have survived historic grazing pressures which were heavier than today. It is unknown if historic grazing has caused a reduction in the range of these species. Localized extinctions or population reductions may have occurred on suitable habitat which has been subject to grazing.

Recreation

People may impact the special status plants by trampling them or their habitat. Several of the plant sites are near preferred hiking routes, the main Leslie Gulch Road and the existing Slocum Creek campground. Factors affecting impacts by visitors include the levels and types of recreation and the location of recreational activities relative to the locations of the plant habitat. Promoting visitation to Leslie Gulch or improving recreational facilities to an excessive level could attract too many visitors to the area. Inadequately managed increased visitor use in the area may cause unacceptable impacts to the relevant and important values of the ACEC.

Road Maintanence

At three locations, the Leslie Gulch Road passes through habitat supporting special status plants. The road is maintained on an annual basis, with additional maintenance necessary following sporadic flood events. Maintenance activities disturb special status plant habitat, affect seed dissemination, and uproots individual plants. Disturbance to the roadsides also provides habitat for noxious weed invasion.

Grazing Impacts to Recreation

Some recreationists object to seeing cattle or their sign, and many have expressed the opinion that cattle should not be in or around developed recreational facilities such as campgrounds.

Acquisition of Private inholding

The 40-acre Dago Gulch private parcel has the only reliable, accessible water source within the ACEC. There is a cabin on the property and the owner is not required to control noxious weeds. There is no legal public access across this land to Dago Gulch and there is limited control over the type of development which the owner could pursue. Some public opinion favors removing the cabin from the natural setting of Leslie Gulch. BLM is yet to determine if public interest is served best by acquiring ownership of the property or by acquisition of access and scenic easements. The water at the site is extremely important to the California bighorn sheep and is presently available for public use.

Rock Climbing

Several sport rock climbing routes within Leslie Gulch are of world class quality. Ail are located within the Wilderness Study Area portions of the ACEC. Climbers have created hand holds and use chalk which makes the hand holds quite visible. In addition, fixed metallic anchors to support ropes and other hardware are attached to the rock faces. Popular climbing

routes can become highly visible and impact the relevant and important scenic values of the area as well as wilderness values.

Noxious Weeds

Three noxious weed species have been found in Leslie Gulch, and other far more aggressive species have been located in nearby areas. Spread of these plants represents the greatest threat to the special status plants and their habitat; Weeds can be spread through movement of domestic and wild animals, by vehicles moving through the area, by the wind, and by general recreational activities including hiking and camping.

Chapter 3 - Management Alternatives

Ten resource management topics have been identified that require management direction within the Leslie Gulch ACEC. These are the following: Access and Roads, Land Tenure, Minerals, Livestock Grazing, Noxious Weeds, Wild Horses, Special Status Plants, Wildlife, Wildfire, and Recreation.

In this section, four alternatives are presented for each of these resource management topics. Each alternative consists of management actions which may be implemented for that topic. Generally, the Alternative A actions are the most protective of natural values with minimal site development, Alternative B is no change from current management direction, and Alternative C provides a higher level of area development and access while still protecting natural values. Alternative D is the agency preferred alternative and is generally a composite of actions selected from Atternatives A, B, and C. All final management actions selected must be in accordance with the Interim Management Policy and Guidance for Lands Under Wilderness Review (IMP) and other policy for the three WSAs.

Management Alternatives for Access and Roads

Alternative A

In addition to the existing maintenance practices detailed for the Leslie Gulch road in Alternative B, the following actions would be implemented:

- Two additional pullout/parking areas would be developed along the Leslie Gulch Road to reduce traffic congestion and to provide access to portions of the ACEC where no parking now exists. The pullout/parking areas would be located at the mouths of small drainages, one in the SW 1/4 of Section 2 and one in the SW 1/4 of Section 13.
- Road width, maintenance practices and design would be analyzed where the Leslie Gulch Road crosses identified special status plant sites to identify opportunities to reduce conflicts with the plants. Road realignment would not be considered.
- The Steamboat Ridge Road would be permanently closed and revegetated with native vegetation. A public easement into Dago Gulch would be pursued if the private land at the mouth of Dago Gulch were not acquired. A locked gate would be installed in Dago Gulch 0.8 mile north of the existing gate to control vehicle access south on the Dago Gulch Road.

Alternative B

- Drainage crossings would not be improved beyond the existing situation. The crossings would be maintained without additional structure to pass most storm runoff events while maintaining road grade.
- Road maintenance would be done only as needed. The road is graded annually and major work is scheduled in response to flood events.
- Outside the special status plant sites, the road maintenance goals would be to retain a graded and drained road prism. Procedures to achieve this would include cleaning of the roadside ditches, backslopes, and crowning of the road surface.
- Culvert maintenance would include tail ditch construction and control of intersecting drainages in accordance with IMP guidance.
- The Steamboat Ridge vehicle Road would remain open, but would not be maintained. No new gate would be placed in Dago Gulch.

Alternative C

The measures in Alternative A would be implemented with the following exceptions:

- Four additional pullout/parking areas would be constructed along the Leslie Gulch Road to reduce traffic congestion and improve recreational access. In addition to the two pullout/parking areas described under Alternative A, pullout/parking areas would be located at the mouth of upper Leslie Gulch and at the mouth of Timber Gulch (NW 1/4 Section 14).
- More extensive road work would be allowed on the drainage crossings of the Leslie Gulch Road. This work could include drop structures located below crossings to control headcutting, or short sections of paving of the crossings themselves.
- The Steamboat Ridge Road would remain open, but would not be maintained. The Dago Gulch road would be partially closed.

DESCRIPTION OF ALTERNATIVES

Resource Topic	Alternative A	Alternative B (No Action)	Alternative C	Alternative D (Preferred)
Access/Roads	•All existing maintenance in Alternative B, plus: •2 additional pullout/parking areas, •Road maintenance minimized at special status plant sites. *Steamboat Ridge route closed; Dago Gulch closed with gate. •Public easement or acquisition up Dago Gulch.	•Drainage crossings not improved. •Road maintenance on as needed basis. • [illegible] road and culvert maintenance. •Steamboat Ridge route would remain open on public land.	•All measures in Alt. A except: •4 pullout/parking areas. •More extensive road work on drainage croeeings. *Steamboat Ridge route would remain open; Dago Gulch closed with gate.	•Up to 4 additional pullout/parking areas. •Road maintenance minimized at special status plant sites, otherwise as needed. •Roadside seeding with native plants permissible. •Steamboat Ridge route open; Dago Gulch closed with gate. •Public easement or acquisition up Dago Gulch.
Land Tenure	•Pursue acquisition of 4 0 acre private parcel or public and scenic easements. •No water development if private parcel acquired.	•Public ownership. public and scenic easements would not be pursued.	•All measures in Alternative A, except some water piped to Slocum Creek campground if private parcel acquired.	•Pursue acquisition of 40 acre parcel, life estate or public and scenic easements. •No water development if private parcel acquired.
Minerals	•Areas not recommended for wilderness withdrawn from locatable mineral development. •No saleable mineral development in the ACEC. •No surface occupancy for mineral leasing.	•Locatable minerals withdrawn throughout ACEC. •No saleable mineral development in the ACEC. •No surface occupancy for mineral leasing.	• Locatable minerals not withdrawn. •No saleable mineral development in the ACBC. •No surface occupancy for mineral leasing.	•Locatable minerals withdrawn throughout ACEC. •No saleable mineral development in the ACEC. •No surface occupancy for mineral leasing.
Livestock Grazing	•No grazing in Leslie Gulch pasture. •AUMs moved to other pastures in Three Fingers allotment. •Fence moved to include entire ACBC in Leslie Gulch pasture. •Drift fence built at ACEC boundary if needed.	• Leelis Gulch pasture grazed with 132 cattle in March and April (264 AUMs). •Other pastures not affected. • xttle trailed in on main access road and trailed out upper Leslie Gulch.	•Leslie Gulch pasture grazed with 88 cattle December through February (264 AUMs). •Other pastures not affected. •Cattle trailed in on abandoned protions of Runaway Gulch road to avoid special status plant site.	•No grazing in Leslie Gulch pasture. •AUMs moved to other pastures in Three Finger" allotment. *Drift fence built at ACBC boundary if needed.
Noxious Weeds	•Manual weed control only. •Clean road maintenance equipment before entering AC&C.	•Existing combination Of manual and chemical weed control.	*Existing combination of manual and chemical weed control. •Weed free hay required for horses.	• xisting combination of manual and chemical weed control. *Chemical control on site specific basis to eliminate potential impacts co special status plants. •Clean road maintenance equipment before entering ACEC.
Wild Horses	*Leslie Gulch removed from Horse Management Area.	• [illegible] Horse Management Area retained.	• [illegible] Area retained.	•Leslie Gulch removed from Horse Management Area.
Special Status Plants	•Trail rerouted in Slocum Creek to avoid tare plant sites. •Other trails around plant sites developed if needed. •Pole fence constructed near Slocum Creek campground if needed. •0.8 mile of Dago Gulch closed by locked gate.	• o changes in current level of protection. Existing limited OHV designation retained.	•All measures in Alternative A. •Exclosure constructed around special status plant site "ear Overlook.	*Site-specific trail segments. fences, signs installed if needed. •0.8 mile of Dago Gulch closed by locked gate. *Special status plants may be introduced into suitable habitat.

DESCRIPTION OF ALTERNATIVES

Resource Topic	Alternative A	Alternative B (No Action)	Alternative C	Alternative D (Preferred)
Wildlife	@Bighorn sheep transplant operation6 based at Slocum Creek campground or BOR lands. @Placement of wormer blocks or other supplements reviewed.	●No limits on bighorn sheep transplant base operations.	●No limits on bighorn sheep transplant operations.	●Bighorn sheep transplant operations based at Slocum Creek campground or BOR lands. Other sites evaluated if proposed by ODFW. *Placement of wormer blocks or other supplements reviewed.
Fire	●No earth moving equipment in cultural or special status plant sites in ACEC. ●IMP provisions apply to WSAs. ● Wilderne@ Management Policy followed if designated Wilderness. ●Outside WSAs/Wilderness no earth moving equipment unless extreme fire conditions occur. ●Fire suppression impacts on ACEC would be monitored.	●All measures as in Alternative A.	@All measures as in Alternative A.	●All measures a.8 in Alternative A, plus: @Prescribed fire would be considered to enhance ACKC or wilderness values.

DESCRIPTION OF ALTERNATIVES
RECREATION

	Alternative A	Alternative B (No Action)	Alternative C	Alternative D (Preferred)
Rock Climbing	•No fixed anchors, artificial handholds. or power tools. @Chalk use discouraged. •No competitive or commercial rock climbing. •No new alteration of natural rock surfaces. • BLM approval needed for removal of artificial constructs.	@Allow existing fixed anchors, artificial handholds only at Einstein. •No power tools. @Mitigated chalk use allowed. •No competitive or commercial rock climbing. •No new alteration of natural rock surfaces. •BLM approval needed for removal of artificial constructs.	•Climbing allowed with BLM approval. • Litnited power tools use. •No new routes or artificial handholds. @Mitigated chalk "ee allowed. •No competitive or commercial rock climbing. •No new alteration of natural rock surfaces. •BLM approval needed for removal of artificial constructs.	• Bxisting fixed anchors, mitigated chalk use, constructed hand holds allowed only at Einstein. Fixed hardware removed or mitigated on other routes. Power tools not allowed. •Route would be closed when fixed anchors became unsafe. •Group size and frequency of use limited if needed. •No competitive or commercial rock climbing. •No new alteration of natural rock surfaces. • BLN approval needed for removal of artificial constructs.
Dispersed Recreation	•Day use only outside Slocum Creek campground. •No ground/campfires outside developed campground. No use of area vegetation. @Administrative horse "se only. •Site specific trail segments developed if needed.	@Camping and ground fires allowed throughout. •Horse use allowed. Weed free hay required. @Sit@ specific trail segments could be constructed.	•Camping allowed except within 0.5 mile of roads. •No ground fires. •Horse use allowed on roads and ridges; group size limited. •Weed free hay required. @Site specific trail segments developed if needed. •Owyhee Breaks trailhead.	•Day "se only outside Slocum Creek campground. •No ground/campfires outside developed campground. No use of area vegetation. •Administrative horse use. •Owyhee Breaks trailhead. •Trails developed if needed. @Wildlife conflicts at higher visitor use areas assessed and mitigated.
Special Use Permits	@Permitted group size limited to 6 persons maximum. •Backcountry access permit system implemented if needed. •No vegetation/rock gathering permits.	•Permits issued on case by case basis. •Backcountry visitor access not restricted.	•Permits issued on case by case basic. •Backcountry access permit system implemented if needed.	@Permitted group size limited to 6 persons maximum. • Backcountzy access permit system implemented if needed. @Vegetation/rock gathering permits for ocienrific or educational purposes only.
Off Highway Vehicle (OHV) Use	@Limited to designated roads. @Steamboat Ridge vehicle route closed. • Dago Gulch road closed with gate	@Limited to existing designated routes.	•Limited to existing designated routes.	•Limited to Leslie Gulch and Steamboat Ridge roads. •Dago Gulch road closed with gate.
Special Designations	@Back Country Byway and Watchable Wildlife designations removed. •Other designations would remain.	•WSA, SRMA, RNA, Back Country Byway, Watchable Wildlife designations would remain.	• wsA, SRMA, RNA, Back Country Byway, Hatchable Wildlife designations would remain.	•Back Country Byway and Watchable Wildlife designations removed. •Other designations would remain.

DESCRIPTION OF ALTERNATIVES
RECREATION

	Alternative A	Alternative B (No Action)	Alternative C	Alternative D (Preferred)
Developed Recreation Facilities	●Existing facilities would remain except relocation of one restroom to Dago Gulch or upper Leslie Gulch. ●10 campsites provided at Slocum Creek campground. ●Day use parking area at Dago Gulch if private land acquired or upper Leslie Gulch if private land not acquired. ●No potable water available. ●Lockable gate at overlook retained. *Handicapped access provided at selected developed facilities. ●Shooting restrictions around developed facilities enforced.	●All existing facilities would remain. ●Additional camp units developed at Slocum Creek campground. ●No restriction on vehicle camping outside WSAs. ●No additional parking areas. ●No potable water available. ●Lockable gate at overlook retained. ● HandicaL;ped access provided at selected developed facilities. *Shooting restrictions around developed facilities enforced.	● Elocum Creek campground expanded to 15-20 camp units. Potable rater and parking developed. ●Day use parking with restrooms and equestrian camp site It Dago Gulch. ●Day use parking at upper Leslie Gulch. *Added parking, docks, waste facility at boat launch. ● Day use picnic area with ↗□□♦ trail near boat launch. ●Day use picnic area at Juniper Gulch. ● Lockable gate at overlook retained. *Handicapped access provided at selected developed facilities. ●Shooting restrictions around developed facilities enforced.	●Existing facilities would remain except relocation of one restroom to Dago Gulch or upper Leslie Gulch. ●Campsites provided at Slocum Creek campground. *Day use parking area at Dago Gulch if private land acquired or upper Leslie Gulch if private land not acquired. ●No potable water available. ●Added parking, safety dock, waste facility, picnic site at boat launch. *Temporary overnight facility could be developed at Slocum for BLM employee. ●Lockable gate at overlook retained. ●Handicapped access provided at selected developed facilities. ● Shooting restrictions around developed facilities enforced.

Alternative D (Preferred Alternative)

- As many as four additional pullout parking areas would be constructed should monitoring indicate a need to prevent unacceptable resource damage in areas of concentrated use.

- Road width, maintenance practices and design would be analyzed where the Leslie Gulch Road crosses rare plant habitat to identify opportunities to reduce conflicts with the plants. 'Road realignment in non-WSA locations could be considered for enhancing special status plant habitat. Any road work proposed would consider the scenic and wilderness values contained within the ACEC and must meet IMP guidance.

- A public easement into Dago Gulch would be pursued if the private land at the mouth of Dago Gulch were not acquired. A locked gate would be installed in Dago Gulch 0.8 miles north of the existing gate to control vehicle access south on the Dago Gulch Road.

- Road maintenance on the Leslie Gulch Road would generally be done only as needed. The road would be graded annually, and major work would be scheduled in response to flood events. Roadside seeding with native plant species would be considered to reduce weed invasion.

- Outside the special status plant sites, the road maintenance goals would be to retain a graded and drained road prism. Procedures to achieve this standard would include cleaning of the roadside ditches, backslopes, and crowning of the road surface.

- Drainage crossings along the Leslie Gulch Road would have drop structures constructed as necessary to retain existing road grade. Any construction activity would be completed in accordance with IMP guidance.

- Road culvert maintenance would follow standard practices and would include tail ditch maintenance and control of intersecting drainages in accordance with IMP guidance.

- The Steamboat Ridge Road would remain open and would not be maintained. WSA boundary signs and increased monitoring would be used to discourage vehicular traffic into Honeycombs WSA.

Management Alternatives for Land Tenure

Alternative A

- Acquisition of the 40-acre private parcel at the junction of Leslie and Dago gulches would be pursued. A public easement to Dago Gulch and a scenic easement would be optionally pursued.

- Should public acquisition of the land occur, the property would be reclaimed to a natural state by removal of all developments and revegetation with native species. Wildlife water would remain at the spring site. No potable water would be made available for public consumption.

Alternative B

- Public ownership, public access or scenic easements would not be pursued on the 40-acre Dago Gulch property. There would continue to be no potable water available on public land.

Alternative C

- The actions described under Alternative A would be pursued, with the following exception: Should the parcel be acquired for public ownership, a portion of the water at Mud Spring would be piped to the Slocum Creek Campground and be treated for public consumption. The pipeline would be buried in the access road. Other options may be considered to supply water to the campground. Adequate water would be made available for wildlife at the spring site.

Alternative D (Preferred Alternative)

- Acquisition of the 40-acre private parcel at the junction of Leslie and Dago gulches would be pursued, assuming a willing seller. If acquisition is not possible, then a life estate that would transfer ownership to the public would be pursued. A public easement to Dago Gulch would be pursued if necessary. A scenic easement would be negotiated as a final option. This acquisition or easement would require an amendment to the Northern Malheur Management Framework Plan.

- Should public acquisition of the land occur, the property would be reclaimed to a natural state by removal of all developments and revegetation with native species. Wildlife water would remain at the

spring site. No potable water would be made available for public consumption.

Management Alternatives for Minerals

Alternative A

- Mineral withdrawal would be pursued for those portions of the ACEC which were not recommended for wilderness designation in the BLM wilderness study process. This is approximately 1035 acres. This action would require an amendment to the Northern Malheur Management Framework Plan, but would not require Congressional review.
- The entire ACEC would remain closed to salable mineral development.
- Mineral leasing would be restricted to no surface occupancy.

Alternative B

- Locatable mineral withdrawal would be pursued for the entire ACEC as recommended in the Northern Malheur Management Framework Plan. Because the area to be withdrawn is larger than 5000 acres, the mineral withdrawal would require Congressional notice and would be subject to veto by either house of Congress.
- The entire ACEC would remain closed to salable mineral development.
- Mineral leasing would be restricted to no surface occupancy.

Alternative C

- The ACEC would not be withdrawn from locatable mineral activity or mineral material sales. Mining claims could be located and developed in accordance with the Mining Law of 1872 and would follow IMP guidance within the WSAs. This action would require an amendment to the Northern Malheur Management Framework Plan. Any areas Congressionally designated as wilderness would likely be withdrawn from all mineral development activity as part of the wilderness designation process.
- The entire ACEC would remain closed to salable mineral development.
- Mineral leasing would be restricted to no surface occupancy.

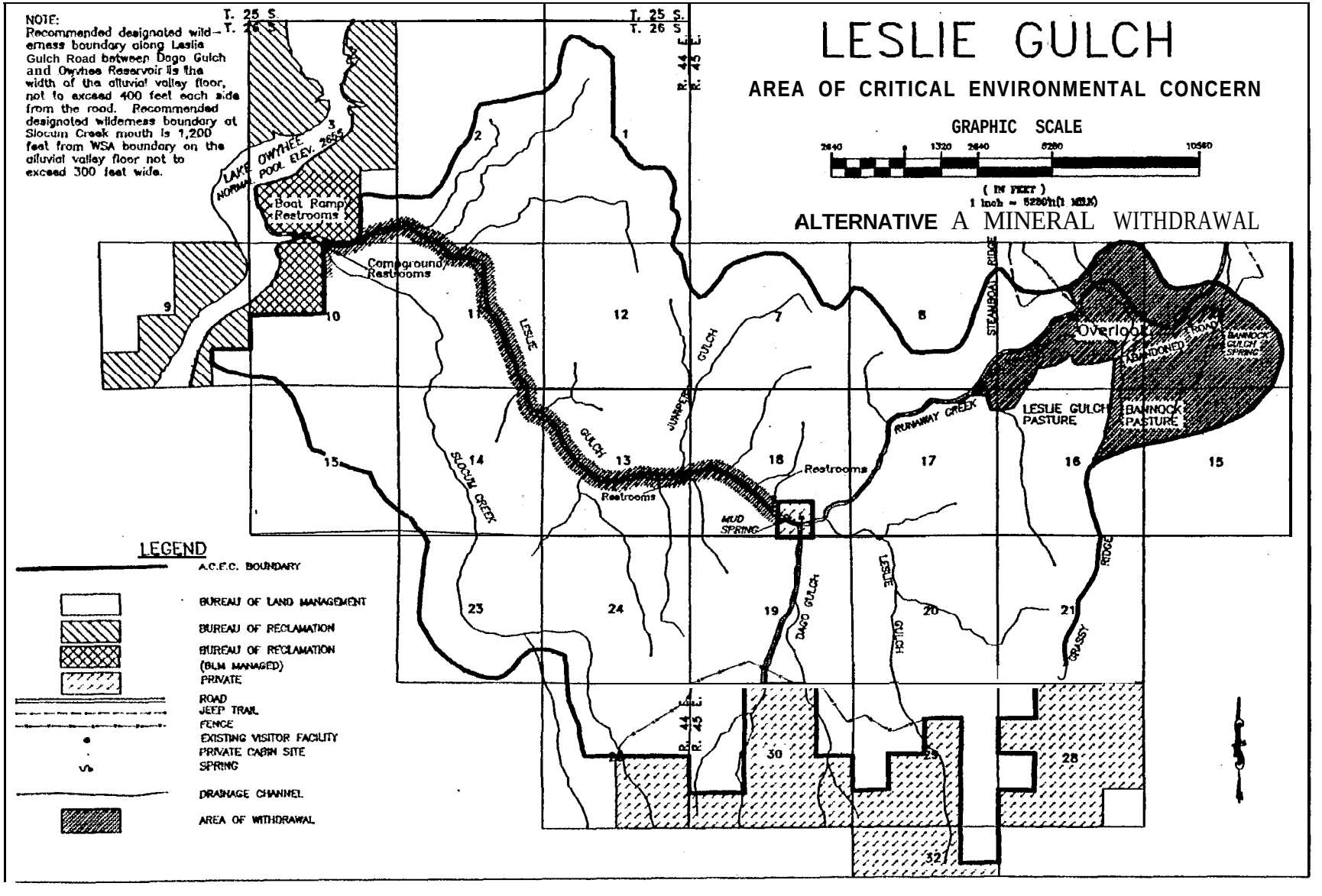
Alternative D (Preferred Alternative)

- A locatable mineral withdrawal would be pursued for the entire ACEC as called for in the Northern Malheur Management Framework Plan. Because the area to be withdrawn is larger than 5,000 acres, a mineral withdrawal would require Congressional notice and would be subject to veto by either house of Congress.
- The entire ACEC would remain closed to salable mineral development.
- Mineral leasing would be restricted to no surface occupancy.

Management Alternatives for Livestock Grazing

Alternative A

- The Leslie Gulch pasture of the Three Fingers temporary allotment would have livestock removed. This is the pasture within the ACEC in which the conflicts between livestock and other resources, especially sensitive plants, have been identified. The livestock use would be moved to three other pastures {Saddle Butte, Bannock, and Sulphur Springs Seeding) within the Three Fingers temporary allotment. Current monitoring data indicate there is sufficient forage to accomodate the increased use in these pastures. A reduction in active grazing preference may be made in the future if monitoring indicates the increased use is not sustainable. This removal would require an amendment to the Northern Malheur MFP.
- The fence between the Leslie Gulch and Bannock pastures within the ACEC would be relocated so that the entire ACEC is within the Leslie Gulch Pasture. The fence would be along the eastern boundry of the ACEC, and would require construction of 3 miles of fence and removal of 2 miles of fence.
- Depending upon monitoring, up to two miles of drift fence may be necessary to keep cattle from drifting into Leslie Gulch from the adjacent Riverside and Bannock pastures. Any fence would be located so as to minimize impacts to wilderness and scenic values.


LESLIE GULCH
AREA OF CRITICAL ENVIRONMENTAL CONCERN
GRAPHIC SCALE
2640 1320 2640 5280 10560
(IN FEET)
1 inch = 5280ft(1 MILE)
ALTERNATIVE A MINERAL WITHDRAWAL
NOTE:
Recommended designated wilderness boundary along Leslie Gulch Road between Dago Gulch and Owyhee Reservoir is the width of the alluvial valley floor, not to exceed 400 feet each side from the road. Recommended designated wilderness boundary at Slocum Creek mouth is 1,200 feet from WSA boundary on the alluvial valley floor not to exceed 300 feet wide.
T. 25 S.
T. 26 S.
R. 44 E.
R. 45 E.
LAKE OWYHEE NORMAL POOL ELEV. 2655
Boat Ramp
Restrooms
Campground
Restrooms
LESLIE GULCH
JUNIPER GULCH
SLOCUM CREEK
RUNAWAY CREEK
STEAMBOAT RIDGE
Overlook
ABANDONED ROAD
BANNOCK GULCH SPRING
LESLIE GULCH PASTURE
BANNOCK PASTURE
Restrooms
Restrooms
MUD SPRING
DAGO GULCH
LESLIE GULCH
GRASSY RIDGE
LEGEND
A.C.E.C. BOUNDARY
BUREAU OF LAND MANAGEMENT
BUREAU OF RECLAMATION
BUREAU OF RECLAMATION (BLM MANAGED)
PRIVATE
ROAD
JEEP TRAIL
FENCE
EXISTING VISITOR FACILITY
PRIVATE CABIN SITE
SPRING
DRAINAGE CHANNEL
AREA OF WITHDRAWAL

This alternative would require an amendment to the Northern Malheur Management Framework Plan.

Alternative B

- Grazing the Leslie Gulch Pasture with 132 cattle during March and April (264 AUMs) each year would continue.
- The Saddle Butte, Bannock and Sulfur Springs Seeding pastures would remain grazed from May 1 to October 31 in a deferred rotational grazing system.
- As is currently done, cattle would be trailed into the Leslie Gulch pasture on the Leslie Gulch Road and trailed out of the pasture through upper Leslie Gulch.

Alternative C

- Grazing would continue in the Leslie Gulch Pasture with the season of grazing changed to December through February with 88 head of cattle. This would harvest the same number of AUMs (264) as is currently used.

Livestock would be trailed into the pasture over the abandoned portions of the Runaway Gulch Road to avoid a special status plant site.

Alternative D (Preferred Alternative)

- The Leslie Gulch pasture of the Three Fingers temporary allotment would have livestock removed. This is the pasture within the ACEC in which the conflicts between livestock and other resources, especially sensitive plants, have been identified. The livestock use would be moved to three other pastures (Saddle Butte, Bannock, and Sulphur Springs Seeding) within the Three Fingers temporary allotment. Current monitoring data indicate there is sufficient forage to accomodate the increased use in these pastures. A reduction in active grazing preference may be made in the future if monitoring indicates the increased use is not sustainable. This removal would require an amendrnent to the Northern Malheur Management Framework Plan.
- Depending upon monitoring, up to. two miles of , drift fence may be necessary, as a last resort, to keep cattle from drifting into Leslie Gulch from the adjacent Riverside and Bannock pastures, Any fence would be located so as to minimize impacts to wilderness and scenic values and be designed to allow big game passage, Other options, such as range riding, may be employed to minimize impacts within a WSA and may make any drift fences unnecessary.

Management Alternatives for Noxious Weeds

Alternative A

- All weed control in Leslie Gulch would be done manually to reduce the chances of inadvertent spraying of the special status plants
- Horse use would not be allowed within the ACEC except for administrative purposes. This would reduce the chances of spreading weed seeds into isolated portions of the ACEC.
- Road maintenance equipment would be cleaned with high pressure water prior to being used in the ACEC to reduce the potential for introduction of weed seeds.

Alternative B

- The existing combination of manual and chemical control methods would continue to be utilized.
- Unlimited recreational horse use would continue.

Alternative C

- In addition to continuing the existing combination of manual and chemical weed control methods, weed-free hay would be required of anyone using horses within the ACEC.
- Road maintenance equipment would be cleaned prior to moving into the ACEC to reduce the potential for introduction of weed seeds.

Alternative D (Preferred Alternative)

- The existing combination of manual and chemical weed control methods would continue. All chemical control actions would be done on a site specific basis and would be monitored on-site by a botanist to eliminate chances for impacts to special status plant species. Manual control methods would be used where they would be effective. If chemical control is necessary, application would be according to the Vale District Five Year Integrated Weed Control Plan and EA. Chemical application would

use methods that would apply chemical targeted to individual plants.

- Road maintenance equipment would be cleaned prior to moving into the ACEC to reduce the potential for introduction of weed seeds.
- Horse use would not be allowed within the ACEC except for administrative purposes. This would reduce the chances of spreading weed seeds into isolated portions of the ACEC.

Management Alternatives for Wild Horses

Alternative A

Leslie Gulch ACEC would be removed from the Herd Management Area. Any wild horses that move into the ACEC would be gathered and removed. This action would require an amendment to the Northern Malheur Management Framework Plan.

Alternative B

- The existing wild horse management plan would continue, with wild horses allowed to use the Leslie Gulch ACEC as part of their range.

Alternative C

- The existing wild horse management plan would continue, with wild horses allowed to use the Leslie Gulch ACEC as part of their range.

Alternative D (Preferred Alternative)

- Leslie Gulch ACEC would be removed from the Herd Management Area. Any wild horses that move into the ACEC would be either moved back into the HMA or gathered and removed. This action would require an amendment to the Northern Malheur Management Framework Plan.

Management Alternatives for Special Status Plants

Alternative A

- Site-specific trail segments would be developed in Slocum Creek to avoid special status plant sites. Other trails would be developed around identified plant sites if monitoring indicates a need to prevent damage to plants and habitat.
- A pole fence would be constructed at the plant site adjacent to the Slocum Creek campground should monitoring indicate a need.
- A locked gate would be installed in Dago Gulch 0.8 mile north of the existing gate to control vehicle access to the special status plant sites along the Dago Gulch Road.

Alternative B

- Under current management, special status plants receive some level of protection from the off highway vehicle designation and under IMP guidance for WSAs.

Alternative C

- In addition to the provisions of Alternative A, an exclosure would be constructed to protect a special status plant site near the overlook from livestock. Other exclosures would be constructed around special status plant sites if monitoring indicates a need.

Alternative D (Preferred Alternative)

- Site-specific trail segments, fences and/or signs would be installed if monitoring indicates a need to protect special status plants or their habitat.
- A locked gate would be installed in Dago Gulch 0.8 mile north of the existing gate to control vehicle access to the special status plant sites along the Dago Gulch Road.
- Special status plants may be introduced into suitable habitat.

Management Alternatives for Wildlife

Alternative A

- Bighorn sheep transplant operations would only be based at the Slocum Creek campground or on Bureau of Reclamation lands along the Owyhee Reservoir.

- Any wormer blocks or feed supplement placements for the bighorn sheep would be reviewed to evaluate impacts to ACEC values.

Alternative B

- Locations of areas used for bighorn sheep transplant base operations would be limited only by IMP considerations. Slocum Creek campground has been used in the past.

Alternative C

- Locations of areas used for bighorn sheep transplant base operations would be limited only by IMP considerations. Slocum Creek campground has been used in the past.

Alternative D (Preferred Alternative)

- Bighorn sheep transplant operations would be based at Slocum Creek Campground or on BOR lands along the Owyhee River. If other sites are needed by ODFW for operations, a required proposal would be submitted to BLM for evaluation of environmental impacts and approval.

- Any wormer blocks or feed supplement placements for the bighorn sheep would be reviewed to evaluate impacts to ACEC values and require approval.

Management Alternatives for Fire

Alternative A

The existing Vale District Fire Management Activity Plan would continue to govern fire suppression activities within the ACEC.

- Earth-moving equipment would not be used unless a fire has flame lengths of six feet or more (extreme fire conditions) and with Area Manager approval.

- No earth-moving equipment would be utilized on any identified special status plant site or archaeologically significant area.

- IMP guidance would be followed within the Wilderness Study Area portions of the ACEC. If the areas are designated Wilderness, then Wilderness Management Policy would be followed.

- Naturally occurring fires would not be used for resource enhancement (e.g., sagebrush control) except where flame length is less than two feet.

Alternative B

The existing Vale District Fire Management Activity Plan would continue to govern fire suppression activities throughout the Vale District.

Alternative C

The existing Vale District Fire Management Activity Plan would continue to govern fire suppression activities throughout the Vale District.

Alternative D (Preferred Alternative)

Generally, the existing Vale District Fire Management Activity Plan would continue to govern fire suppression activities within the ACEC. The following additional provisions would be added to fire management in the ACEC.

- IMP guidance would be followed within the WSA portions of the ACEC. If the areas are designated Wilderness, then Wilderness Management Policy would be followed. If Congress returns the WSAs to multiple use, IMP guidance would continue to be used within the ACEC.

- Prescribed or naturally occurring fire may be utilized when specific management objectives are identified to enhance ACEC or wilderness values.

Management Alternatives for Recreation

All Alternatives

The following management actions would apply under all recreation alternatives:

- The Memorandum of Understanding between the Bureau of Land Management and the Bureau of Reclamation would be retained and revised as needed.

- The lockable gate at the overlook at the head of Runaway Gulch would be retained to temporarily close the ACEC to vehicle access for public safety.

- A Sign Plan would be developed for the ACEC for the placement of safety, directional and interpre-

tive signs A brochure about the Leslie Gulch area would be developed which emphasizes resource values and user ethics.

- Handicapped access would be provided at selected developed facilities.
- Shooting restrictions would be enforced around developed facilities for public safety.
- There would be no organized competitive or commercial rock climbing, and no new alteration of natural hand/foot holds: temporary rock climbing hardware would not be left on walls; and BLM approval would be required for maintenance or removal of fixed anchors and other artificial constructs.

Alternative A

Rock Climbing

- Rock climbing with fixed anchors or artificially constructed hand holds would be precluded within the ACEC. Power tools would not be permitted and chalk use would be discouraged.

Dispersed Recreation

- All recreational activities would be limited to day use only. Camping and ground fires would be restricted to the Slocum Creek campground.
- Recreational horse use would not be allowed within the ACEC.
- Trails would be developed if monitoring indicates a need to protect significant resource values.

Special Use Permits

- Any activity requiring a permit would be limited to a maximum of six persons.
- Vegetation gathering permits would not be issued.
- A back country visitor access permit system would be implemented if monitoring indicated a need for the protection of resource values.

Off-Highway Vehicle (OHV) Use

- The present Limited OHV use designation would remain in effect for designated roads (Runaway Creek/Leslie Gulch and Dago Gulch). The Steamboat Ridge vehicle route would be closed. Vehicle access to Dago Gulch would be consistent with the private right-of-way and controlled with a locked gate located immediately above any day use facilities. The remainder of the ACEC would remain closed to off-road vehicle use.

Special Designations

- The Back Country Byway and Watchable Wildlife designations would be removed. The Wilderness Study Area, Special Recreation Management Area, and Research Natural Area designations would be retained.

Developed Recreation Facilities

- Existing facilities would remain unchanged, except the restroom adjacent to the private parcel would be moved to Dago Gulch if the private land there is acquired. Optionally, the restroom would be placed at upper Leslie Gulch. Day use parking would also be developed at the mouth of Dago Gulch or at the mouth of upper Leslie Gulch.
- Ten campsites would be developed at the Slocum Creek campground within the existing campground area.
- No potable water would be made available.

Alternative B

Rock Climbing

- Existing fixed anchors and constructed hand holds would be allowed only at the Einstein climbing site in upper Leslie Gulch. Climbers would remove or mitigate existing fixed hardware and hand holds in other areas. Power tools would not be allowed, and chalk use would be mitigated. Group size and frequency of site-specific use would be limited if monitoring indicates a need for protection of resource values.

Dispersed Recreation

- Camping and ground fires would be permitted throughout the area, Down and dead vegetation could be used for campfires.
- Horse use would be allowed throughout the area.
- Site-specific trail segments would be constructed to protect sensitive resource values. The Owyhee Breaks trail corridor would not be established.

Special Use Permits

- Special Recreation Use Permits, Land Use Permits and vegetation gathering permits would be issued on a case-by-case basis consistent with management of ACEC values and IMP guidance.
- A back country access permit system would not be established.

Off-Highway Vehicle (OHV) Use

- The present Limited OHV use designation would remain restricting vehicle use to designated routes (Runaway/Leslie Gulch, Dago Gulch, and Steamboat Ridge only). All other areas would remain closed to off-road vehicle use,

Special Designations

- The Wilderness Study Area, Special Recreation Management Area, Research Natural Area, Back Country Byway, and Watchable Wildlife designations would be retained.

Developed Recreation Facilities

- All existing developed day use and camping facilities would remain, and additional specific camp units with tables and grills would be developed at Slocum Creek campground within the existing campground area.
- No additional pullout/parking areas or potable water would be developed.
- There would be no restriction on vehicle camping outside the WSA boundaries.

Alternative C

Rock Climbing

- Existing fixed anchors would remain. Existing partially completed climbing routes may be completed with BLM approval, but no new climbing routes would be allowed. Measures to minimize resource impacts and public hazards would be enforced. Additions at the Einstein site would not be allowed. The use of power tools would be allowed in WSAs with BLM approval, but not in designated wilderness areas. -Chalk use would be mitigated. Group size and frequency of the site-specific use would be limited if monitoring indicates a need to protect resource values.
- Rock climbers would be directed away from known raptor nests, bat roosting and bighorn sheep lambing sites.

Dispersed Recreation

- Camping would be allowed throughout the ACEC except within 0.5 mile of the Leslie Gulch Road. Backcountry campsites would be designated if monitoring indicates the need to protect resource values.
- Vegetation gathering for camp fire fuel would not be permitted. Camp fires would be limited to the grills provided at the Slocum Creek campground,
- Horse use would be allowed on roads and ridges with limits placed on group sizes. Weed-free hay would be required.
- Short, site specific trail segments would be developed if monitoring indicates a need to protect significant resource values.
- An Owyhee Breaks trailhead would be developed in conjunction with one of the vehicle pullout/parking areas. The trail would be a point-to-point type of trail with no development of treaded trail, except that needed to protect ACEC and wilderness values.

Special Use Permits

- Special Recreation Use Permits, Land Use Permits and vegetation gathering permits would be issued on a case-by-case basis consistent with ACEC values and IMP guidance.
- A back country visitor access permit system would be implemented if monitoring indicated a need to protect resource values.

Off-Highway Vehicle (OHV) Use

- The present Limited OHV vehicle use designation would remain, restricting vehicle use to existing roads (Runaway/Leslie Gulch, Dago Gulch and Steamboat Ridge). The remainder of the ACEC would remain closed to off-road vehicle use.

Special Designations

- The Wilderness Study Area, Special Recreation Management Area, Research Natural Area, Back Country Byway, and Watchable Wildlife designations would be retained.

Developed Recreation Facilities

- Should any Congressional wilderness or non-wilderness designation permit, Slocum Creek campground would be expanded and then developed to contain 15 to 20 designated camping units outside of any wilderness. Potable water would be available at the site, and day use parking would be constructed. Camping with horses would be permitted only at a Dago Gulch designated equestrian campsite.

- Dago Gulch would have a day use parking site, a restroom and an equestrian campsite if the private 40 acre parcel is acquired. Parking would also be provided at upper Leslie Gulch.

- The Owyhee boat launching facility would have additional parking, safety docks and a waste disposal facility for river floaters.

- Additional recreational facilities would be developed at the hill south of the Owyhee boat launch to include a day use picnic area with four to six tables/grills and a foot trail. Also, a single picnic table/grill would be provided at the mouth of Juniper Gulch.

Alternative D (Preferred Alternative)

Rock Climbing

- A cooperative agreement would be developed with rock climbers for implementing management actions, monitoring of use, minimizing safety hazards, minimizing resource impacts, promoting climbing ethics and development of a search and rescue plan.

- Existing fixed anchors, mitigated chalk use and existing constructed holds would be allowed only at the Einstein climbing site in upper Leslie Gulch. Climbers would remove or mitigate existing fixed hardware and artificial hand holds in other areas. Power tools would not be allowed.

- When and where fixed anchors become unsafe at the Einstein site, as determined by climbers, the route would be closed and removed by climbers in accordance with BLM authorization, Maintenance of fixed anchors and holds would not occur.

- Group size and frequency of site use would be limited or all rock climbing use eliminated if monitoring indicates a need to protect ACEC and wilderness values.

Dispersed Recreation

- All recreational activities would be limited to day use only. Camping and ground fires would be restricted to the Slocum Creek campground.

- Recreational horse use would not be allowed.

- Site-specific signs or trail segments would be developed if monitoring indicates a need to protect significant resource values.

- Higher visitor use areas may be surveyed for bighorn sheep lambing, raptor nesting and bat roosting. Appropriate mitigation would be implemented if impacts to these species are identified.

- An Owyhee Breaks trailhead would be developed at an established pullout/parking area. Site-specific treaded trail segments would be established only to protect important ACEC or wilderness values.

Special Use Permits

- Any activity requiring a permit would normally be limited to a maximum of six persons. Specific exceptions may be allowed where the use is compatible with ACEC and wilderness values.

- Vegetation or mineral material permits would be issued only for scientific or educational purposes.

- A back country visitor access permit system would be implemented if monitoring indicated a need for the protection of resource values.

Off-Highway Vehicle (OHV) Use

- The present Limited OHV use designation would limit vehicular traffic to the Leslie Gulch and Steamboat Ridge roads. Vehicle access to Dago Gulch would be consistent with the existing private right-of-way and controlled with a locked gate located on public lands .8 mile north of the existing gate. The remainder of the ACEC would remain closed to off -highway vehicle use.

Special Designations

- The Back Country Byway and Watchable Wildlife designations would be removed. The Wilderness Study Area, Special Recreation Management Area, and Research Natural Area designations would be retained.

Developed Recreation Facilities

- Existing facilities would remain unchanged in the ACEC, except the restroom adjacent to the private parcel would be moved to Dago Gulch and a day use parking area developed if the private land or easement is acquired by the BLM. Optionally, a restroom and pullout/parking area may be placed at upper Leslie Gulch.

- Campsites with tables and grills would be developed at the Slocum Creek campground within the existing campground area.

- No developed potable water would be available within the ACEC.

- The boat launching facility would have additional parking, up to three picnic sites, a safety dock, a fish cleaning station, and a waste disposal facility provided for floaters of the Owyhee Wild and Scenic River.

- Temporary overnight facilities may be provided at the Slocum Creek Campground for a BLM visitor contact or resource protection employee.

Management Alternatives Considered But Not Analyzed in Detail

- Total closure of Leslie Gulch by locking the gate near the Overlook and allowing access only by permit could reduce many of the identified resource conflicts. This alternative is not considered further since actions proposed in the alternatives analyzed would provide adequate protection for the relevant and important values of the ACEC.

- Either suspension of active grazing preference for several years or a long-term suspension was considered. These alternatives are not analyzed at this time because current monitoring data indicate there is sufficient forage to accomodate displaced AUMs in adjacent pastures within the same allotment.

- Livestock impacts to special status plant sites could be controlled by fencing all of the identified plant sites. This alternative would require a large amount of fence and would not comply with IMP guidance or visual resource management.

- The alternative to increase livestock grazing in the Leslie Gulch pasture from the current 264 AUMs to the 946 AUM carrying capacity was considered but is not analyzed in detail. Increased livestock grazing would not be compatible with the relevant and important values identified within the ACEC.

- The potential for public acquisition of private lands along the south boundary of the ACEC through means other than exchange was considered but not analyzed in detail. These lands are outside the exterior boundary of the ACEC. This issue is more appropriately addressed when the Resource Management Plan is prepared for BLM lands in Malheur County starting in 1995.

- Improving the quality of the access road with measures such as paving the road was considered but not analyzed in detail. These measures would result in increased recreational use and not be compatible with the relevant and important values identified within the ACEC.

- Complete removal of the Slocum Creek campground was considered but not analyzed in detail. Overnight facilities are necessary to manage overnight camping near the boat launch facility. Due to its remote location, camping by boat users will continue to occur in this area.

Chapter 4 - Environmental Consequences

In this chapter, each of the resource management topics is considered individually. A narrative describes the factors which influence management prescriptions, and an analysis is then made of the anticipated impacts of each alternative on that topic. To enable tracking of the origin of a particular action, a topic heading is added to blocks-of potential actions in each alternative. Monitoring needs for each topic are also listed in this section.

Access and Roads

Factors Which Influence Management Prescription

The Leslie Gulch Road has a 200-foot wide public right-of-way which protects public access. Where the road crosses the 40-acre private parcel at the junction of Leslie and Dago Gulches, a 100-foot wide perpetual easement has been retained for public access.

The Leslie Gulch Road was inadvertently constructed through several sites which contain special status plants. When the present road was constructed in 1969, the significance of these plant populations unknown. Annual road maintenance and the disruption of surface water flows by the road may be impacting plants within these sites.

A private right-of-way across public land has been granted for the road in Dago Gulch. This right-of-way is a nonexclusive, nonpossessory right-of-way which provides legal access for the owner of the private lands at the head of Dago Gulch. Although this road connects physically with the Leslie Gulch Road, there is no legal public access across the private land at the mouth of Dago Gulch. The few hundred feet of Dago Gulch road across this private parcel could legally be closed to the public by the private landowner.

The primitive road along the top of Steamboat Ridge once provided access to a horse trap that was used for gathering wild horses. The trap has not been used for many years. This route leaves the Leslie Gulch Road near the overlook and crosses approximately 0.25 mile of the ACEC before following the ridge top for several miles. This is not a constructed road and has no right-of-way or easement. Current use is limited to providing recreational access for hunters during big game season. Trespass vehicle use is spreading from this route into the Honeycombs WSA. The steep grade of the road is causing some accelerated soil erosion.

impacts of Alternatives on Access and Roads

Alternative A

Access and Roads

- Addition of two pullout/parking areas would reduce road congestion and improve backcountry access along the Leslie Gulch Road. Road congestion would be significantly reduced at upper Leslie Gulch which now receives occasional heavy use, should parking be provided there or at Dago Gulch.

- Where the Leslie Gulch Road passes through identified special status plant sites, alternative road maintenance practices could result in a rougher, less passable road for short distances. The extent of this change would be dependent upon the specific modifications to maintenance which are implemented; however, the road would remain passable for highway vehicles.

- There would be no vehicle access to Steamboat Ridge. The accelerated soil erosion which is occuring along the road would decrease over time.

Land Tenure

- Acquisition of ownership or public easement of the Dago Gulch private parcel would guarantee public access to Dago Gulch.

Special Status Plants

- Should public access be acquired into Dago Gulch, the added locked gate in the gulch would remove public vehicle access to approximately 0.6 mile of road.

Recreation

- Removal of all sport rock climbing from the ACEC would reduce congestion at the upper Leslie Gulch parking area and remove the distraction that rock climbers present to drivers on the road. Based on public input to date, this would enhance the quality of sightseeing for the majority of motorists.

- The Leslie Gulch Road and developed facilities would be available to vehicle use.

Alternative B

Access and Roads

- With no new pullout/parking areas, road congestion and back country access would not be improved under this alternative.
- The Steamboat Ridge Road would remain open to general public vehicle use; Slightly accelerated soil erosion: would continue along the Steamboat Ridge road. Legal vehicle access to public lands in Dago Gulch would not be available.

Land Tenure

- The owner of the 40-acre parcel at Dago Gulch could legally close public access to Dago Gulch. Without this legal access, the public would not have a means to visit public lands in Dago Gulch, except by hiking over excessively steep terrain or by back country access.

Special Status Plants

- Since public vehicle access to the lower 0.8 mile of the gulch would remain, there would be increased potential for impacts to special status plants along the road.

Recreation

- Eliminating rock climbing from the Asylum site would remove this distraction to motorists. The road corridor's natural setting for motorists' sightseeing would also be enhanced. There would be some occasional parking congestion and damage to vegetation at the upper Leslie Gulch trailhead area due to continued use of the Einstein site.
- Under the Limited OHV designation, there would be public vehicle access over the Leslie Gulch, Dago Gulch, Steamboat Ridge roads and all developed facilities. This designation would continue to preclude OHV use on all other areas of the ACEC.

Alternative C

Access and Roads

- The addition of four pullout/parking areas would improve road congestion and back country access more than the other alternatives.
- The more extensive improvements proposed for the drainage crossings under this alternative would improve the quality of access along the road. These improvements could also reduce the amount of road maintenance necessary at the crossings.

Special Status Plants

- The added locked gate in Dago Gulch would remove public vehicle access to approximately 0.8 mile of road.

Recreation

- Rock climbing activity viewed by motorists driving along the Leslie Gulch Road could distract drivers and disrupt to the natural setting.
- Under the Limited OHV use designation, there would be public vehicle access over the Leslie Gulch, Dago Gulch, Steamboat Ridge roads and all developed facilities. This designation would continue to preclude OHV use on all other areas of the ACEC.

Alternative D

Access and Roads

- The addition of up to four pullout/parking areas would reduce driving hazards and road congestion, help disperse hiking, and provide for increased back country access.
- The Steamboat Ridge Road would remain open to general public vehicle use; slightly accelerated soil erosion would continue along the Steamboat Ridge road,
- Where the Leslie Gulch Road passes through identified special status plant sites, alternative road maintenance practices could result in a rougher, less passable road for short distances. The extent of this change would be dependent upon the specific modifications to maintenance which are implemented; however, the road would remain passable for highway vehicles. Road realignment within WSAs would not comply with the IMP, since realignment would result in changing a WSA's boundary.

Land Tenure

- Acquisition of ownership or public easement of the Dago Gulch private parcel would guarantee public access to Dago Gulch.

Speclal Status Plants

- The added locked gate in Dago Gulch would remove public vehicle access to approximately 0.8 mite of road.

Recreation

- Sport rock climbing activity would not be viewed by motorists driving along the Leslie Gulch Road. Sightseeing of the natural setting-by motorits would be enhanced.
- Under the Limited OHV use designation, there would be public vehicle access over the Leslie Gulch and Steamboat Ridge roads and all developed facilities. This designation would continue to preclude OHV use on all other areas of the ACEC. The gate on the Dago Gulch road would eliminate unsafe turn arounds on the narrow road and prevent vehicle trespass in Upper Leslie and Slocum Creek WSAs in Dago Canyon.

Land Tenure

Factors Which Influence Management Prescriptions

Potential acquisition of private lands by the BLM must be consistent with the prescribed mission of the agency. Protection of the naturalness of the wilderness study areas and the Relevant and Important value of high quality scenery dictates analyzing characteristics of adjacent lands which might conflict with these values. The existence of structures immediately adjacent to the three wilderness study areas within the otherwise mostly natural setting of the ACEC conflicts with wilderness and scenic values.

Impacts of Alternatives on Land Tenure

Alternative A

- Public acquisition of the 40-acre parcel at Dago Gulch would reduce the Malheur County tax base by approximatly $350.00.

Alternative B

- Malheur County should continue to collect the approximatly $350.00 in property taxes from the owner of the 40-acre private parcel.

Alternative C

- Public acquisition of the 40-acre parcel at Dago Gulch would reduce the Malheur County tax base by approximatly $350.00.

Alternative D

- Public acquisition of the 40-acre parcel at Dago Gulch would reduce the Malheur County tax base by approximatly $350.00.

Minerals

Factor Which Influence Management Presecriptions

Although there are presently no mining claims within the ACEC, the area is open for the location of mining claims. Under the Interim Management Policy and Guidelines for Lands under Wilderness Review, mineral exploration and development on mining claims within Wilderness Study Areas, as with all activities, is regulated to protect wilderness values, Since October of 1990, no surface disturbing work which would require reclamation has been allowed within WSAs in Oregon. Any Congressionally designated wilderness would likely be withdrawn from mineral activity. Mining claims located within the WSAs would be subject to validity examination should any development work be proposed following designation of the area as wilderness. With a valid discovery, mineral development could proceed within the designated wilderness area.

Following Congressional action which does not designate the areas as wilderness, the WSA portions of the ACEC would again become available for locatable mineral development.

In the portions of the ACEC which are outside of the Wilderness Study Areas, claims can be located and mineral development could proceed as provided for in the General Mining Law of 1872. Mineral development in any open area within the ACEC would be regulated by the 43 CFR 3809 regulations to eliminate unnecessary and undue degradation of the federal lands. These regulations require operators submit a plan of operations for any locatable mineral development proposed within an ACEC. Claimants would have the basic right to pursue development of the claims.

The Northern Malheur Management Framework Plan states that a protective withdrawal from locatable mineral activity is to be secured for the Leslie Gulch

ACEC. This withdrawal would remove 11,900 acres from mine claim location or development activity under the General Mining Law of 1872. This withdrawal would require Congressional review to implement since it is in excess of 5,000 acres. The MFP also states that the 11,900 acre ACEC would be closed to salable mineral activity and that mineral leasing be allowed only with no surface occupancy.

Impacts of Alternatives on Minerals Management

Alternative A

Land Tenure

- Public acquisition of the 40-acre private parcel would make these lands available for the same minerals management direction as the remainder of the ACEC. Under this alternative, portions of this parcel would be withdrawn from mineral activity. If acquired, this parcel would be partially within each of the three WSAs.

Minerals

- The portions of the ACEC not recommended for wilderness designation would not be available for any locatable mineral activities. Congress may adjust the wilderness boundaries during the designation process which could leave portions of the ACEC unprotected by mineral withdrawal. The ACEC has low to moderate potential of occurrence of locatable mineral deposits. No deposits have been identified and there is no direct evidence that any exist within the ACEC. No mines, prospects or mining claims are located within the ACEC.

- Locatable minerals would remain available for location within the WSAs and development outside any designated wilderness area. The claimants would have the basic right to development granted under the Mining Law of 1872 after wilderness designation if there was a valid discovery made prior to designation. Locatable minerals exploration and development activities would be regulated under 43 CFR 3809 which require a plan of operations be approved prior to any surface disturbing activity within Wilderness to prevent unnecessary or undue degradation. This requirement would give only limited protection to the relevant and important values for which the ACEC was designated.

- No surface occupancy would be permitted within the ACEC for leasable minerals. Slant drilling could be considered from outside the ACEC to reach oil, gas or geothermal resources located below the surface of the ACEC.

- No salable minerals would be available for development.

Alternative B

Land Tenure

- With no public acquisition of the 40-acre private parcel, mineral values would remain controlled by the landowner and available for development.

- A completed withdrawal would eliminate all potential for locatable mineral activities within the ACEC for twenty years. The portions of the ACEC designated wilderness would likely have a permanent mineral withdrawal. The ACEC has low to moderate potential of occurrence of locatable mineral deposits. No deposits have been identified and there is no direct evidence that any exist within the ACEC. No mines, prospects or mining claims are located within the ACEC. The potential for loss of availability of mineral resources within the ACEC would be insignificant.

- The relative and important values for which the ACEC was designated would be protected form adverse impacts from minerals exploration and development under the Mining Law of 1872.

- No surface occupancy would be permitted within the ACEC for leasable minerals. Slant drilling could be considered from outside the ACEC to reach oil, gas or geothermal resources located below the surface of the ACEC.

- No salable minerals would be available for development.

Alternative C

Land Tenure

- Public acquisition of the 40-acre private parcel would make these lands available for the same minerals management direction as the remainder of the ACEC. If acquired, this parcel would be partially within each of the three WSAs.

Minerals

- Locatable minerals would remain available for location in the entire ACEC and development outside any designated wilderness area. No

surface disturbance which requires reclamation would be allowed within the WSAs as long as they remain in study status. Claimants would have the basic right to development granted under the Mining Law of 1872. Locatable minerals exploration and development activities would be regulated under 43 CFR 3809 which requires a plan of operations be approved prior to any surface disturbing activity within ACECs to prevent unnecessary or undue degradation. This requirement would give only limited protection to the relevant and important values for which the ACEC was designated.

- No surface occupancy would be permitted within the ACEC for leasable minerals. Slant drilling could be considered from outside the ACEC to reach oil, gas or geothermal resources located below the surface of the ACEC.

- No salable minerals would be available for development

Alternative D

Land Tenure

- Public acquisition of the 40-acre private parcel would make these lands available for the same minerals management direction as the remainder of the ACEC. Under this alternative, this parcel would be withdrawn from all mineral activity.

Mlnerals

- A mineral withdrawal would eliminate all potential for activities within the ACEC for twenty years. The WSA portions of the ACEC, if designated wilderness, would likely have a permanent withdrawal. The ACEC has low to moderate potential of occurrence of locatable mineral deposits. No deposits have been identified and there is no direct evidence that any exist within the ACEC. No mines, prospects or mining claims are located within the ACEC. The potential for loss of availability of mineral resources within the ACEC would be insignificant.

- The relative and important values for which the ACEG was designated would be protected form adverse impacts from minerals exploration and development under the Mining Law of 1872.

- No surface occupancy would be permitted within the ACEC for leasable minerals. Slant drilling could be considered from outside the ACEC to reach oil, gas or geothermal resources located below the surface of the ACEC.

- No salable minerals would be available for development.

Monitoring Needs

- Portions of the ACEC remaining open for mineral development would require monitoring of any proposed activity. Mining claim activity is regulated to prevent unnecessary or undue degradation of the public lands.

Livestock Grazing

Factors Which Influence Management Prescriptions

Regulation of grazing began with passage of the Taylor Grazing Act in 1934, which has been amended with various laws and regulations, including the National Environmental Policy Act, Federal Land Policy and Management Act, and the Public Rangeland Improvement Act.

Livestock use was limited (adjudicated) to carrying capacity in this area, known as the Mahogany Planning Unit in the early 60s. The adjudication reduced the active grazing preference by 33 percent. This reduction was put into a suspended, non-use state. This environmental analysis does not analyze the impacts of this reduction.

The latest land use planning was completed in 1984 with the Southern Malheur Grazing Environmental Impact Statement (EIS) and Rangeland Program Summary (RPS) decision document. In those plans livestock use was allocated and objectives were set specifically by pasture for the EIS area, which included the pastures within the ACEC. The pastures within the ACEC were identified as Leslie Gulch and Bannock within the Mahogany Allotment (0500). The allotment at that time contained 327,129 federal acres, and grazing preference was allotted at 34,848 AUMs.

In 1984 the Mahogany Allotment was divided into five permanent and six temporary allotments. A 1988 decision to make the temporary allotments permanent is currently under appeal. The Bannock and Leslie Gulch pastures are within the Three Fingers temporary allotment which has 9,981 active and 4,653 suspended AUMs with four grazing permittees. Currently the two pastures are used by two of the permittees, Bud Greeley and Delbert Allison.

Livestock actual use records for the area exist since 1973. At that time *the* Leslie Gulch pasture was

considered a part of the Riverside pasture, adjacent to and immediately north of the Leslie Gulch pasture. The two pastures are divided only by natural barriers, and a small amount of livestock movement can take place between the two pastures. Use from 1973 until 1979 in the two pastures was with up to 1400 cattle and 3500 AUMs, between April and December. In 1979, Leslie Gulch was recognized as a separate pasture and livestock use was greatly reduced. Present use of the Leslie Gulch pasture is 132 cattle with 264 AUMs from March 1 to April 30.

The Bannock pasture is used by approximately 450 cattle from May 1 to October 31 in a deferred rotation grazing system with three additional pastures, with use being deferred after the critical growth period of key forage species (approximately July 1) two out of three years.

An allotment evaluation completed in 1990 estimated the livestock carrying capacity in Leslie Gulch pasture at 948 AUMs and Bannock pasture at 928 AUMs. Trend of upland vegetation was improving in the Bannock pasture and not apparent for the Leslie Gulch pasture. Utilization studies of key forage species have been conducted in the Leslie Gulch pasture since 1985, with the highest recorded utilization of key forage species being 16 percent. Utilization studies in the Bannock pasture from 1978 to 1989 indicated the average utilization of key forage species was 39 percent.

Impacts of Alternatives on Livestock Grazing

Alternative A

Livestock Grazing

- The livestock operators would be required to alter their operations by finding alternative feed and pasture for the 132 cattle from March 1 to April 30.
- The potential for activation of suspended AUMs held by these and other permittees in the allotment would be decreased by the 264 AUMs because of the loss of use of this pasture and a portion of the Bannock pasture added to the Leslie Gulch pasture. The possibility of future reductions in active preference would be also increased as a result of a loss of the use of this area.
- The lower seral vegetative conditions of the bottom areas near the Owyhee Reservoir should improve over time due to the elimination of livestock use. The rate of improvement may be slightly greater than under Alternatives B and C.

Alternative B

Livestock Grazing

- This alternative would not affect the present livestock operations.
- The lower seral vegetative conditions in lower canyon bottom sites should improve over time due to the restricted period of use and the current low utilization levels of key perennial forage species. The rate of improvement may be slower than under Alternatives A, C or D.

Alternative C

Livestock Grazing

- The livestock operators would be required to alter their operations by finding alternative feed and pasture for the 132 cattle from March 1 to April 30. This cost would be offset by the saving of feed and pasture costs for the 88 head of cattle that would graze the pasture from 12/1 to 2/28. The other permittees in the allotment would not be affected,
- The lower seral vegetative conditions of the bottom areas near the Owyhee Reservoir should improve over time due to low utilization levels of key perennial forage species and due to grazing during the dormant season of these species.

Alternative D

Livestock Grazing

- The livestock operators would be required to alter their operations by grazing the 264 AUMs in September and October rather than during March and April.
- The potential for activation of suspended AUMs held by these and other permittees in the allotment would be decreased by the 264 AUMs that would be shifted to other parts of the allotment because of the loss of use of this pasture. The possibility of future reductions in active preference would be increased as a result of a loss of the use of this pasture and the increased use in the other parts of the allotment.
- The lower seral vegetative conditions of the bottom areas near the Owyhee Reservoir should improve over time due to the elimination of livestock use. The rate of improvement may be slightly faster than under Alternatives B or C.

Monitoring Needs

- Trend studies would be established within the ACEC to determine changes in plant composition in areas used by livestock.
- Forage utilization data and livestock use data would be continued to be collected annually to determine pattern and amount of vegetation removed by grazing animals.
- Use supervision of grazing and monitoring for unauthorized use including drift of livestock from the adjacent Bannock and Riverside pastures would continue.

Noxious Weeds

Factors Which Influence Management Prescriptions

Noxious weeds present a substantial threat to all plants, including the special status species and their habitats. These exotics, capable of growing on a wide variety of soil types, are aggressive competitors, eliminating or replacing native vegetation. Three noxious weeds have been identified in the Leslie Gulch ACEC: Scotch thistle (*Onopordum acanthium*), whitetop (*Cardaria draba*) and St. John's wort (*Hypericum perforatum*). Invading biennial Scotch thistle has been found in road corridors from the overlook to the Owyhee Reservoir; five sites of the perennial, rhizomatous whitetopare established adjacent to the Leslie Gulch Road with the colonies beginning to extend into native vegetation. Within the past five years, increasing numbers of both of these species have been observed along the roadways east of the ACEC. St. John's wort has been found at one site in Slocum Creek and at one site near Mud Spring. Biological controls have not been found for whitetop or Scotch thistle. A beetle is used to control severe infestations of St. John's wort. Potential invasion by other species, such as the knapweeds (*Centaurea* spp.) and yellow star thistle (*Centaurea solstitialis*), presents additional threats to native plants.

Limited chemical control (spraying) of Scotch thistle has occurred at the Overlook, and all three noxious weed species have been manually removed during the past two field seasons. A Pesticide Use Proposal (PUP) has been developed by the Vale District for Leslie Gulch which permits limited chemical control of noxious weeds from the overlook site to the Owyhee Reservoir under the purview of a botanist or individual designated by the botanist. This PUP has been developed in accordance with the Northwest Area Noxious Weed Control Program EIS Supplement dated 05/05/87.

Manual control methods are somewhat effective for controlling scattered individuals of noxious weeds. In dense stands or when the weed species spread by rhizomes, manual control methods are much less effective. Generally, the most effective control is a combination of spraying when the plants are green and manual removal of any developed seed heads. Extensive and dense stands of noxious weeds make manual control extremely costly and ineffective. In these situations, the most satisfactory mode of control includes site-specific, carefully-controlled spraying in the spring. For whitetop, chemical application when the plants are green and budding, but prior to bloom, so that the herbicide can be translocated into the rhizomes, is most effective. Manual control of scattered Scotch thistle and St. John's wort is effective.

Impacts of Alternatives on Noxious Weeds

Alternative A

Access and Roads

- Additional pullout/parking areas would remove native vegetation and provide a disturbed habitat for colonization by weeds.
- Closure and successful rehabilitation of the Steamboat Ridge Road would eliminate the open niches favorable to weed establishment.

Land Tenure

- With acquisition of the 40-acre private parcel, aggressive weed control activities could be pursued by the BLM on the land.

Minerals

- Withdrawing those areas near the Leslie Gulch Road from mineral entry would eliminate the potential for mining related disturbances in these areas. Disturbances here would be particularly susctible to weed invasion due to the proximity to the road.

Noxious Weeds

- Manual weed control alone has limited effect in controlling noxious weeds. Difficulty of removing

by hand all the rhizomes of whitetop and other rhizomonous species reduces the effectiveness of this method when compared to a combination of manual and chemical control methods.

Livestock Grazing

- With livestock removal from the Leslie Gulch pasture, the lower seral vegetative conditions of the bottom areas near the Owyhee Reservoir may again support perennial native grasses,-thus helping to eliminate open niches where weeds may colonize.

- The potential for livestock transport of weed seed would be eliminated.

Wild Horses

- Removal of wild horses from the ACEC would eliminate the potential for weed seed transport by these animals.

Recreation

- Restricting permitted group size to a maximum of 6 persons would reduce the potential of these activities to spread noxious weed seeds.

- Eliminating recreational horse use would help reduce dissemination of weed seeds from existing sites, as well as eliminate the transportation of new invaders into the area through hay and animal transport.

- Removal of the Back Country Byway and Watchable Wildlife designations and the limited recreational development would likely reduce the rate of visitor use increase in the ACEC, thus reducing the potential for the spread of existing noxious weeds and introduction of new invaders.

Alternative B

Access and Roads

- Continued use of the Steamboat Ridge Road would increase the potential for colonization of noxious weeds along the road.

Land Tenure

- The portion of the 40 acre parcel in a highly disturbed condition presents fine habitat for establishment of exotic species. If this parcel is not acquired, and the land owner does not control noxious weeds, weeds on this land could provide a significant weed seed source for adjacent areas of the ACEC.

Minerals

- Once withdrawn, no disturbances would occur to the land from locatable mineral activity, resulting in no new niches becoming available for colonization by noxious weeds.

Noxious Weeds

- The combination of manual and chemical control methods should be effective in controlling noxious weeds.

Livestock Grazing

- Continuation of current grazing practices should result in improved vegetative conditions in the bottom land areas near the Owyhee Reservoir. This improvement would help reduce weed invasion over time, but the rate of improvement would be the slower under this alternative than under Alternatives A, C and D.

- The potential for livestock transport of weed seeds would continue.

Wild horses

- The potential for wild horses to transport weed seeds within the ACEC would continue.

Recreation

- Without a defined maximum size of permitted group activities, these groups would have a larger potential for spreading noxious weed seeds under this alternative.

- With no control over horse use, noxious weed seeds could be brought into the area in hay or through the horses themselves.

- Retention of the Back Country Byway and Watchable Wildlife designations would likely attract more visitors to the area and increase the potential for noxious weed spread and new weed introduction under this alternative.

Alternative C

Access and Roads

- Additional pullout/parking areas would remove native vegetation and provide a disturbed habitat for colonization by weeds.

- The Steamboat Ridge Road would remain open for colonization of noxious weeds.

- More extensive road maintenance work also would contribute to opening new sites for establishment of weeds.

Land Tenure

- With acquisition of the 40-acre private parcel, weed control activities could be pursued by the BLM on the land.

Minerals

- All sites disturbed from locatable mineral activities would present fresh surfaces available for colonization by weeds.

Noxious Weeds

- The combination of manual and chemical control methods should be effective in controlling noxious weeds.

Llvestock Grazing

- Changing the season of grazing to winter should improve vegetative conditions of the bottoms near the Owyhee Reservoir. These areas would then be less susceptible to weed invasion, but the conditions would not improve as rapidly as under Atternatives A and D.

- The potential for livestock transport of weed seeds would continue.

Wild Horses

- The potential for wild horses to transport weed seeds within the ACEC would continue.

Recreation

- With no controls on the size of permitted group activities, these groups would have a larger potential for spreading and introducing noxious weed seeds under this alternative.

- Limiting hay use to certified weed-free hay would help in reducing introduction of new weeds in the ACEC, but the possibility of weed introduction through horses would not be totally eliminated.

- Retention of the Back Country Byway and Watchable Wildlife designations and the increased recreational developments proposed under this alternative would likely attract more visitors to the area and increase the potential for noxious weed spread and introduction.

Alternative D

Access and Roads

- With continued use of the Steamboat Ridge Road, the potential for colonization of noxious weeds -along the road would remain.

- Additional pullout/parking areas would remove native vegetation and provide a disturbed habitat for colonization by weeds, Agressive planting of native species on newly disturbed locations would partially mitigate weed invasion.

Land Tenure

- With acquisition of the 40-acre private parcel, aggressive weed control activities could be pursued by the BLM on the land.

Minerals

- Once withdrawn, no surface disturbances would occur from mineral activity, resulting in no new niches becoming available for colonization by noxious weeds.

Noxious Weeds

- The combination of manual and chemical control methods should be effective in controlling noxious weeds.

Livestock Grazing

- With livestock removal from the Leslie Gulch pasture, there would be a slightly faster improvement in perennial vegetation condition. The lower seral vegetative conditions of the bottom areas near the Owyhee Reservoir may again support perennial native grasses, thus helping to eliminate open niches where weeds may colonize.

- The potential for livestock transport of weed seed would be eliminated.

Wild horses

- Removal of wild horses from the ACEC would eliminate the potential for weed seed transport by these animals.

Recreation

Restricting permitted group size to a maximum of 6 persons would reduce the potential of these activities to spread and introduce noxious weed seeds and damage desireable vegetation which provides competition for weeds.

Eliminating recreational horse use would help reduce dissemination of weed seeds from existing sites, as well as-eliminate the transportation of new invaders into the area through hay and animal transport.

Removal of the Back Country Byway and Watchable Wildlife designations and the limited recreational development would likely reduce the rate of increased of visitor use in the ACEC, thus reducing the potential for the spread and introduction of noxious weeds.

Monitoring Needs

- Effectiveness of the various control methods on elimination and/or control of existing populations of noxious weeds would be monitored.

- Annual assessments of rate of spread and occurrences of existing and new exotic species in the canyons would be made.

Wild Horses Management

Factors Which Influence Management Prescriptions

The Wild Horse and Burro Act of 1971 provided for the management and protection of wild horses. The Three Fingers Herd Management Area was established as a result of that act with current boundaries and numbers established in the Northern Malheur Management Framework Plan of 1983. This plan provided for maintaining between 75 and 150 wild horses.

Wild horses are inventoried annually, provided funding is available. Currently the horse use occurs outside of the ACEC with little or no use within the ACEC. Historically significant use by wild horses took place within the ACEC, and a horse trap site was located in Juniper Gulch with over 200 horses being gathered from the area in the late 1960s.

Impacts of Alternatives on Wild Horses

Alternative A

- Removing the Leslie Gulch ACEC from the HMA would have few, if any, impacts because the horses are not presently utilizing the portion of the herd area within the ACEC. The horses have been observed within 0.25 mile of the ACEC in recent times, and it is probable that they would move into the ACEC during severe winter grazing donfitions or in the future as this historically was horse range. Horses that move into the ACEC would be removed initially by moving the horses from the ACEC back into the HMA. if the horses were to return, they would have to be gathered and either moved to other herd areas or put up for adoption. Any future opportunities for recreational wild horse viewing would be precluded.

Alternative B

- There would be no change to the existing situation. Wild horses would continue to be allowed to use the ACEC.

Alternative C

- There would be no change to the existing situation. Wild horses would continue to be allowed to use the ACEC.

Alternative D

- Removing the Leslie Gulch ACEC from the HMA would have few, if any, impacts because the horses are not presently utilizing the portion of the herd area within the ACEC. The horses have been observed within 0.25 mile of the ACEC in recent times, and it is probable that they would move into the ACEC in the future as this historically was horse range. Horses that move into the ACEC would be removed initially by moving the horses from the ACEC back into the HMA. if the horses were to return, they would have to be gathered and either moved to other herd areas or put up for adoption. Any future opportunities for recreation wild horse viewing would be precluded.

Monitoring Needs

- The ACEC will be monitored to determine if and when horse use begins.

- Outside the ACEC, within the HMA, horse herd populations, annual forage utilization and vegetation trends would continued to be monitored.

Special Status Plant Species

Factors Which influence Management Prescriptions

At least five special status plant species are found in concentrated numbers in the ACEC. Table I in Appendix 1 shows the federal candidate species being considered for listing under the Endangered Species Act, the number of acres of their habitat in the Leslie Gulch ACEC, and the total number of habitat acres for the entire species range.

Ertter's groundsel is an annual species, initiating growth in early spring and completing its life cycle by the end of November. Its global distribution is limited to the Leslie Gulch vicinity and to two small sites near Birch Creek, approximately six miles southwest of Leslie Gulch. Suitable habitat sites have been surveyed in the Honeycombs to the north, but only one site has been found. Little potential habitat remains to be explored for the species, and it is anticipated that at least 90 percent of the plant sites have been identified. Numbers of plants vary dramatically based on timing and amount of rainfall in the area.

Packard's blazing star also is an annual species, with its life cycle generally completed by late June. It grows on the same loose talus rubble as Ertter's groundsel but only on the lower slopes and more gentle fans which spread out at the base of the talus runs, Outside of Leslie Gulch, only a single site in northern Nevada is known for this species. Very little potential habitat remains to be examined for Packard's blazing star, and the likelihood of additional site discoveries is slim.

Grimy ivesia, a perennial herb, grows on five discrete sites in the Vale District, three of which are in the Leslie Gulch ACEC. One other small site is known from Lake County, and two sites have been identified in northern Nevada. In spite of its fairly wide distribution, the species is extremely rare. It is restricted in our region to barren outcrops of Leslie Gulch Ash-Flow Tuff with two to three inches of rubble on top, a harsh site with little rooting depth.

Inventories to locate more populations have been unsuccessful.

Owyhee clover grows on scattered sites in the Leslie Gulch ACEC, and also outside the area. All are found east of the Owyhee Reservoir. Little is known about this species, and it is anticipated that more sites will be located with intensive inventory. Succulent legumes such as this are palatable to herbivores'

Of the special status species in the Leslie Gulch ACEC, sterile milk-vetch is the most wide-spread geographically and in terms of known numbers and number of sites-although it is endemic to the Owyhee Region. It occupies loose ash sites of varying colors and textures, An extensive inventory for the species has been conducted east of the Owyhee Reservoir, and more sites are anticipated to be found when a similar inventory can be conducted west of the reservoir.

None of the special status plant species in Leslie Gulch are listed as either endangered or threatened under the Endangered Species Act of 1973. However, as candidate species, five of the species are managed under BLM policy which states that "The BLM . . . shall ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as Threatened or Endangered." (BLM Manual 6840.06-C)

Impacts of Alternatives on Special Status Plants

Alternative A

Access and Roads

- Road maintenance would continue to impact small portions of special status plant sites which are already in a disturbed state due to past road construction. A few plants continue to occupy this disturbed area yearly. Opportunities to minimize borrow ditch maintenance at two locations where Ertter's groundsel is found may heip prevent loss of plants at those sites and may result in establishment of more plants at these sites. If the road is outsloped where it has disrupted deposition of talus outwash, any outwash will pass over the road and form new habitat downstream of the road, rather than diverting water down the roadside ditch. Seeds of the special status species would flow unrestricted into the habitat.

- The two pullout/parking areas proposed for construction could benefit rare plant habitat elsewhere by dispersing recreational use in the canyon. The parking area closest to the Owyhee Reservoir could direct dispersed hiking into some areas of known plant habitat. Damage to special

status plants and habitat through construction of this parking area would be avoided, and subsequent hiker impacts would likely be negligible due to the large extent of area which could be traversed and the unattractive nature of the special status plant habitat.

Land Tenure

- Acquisition of the 40-acre private inholding would extend BLM protection measuresto one site supporting Ertter's groundsel. Reduced recreational use of this area would result if water developments were removed, reducing potential impacts to the Ertter's groundsel site.

Minerals

- Withdrawal of the nonwilderness portions of the ACEC from locatable mineral activities would protect the special status plant sites in these areas from potential disturbances. A limited number of sites supporting grimy ivesia, sterile milk-vetch, Packards blazing star and Ertter's groundsel are found in these areas.

Livestock Grazing

- Removal of livestock grazing from the Leslie Gulch pasture would eliminate all threats to special status plants associated with livestock grazing. These threats include destruction of habitat through trailing, destruction of plants by trampling and ingestion, and transport of weed seeds. The lower seral vegetative conditions of the bottom areas near the Owyhee Reservoir would improve faster under this alternative than under Alternative B or C, thus reducing vegetative niches where weeds may colonize.

Noxious Weeds

- Manual weed control alone would eliminate the chances that special status plants or any other non-target plant species would be inadvertently sprayecl. Because this control method is less effective than others, there would be an increased chance that existing weed infestations would expand.

Wild Horses

- Removal of wild horses from the ACEC would reduce the potential for impacts to special status plants, such as trampling of habitat and weed dispersal. Within the last five years, no wild horses have been observed in the ACEC, and consequently no impacts of wild horses to special status plants have been observed. The potential for wild horse use in the area currently exists because the boundary of the ACEC is not fenced and the area is administratively open to wild horse use.

Special Status Plants

- Addition of the gate in lower Dago Gulch would benefit special status plants by reducing the opportunity for vehicle traffic to pass over the plant sites adjacent to the Dago Gulch Road.

Wildlife

- Since bighorn sheep were part of the coexisting flora and fauna of the area prior to stabilized human settlements, maintenance of a viable herd of bighorn sheep is considered compatible with special status plant management. No studies documenting use of bighorns on Owyhee clover have been conducted, and the interrelationship between the two species is not known, but it is likely that bighorns do eat the clover. There are no documented impacts by the bighorn or other wildlife on the special status plant species in the ACEC.

Recreation

- Increased recreational use in the ACEC would increase the potential for impacting special status plants and plant habitat. Direct impacts include disturbance to individual plants and their habitat. Indirect effects would include dissemination of exotic weed seeds at the Slocum Creek campground and in hiking corridors. Alternative A would have less recreational impact than Alternative C, but more than Alternative B and the same as Alternative D.

- Removal of the Back Country Byway and Watchable Wildlife designations would reduce the potential for recreational impacts to special status plants by possibly reducing the rate of increased recreational use in the ACEC.

- If determined necessary, placement of site-specific signs or trail segments which would route hikers around special status plant sites would reduce impacts to these sites.

- Eliminating recreational horse use would reduce dissemination of weed seeds through hay and animal transport. Seed dissemination would remain a concern during administrative use of

horses in the ACEC. Impacts of horses on fragile soils and special status plant sites would also be eliminated.

- Instituting a back country permit system would allow controls to be placed on the amount of recreational use. Such a permit system would lessen potential recreational impacts on special status plants and their habitat.

- Limiting Special Recreational-Use Permits to a maximum party size of six persons would aid in the avoidance of special status plant habitat.

Alternative B

Access and Roads

- Road maintenance at current levels affects special status plant sites which are already in a disturbed state due to past road construction. If kept at current levels, disturbance will continue to occur to the borrow ditches along which Ertter's groundsel is sporadically found. Opportunities to minimize borrow ditch maintenance at two locations where Enter's groundsel is found may help prevent loss of plants at those sites and may result in greater establishment of plants on those sites.

- Keeping Steamboat Ridge Road open would have no effect on special status plants.

Land Tenure

- If the 40-acre private inholding were not acquired, one Ertter's groundsel site would remain unprotected.

Minerals

- Withdrawal of the ACEC from locatable minerals would protect special status plants and their habitats from these potential disturbances. Salable minerals are available at the discretion of local BLM managers and would be developed only after environmental analysis showed that impacts to other values could be mitigated. The Northern Malheur MFP has removed the ACEG from leasable mineral activity.

Livestock Grazing

- Continuation of current grazing practices would result in continued threats to the special status plants. These threats include destruction of habitat through trailing, destruction of plants by annual trampling and ingestion, and transport of weed seeds. At certain sites habitat destruction may cause local plant extinctions.

- The lower seral vegetative conditions of the bottom areas near the reservoir should improve over time due to the low utilization levels of key perennial forage species. The rate of improvement may be slightly slower than under Alternatives A, C or D.

-Noxious Weeds

- Careful use of both manual and chemical methods to control noxious weeds would effectively reduce the threat of habitat loss. However, there would be a slight risk of inadvertent spraying of special status plants under this alternative.

Wild Horses

- Impacts of wild horses to special status plants, including habitat destruction and transport of weed seeds, may occur with the area remaining open to wild horse use.

Special Status Plants

- With no gate installation in lower Dago Gulch, vehicles could impact the special status plant sites along the road there.

Wildlife

- Since bighorn sheep were part of the coexisting flora and fauna of the area prior to human settlement, maintenance of a viable herd of bighorn sheep is considered compatible with special status plant management. There is no documented evidence that bighorn sheep or any other wildlife impact any of the special status plant species in the ACEC.

Recreation

- The current level of recreational development and restrictions would continue to cause damage to special status plants damage in Dago Gulch and near the Slocum Creek campground. The level of recreational development proposed under Alternative B would make the ACEC the least attractive of the three alternatives and result in the least recreational impact to special status plants. Recreational horse use would have the potential for noxious weed seeds transport into the area in hay or through the horses themselves.

Alternative C

Access and Roads

- Road maintenance affects special status plant sites which are already disturbed from past road construction. Opportunities to minimize borrow ditch maintenance at two locations where Ertter's groundsel is found may help prevent loss of plants at those sites and promote establishment of plants.

- The four proposed pullout/parking areas are not located in special status plant habitat. These pullout areas could benefit special status plant habitat elsewhere by dispersing recreational use in the ACEC. The proposed new parking area closest to the reservoir could direct dispersed hiking into some areas of known plant habitat. Any damage to special status plants and resulting from construction of this turnout and subsequent hiker dispersal would likely be negligible.

- Keeping the Steamboat Ridge Road open would have no effect on special status plants.

Land Tenure

- If the 40-acre private inholding were not acquired, one Ertter's groundsel site would remain unprotected.

Minerals

- Mineral development activities could destroy and displace special status plants. Seed banks contained within soils could be destroyed, genetic diversity reduced, and habitat permanently lost. The extent and location of activities would determine the severity of impacts to the special status plants. Standard reclamation practices may not replace the conditions necessary for plant survival on the unique substrates where the plants grow when the plant sites are disturbed.

Livestock Grazing

- Changing the season of grazing from the current use to winter use would not eliminate potential mechanical or grazing damage to grimy ivesia plants since this species does not go dormant in winter. The other perennial special status species, Owyhee clover and sterile milk-vetch, go dormant in winter and would be less susceptible to damage during the winter.

- Winter grazing would not damage either of the two annual species, Ertter's groundsel and Packard's mentzelia, which complete their life cycles by winter.

- Frozen ground in the winter would reduce the chance for soil compaction and disturbance on many special status plant sites. The exception would be south slopes at lower elevations which receive solar radiation and may warm sufficiently to prevent freezing of the soil.

- The lower elevation, south-facing slopes near the reservoir provide open, thermally-desirable areas with accessible water which could cause livestock to congregate in these areas. Shadscale, which often grows on the ash talus and also supports the special status plant species, is extensively used by livestock during the winter months. These features would attract livestock to the high concentration of rare plant sites in lower Slocum Creek, increasing damage to plant habitats through soil compaction.

- Changing to winter grazing should improve vegetative conditions of the bottom areas near the reservoir. These areas would then be less susceptible to weed invasion, but the conditions may not improve as rapidly as under Alternative A or D.

Noxious Weeds

- Careful use of both manual and chemical methods to control noxious weeds would effectivly reduce for special status plants. There would be some risk of inadvertent spraying special status plants under this alternative.

Wild Horses

- Impacts of wild horses to special status plants, including habitat destruction and transport of weed seeds, may occur with the area remaining open to wild horse use.

Wildlife

- Bighorn sheep were part of the coexisting flora and fauna of the area prior to stabilized human settlements, and maintenance of a viable herd of bighorn sheep is compatible with special status plant management. No studies documenting use of sheep on Owyhee clover have been conducted, and the interrelationship between the two species is unknown, but it is likely that bighorns do eat the clover. There are no documented impacts by the bighorn or other wildlife on othe special status plant species in the ACEC.

Recreation

- issuance of special recreation use permits for organized events would allow use to be directed only to specified areas which would avoid special status plant sites.

- Campground expansion at Slocum Creek would put the campground within 50 feet of a talus slope which supports Ertter's groundsel. This expansion would increase the possibility that campers would impact the plant site. This impact could be partially mitigated public education and/or by construction of a fence.

- Providing potable water at the Slocum Creek campground would attract more visitors to the area, which would increase chances of impacts to the special status plant sites.

- Requiring weed-free hay for recreational horse use within the ACEC would reduce the potential of weed dispersal, but would not totally eliminate the problem because horses can carry weed seeds in their hooves and digestive tracts.

- Development of an equestrian campsite and installation of a vault toilet at Dago Gulch would not impact special status plants there. Camping with horses, however, may introduce weeds into the area.

- Expanding facilities at the boat launch area would not directly affect special status plants or their habitat; however, increased visitor use of the ACEC resulting from improved facilities may impact plants.

- Neither of the two proposed picnic areas is anticipated to affect special status plants or their habitats.

- Maintaining the special designations of Scenic Byway and Watchable Wildlife, combined with the level of recreational development proposed under Alternative C, would invite more visitor use to the ACEG than Alternatives A and D. This increased use would increase the likelihood that special status plant sites would be affected by recreational activities.

Alternative D

Access and Roads

- Road maintenance would continue to impact several special status plant sites which are already in a disturbed state due to past road construction. A few plants continue to occupy this disturbed area yearly. Opportunities to minimize borrow ditch maintenance at two locations where Ertter's groundsel is found may help prevent loss of plants at those sites and may result in establishment of more plants. If the road is outsloped where it has disrupted deposition of talus outwash, any outwash will pass over the road and form new habitat downstream of the road, rather than diverting water down the roadside ditch. Seeds of the special status species would flow unrestricted into the habitat.

- Keeping Steamboat Ridge Road open would have no effect on special status plants.

- The up to four proposed pullout/parking areas are not located in special status plant habitat. These pullout areas could benefit special status plant habitat elsewhere by dispersing recreational use away from the habitat in the ACEC. The proposed new parking area closest to the reservoir could direct dispersed hiking into some areas of known plant habitat. Any damage to special status plants and resulting from construction of this pullout and subsequent hiker dispersal would likely be negligible.

Land Tenure

- Acquisition of the 40-acre private inholding would extend BLM protection measures to one site supporting Ertter's groundsel. Reduced recreational use of this area would result if water developments were removed, reducing potential impacts to the Ertter's groundsel site.

Minerals

- Withdrawal of the ACEC from locatable minerals and removal of the possibility for mineral sales would protect special status plants and their habitats from these potential disturbances.

Livestock Grazing

- Removal of livestock grazing from the Leslie Gulch pasture would eliminate all threats to rare plants associated with livestock grazing. These threats include destruction of habitat through trailing, destruction of plants by trampling and ingestion, and transport of weed seeds. The lower seral vegetative conditions of the bottom areas near the Owyhee Reservoir may improve faster under this alternative than under Alternative B or C and the vegetative niches where weeds may colonize would be reduced.

Noxious Weeds

- Careful use of both manual and chemical methods to control noxious weeds would effectively reduce the threat of habitat loss. With a botanist on site during chemical application and chemicals to be applied to targeted plants, the likiehood of chemicals affecting specaial status plants would be remote.

Wild Horses

- Removal of wild horses from the ACEC through revision of the Horse Management Plan and Management Framework Plan would reduce the potential for impacts to rare plants, such as trampling of habitat and weed dispersal. Within the last five years, no wild horses have been observed in the ACEC, and consequently no impacts of wild horses to rare plants have been observed. The potential for wild horse use in the area currently exists because the boundary of the ACEC is not fenced and the area is administratively open to wild horse use.

Special Status Plants

- Addition of the gate in lower Dago Gulch would benefit special status plants by reducing the opportunity for vehicle traffic to pass over the plant sites adjacent to the Dago Gulch Road.

Wildlife

- Since bighorn sheep were part of the coexisting flora and fauna of the area prior to stabilized human settlements, maintenance of a viable herd of bighorn sheep is considered compatible with special status plant management. No studies documenting use of bighorns on Owyhee clover have been conducted, and the interrelationship between the two species is not known, but it is likely that bighorns do eat the clover. There are no documented impacts by the bighorn or other wildlife on the special status plant species in the ACEC.

Recreation

- Increased recreational use in the ACEC would increase the potential for impacting special status plants and plant habitat. Direct impacts include disturbance to individual plants and their habitat. Indirect effects include dissemination of exotic weed seeds at Slocum Creek campground and in hiking corridors. Alternative A and D would have less recreational impact than Alternatives B or C.
- Removal of the Back Country Byway and Watchable Wildlife designations would reduce an increased potential for recreational impacts to special status plants by possibly reducing the rate of increased recreational use in the ACEC.
- If determined necessary, development of site-specific signs or trail segments which would route hikers around special status plant sites would reduce impacts to these sites.
- Eliminating recreational horse use would reduce dissemination of weed seeds through hay and animal transport. Seed dissemination would remain a concern during administrative use of horses in the ACEC. Impacts of horses on fragile soils and special status plant habitat also would be eliminated.
- Instituting a back country access permit system would allow controls to be placed on the amount and location of recreational use. Such a permit system would lessen potential recreational impacts on special status plants and their habitat.
- Establishment of an Owyhee Breaks trailhad at an existing vehicle pullout/parking area would have no impact on special status plants or their habitat.
- Limiting Special Recreational Use Permits to a maximum party size of six persons would aide in the avoidance of special status plant habitat.
- Installation of a toilet and parking area at Dago Gulch or optionally at upper Leslie Gulch would not impact special status plants at these locations.
- Expanding parking facilities at the boat launch area and providing a waste disposal for river floaters would not affect special status plants or their habitat. Any increased ACEC use resulting from the development of these outside and water-based facilities may have a negligible impact on special status plants or their habitat.

Monitoring Needs

- The five candidate plant species identified in Leslie Gulch would be monitored for maintenance of habitat and existence of viable populations,
- The two annual species, Ertter's groundsel and Packard's mentzelia, require monitoring several times annually due to population fluctions caused by climate changes and uncertain seed bank dynamics. Disturbances to their habitat and invasion by exotic species are of particulay concern

- Plant demographics of the perennial species would yield information about the natural population dynamics of these three species.

- A monitoring plan for the special status plant species will be incorporated into the final ACEC management plan, taking into account impacts from recreational use, wild horses, mining activity, grazing, and noxious weed encroachment.

Wildlife

Factors Which Influence Management Prescriptions

Bureau policy states that candidate species such as California bighorn sheep will be treated as priority species in all land use plans. Management direction provided by the MFP was to manage the habitats of special status wildlife species in a manner that would favor their perpetuation and/or expansion, to provide forage for big game, and to assure that land use authorizations perpetuate or enhance existing habitat characteristics of critical wildlife use areas. The Northern Malheur MFP also recommended bighorn sheep reintroduction and the Southern Malheur EIS Preferred Alternative had provisions for sheep transplants.

The Leslie Gulch Habitat Management Plan (HMP) for California bighorn sheep includes the Leslie Gulch ACEG area. Through the HMP, one bighorn sheep water development and fence modification for bighorn passage has been completed in the ACEC. Future maintenance may be necessary on those projects. Reclamation of Steamboat Ridge Trail was a planned HMP action that has not been implemented.

Like other reintroduced herds of California bighorn sheep, this population seems to be self-limiting in numbers, One factor that may limit the herd is the bighorn sheep lungworm, an endemic organism that passes from the ewe to the unborn lamb and causes mortality in young animals. In the past, the Oregon Department of Fish and Wildlife (ODFW) placed wormer blocks in the ACEC for bighorn sheep use. Due to the abundant naturally occurring salts in the area, the blocks were not used by the bighorns and were removed. A different type of wormer may be used in the future.

Management actions that could influence the quality of bighorn sheep habitat in Leslie Gulch include the number of roads, range condition, amount of human disturbance, presence or absence of domestic sheep, mineral development, and water availabliity.

Because most historic California bighorn range has been degraded by human use, it is unlikely that enough herds can be established to remove the species from consideration for listing under the Endangered Species Act. If a catastrophic event occurs, such as an epidemic disease, the likelihood of species survival increases with the number of populations. In addition, the Leslie Gulch herd is among a few in Oregon large enough to serve as a source for transplanting to other areas. These factors make the Leslie Gulch ACEC regionally and nationally significant for California bighorn sheep habitat. Protection of those values is necessary to maintain a healthy herd and contribute to protection of the species.

Bighorn sheep are captured periodically by ODFW for relocation to unoccupied ranges. This removal of animals also avoids the stagnation of the Leslie Gulch herd. Expansion of the herd to new habitat without manual relocation has been rare. In 1988, the Malheur County Bighorn Sheep Reintroduction Plan and Memorandum of Understanding (MOU) was signed by BLM Vale District and ODFW. Reasonable numbers for the Leslie Gulch bighorn herd unit were established at 250 to 300 animals, and capture and release of bighorn sheep was also authorized+

Capture involves the use of a helicopter, trailers and other base camp equipment for two days, usually in the winter. Only two captures, in 1986 and 1988, have been conducted in Leslie Gulch ACEC. Past activity was based at Slocum Creek campground, but actual capture activity was outside the ACEC boundary. Helicopters are also used by ODFW for bighorn inventories in January and June, with landings for refueling usually occurring at the Overlook.

Bald eagles, listed as threatened under the Endangered Species Act, winter along the Owyhee River but have no known roost sites such as large cottonwoods within the ACEC. No site specific information is presently available.

Townsend's big-eared bat populations are declining seriously in Oregon and elsewhere. Less than 2800 individuals are estimated to remain in Oregon. The most important habitat factor seems to be undisturbed roost, nursery, and winter hibernating sites, which are often found in caves. When those sites are disturbed, bats burn critical fat reserves, No site specific information on this species is available.

Mojave black-collared lizards are associated with boulders or rockpiles on arid slopes. This species is considered sensitive because of its restricted distribution. Bureau policy is to treat Bureau Sensitive species the same as federal candidate species. The western ground snake, a BLM tracking species, is difficult to inventory because of its secretive, nocturnal habits. The few specimens found in Oregon have been located at the foot of rocky slopes.

Impacts of Alternatives on Wildlife

Alternative A

Access and Roads

- Road closure on Steamboat Ridge would benefit California bighorn sheep, mule deer, and Rocky Mountain elk, since there would be less disturbance through human activity.
- Road closure would make wildlife surveys more difficult for ODFW to accomplish,

Land Tenure

Acquisition or a scenic easement of the private inholding would prevent further development, habitat degradation, and disturbances to wildlife at Mud Spring.

In the short term, site rehabilitation would disturb bighorn sheep and other wildlife. Removal of the present development would have a long-term beneficial effect by returning the site to native habitat and reducing the likelihood of camping near Mud Spring.

Minerals

- Wildlife habitat would be maintained within the area withdrawn from mineral activity. If the rest of the ACEC is not withdrawn through wilderness designation, adverse impacts could occur from locatable mineral development. Impacts would include habitat degradation and disturbance to wildlife. Impacts from mineral leasing would occur outside the ACEC; however, there would be impacts to wildlife species that range both inside and outside the ACEC boundaries. The severity of impacts would be dependent upon the level and location of the activity.

Livestock Grazing

- Utilization levels by livestock are presently very light, with nearly all of the cattle use on slopes less than 40 percent. Removal of livestock may improve forage quality on the lower slopes. Forage is not a limiting factor for this bighorn sheep population, so benefits would be minimal. Other wildlife species dependent on mid-to-late seral stage vegetation for forage and cover may benefit, while wildlife dependent on early seral stage vegetation may decrease in numbers within the ACEC. Removal of cattle would reduce some of the potential for noxious weed invasion and expansion of existing sites. Minimizing invasion by exotic weeds would maximize native habitat available for wildlife forage and cover.
- Fences would meet BLM guidelines for wildlife passage. There would be minimal impacts on wildlife.

Noxious Weeds

- Manual control of noxious weeds would limit introduction of exotic weed species along the roads, making native habitat used for forage and cover. Manual control alone may not be as effective at limiting weed introduction as the combination of chemical and manual methods. With no chemical control, there would be no toxic effects on small mammals, reptiles, or other wildlife.
- Cleaning of road maintenance equipment for removal of weed seeds would benefit wildlife by maintaining available native habitat.

Wild Horses

- No impacts to wildlife are known due to recent wild horse use. Removal of the ACEC from the HMA would eliminate the potential for any future impacts.

Special Status Plants

- By limiting vehicle access, the gate at Dago Gulch would limit potential disturbance of wildlife.

Wildlife

- Limiting base operations would not prevent ODFW from carrying out needed bighorn management. Occasional removal of animals for transplant would maintain the health of the bighorn sheep herd. Operations could be less efficient and the animals subjected to slightly more stress when being moved by helicopter. Wormer blocks or other supplements would also be available for use if deemed necessary by ODFW. There should be no effects on other wildlife species from bighorn sheep management activities.

Fire

- Protection from fire would benefit special status species and other wildlife by minimizing loss of habitat. Surface disturbance from earthmoving equipment could create site-specific negative impacts to Mojave black-collared lizards, western ground snakes and other wildlife species with restricted ranges.

Recreation

- Fewer visitors would be expected under this alternative than under Alternatives Bor C due to less recreation development and curtailment of present uses. This reduced visitation should be beneficial to wildlife since there would be fewer wildlife-human contacts and less ground disturbance. Elimination of recreational horse use would reduce the potential for invasion by new exotic weed species and expansion of current exotic weed species into native wildlife habitat.

- Developed recreation would be limited to Slocum Creek campground and the boat ramp area, which are already disturbed. Elimination of camping sites at Dago Gulch would reduce visitor contacts with bighorns and other wildlife at Mud Spring. To a lesser extent, impacts may occur from day use parking and restrooms.

Alternative B

Access and Roads

- Leaving Steamboat Ridge Road open would result in continued disturbance of California bighorn sheep, mule deer, and Rocky Mountain elk at current or higher levels.

- Wildlife surveys by ODFW would continue unimpeded.

Land Tenure

- If the private inholding were not acquired, visitor use of the Mud Spring area would likely increase. This use would result in more disturbance to bighorn sheep and other wildlife using the spring. With the land remaining in private ownership there would be potential for further development which would degrade wildlife habitat and increased disturbance to wildlife at Mud Spring.

Minerals

- Withdrawal from locatable mineral activity would benefit bighorn sheep and other wildlife species by reducing the potential of disturbance to habitat. Impacts from mineral leasing would occur outside the ACEC; however, there would be impacts to wildlife species that range both inside and outside the ACEC boundaries. The severity of impacts would be dependent upon the level and location of the activity.

Livestock Grazing

- Continuing existing livestock management may cause accessible slopes to remain in early seral vegetation for a longer time than under Alternatives A and C. Wildlife forage quality for species dependent on mid to late seral stages may recover more slowly which may have negative impact on wildlife species dependent on middle to late seral stage vegetation for forage and cover. The bighorn sheep population would not be affected, since forage is not a limiting factor in the ACEC. The potential for increased weed invasion from livestock would continue, which could reduce the amount of available forage and cover for wildlife.

Noxious Weeds

- While the site-specific, limited use of herbicides could cause short-term moderate toxic effects in small mammals and reptiles, the treated areas would be so restricted that impacts should be minimal. The habitat improvement achieved by removing undesirable vegetation would offset any negative impacts.

Wild Horses

- Any wild horses that move into the AGEC would increase grazing pressure, especially on the lower slopes. Since horses prefer late seral stage vegetation and will use steeper slopes than cattle, there would be more dietary overlap and competition with bighorn sheep. However, since forage is not a limiting factor for this bighorn sheep population, impacts would be minimal. Ecological site conditions on the lower slopes would remain in early seral stages, while those areas in mid-to-late seral stages could decline under increased grazing pressure. Wildlife forage quality and quantity would be reduced.

Special Status Plants

- Continuation of present special status plant species management would not affect wildlife.

Wildlife

- Occasional removal of animals for transplant would maintain the health of the bighorn sheep herd. There should be no effects on other wildlife species from bighorn -management activities.

Fire

- Protection from fire would benefit special status species and other wildlife by minimizing loss of habitat. Surface disturbance from earthmoving equipment could create site-specific negative impacts to Mojave black-collared lizards, western ground snakes and other wildlife species with restricted ranges.

Recreation

- Minimal control on visitor use could result in major impacts to wildlife species as the number of visitors increase. Potential impacts include increased surface disturbance, increased harassment and visitor contacts, and new and further invasion of weedy species by spreading seeds and soil disturbances into native habitat.

- Rock climbing activities at the Einstein climbing site could cause some disturbance of rubble and boulders near the bottom of the slopes. This disturbance could impact on Mojave black-collared lizard and western ground snake habitat, but any impact would be minimal and localized.

Alternative C

Access and Roads

- Leaving Steamboat Ridge Road open would result in continued disturbance of California bighorn sheep, mule deer and Rocky Mountain elk at current or higher levels.

- Wildlife surveys conducted by ODFW would continue unimpeded.

Land Tenure

- Acquisition or a scenic easement of the private inholding would prevent further development, habitat degradation, and disturbances to wildlife at Mud Spring.

Piping the water from Mud Spring for human use off-site would have a short-term impact from construction noise and disturbance. In the long term, bighorn sheep and other wildlife should benefit at Mud Spring from the reduction in disturbance and encounters with people. By providing potable water at Slocum Creek, more visitors would be attracted to the ACEC with the associated increase of impacts to all wildlife.

Minerals

- Locatable mineral activity would disturb both wildlife habitat and wildlife species, Impacts from mineral leasing would occur outside the ACEC; however, there would be impacts to wildlife species that range both inside and outside the ACEC boundaries. The severity of impacts would be depedent on the level and location of the activity.

Livestock Grazing

- Changing the grazing period to winter use may improve forage quality for some species of wildlife. Winter grazing removes only dormant grass material and does not deplete the carbohydrate reserves of the plants allowing grasses to achieve their maximum potential for increase in size, vigor and productivity. Wildlife species dependent on mid-to-late seral stage vegetation for forage and cover should benefit. Wildlife dependent on early seral stage vegetation could have reduced habitat within the ACEC. Forage is not a limiting factor for this bighorn sheep population, so benefits to bighorns would be minimal.

Noxious Weeds

- The site-specific use of herbicides could cause short-term moderate toxic effects in small mammals and reptiles; however, the treated areas would be so restricted that impacts should be minimal. The positive impact of improving habitat by removing undesirable vegetation is far greater than any potential negative impacts.

- Weed-free hay would limit the spread of exotic plant species, including noxious weeds, into native wildlife habitat. However, enforcement would be difficult and some spread of weeds is likely from horse use, since weed seeds can be carried in digestive tracts for several days.

Wild Horses

- Any wild horses that move into the ACEC would increase grazing pressure, especially on the lower

slopes. Since horses prefer late seral stage vegetation and will use steeper slopes tahn cattle, there would be more dietary overlap and competition with bighorn sheep. However, since forage is not a limiting factor for this bighorn sheep population, impacts would be minimal. Ecological site conditions on the lower slopes would remain in early seral stages, while those areas in mid-to-late seral stages could decline under increased grazing pressure. Wildlife forage quality and quantity would be reduced.

Special Status Plant Species

- The use of exclosure fences to protect special status plant sites would not impact wildlife.
- The gate in lower Dago Gulch would reduce impacts to wildlife from vehicles using the lower 0.8 mile of the road.

Wildlife

- Occasional removal of animals for transplant would maintain the health of the bighorn sheep herd. There should be no effects on other wildlife species from bighorn sheep management activities.

Fire

- Protection from fire would benefit special status species and other wildlife by minimizing loss of habitat, Surface disturbance from earthmoving equipment could create site-specific negative impacts to Mojave black-collared lizards, western ground snakes and other wildlife species with restricted ranges.

Recreation

- Under this alternative the rate of day-use visitation and overnight camping would increase, making disturbances and harassment of wildlife more likely to occur. Increased development would also reduce habitat for species such as non-game migratory birds and herptofauna such as the Mojave black-collared lizard.
- Rock climbing activities at all of the existing sites could disturb rubble and boulders near the bottom of the slopes. Impacts on Mojave black-collared lizard and western ground snake habitat would be minimal and localized. There would be continued disturbance to any raptors, bighorn sheep lambing areas, and bat roosting sites near the existing climbing routes.

Alternative D

Access and Roads

- Leaving Steamboat Ridge Road open would result in continued disturbance of California bighorn sheep, mule deer, and Rocky Mountain elk at current levels.
- Wildlife surveys conducted by ODFW would continue unimpeded.

Land Tenure

- Acquisition or an easement of the private inholding may prevent further development, habitat degradation, and disturbances to wildlife at Mud Spring.
- In the short term, site rehabilitation would disturb bighorn sheep and other wildlife. Removal of the present development would have a long-term beneficial effect by returning the site to native habitat and reducing the likelihood of camping near Mud Spring.

Minerals

- Withdrawal from locatable mineral activity would benefit California bighorn sheep and other wildlife species by reducing the potential of disturbance to habitat. Impacts from mineral leasing would occur outside the ACEC; however, there would be impacts to wildlife species that range both inside and outside the ACEC boundaries. The severity of impacts would be dependent on the level and location of the activity.

Livestock Grazing

- Utilization levels by livestock are presently very light, with nearly all of the cattle use on slopes less than 40 percent. Removal of livestock may improve forage quality on the lower slopes. Forage is not a limiting factor for this bighorn sheep population, so benefits may be minimal. Other wildlife species dependent on mid-to-late seral stage vegetation for forage and cover should benefit, while wildlife dependent on early seral stage vegetation may decrease in numbers within the ACEC. Removal of cattle would reduce some of the potential for noxious weed invasion and expansion of existing sites. Minimizing invasion by exotic weeds would maximize native habitat available for wildlife forage and cover.
- Fences would meet BLM guidelines for wildlife passage. There would be minimal impacts on wildlife.

Noxious Weeds

- While the site-specific, limited use of herbicides could cause short-term moderate toxic effects in small mammals and reptiles, the treated areas would be so restricted and treatment controlled so that impacts should be minimal. The habitat improvement achieved by removing undesirable vegetation would offset any negative impacts.

- Cleaning of road maintenance equipment for removal of weed seeds would benefit wildlife by maintaining available native habitat.

Wild Horses

- No impacts to wildlife are known due to recent wild horse use. Removal of the ACEC from the HMA would eliminate the potential for any future impacts.

Special Status Plants

- The use of exclosure fences to protect special status plant sites would not impact wildlife.

- By limiting vehicle access, the gate at Dago Gulch would limit potential disturbance of wildlife.

Wildlife

Limiting base operations would not prevent ODFW from carrying out needed bighorn management. Occasional removal of animals for transplant would maintain the health of the bighorn sheep herd. If any sites other than Slocum Creek campground are needed for efficient transplant operations and are approved by BLM, there would be mitigation for any potential impacts to wildlife. Wormer blocks or other supplements would also be available for use if deemed necessary by ODFW. There should be no effects on other wildlife species from bighorn sheep management activities.

Fire

Protection from fire would benefit special status species and other wildlife by minimizing loss of habitat. Surface disturbance from earthmoving equipment could create site-specific negative impacts to Mojave black-collared lizards, western ground snakes and other wildlife species with restricted ranges.

Recreation

- Fewer visitors would be expected under this alternative than under Alternatives B or C due to less recreation development and curtailment of some present uses. This reduced visitation should be beneficial to wildlife since there would be fewer wildlife-human contacts and less ground disturbance. Elimination of recreational horse use would reduce the potential for invasion by new exotic -weed species and expansion of current exotic weed species into native wildlife habitat.

- Developed recreation would be limited to Slocum Creek campground and the boat ramp area, which are already disturbed. Elimination of camping sites at Dago Gulch would reduce visitor contacts with bighorns and other wildlife at Mud Spring. To a lesser extent, impacts may occur from day use parking and restrooms.

- The picnic area near the boat ramp would disturb additional wildlife habitat. The small area disturbed should have minimal impacts on wildlife.

- Rock climbing activities at the Einstein climbing site could cause some disturbance of rubble and boulders near the bottom of the slopes. This disturbance could impact on Mojave black-collared lizard and western ground snake habitat, but any impact would be minimal and localized.

Monitoring Needs

- Annual aerial monitoring of California bighorn sheep and mule deer populations by ODFW will continue,

- Annual monitoring of mule deer and upland gamebirds by ODFW will continue.

- Baseline information for bald eagle winter use, presence and distibution of special status wildlife species, and raptor nesting in the ACEC will be gathered.

Fire

Factors Which Influence Management Prescriptions

The Vale District Fire Management Activity Plan establishes guidelines for selecting fire suppression methods for individual fires within the district. These guidelines consider resource conflicts of the various

methods available and the severity of burning conditions Fire suppression personnel must consider the trade-offs between impacts to other resources of the area and the effectiveness of selected fire control measures. Full fire suppression efforts, which include crawler tractor-constructed fire lines, may not be appropriate in areas such as Leslie Gulch where impacts to the visual resource are of primary concern. The Interim Policy and Guidance for Lands Under Wilderness Review specifies that fire control methods be selected which are most effective while being least damaging to wilderness values. These constraints apply only to the Wilderness Study Area portions of the ACEC. No earth moving equipment may be utilized in any identified Special status Plant site or archaeological sites.

Fire suppression on public lands often is required to prevent fire from spreading to adjacent lands. The private owner of the lands to the south of Leslie Gulch uses these lands for livestock grazing. Fire which spreads from the public lands can destroy privately-owned forage and range developments and the federal government could be held liable for damages if less than full suppression measures are implemented.

The Interim Policy and Guidance for Lands Under Wilderness Review also sets policy for revegetation activities within Wilderness Study Areas. This policy states that to the extent feasible, emergency seeding and planting will utilize native species and that the use of mechanized cross country travel will be avoided.

Impacts of Alternatives on Fire

Alternative A

Access and Roads

- Closure of the Steamboat Ridge Road would eliminate this route for access to this area by fire suppression personnel.

Livestock Grazing

- With no cattle to consume annual grass production, there would be a slight increase in fine fuels during the fire season. Since large portions of the ACEC are either not used by livestock or are inaccessible and many natural fire breaks exist within the ACEC, there is not expected to be a significant change to the fire hazard within the ACEC due to changes in livestock grazing.

Recreation

- Restricting campfires to developed campgrounds and prohibiting back country camping would remove these potential sources of fire from the ACEC and reduce fire hazard.

Alternative B

Access and Roads

- All existing roads would remain available for access by fire suppression personnel.

Livestock Grazing

- Permiting grazing in March and April would reduce the accumulation of fine fuels in areas where cattle graze. Since grazing occurs early in the growing season, any grass growth occurring after livestock removal remains available for fire fuel during the late summer fire season.

Recreation

- Permitting unrestricted camping and use of campfires throughout the ACEC would increase the risks of fire starting from these activities.

Alternative C

Access and Roads

- All existing roads would remain available for access by fire suppression personnel.

Livestock Grazing

- Changing the season of livestock grazing to the winter months would reduce the effect that cattle have in reducing accumulation of fine fuels. Since grazing would not occur during the growing season, more fine fuels would be available to burn during the late summer fire season. Since large portions of the ACEC are either not used by livestock or are inaccessible and many natural fire breaks exist within the ACEC, there is not expected to be a significant change to the fire hazard within the ACEC due to changes in livestock grazing.

Recreation

- Prohibiting ground fires outside of developed campgrounds would reduce the potential for wildfires. This alternative would have the same risk of fire starts by recreationists as Alternative A and have less risk than Alternative B.

Alternative D

Access and Roads

- All existing roads would remain available for access by fire suppression personnel.

Livestock Grazing

- With no cattle to consume annual grass production, there would be a slight increase in fine fuels during the fire season. Since large portions of the AGEC are either not used by livestock or are inaccessible and many natural fire breaks exist within the ACEC, there is not expected to be a significant change to the fire hazard within the ACEC due to changes in livestock grazing.

Recreation

- Restricting campfires to developed campgrounds and prohibiting back country camping would remove these potential sources of fire from the ACEC and reduce fire hazard.

Monitoring Needs

- Monitor impacts of fire and fire suppression activities until all disturbances are stabilized by vegetation. In Leslie Gulch, impacts to the Relevant and Important Values are primarily considered; but also analysis of impacts to all resources of the area are also analyzed. Fire personnel are used as available to monitor rehabilitation of burned areas and identify locations where remedial work is necessary.

Cultural Resources

Factors Which Influence Management Prescriptions

No systematic cultural resource inventories have been conducted within the Leslie Gulch ACEC boundaries. One prehistoric site has been identified and recorded, but its eligibility for the National Register of Historic Places has not yet been determined. Extensive cultural resource inventories have been conducted upriver from the Leslie Gulch area. The Owyhee River, tributary canyons and adjacent uplands are known to have been intensively and extensively utilized by Native Americans.

No systematic paleontological inventories have been conducted within the Leslie Gulch ACEC boundaries. A single tooth of unknown significance has been identified in the ACEC area.

Known cultural resources would be evaluated to determine the property's eligibility to the National Register of Historic Places. Any ground-disturbing activities or management actions which have the potential for concentrating use requires a Class III cultural resource inventory, evaluation of property significance and monitoring in accordance with the National Historic Preservation Act, the Archaeological Resources Protection Act and 36 CFR 800.

Impacts of Alternatives on Cultural Resources

Alternative A

Management activities which would affect cultural resources may be authorized after the effect of those activities has been evaluated and any required mitigation measures have been implemented to adequately protect cultural resources.

Alternative B

Management activities which would affect cultural resources may be authorized after the effect of those activities has been evaluated and any required mitigation measures have been implemented to adequately protect cultural resources.

Alternative C

Management activities which would affect cultural resources may be authorized after the effect of those activities has been evaluated and any required mitigation measures have been implemented to adequately protect cultural resources.

Alternative D

Management activities which would affect cultural resources may be authorized after the effect of those activities has been evaluated any any required mitigation measures have been implemented to adequately protect cultural resources.

Recreation

Factors Which Influence Management Prescriptions

The diverse nature of the recreational opportunities available in Leslie Gulch has a significant role in the area's management. While remaining relatively unknown, the area'spopularity is increasing. In recent years, the area has received media attention in various regional and national publications. BLM's wilderness review process has also attracted public interest to the area.

The quality of a visitor's recreation experience in a particular activity is affected by a combination of environmental and personal factors. Environmental factors can include the level and type of development, condition of the area's resources, user conflicts, and extent of managerial presence (e.g.,signs and patrols). Each visitor also has a unique set of personal values (e.g., preferences, expectations, and tolerances) which also affects his or her experience when recreating in the area.

Existing management direction for recreation in the area is provided in the Northern Malheur Management Framework Plan (MFP) and in the Interim Management Policy and Guidelines for Lands under Wilderness Review (IMP).

The MFP provides for legal motorized access with an off-highway vehicle (OHV) limited use designation which restricts vehicle use to the existing Leslie Gulch, Dago Gulch and Steamboat Ridge roads. Development of trail heads, trails, the boat ramp, sanitation facilities, campgrounds/picnic areas; VRM Class II management; and managerial signing and dispersed recreational use are also provided for in the MFP. Under BLM's Recreation 2000 initiative, the Leslie Gulch area is a part of the Owyhee River Complex Special Recreation Management Area.

The purpose of the IMP is to retain or enhance existing wilderness values which qualify the WSAs suitable for preservation as wilderness. These values include naturalness, outstanding opportunities for solitude, and primitive and unconfined recreation.

Management actions should not exceed the management objective for the VRM Class II designation. Any developments proposed for the ACEC must consider their potential effects upon the visual character of the area.

Through a Memorandum of Understanding with the Bureau of Reclamation (BOR), the BLM manages the BOR parcel located between the ACEC and the Owyhee Reservoir. The type and extent of developed recreational facilities on this parcel concur with the MFP decision to provide boating access in Leslie Gulch. These facilities were developed in partnership with Malheur County and the Oregon Department of Parks and Recreation to provide recreation uses not otherwise available in the Leslie Gulch area. The presence and use of these facilities affects recreation opportunities within the ACEC. Presently there is no docking facility to provide safety for the boating public. The knoll adjacent to the boat ramp is subject to increased vegetation and soil damage by day use visitors of the area.

Leslie Gulch is a component of BLM's National Watchable Wildlife and National Back Country Byways programs. Byways are established to provide opportunities for the public to enjoy America's public lands which are removed from major highway systems. Watchable Wildlife areas are managed to provide wildlife viewing opportunities for the public. Both programs promote the area in widely circulated promotional mediums. The State of Oregon has nominated the Byway as one of its original Scenic Tour Loops, a new program designed to promote motorized travelers' enjoyment of the state's natural and cultural resources and to enhance tourism.

Sport rock climbing has recently expanded within the ACEC and specific management guidance regarding this activity has yet to be developed in the BLM. In the Vale District, there is a moratorium on the placement of fixed anchors and the use of portable power tools in WSAs until additional management direction is developed. Rock climbing can impact recreation by affecting the area's scenic resources, cultural values wilderness values, soils and vegetation.

Impacts of Alternatives on Recreation

All Alternatives

The Memorandum of Understanding with the BOR would provide for continued on-site BLM management of federal lands for recreational purposes where Leslie Gulch confluences with Owyhee Reservior. Visitors would continue to have the opportunity to use the recreational facilities on BOR lands.

Visitor safety and resource values would be enhanced by retention of the gate at the oOverlook for temporary closure. If the gate were closed, there would be a short-term loss of recreation opportunity.

Signs would be designed to be minimal in scope and to blend with the setting while providing appropriate protection of resources and enhancing the public's visit to the area.

Providing for the physically challenged at selected developed facilities would enhance the recreation opportunities for a larger segment of the public.

Shooting restrictions in areas of concentrated use would provide a measure of safety for the-visiting public.

The management actions affecting rock climbing activities would restrict opportunities for rock climbers, There would be fewer impacts to the natural and visual values, which would enhance enjoyment of the ACEC by other recreational users

Alternative A

Access and Roads

- Two additional pullout/parking areas along the Leslie Gulch Road would decrease driving hazards by keeping parked vehicles off the traveled road. Improved access to areas of the ACEC where there is currently no parking would reduce impacts to resources at the currently heavier used areas and increase use in other areas. Visitors' primitive recreation experiences would be enhanced by improved distribution of use and a decrease in the number of party contacts.

- Elimination of vehicular access on Steamboat Ridge would preclude use by recreationists who drive this particular route. Vehicle trespass in the three WSAs would be reduced.

- By not improving the Leslie Gulch channel crossings, current road standards would continue to discourage some visitation, particularly by low clearance vehicles. Occasional flood damage of the crossings would continue to occur, temporarily preventing road access and possibly stranding visitors.

Land Tenure

- Acquisition of the 40-acre private parcel at Dago Gulch would provide for the establishment of a day use parking area and a restroom in that area. These facilities would reduce vehicle congestion and place a restroom closer to where back country recreational use originates in this part of the ACEC. Reclamation of the existing developments on this parcel and careful design of the new facilities would reduce the overall visual impacts on the setting.

- Non-availability of developed water at Mud Spring would reduce the attractiveness of the ACEC for camping.

Minerals

- Exploration or development of locatable minerals, where available in the ACEC, could adversely impact the scenic qualities of the ACEC and likely not meet VRM Class II objectives. All recreational activities would be adversiy impacted should mineral activites occur. Any mining claims staked within the WSAs would be subject to a validity examination prior to development activity following designation as wilderness. Valid claims would have the basic rights for development granted under the Mining Law of 1872.

Livestock Grazing

- Removal of livestock from the ACEC would enhance the quality of the recreation experience for those visitors who dislike the presence of livestock or their evidence. There would be less human-induced alteration from livestock use activities on the natural setting within the ACEC.

Noxious Weeds

- Manual removal of noxious weeds would help maintain the area's natural appearance, but would not be as effective at controlling weeds as Alternatives B, C and D, which have a combination of manual and chemical control methods.

Wild Horses

- Although there has been no recent wild horse use, excluding the Leslie Gulch area from the Wild Horse Management Area would eliminate the chances that visitors would observe wild horses.

Special Status Plants

- Any fences, signs or trail segments constructed to protect special status plant sites would create a visual intrusion but would not significantly affect most recreational activities.

- Installation of a gate on the Dago Gulch Road would limit vehicle access on approximately 0.8 mile of a dead-end road and reduce motorized vehicle trespass in the Upper Leslie Gulch and Slocum Creek WSAs, and eliminate the need to turn around at hazardous points along the road.

Recreation

- Elimination of the Back Country Byway and Watchable Wildlife designations would reduce public awareness of the ACEC's values, and the opportunity for public education available through these programs would be lost. Although recreational use of the Leslie Gulch area is expected to increase in the future, the rate of increase would likely be less under this alternative.

- This alternative would be the least attractive for vehicle campers at Slocum Creek campground since there would be no additional development. Boat loading/unloading would remain a safety hazard with no safety dock provided. The lack of developed picnic units near the boat ramp would promote increased proliferation of trails on unstable slopes, damage to vegetation and the scattering of trash. No provision for a human waste facility would encourage continued dumping on public lands and cause maintenance difficulties in vault toilets due to plastics dumped with the waste.

- The Owyhee Breaks trail corridor would not be available to direct users to a preferred route location, possibly causing a proliferation of primitive trail routes and impacts to resources.

- Opportunities for recreational horse use in the area would not be available.

- Impacts on natural values and higher levels of social contact between users due to back country camping would not occur. This would retain the back country in a more natural condition and enhance the quality of a primitive recreation experience for day users in the area.

- Permits limiting organized group size to six persons would result in less impact to natural values and lessen social impacts between parties in the back country.

- Prohibiting sport rock climbing within the ACEC would eliminate visual impacts caused by fixed anchors or chalked and artificially constructed handholds, site-specific soil compaction, and vegetative disturbance. Some visual scarring of the rock faces may remain evident due to removal of existing anchors, particularly at the Einstein site. Potential impacts to known cultural resources caused by rock climbing activities would be avoided.

Alternative B

Access and Roads

- No additional pullout/parking areas along the Leslie Gulch Road would preclude the opportunity to improve safety along the road and to improve the distribution of dispersed recreation activities within the ACEC. This could lead to a lower quality primitive recreation experience for visitors as use levels increase in more popular back country areas.

- With vehicle access to Steamboat Ridge and Dago Gulch remaining open, the potential for unauthorized vehicle use in the three WSAs would continue,

- By not improving the Leslie Gulch channel crossings, current road standards would continue to discourage some visitation, particularly by low clearance vehicles. Occasional severe flood damage of the crossings would continue to occur, temporarily preventing road access and possibly stranding visitors.

Land Tenure

- With no acquisition of the private parcel or scenic easement at Dago Gulch, the possibility of development of day use facilities and reduction of visual impacts by the existing structures would be foregone. Any additional developments by the landowner would likely further impact the high scenic values located in the setting of the ACEC.

- Public use of water from Mud Spring would be at the discretion of the private landowner.

Minerals

- Withdrawal of locatable minerals throughout the ACEC would help protect the ACEC's existing natural landscape and high scenic qualities from disturbance. This closure would enhance the recreational experiences dependent upon these values.

Livestock Grazing

- The presence of livestock during the beginning of the high recreational use period (March and April) would impact some recreational activities by intruding upon the natural setting. Livestock presence or evidence may degrade the desired recreation experience for some visitors.

Noxious Weeds

- The combination of manual and chemical control of noxious weeds would likely result in fewer weeds in the area than under Alternative A, aiding in maintaining the area's natural appearance.

Wild Horses

- Allowing wild horses into the ACEC would provide the opportunity for visitors to-see wild horses in a natural setting. The impact on an individual's recreational experience from this opportunity would depend on personal perceptions.

Special Status Plants

- Possible site-specific measures, including public education and fence or sign placement to protect plant sites, may enhance visitors' awareness, respect and interest about the area's unique plants and their habitat.

- Any fences, signs or trail segments constructed to protect special status plant sites would create a visual intrusion but would not significantly affect most recreational activities.

- With the lower 0.8 mile of Dago Gulch Road being open, OHV trespass would continue in Upper Leslie Gulch and Slocum Creek WSAs. Motorists would continue to turn around at hazardous locations on this dead end road.

Recreation

- Maintaining the Back Country Byway and Watchable Wildlife management programs in the ACEC would likely increase the rate of the area's recreational use, but would serve the important role of public education and information dissemination about resource values and user ethics.

- Developing individual camp units within the presently disturbed area at the Slocum Creek campground would enhance camping opportunities there. However, this level of campground development would not help meet peak season camping demands for the area. Boat loading/unloading would remain a safety hazard with no safety dock provided. The lack of developed picnic units near the boat ramp would promote increased proliferation of trails on unstable slopes, damage to vegetation and the scattering of trash.

- Continued vehicle camping at dispersed locations in the ACEC, primarily in Dago Gulch, would continue to cause damage to vegetation, soils and aesthetic values and increase vehicle trespass into WSAs.

- Recreational horse riding would continue On primitive trails and may cause establishment of additional trails and spread weed seeds throughout the area. Fragile soils and special status plant habitat may be disturbed.

- The Owyhee Breaks trail corridor would not be available to direct recreationists to a preferred route location. Proliferation of primitive trail routes and impacts to resources may occur.

- With the continuation of uncontrolled back country camping, there would be increased frequency of contacts between back country users and long term evidence of campsites. This would reduce the sense of solitude and quality of a primitive recreation experience. Continued damage to vegetation for use in camp fires and proliferation of fire rings would continue.

- Not placing restrictions on the size of organized group activities would cause more intense and accelerated impacts on natural values. Social conflicts with other recreationists could also be more apparent. Adding special stipulations to activities which require a special use permit would partially mitigate the impacts.

- Sport rock climbing at the Einstein climbing site using fixed anchors would cause visual impacts from the use of fixed hardware, artificially created hand holds and white chalk deposits on the rock faces. There would also be impacts upon other resources by the concentration of activity at the climbing site. The climbing routes would not be visible from the access road, therefore, disruption to the high quality scenery would not occur for motorists. The climb routes and activities would be visible to other back country recreationists in the Upper Leslie Gulch WSA. Climbing activities at the Asylum site would impact the visually sensitive natural setting viewed by motorists along the ACEC's main canyon road. Mitigative measures to avoid impacts on known cultural resources in a climbing area may be necessary, but would likely not preclude climbing.

Alternative C

Access and Roads

- Development of four pullout/parking areas along the Leslie Gulch and Dago Gulch roads would

improve safety and access to additional areas of the ACEC. This would reduce user pressure and impacts on those back country areas with existing parking.

- With vehicle access to Steamboat Ridge remaining open, the potential would remain for vehicle trespass into the Honeycombs WSA. Vehicle access to Steamboat Ridge would remain.

- Proposed drainage crossing improvements under this alternative would slightly improve accessibility of the ACEC. These improvements would allow the crossings to pass larger storm runoff events without becoming impassable. This would reduce the chances that visitors would become stranded in the gulch during storms. Although all types of highway vehicles presently use the road, these improvements would make the ACEC slightly more attractive to visitors, which could result in slightly increased use.

Land Tenure

- Acquisition of the 40=acre private parcel at Dago Gulch would provide for the establishment of a day use parking area and restroom in that area. These developments would reduce vehicle congestion and place a restroom closer to where back country recreational use originates in this part of the ACEC. Reclamation of the existing developments on this parcel and careful design of the new facilities would reduce the overall visual impacts on the setting.

- Piped potable water to Slocum Creek campground from Mud Spring would increase camping pressure at Slocum Creek. Water development, combined with the campground expansion, would increase the number of visitors as well as the length of stay of campers.

Minerals

- Exploration for or development of locatable minerals in the ACEC could adversely impact the exceptional scenic qualities of the ACEC, which are an important and relevant value. Mineral extraction activities would likely not meet visual management objectives for the designated VRM Class II area of the ACEC. The quality of a recreation experience for most recreation opportunities in the ACEC would likely be substantially adversely impacted and diminished by certain mineral exploration methods and by all forms of mineral extraction activities.

- Although IMP guidance precludes nearly all mineral development activities, mining claims can still be located. Any mining claims staked within the WSAs would be subject to a validity examination prior to development activity following designation as wilderness. Valid claims would have the basic rights for development granted under the Mining Law of 1872.

Livestock Grazing

- Changing the livestock grazing season in the Leslie Gulch pasture to winter use would separate the cattle use period from the primary recreational use season. Recreational visitors may still view some indirect evidence of livestock use but to a lesser extent than under Alternative B.

Noxious Weeds

- The combination of manual and chemical control of noxious weeds would likely result in fewer weeds in the area than under Alternative A, which would help maintain the area's natural appearance.

Wild Horses

- Wild horses may move into the ACEC, presenting an opportunity for visitors to see wild horses. The impact on an individual's recreational experience from this opportunity would depend on personal perceptions.

Special Status Plants

- Any fences, signs or trail segments constructed to protect special status plant sites would create a visual intrusion but would not significantly affect most recreational activities.

- A back country visitor access permit system would help limit impacts on special status plants.

- Installation of a gate on the Dago Gulch road would limit vehicle access on approximately 0.8 mile of dead-end road up Dago Gulch, reduce vehicle trespass in the Upper Leslie Gulch and Slocum Creek WSAs and eliminate a hazardous vehicle turn around point on the dead-end road.

- Possible site specific measures, including public education, signing and fence placement, to protect plant sites, may enhance visitors' awareness, respect and interest about the area's unique plants and their habitat.

Recreatiam

- Maintaining the Back Country Byway and Watchable Wildlife designations in the ACEC would likely increase the rate of the area's recreational use, but would serve the important role of public education and information dissemination about resource values and user ethics.

- The on-site availability of potable water, development of individual camp units and the improvements at the boat ramp area proposed under this alternative would increase the level of camping use within the ACEC and provide safety for the boating public and picnic tables while protecting vegetation and soil adjacent to the boat ramp outside of the ACEC.

- Providing equestrians with a vehicle campsite at Dago Gulch would separate their overnight activities frorn Slocum Creek campground users, reducing user conflicts.

- The requirement for horse users to provide weed-free hay would be an inconvenience for recreational horse users.

- Physical impacts due to recreational horse use would be confined to roads and accessible ridge tops under this alternative, largely avoiding special status plant habitats. Significant increases of horse use for recreational riding could cause excessive damage to sensitive and steep soil sites and vegetation, as well as cause some user conflicts.

- With motorized vehicle access to Steamboat Ridge remaining open, violations of off-road driving would continue to occur into Honeycombs WSA.

- The frequency of back country user contacts would likely be greatest under this alternative, diminishing the quality of the primitive recreation experience.

- Providing for the Owyhee Breaks trail corridor and creating a trailhead would direct users to a preferred route, reducing impacts to sensitive resources.

- Unrestricted sizes of organized group activities would cause increased impacts on resource values, Social conflicts with other recreationists would be more apparent. Adding special stipulations to activities which require a special use permit would partially mitigate these impacts.

- Retaining all existing sport rock climbing routes would continue to cause visual impacts due to fixed hardware, artificially created hand holds and white chalk deposits on the rock faces: and impacts upon other resources such as soil compaction and vegetation damage caused by the concentration of climbing activity. Limiting the number of persons and frequency of use at the climbing sites would reduce the impacts more than under Alternative B. Climbing routes within view of the Leslie Gulch Road would disrupt sightseeing within the area for motorists. Mitigative measures to avoid impacts on known cultural resources in a climbing area may be necessary, but would likely not preclude climbing.

Alternative D

Access and Roads

- Development of up to four pullout/parking areas along Leslie Gulch and Dago Gulch would improve road driving safety and access to additional areas of the ACEC. This would reduce user pressure and impacts on those back country areas with existing parking.

- With vehicle access to Steamboat Ridge remaining open, the potential would remain for vehicle trespass into the Honeycombs WSA. Access would also remain for hunting and other uses.

- Proposed drainage crossing improvements under this alternative would slightly improve accessibility of the ACEC. These improvements would allow the crossings to pass larger storm runoff events without becoming impassable. This would reduce the chances that visitors would become stranded in the gulch during storms. Although all types of highway vehicles presently use the road, these improvements would make the ACEC slightly more attractive to visitors, which could result in slightly increased use.

Land Tenure

- Acquisition of the 40=acre private parcel at Dago Gulch would provide for the establishment of a day use parking area and a restroom in the Dago Gulch area. These facilities would reduce vehicle congestion, decrease vehicle trespass into WSAs, and improve sanitation by placing a restroom closer to where back country recreational use originates in this part of the ACEC. Reclamation of the existing developments on this parcel and careful design of the new facilities would reduce the overall visual impacts on the setting.

- Non-avaliability of developed water at Mud Spring or elsewhere would somewhat reduce the attractiveness of the ACEC for camping.

Minerals

- Elimination of mineral activity throughout the ACEC would help protect the ACEC's existing natural landscape and high scenic qualities from disturbance. Recreational experiences dependent upon these values would be enhanced.

Livestock Grazing

- Removal of livestock from the Leslie Gulch pasture would enhance the quality of the recreation experience for those visitors who dislike the presence of livestock or their evidence. There would be no new livestock trails, no grazed appearance, no livestock and no livestock sign to alter the natural setting within the ACEC.

Noxious Weeds

- The combination of manual and chemical control of noxious weeds would likely result in fewer weeds in the area than under Alternative A, aiding in maintaining the area's natural appearance.

Wild Horses

- Although there has been no recent wild horse use, excluding the Leslie Gulch area from the Wild Horse Management Area would eliminate the chances that visitors would observe wild horses.

Special Status Plants

- Any fences, signs or trail segments constructed to protect special status plant sites would create a visual intrusion but would not significantly affect most recreational activities.

- Installation of a gate on the Dago Gulch Road would limit vehicle access on approximately 0.8 mile of a dead-end road and reduce motorized vehicle trespass in the Upper Leslie Gulch and Slocum Creek WSAs, and prevent hazardous turn around driving on the dead-end road.

Recreation

- Elimination of the Back Country Byway and Watchable Wildlife designations would reduce public awareness of the ACEC's values, and the opportunity for public education available through these programs would be lost. Although recreational use of the Leslie Gulch area is expected to increase in the future, the amount of increased use would likely be somewhat less under this alternative. The level of adverse impacts on natural values and frequency of social impacts between visitors would be somewhat less,

- Opportunities for recreational horse use in the area would not be available.

- Impacts on natural values and higher levels of social contact between users due to back country camping would not occur. This would retain the back country in a more natural condition and enhance the quality of a primitive recreation experience for day users in the area.

- Permits limiting organized group size normally to six persons would result in less impact to natural values and less social contact between groups within the ACEC.

- Developing individual camp units within the presently disturbed area at the Slocum Creek campground would enhance camping opportunities there. However, this level of campground development would not help meet peak season camping demands for the area. The safety dock would help provide protection for visitors and their watercraft, designed for loading/unloading only. Providing up to three picnic tables on the knoll adjacent to the boat ramp would curtail haphazard damage to vegetation and soil while minimally providing for this recreational activity.

- Sport rock climbing using fixed anchors at the Einstein climbing site would cause visual impacts from the use of fixed hardware, artificially created hand holds and white chalk deposits on the rock faces. There would also be impacts upon other resources by the concentration of activity at the climbing site. The climbing routes would not be visible from the access road; therefore, disruption to the high quality scenery would not occur for motorists. The climb routes and activities would be visible to other back country recreationists in the Upper Leslie Gulch WSA. Impacts would eventually be less apparent as climbing routes are removed once they become unsafe. Sport rock climbing would eventually no longer be available in the ACEc. In the short term, any required mitigation to protect known cultural resource values in a climbing area would likely not preclude rock climbing activities. Over the long term, rockclimbing impacts to known cultural resources would be fully avoided.

- Providing for the Owyhee Breaks trail corridor and creating a trailhead would direct users to a preferred route, reducing impacts to sensitive resources.

- Provision of a human waste dump facility for river floaters would prevent illegal dumping on public lands and eliminate maintenance problems of vault toilets in the ACEC.

- Providing temporary housing at Slocum Creek campgroung would provide for more efficient monitoring of activities and public contact services for the public.

Monitoring Needs

- Maintain vehicle counts of use, particularly during the primary recreational use period (April through October).

- Conduct studies to determine where and to what extent various recreationatactivities are occurring within the ACEC, emphasizing water-oriented, developed facility and back country dispersed recreational activities.

- Establish baseline data for indicators of condition (current and desired) and measures of human induced recreational impacts on natural and cultural values, focusing on areas where use is more concentrated and where more sensitive resources may be affected.

- Establish measures for retaining or enhancing quality of recreation experience, while minimizing conflicts between various recreation uses and users.

Wilderness

Factors Which Influence Management Prescriptions

The 1989 BLM Oregon Final Wilderness EIS and subsequent 1991 BLM Oregon Wilderness Study Report to the President recommended nearly all of the portions of the three WSAs within the ACEC be designated as components of the National Wilderness Preservation System. In 1992, the President submitted to Congress the same recommendation. Congress has no deadline to make a decision on the wilderness issue. WSA land within the ACEC not recommended for wilderness designation are at two locations: 1) the width of the lower Leslie Gulch canyon floor, not to exceed 400 feet from either side of the Leslie Gulch Road, from the private land at Mud Spring down canyon to the Bureau of Reclamation-administered land and 2) the width of the Slocum Creek canyon floor extending for 1,200 feet south from the Slocum Creek campground area.

There is substantial public support for wilderness designation of the WSAs.

While in study status, the three wilderness study areas within the Leslie Gulch ACEC are managed in accordance with BLM's Interim Managment Policy and Guidelines for Lands under Wilderness Review (IMP) (BLM Manual Handbook 8550-l) and Instruction Memorandum OR-92-241, "Interim Management of Wilderness Study Areas". In general, the only activities allowed under these guidelines are temporary uses that create no new surface disturbance. Allowing for noted exceptions, proposed surface disturbing management actions within WSAs which would require reclamation could not be implemented until Congress removes an area from WSA status. Regarding noted exceptions, any proposed new surface disturbing action {such as pullout/parking areas, developed trails, road stabilization work, restrooms, fences or signs) are assessed to determine if the action meets the IMP by providing for one or more of the following: 1) the action is the minimum necessary to protect or enhance wilderness values; 2) the action provides the minimum necessary facilities for public enjoyment of the wilderness values; and/or 3) the action is necessary for public health and safety in the use and enjoyment of the public lands' wilderness values. Implementation of any surface disturbing action within a WSA must be substantiated by appropriate monitoring. Monitoring results must show that the impacts on wilderness values requires a project's implementation as a minimum action to protect or enhance the wilderness resources or their uses.

The IMP states that livestock grazing activities, mining, and mineral leasing uses on lands under wilderness review may continue in the manner and degree in which these uses were being done on October 21, 1976. These are "grandfathered" uses. Livestock grazing is grandfathered in all three WSAs. There are no grandfathered mining claims or mineral leases within the WSAs of the Leslie Gulch ACEC.

Activities that do not impair the land's suitability as wilderness or those that protect or enhance wilderness values are permitted in WSAs. The IMP requires separate analysis of impacts for the exceptions of use or surface-disturbing activities to ensure that wilderness values are not so impaired as to

make a WSA not suitable for wilderness designation. New permanent structures, installations or trails are permitted if needed to preserve wilderness and resource values or provide the minimum necessary for public health and safety in the use and enjoyment of the public lands wilderness values. Maintenance, construction or removal of existing structures and installations are permitted if accomplished by primitive means. New permanent range improvements may be approved for the purpose of enhancing wilderness values by better protecting the rangeland in a natural condition.

Land use authorizations such as leases and special use permits may be permitted if BLM determines that wilderness values would not be impaired. Changes in livestock use are allowed if the changes do not cause declining condition or trend of the vegetation or the soil. Noxious weeds may be controlled by grubbing or chemicals if there is no effective alternative and there are no serious adverse impacts on wilderness values.

The IMP provides for land exchanges when BLM receives lands within an area under wilderness review in exchange for public lands not under wilderness review. BLM's wilderness recommendation for each of the three WSAs of the ACEC did not recommend acquisition of the 40-acre private parcel.

Any portions of the WSAs that are congressionally designated as wilderness would be managed in accordance with BLM's Wilderness Management Policy Title 43 CFR 8560 and BLM Manual 8560, Management of Designated Wilderness Areas. A wilderness management plan would be developed for any designated wilderness area. All issues and needs to specifically manage the wilderness area(s) would be addressed in the plan Appropriate decisions of this plan would be included in the wilderness management plan.

Impacts of Alternatives on Wilderness

Alternative A

Access and Roads

- Construction of two pullout/parking areas along Leslie Gulch Road would provide safe parking for persons going into the Slocum Creek or Honeycombs WSAs, enhancing the opportunity to enjoy wilderness values. Overall, primitive recreation opportunities in WSAs would be enhanced by decreasing the number of party contacts with the greater distribution of use.
- Closing motorized vehicle access on Steamboat Ridge and on about 0.8 mile of the Dago Gulch Road would prevent unauthorized off-road vehicle use into the three WSAs and enhance primitive recreation opportunities in these WSAs.

Land Tenure

- Acquisition of the 40-acre private parcel at Dago Gulch would allow for consistent management of wilderness values including outstanding natural scenic values, bighorn sheep habitat and Ertter's grounsel specimens and habitat. Removal of the structures and reclamation of the area north of the Leslie Gulch Road would eliminate these visual intrusions. Proposed parking area and restroom in Dago Gulch would be designed to have a lower visual impact than the existing developments

Minerals

- Closure to mineral material sales throughout the ACEC would protect wilderness values of the ACEC from disturbances associated with this type of mineral resource development. Locatable minerals development would likely impair wilderness values and not meet VRM Class II objectives.
- The 1035 acre locatable mineral withdrawal, proposed under this alternative, includes those portions of the WSAs not recommended for wilderness designation and the remainder of the ACEC which is outside of the WSAs. Without withdrawal, these areas would be available for mineral development which could severely impact wilderness values within adjacent designated wilderness areas. Any congressional legislation for designated wilderness within the ACEC would likely withdraw the designated wilderness from mineral entry. However, for any mining claims established prior to designated wilderness, surface disturbing mining activities on claims with a valid mineral discovery within designated wilderness could be authorized. Mining activities within designated wilderness would likely severely impact wilderness values.

Livestock Grazing

- Elimination of livestock grazing, livestock trails, and the grazed appearance in livestock use locations within the three WSAs would reduce the human-induced alteration of the naturalness within the three WSAs.

Noxious Weeds

- **Manual control of noxious weeds would help preserve the naturalness of the three WSAs, but this method alone would be less effective than the combination of methods proposed in Alternatives B, C and D.**

Wild Horses

- **Removal of wild horses would have limited effect on wilderness values because there is minimal wild horse use in the ACEC.**

Special Status Plants

- **Constructing site specific trails or fences or placing signs in WSAs to protect special status plant sites would serve as the least surface disturbing activities to protect these important wilderness values. Fence construction would likely cause more visual intrusion on the naturalness of a WSA than small segments of trail construction or the placement of signs, thus, should be done as a last resort to protect site specific special status plants.**

Wildlife

- **Current bighorn sheep transplant practices have not impaired wilderness values. The presence of bighorn sheep wormer blocks or other supplements in public use areas within WSAs would create an undesirable iittered appearance. Placement in less apparent locations would reduce impact on wilderness values.**

Recreation

- **There would be fewer impacts on wilderness values by recreationists under this alternative than under Alternatives B and C, and about the same impacts as under Alternative D. Recreational use would be directed to fewer specific locations in each of the three WSAs than under Alternative C in order to enhance opportunities for solitude and primitive recreation.**

- **Recreational use impacts would be more dispersed and less acute in high use areas than under Alternative B. The extent of these impacts would be partially mitigated by the lower level of recreational facility development and improvements prescribed under this alternative and by the limitation to day use hiking for access within the WSA portions of the ACEC. Possible implementation of a back country use permit system would increase opportunities for recreationists to experience solitude and a aualitv orimitive recreation experience while aiding the'protection of wilderness natural values.**

- **The naturalness of the WSAs would be most protected under this alternative by closure of two road segments, development of a parking area at Dago Gulch which would centralize parking for both Dago Gulch and upper Leslie Gulch, improved dispersal of WSA recreational use by establishing two additional pullout/parking areas along the main Leslie Gulch Road and by limited special use permit activities.**

- **Not providing for the Owyhee Breaks trail corridor could result in a proliferation of trails established by repeated use within the WSAs, particularly in the Honeycombs and Slocum Creek WSAs. The opportunity to manage this type of recreational use would be foregone.**

- **Removal of fixed anchors associated with sport rock climbing in the WSAs would be in accordance with the IMP policy of not permitting the establishment of permanent installations within WSAs. At the Einstein climbing site, the removai of fixed anchors would likely cause more observable scars than leaving the existing camouflaged hardware on the rock face and providing maintenance. Potential impacts on cultural resource values caused by rockclimbing activities would be avoided.**

Alternative B

Access and Roads

- **With no additional pullout/parking provided in the ACEC, the opportunity to improve the WSA visitors' safety while using the access road, and the opportunity to improve the distribution of use in the WSAs would be foregone, resulting in higher concentrations of use in WSA locations where parking along the road presently occurs. Within WSAs, there would be a long term deterioration of a quality primitive recreation experience, fewer opportunities for outstanding solitude, and increased physical impacts to resources in the existing concentrated use areas. Visitors to the lesser-used areas in WSAs would more likely retain opportunities for outstanding solitude with fewer contacts with other back country users.**

- **With no change in motorized vehicle access routes, a total of approximately 1.5 miles of existing road would remain available for use in the ACEC, compared to Alternative A. Off-road**

vehicle use would likely continue into Honeycombs WSA from the Steamboat Ridge Road, and-along the Dago Gulch Road into Upper Leslie Gulch and Slocum Creek WSAs. Along steep grades of Steamboat Ridge Road, soil erosion from surface water runoff would be a continued concern.

Land Tenure

- Without acquisition of the Dago Gulch 40-acre private parcel, opportunities to remove the-visual impacts of the structures would be foregone.

Minerals

- The withdrawal of locatable minerals from the entire ACEC now would be a significant step in protecting wilderness values. The WSAs are currently open for location of mining claims while in the study process. However, should mining claims be established prior to designated wilderness, surface disturbing mining activities on the claims with a valid mineral discovery within any designated wilderness could be authorized. Mineral development on areas designated wilderness would likey have significant impacts on wilderness values.

Livestock Grazing .

- The presence of livestock and the evidence of livestock use (trails, fecal material and grazed areas) in WSAs and designated wilderness may reduce the enjoyment of some visitors seeking primitive recreation activities. Livestock impacts to wilderness natural values, such as to special status plants or their habitats, hinders efforts to protect such values.

Noxious Weeds

- The combination of manual and chemical control of noxious weeds would be more effective than manual control alone in reducing the impacts of noxious weed invasion on the natural setting of the WSAs.

Wild Horses

- Wild horse use within the ACEC is minimal so has limited effect on wilderness values, Depending upon the specific locations and level of the wild horse use, impacts could be similar to those described for livestock under this alternative. The presence of wild horses can have positive or negative impacts for WSA visitors depending upon their personal perceptions,

Special Status Plants

- Under current management direction and guidance, site-specific measures may be implemented to protect special status plant species or other wilderness values. Measures such as signing, fencing, and trail relocation may be approved as the least impacting activities to a WSA's naturalness, should monitoring determine such actions to be necessary to protect or enhance wilderness values and wilderness values are not unduly impaired. Constructing site specific trails or fences or placing signs in WSAs to protect special status plant sites would serve as the least surface disturbing activities to protect these important wilderness values. Fence construction would likely cause more visual intrusion than trail segment construction or the placement of signs, thus, should be done as a last resort to protect site specific special status plants. This alternative may require an increased degree of protective measures than required under Alternative A or D due to the retention of livestock grazing.

Wildlife

- The current bighorn sheep transplant practices have not impaired wilderness values. The presence of bighorn sheep wormer blocks or other supplements in public use areas within WSAs would create an undesirable littered appearance. Placement in less apparent locations would reduce impact on wilderness values.

Recreation

- Vehicle access on the Steamboat Ridge and Dago Gulch roads would perpetuate unauthorized off-road vehicle use in the three WSAs. Not providing for the Owyhee Breaks trail use corridor would likely lead to a proliferation of trails and inadvertant impacts to other resources caused by repetitive passage of recreational users in the WSAs.

- There would be fewer specific opportunities to manage various recreation uses in WSAs under this alternative and less opportunity to direct increased dispersed use to other locations within the WSAs.

- Recreational use impacts would be more concentrated and acute in specific locations of the three WSAs than under Alternatives A or C or D, since no additional pullout/parking areas would be provided. As back country visitation increases within the ACEC, some wilderness values in the presently accessible locations of the WSAs would

be more severely impacted. There would be a greater deterioration of outstanding opportunities for solitude as the frequency of party contacts increases in these locations. Organized group use activities would intensify certain physical impacts in the WSAs during concentrated group activities.

- Long term retention of fixed anchors for sport rock climbing, as permanent installations, in WSAs would not be in accordance with the IMP. Limiting sport rock climbing to Einstein and employing mitigative measures would be more effective in this alternative than under Alternative C. While anchor removal at the Asylum climbing site would result in some rock surface scaring, the scaring would be inconspicuous to the casual observer due to the distance from common back country use corridors within Upper Leslie Gulch WSA and the site's distance from motorists on the main Leslie Gulch Road, Mitigative measures to avoid impacts on known cutural resources in one climbing area may be necessary, but would likely not preclude climbing activities.

Alternative C

Access and Roads

- Construction of four pullout/parking areas in or abutting WSAs within the ACEC would provide safe parking for persons going into the WSAs. Primitive recreation opportunities in WSAs would be enhanced by decreasing the number of party contacts with the greater distribution of use. In the long term, physical impaets to resources at the currently heavier-used areas in WSAs would be reduced, with opportunities for solitude and primitive recreation more available. Visitors to the currently lesser used areas would have reduced opportunities for outstanding solitude. Physical impacts within WSAs would increase in the new areas provided with parking access.

Land Tenure

- Acquisition of the 40-acre private parcel at Dago Gulch would allow for consistent management of wilderness values associated with the area of the ACEC, including outstanding natural scenic values, bighorn sheep habitat and Ertter's groundsel specimens and their habitat. Removal of the structures and reclamation of the area north of the Leslie Gulch Road would eliminate the visual intrusion. Proposed facilities of a parking area with a restroom in Dago Gulch would be designed to have a lower visual impact than the existing developments.

Minerals

- In accordance with the IMP for WSAs, surface-disturbing mining activities requiring reclamation, or which would impair wilderness values, would not be authorized. For any mining claims established prior to designated wilderness, surface disturbing mining activities on claims with a valid mineral discovery within designated wilderness could be authorized.

- Wilderness designation would likely withdraw approximately 85 percent of the ACEC from mineral development. However, for mining claims established prior to designated wilderness, surface disturbing mining activities on claims with a valid mineral discovery within any designated wilderness could be authorized.

Mineral development on areas either designated or not designated wilderness could have significant adverse impacts on wilderness values on any portion of the ACEC which would be designated wilderness.

Livestock Grazing

- The change in grazing season to the winter months would separate the presence of livestock in the WSAs from the visitor use season of the WSAs. While direct evidence of livestock use, such as trails, fecal material and grazed appearance, could be experienced by recreationists in the WSAs, it would likely be less noticeable than under Alternative B.

Noxious Weeds

- The combination of manual and chemical control of noxious weeds would be more effective than manual control alone in reducing the impacts of noxious weed invasion on the natural setting of the WSAs.

Wild Horses

- Wild horse use in the ACEC is minimal so has limited affect on wilderness values. Wild horses could move into the WSA under this alternative, which would provide the opportunity for visitors to see wild horses. Dependent upon the specific locations and level of the wild horse use, impacts could be similar to those described for livestock under Alternative B. The presence of wild horses can have positive or negative impacts for WSA visitors depending upon their personal perceptions.

Special Status Plants

- The exclosure fence for grimy ivesia would be partially within Honeycombs WSA. Although located and designed to minimize its visual presence in the WSA, there would be some visual impact, making the area appear less natural. Any additional fences or other measures taken to protect special status plant sites may further detract from the naturalness and scenic values. This alternative could impact wilderness values the same as Alternative B.

Wildlife

- Current bighorn sheep transplant practices have not impaired wilderness values. The presence of bighorn sheep wormer blocks or other supplements in public use areas within WSAs would create an undesirable littered appearance. Placement in less apparent locations would reduce impact on wilderness values.

Recreation

- Continued motorized vehicle access on the Steamboat Ridge Road would perpetuate off-road vehicle trespass in this area of the Honeycombs WSA.

- Non-motorized primitive recreation use opportunities would be enhanced in the upper Dago Gulch areas within Upper Leslie Gulch and Slocum Creek WSAs. Should it be needed, a back country access permit system would enhance opportunities of solitude, primitive recreation and protection of wilderness values.

- Providing for the Owyhee Breaks trail corridor would avoid proliferation of primitive trails in Honeycombs and Slocum Creek WSAs.

- Recreational horse use would be more limited than under Alternative B, with impacts to the wilderness values of special status plant habitats and populations less likely to occur by riding activities. Horse use would remain a factor in the potential introduction of noxious weeds into the WSAs.

- The extent of developed recreation facilities, developed potable water and the opportunity to camp in the WSAs would invite greater use and longer recreational stays than under Alternatives A or B. This impact would be partially off set by more widely dispersing the WSA recreational use with the establishment of four pullout/parking areas along the Leslie Gulch Road. Naturalness and opportunities for solitude would be more impacted by recreational use under this alternative than under the other alternatives.

- Long term retention of fixed anchors for sport rock climbing as permanent installations in WSAs would not be in accordance with the IMP. The level of impact to wilderness values by rock climbing would be greatest under this alternative. Although mitigative measures would minimize each impact, the locations where climbing would be allowed would be the greater. Mitigative measures to avoid impacts on known cutural resources in one climbing area may be necessary, but would likely not preclude climbing activities.

Alternative D

Under this preferred alternative, all proposed management actions affecting WSAs of the ACEC meet the minimum requirements for approval under the IMP for WSAs. A decision to implement an approved management action within a WSA must assure the following: 1) the project is determined necessary and timely to protect the needs of wilderness values and/or is relative to visitors' health, safety and/or their enjoyment of the wilderness values based on results of monitoring of wilderness values and uses, and 2) the project's size, scope and design do not exceed the extent of action necessary to meet the project's purpose and needs for responsible management of wilderness values and uses.

Access and Roads

- Construction of up to four pullout/parking areas in or abutting WSAs of the ACEC would provide safe parking for persons hiking into the three WSAs. Individual pullout/parking areas would be developed separately only if and when monitoriing indictates the need to meet the IMP requirements. Primitive recreation opportunities in WSAs would be enhanced by decreasing the number of party contacts with the greater distribution of use. In the long term, physical impacts to resources at the currently heavier-used areas would be reduced, with opportunities for solitude and primitive recreation more available. Visitors to the currently lesser used areas would have reduced opportunities for outstanding solitude, but not sufficient to impair the area's suitability to manage as wilderness. Physical impacts would increase in the new areas provided with parking access, but not sufficiently to impair the area's suitability to manage as wilderness.

Land Tenure

Acquisition of the 40-acre private parcel at Dago Gulch would allow for consistent management of wilderness values associated with the area of the ACEC, including outstanding natural scenic values, bighorn sheep habitat and Ertter's groundsel specimens and habitat. Removal of the structures and reclamation of the area north of the Leslie Gulch Road would eliminate the visual intrusion. Proposed facilities which-Include a day use parking area with a restroom in Dago Gulch would be designed to have a lower visual impact than the existing developments.

Minerals

- **The withdrawal of locatable minerals now from the entire ACEC would be a significant step in protecting wilderness values of the three WSAs. Surface-disturbing activities associated with salable mineral development would be considered, although environmental analysis would be required prior to any proposed sales. In accordance with the IMP for WSAs, surface-disturbing mining activities requiring reclamation, or which would impair wilderness values, would not be authorized. For any mining claims established prior to withdrawal or designated wilderness, surface disturbing mining activities on claims with a valid mineral discovery could be authorized. Mining activities within designated wilderness would likely severely adversely impact wilderness values.**

Livestock Grazing

- **Elimination of livestock grazing, livestock trails, and the grazed appearance in livestock use locations within the three WSAs would reduce the human-induced alteration of the naturalness within the three WSAs. Managing livestock trespass into WSAs or designated wilderness should be conducted by range riding, unless excessively repeated trespass requires the last resort of constructing fence within WSAs to protect orenhance wilderness values. While up to two miles of fence is identifed to exclude livestock from the Leslie Gulch pasture of the ACEC, not all of the fence would be placed in WSAs.**

Noxious Weeds

- **The combination of manual and chemical control of noxious weeds would be more effective than manual control alone in reducing the impacts of noxious weed invasion on the natural setting of the WSAs.**

Wild Horses

- **Removal of wild horses would have limited effect on wilderness values because there is minimal wild horse use in the ACEC.**

Special Status Plants

- **Constructing site specific trail segments or fences or placing signs in WSAs to protect special status plant sites would impair the naturalness of a WSA. Fence construction would likely cause more visual intrusion than small segments of trail construction or the placement of signs, thus, should be done as a last resort to protect site specific special status plants. The least impacting mitigative measure which meets wilderness value protection requirements would be employed on a case-by-case basis.**

Wildlife

- **Current bighorn sheep transplant practices have not impaired wilderness values. Maintaining base camp operations at already disturbed sites outside WSAs would aid in the protection of wilderness values. The presence of bighorn sheep wormer blocks or other supplements in public use areas within WSAs would create an undesirable littered appearance. Placement in less apparent locations would reduce impact on wilderness values.**

Fire

Adequate protection of wilderness values is provided. The option of employing prescribed fire would be available to protect or enhance wilderness values,

Recreation

There would be fewer impacts on wilderness values by recreationists under this alternative than under Alternatives B and C, and about the same impacts as under Alternative A.

- **Continued motorized vehicle access on the Steamboat Ridge Road would perpetuate off -road vehicle trespass in this area of the Honeycombs WSA.**

- **Non-motorized primitive recreation use opportunities would be enhanced in the upper Dago Gulch areas within Upper Leslie Gulch and Slocum Creek WSAs. Should it be needed, a back country access permit system would enhance opportunities of solitude, primitive recreation and protection** of wilderness values.

- Recreational use impacts would be more dispersed and less acute in high use areas than under Alternatives B and C. The extent of impacts would be partially mitigated by the lower amount of recreational facility development and improvements prescribed under this alternative and by the limitation to day use hiking for access within the WSA portions of the ACEC. Possible implementation of a back country access permit system would increase opportunities for recreationists to experience solitude and a quality primitive recreation experience while aiding the protection of wilderness natural values.

- Limiting sport rock climbing to Einstein and employing mitigative measures would be more effective in this alternative than under Alternative C. While anchor removal at the Asylum climbing site would result in some rock surface scaring, the scaring would be inconspicuous to the casual observer due to the distance from common back country use corridors within Upper Leslie Gulch WSA and the site's distance from motorists on the Leslie Gulch Road. Eventual removal of all fixed anchors and atificial hand holds would comply with the IMP. During the short term, mitigative measures to avoid impacts on known cutural resources in one climbing area may be necessary, but would likely not preclude climbing activities. Over the long term, potential impacts on cultural resource values caused by rockclimbing activities would be avoided.

- Providing for the Owyhee Breaks trail corridor and trailhead would avoid proliferation of primitive trails in Honeycombs and Slocum Creek WSAs.

Monitoring Needs

- Continue WSA general surveillance patrols during the primary use season (April through October), one per month minimum, and conduct aerial surveillance patrols as deemed necessary. Increase frequency of patrol if use levels dictate a need.

- Monitor implementation of management actions perscribed in this plan for compliance with IMP guidance.

- As described under Monitoring Needs for Recreation, conduct studies, determine basline data and establish standards to monitor for retaining or enhancing opportunities for solitude and primitive, unconfined recreation, and for protecting wilderness values in WSAs and any Congressional designated wilderness.

Other Critical Elements

The following elements are either not present within the ACEC or are not affected by any of the management afternatives considered: air quality, prime and unique farmlands, flood plains, native American religious concerns, hazardous wastes, wetlands, wild and scenic rivers, riparian areas.

Chapter 5 - Participation

Two formal solicitations have been made for written input from a broad representation of govermental agencies, organizations and individuals via the District mailing list. A request for comments regarding issues and options to be considered in development of a management plan was sent on March 24, 1993. Following notification of intent to conduct a plan amendment and publication of the Analysis of Management Alternatives, a second request for comments was sent on September 14, 1993.

In addition, input was solicited from meetings in early summer, 1993, with the Vale District Multiple Use Advisory Board, Three Fingers Allotment grazing permittees, the Native Plant Society or Oregon, and a group of sport rock climbers.

Written comments have been received and are available for inspection at the District Office from four governmental agencies, 10 organizations, and 46 individuals from five states (Oregon, Idaho, California, Nevada, and Washington). Commentors have represented a wide variety of interests with differing goals, desires and expectations for management of Leslie Gulch. The general tone of the majority of comments indicates that the area is viewed as particularly environmentally sensitive to human activities and is worthy of having its natural beauty maintained in an undeveloped or minimally developed setting. The relevant and important values for which the ACEC was designated, characteristics that many believe are deserving of protection, were reaffirmed in numerous comments.

Written comments were received from the following in response to the two mailings:

1. Governmental Agencies
   - U.S. Fish and Wildlife Service, Boise Field Office
   - Oregon Department of Fish and Wildlife
   - Oregon Department of Agriculture
   - County Court, Malheur County

2. Organizations
   - The Native Plant Society of Oregon
   - Idaho Conservation League
   - The Natural Heritage Advisory Council (Oregon)
   - Oregon Natural Desert Association
   - The Nature Conservancy
   - Oregon Natural Heritage Program
   - Oregon Naturai Resources Council
   - The Wilderness Society (Idaho)
   - Back Country Horsemen of America
   - Wilderness Watch

3. Individuals
   46 individuals

The input received has been used to help identify issues to be addressed in the management plan, to help select the range of management alternatives, and to aid in development of the preferred management alternative. Several written comments on options not surfaced during meetings or internal review have now been incorporated for consideration and include the following:

- use of the Overlook for bighorn sheep gathering
- chemical control application made to individual noxious weeds only and under supervision of a botanist
- purchase of the private parcel with life tenancy for the owner
- provisions made for law enforcement or supervisory needs
- potential use of prescribed fire
- introduction of special status plants into suitable habitat not currently occupied
- mineral withdrawal of all lands not in WSA status
- moving the eastern pasture boundary fence to include the entire ACEC in the Leslie Gulch pasture

Participating Staff

Bob Alward, Outdoor Recreation Planner, Malheur Resource Area
Clair Button, Botanist, Vale District
Angel Dawson, Archaeologist, Malheur Resource Area
Randy Eyre, Range Conservationist, Malheur Resource Area
Jean Findley, Botanist, Vale District
Connie George, Engineering Draftsman, Vale District
Ralph Heft, Area Manager, Malheur Resource Area
Kathy Helm, Writer Editor, Coos Bay District
Bill Holsheimer, Geologist, Vale District
Bonnie Jakubos, Wildlife Biologist, Malheur Resource Area
Diane Pritchard, Archaeologist, Malheur Resource Area
Ken Thacker, Soil Conservationist, Malheur Resource Area, Team Leader

Glossary

Active Preference - **That portion of the total grazing preference for which grazing use may be authorized.**

Active Use - **The total number of AUMs authorized for grazing by livestock.**

Activity Plan - **A document which describes management objectives, actions and projects to implement decisions of planning documents.**

Allotment - **An area of public land, consisting of one or more pastures, where one or more operators graze their livestock which may include parcels of state or private land. The number of livestock and season of use are stipulated for each allotment.**

Alluvial Deposit - **Accumulation of soil or rock material which has been transported by moving water.**

Animal Unit Month (AUM) - **The amount of forage required to sustain one cow with one calf, or their equivalent for one month.**

Area of Critical Environmental Concern - **An area of BLM administered lands where special management attention is needed to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resource or other natural systems or processes; or to protect life and provide safety from natural hazards,**

Back Country Byway - **Travel routes designated and managed to provide opportunites for the travelling public to enjoy public lands which are isolated from major highway systems.**

Bureau Sensitive Species - **Plant or animal species eligible for federal listed, federal candidate, state listed, or state candidate (plant) status, or on List 1 in the Oregon Natural Heritage Data Base, or approved for this category by the State director.**

Candidate Species - **Those plants and animals included in Federal Register "Notices of Review" that are being considered by the Fish and Wildlife Service (FWS) for listing as threatened or endangered. There are two categories that are of primary concern to BLM. These are:**

> Category 1 Species - **Taxa for which the FWS has substantial information on hand to support proposing the species for listing as threatened or endangered. Listing proposals are either being prepared or have been delayed by higher priority listing work.**
>
> Category 2 Species - **Taxa for which the FWS has information to indicate that listing is possibly appropriate. Additional information is being collected.**

Carrying Capacity - **The maximum number of animals an area can sustain without inducing damage to vegetation or related resources, such as soil and water.**

Critical Growing Period - **The portion of a plant's growing season, generally between flowering and seed ripe, when defoliation is most detrimental.**

Cumulative Effect - **The impact which results from identified actions when they are added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.**

Cultural Resources - **Any definite location of past human activity identifiable through field survey, historical documentation, or oral evidence; includes archaeological sites, structures, or places, and places of traditional cultural or religious importance to specified groups whether or not represented by physical remains.**

Deferred Grazing - **Grazing occurs after a specified period, such as after seed ripe of key forage species.**

Developed Recreation Site - **A site developed with permanent facilities designed to accommodate recreation use.**

Dispersed Recreation - **Outdoor recreation which visitors are diffused over relatively large areas. Where facilities or developments are provided, they are primarily for access and protection of the environment rather than comfort or convenience of the user.**

Environmental Assessment (EA) - **A systematic analysis of site-specific BLM activities used to determine whether such activities have a significant effect on the quality of the human environment and whether a formal Environmental Impact Statement (EIS) is required; and to aid an agency's compliance with NEPA when no EIS is necessary:**

Environmental Impact - **The positive or negative effect of any action upon a given area or resource.**

Environmental Impact Statement (EIS) - **A formal document to filed with the Environmental Protection Agency that considers significant environmental impacts expected from implementation of a major federal action,**

Erosion - **Detachment and movement of soil or rock by water, wind, ice, or gravity.**

Grazing System - **The specific way in which the amount and timing of grazing is planned for a given area.**

Gully - A soil erosion channel formed by surface flowing water which has been concentrated in a narrow area. Depths can range from a few feet to as much as 100 feet.

Habitat - **The place where a plant or animal naturally lives and grows.**

Impact - **A spatial or temporal change in the environment caused by human activity.**

impair - **To diminish in value or excellence.**

Inholding - **Parcels of land with surface or mineral rights held privately or administered by a non-BLM agency.**

Leasable Minerals - **Minerals which may be leased to private interests by the federal government. Includes oil, gas, geothermal resources and coal.**

Listed Species - **Any species of fish, wildlife or plant which has been determined to be endangered or threatened under Section 4 of the Endangered Species Act. It is any plant or animal which is in danger of extinction throughout all or a significant part of its range. Listed species are found in 50 CFR 17.11-17.12.**

Locatable Minerals - **Minerals subject to exploration, development and disposal by staking mining claims as authorized by the Mining Law of 1872 (as amended}. This includes valuable deposits of gold, silver and other uncommon minerals not subject to lease or sale.**

Management Framework Plan (MFP) - **A land use plan that established coordinated land use allocations for all resource and support activities for a specific land area within a BLM district. It established objectives and constraints for each resource and support activity and provided data for consideration in program planning. This process has been replaced by the Resource Management Planning process.**

Mining Claim - **Portions of public lands claimed for possession of locatable mineral deposits, by locating and recording under established rules and pursuant to the 1872 Mining Law.**

Mitigating Measures - **Modifications of actions which (a) avoid impacts by not taking a certain action or parts of an action; (bf minimize impacts by limiting the degree or magnitude of the action and its implementation; (c) rectify impacts by repairing, rehabilitating or restoring the affected environment; (d) reduce or eliminate impacts over time by preservation and maintenance operations during the life of the action; or (e) compensate for impacts by replacing or providing substitute resources or environments**

Monitoring/Evaluation - **The orderly collection and analysis of data to evaluate the progress and effectiveness of on-the-ground actions in meeting resource management objectives.**

Naturalness - **Refers to an area which "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable." (Wilderness Act, 1967)**

Noxious Weed - **A plant specified by law as being especially undesirable, troublesome and difficult to control.**

Off-Highway Vehicle (OHV) - **Any motorized track or wheel vehicle designed for cross country travel over natural terrain.**

Off-Highway Vehicle Designation -

Open:	**Designated areas and trails where off-road vehicles may be operated subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343.**
Limited:	**Designated areas and trails where off-road vehicles are subject to restrictions limiting the number or types of vehicles, date and time of use; limited to existing or designated roads and trails.**
Closed:	**Areas and trails where the use of off-road vehicles is permanently or temporarily prohibited. Emergency use is allowed.**

Outstanding - **Standing out and superior among other of its kind.**

Pasture - **A subdivision of a grazing allotment capable of being grazed by livestock independently from the rest of the allotment.**

Plan Amendment - **A change in the terms, conditions or decisions of a resource management plan.**

Primitive and Unconfined Recreation - **Nonmotorized and undeveloped types of outdoor recreation activity.**

Primitive Recreation - **Characterized under the ROS by opportunity for isolation from human sights and sounds, to feel a part of the natural environment, to have high risk challenge, and to use outdoor skills in a large and essentially unmodified natural environment. User concentration is very low; evidence of other users minimal. Only facilities essential for resource protection are provided. Recreational motorized use not permitted. Activity examples include backpacking and camping, hiking, climbing, enjoyment of scenery and natural features, hunting, fishing and nonmotorized floatboating.**

Raptor - **Birds of prey, such as hawks, eagles and owls.**

Recreation Opportunity Spectrum (ROS) - **A continuum used to characterize recreation opportunities in terms of setting, activity and experience. The spectrum contains six classes: Primitive, Semi-primitive Non-motorized, Semi-primitive Motorized, Roaded Natural, Rural and Modem Urban.**

Research Natural Area (RNA) - **An area that contains natural resource values of scientific interest and is managed primarily for research and educational purposes.**

Revegetation - **Reestablishment of a vegetative cover on a disturbed or burned area.**

Right-of-Way - **A permit or an easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, reservoirs and the lands covered by such an easement or permit.**

Rill -**A small erosive feature caused by the channeling of water on slopes.**

Road Prism - **A cross section of a constructed road which includes cutbanks, roadside ditches, road surface and fill slopes below the road.**

Roaded Natural Recreation - **A class (type) of recreation characterized under the ROS by opportunities for both motorized and nonmotorized recreational activities with site-specific facilities and controls sometimes provided for user convenience, safety and resource protection. Opportunity to have a high degree of interaction with the natural environment is available. Activity examples may include those described under Primitive Recreation, plus auto touring, interpretive use, organized campground, picnic and boating activities and motorized boating sports.**

Rotational Grazing - **Grazing use is subdivided into units or pastures with grazing taking place in one unit, then another, in regular succession. This rotational use can be alternated between years in a variety of grazing systems,**

Salable Minerals - **Minerals which may be sold or otherwise disposed of by the federal government, as authorized by the Material Sale Act of 1947. These include common varieties of stone, clay, sand, gravel, volcanic cinders, petrified rock, etc.**

Scenic Quality - **The relative worth of a landscape from a visual perception point of view.**

Semi-Primitive Nonmotorized Recreation - **Characterized under the ROS by some opportunity for isolation from human sights and sounds. Opportunity to have a high degree of interaction with the natural environment with moderate challenge and risk, and to use outdoor skills in a predominantly unmodified natural environment of moderate to large size. Concentration of users is low. Facilities are provided for the protection of resources and safety of users, only.**

Soil - **A natural body on the surface of the earth composed of mineral and organic materials, living forms air and water.**

Solitude - **1. The state of being alone or remote from habitations; isolation. 2. A lonely, unfrequented or secluded place.**

Special Features - **Features that may be present in an area under consideration for wilderness, such as ecological, geological or other features of scientific, educational, scenic or historical value.**

Special Recreation Management Area (SMRA) - **An area where a commitment has been made to provide specific recreation activity and experience opportunities. These areas usually require a high**

level of recreation investment and/or management. They include recreation sites but recreation sites alone do not constitute SRMAs.

Special Status Species - Plant or animal species falling in any of the following categories (see separate glossary definitions for each):
- -Threatened or Endangered Species
- -Proposed Threatened or Endangered Species
- -Candidate Species
- -State Listed Species
- -Bureau Sensitive Species
- -Bureau Assessment Species

Sport Rock Climbing - For this plan, the recreational and competitive sport of free climbing rock walls on an established climbing route without the direct assistance of artificial climbing devices. Climbers use hand/foot holds (natural or man-made) to assist climbing. Climber safety is afforded, in part, by use of ropes attached on fixed (bolted, permanently installed) anchoring devices placed into the rock surface and the use of gymnastic hand chalk. Climbing routes are graded by an international method measuring the level of climbing difficulty.

State Listed Species - Plant or animal species listed by the State of Oregon as threatened or endangered pursuant to ORS 496.004, ORS 498.026 or ORS 564.040.

Suspended Preference - The number of AUMs removed from a permittee's active preference.

Threatened Species - Any species defined through the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range and published in the Federal Register.

Total Preference - The active preference and suspended preference together make up total preference.

Unnecessary or Undue Degradation - Surface disturbance greater than what would normally result when an activity is being accomplished by a prudent operator in usual, customary and proficient operations of similar character and taking into consideration the effects of operations on other resources and land uses, including those resources and uses outside the area of operations. Failure to initiate and complete reasonable mitigation measures, including reclamation of disturbed areas, or creation of nuisance, may constitute unnecessary or undue degradation. Failure to comply with applicable environmental protection statutes and regulations thereunder will constitute unnecessary and undue degradation.

Utilization - The proportion of the current year's forage production consumed or destroyed by grazing animals. This term may refer to a single species or to the whole vegetative complex.

Valid Mining Claim -A mining claim staked in accordance with the provisions of the Mining Law of 1872 which has not been voided or extinguished by a federal administrative or legal action.

Validity Examination - A formal evaluation of a mining claim by a BLM geologist or mining engineer to determin the presence or absence of an economic mineral deposit.

Visual Resource Management (VRM) Classes - The inventory and planning actions to identify visual values and establish objectives for managing those values and the management actions to achieve visual management objectives.

Visual Class II Management Objective - To retain the existing character of the landscape. The level of change, overall, to the existing landscape should be low. Management activities may be seen, but should not attract attention of the casual observer. Any changes must repeat the basic visual elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.

Watchable Wildlife Area - Area established and managed to provide wildlife viewing opportunities on public lands.

Wilderness Review Program - The term used to cover the entire process of wilderness inventory, study and reporting for the wilderness resource, culminating in recommendations submitted through the Secretary of the Interior and the President to Congress as to the suitability or nonsuitability of each wilderness study area for inclusion in the National Wilderness Preservation System.

Wilderness Study Area (WSA) -A roadless area inventoried and found to be wilderness in character, having few human developments and providing outstanding opportunities for solitude and primitive recreation, as described in Section 603 of the Federal Land Policy and Management Act and in Section 2(c) of the Wilderness Act of 1964.

Withdrawal - A designation which restricts or closes public lands from the operation of land or mineral disposal laws.

Wormer Blocks - A medicated supplement in salt block form for treatment of internal parasites.

Literature Cited

Ertter, Barbara J. and James L. Reveal. 1977. A new species of *Ivesia* (Rosaceae) from Southeastern Oregon. Madrono 24: 224-227.

Ganskopp, David C. 1983. Habitat use and spacial interactions of cattle, wild horses, mule deer, and California bighorn sheep in the Owyhee breaks of southeastern Oregon. Thesis submitted in partial fulfillment of Ph.D degree. Oregon State University. Corvallis, Oregon. 69 pp.

Glad, J.A. 1976. Taxonomy of *Mentzelia mollis* and allied species (Loasaceae). Madrono 23: 283-291.

Gray, J.J., N. Peterson, J. Clayton, and G. Baxter. 1983. Geology and mineral resources of 18 BLM Wilderness Study Areas, Harney and Malheur Counties, Oregon. State of Oregon Department of Geology and Mineral Industries. Portland, Oregon. 106 pp.

Grimes, James W. 1979. The flora of Leslie Gulch, Malheur County, Oregon. Thesis submitted in partial fulfillment of M.S. degree. Utah State University. Logan, Utah. 54 pp.

Grimes, James W. 1984. Notes on the flora of Leslie Gulch, Malheur County, Oregon. Madrono 31: 80-85.

Holsheimer, William D. and Edward J. Kandell. 1973. Mineral potential report for the Leslie Gulch. U.S. Department of Interior, Bureau of Land Management, Vale, Oregon. 12 pp.

Kittleman, Laurence R. 1973. Guide to the geology of the Owyhee region of Oregon. Bulletin No. 21. Museum of Natural History, University of Oregon. Eugene, Oregon. 59 pp.

Marshall, David B., Mark Chilcote and Hal Weeks. 1992. Sensitive vertebrates of Oregon. Oregon Department of Fish and Wildlife, Portland, Oregon. (not paged).

McKee, Arthur and Donald Knutson. 1987. A disjunct ponderosa pine stand in southeastern Oregon. Great Basin Naturalist. 47: 163-167.

Meinke, Robert. 1979. Threatened and endangered vascular plants of Oregon: an illustrated guide. U.S. Fish and Wildlife Service. Portland, Oregon. 352 pp.

Oregon Department of Fish and Wildlife. 1992. Oregon's bighorn sheep management plan 1992-1997. Portland, Oregon. 30 pp.

The American Geological Institute. 1976. Dictionary of geologic terms. Anchor Press, Garden City, New York. 472 pp.

U.S. Department of Agriculture, Soil Conservation Service. 1975. Soil taxonomy. Agriculture Handbook No. 436. Washington, D.C. 754 pp.

U.S. Department of Interior, Bureau of Land Management. 1975. Three Fingers herd management plan for wild horses. Vale District Office. Vale, Oregon. 8 pp.

1981 a. Planning for recreation resources. Manual Handbook No. 8320. Washington Office. Washington, D.C. 9 pp.

1981 b. Wilderness management policy. Washington Office. Washington, D.C. 36 pp.

1983a. Preferred land use plan alternative for Southern and Northern Malheur Resource Area management framework plans. Vale District Office. Vale, Oregon. 48 pp.

1983b. Southern Malheur grazing environmental impact statement. Vale District Office. Vale, Oregon. 45 pp.

1984. Southern Malheur rangeland program summary. Vale District Office. Vale, Oregon, 24 pp.

1985. Malheur County bighorn sheep habitat management plan. Vale District Office. Vale, Oregon. (not paged).

1986a. Northern Malheur rangeland program update. Vale District Office. Vale, Oregon. (not paged).

1986b. Visual resource inventory. Manual Handbook 8410-l. Washington Office. Washington, D.C. 23 pp.

1987. Interim management policy and guidelines for lands under wilderness review. Manual Handbook 8550-l. Washington Office. Washington, D.C. 56 pp.

1989. Oregon wilderness final environmental impact statement. Vol. 1 & 4. Oregon State Office. Portland, Oregon. 894 pp.

1990. Three Fingers allotment evaluation. Vale District Office. Vale, Oregon. 13 pp.

1991. Wilderness study report. Vol. 1. Washington Office, Washington, D.C. 769 pp.

1992a. Guidelines for domestic sheep management in bighorn sheep habitats. Instruction Memorandum No. 92-264. Washington Office. Washington, D.C.

1992b. interim management of wilderness study areas. Instruction Memorandum No. OR-92-241. Oregon State Off ice. Portland, Oregon.

U.S. Department of Interior, Bureau of Reclamation. 1993. Draft Owyhee Reservoir resource management plan. Pacific Northwest Region. Boise, Idaho. 233 pp.

U.S. Department of Interior, U.S. Geological Survey 1987. Mineral resources of the Honeycombs Wilderness Study Area, Malheur County, Oregon. U.S.G.S. Survey Bulletin 1741 -A. Washington, D.C. 15 pp.

1989. Mineral resources of the Upper Leslie Gulch and Slocum Creek Wilderness Study Areas, Malheur County, Oregon. U.S.G.S. Survey Bulletin 1741 -D. Washington, D.C. 20 pp.

Appendix I

Analysis of Factors Affecting Special Status Plant Species

I. Special Status Plants

At least five rare plant species are found in concentrated numbers in this area:

1. Enter's groundsel (Senecio *ertterae*) is an annual species, initiating growth in early spring and completing its life cycle by the end of November. Its global distribution is limited to the Leslie Gulch vicinity and to two small sites near Birch Creek, approximately 6 miles southwest of Leslie Gulch. Suitable habitat has been surveyed in the Honeycombs to the north, but only one site has been found. Little potential habitat remains to be explored for the species, and it is anticipated that at least 90% of the plant sites have been identified. Numbers of plants vary dramatically based on timing and amount of rainfall in the area.

2. Packard's blazing star (*Mentzelia packardiae*) also is an annual species, with its life cycle generally completed by late June. It grows on the same loose talus rubble as Senecio *ertterae* but only on the lower slopes and more gentle fans which spread out at the base of the talus runs. Outside of Leslie Gulch, only a single site in northern Nevada is known for this species. Very little potential habitat remains to be examined for *Mentzelia* and the likelihood of additional site discoveries is slim.

3. Grimy ivesia (*Ivesia rhypara* var. *rhypara*), a perennial herb, grows on five discrete sites in the Vale District, three of which are found in the Leslie Gulch ACEC. One other small site is known from Lake County, and two sites have been identified in northern Nevada. In spite of the fairly wide distribution, the species is extrodinarily rare. Unsuccessful inventories have attempted to locate more populations, It is restricted in our region to barren outcrops of Leslie Gulch Ash-Flow Tuff with two to three inches of rubble on top, a harsh site with little rooting depth.

4. Owyhee clover (*Trifolium owyheense*) is known from five sites in the Leslie Gulch ACEC. Sites are also known outside the area, but all are found east of the Owyhee Reservoir. Little is known about this species, and it is anticipated that more sites will be located with intensive inventory. Succulent legumes such as this are palatable to herbivores.

5. Of the rare species in the Leslie Gulch ACEC, sterile milk-vetch (*Astragalus sterilis*) is the most wide-spread geographically and in terms of known numbers and number of sites, although it is endemic to the Owyhee Region. It occupies loose ash sites of varying colors and textures. An extensive inventory for the species has been conducted east of the Owyhee Reservoir, and more sites are anticipated to be found when a similar inventory can be conducted west of the reservoir.

***Ivesia* is also known from one site (<1/4 acre) in Lake County, Oregon, and one population each in Washoe County (1 acre,) and Elko County, (1-2 acres) Nevada. *Mentzelia packardiae* occurs with *Ivesia* at the Elko site. All other locations for these species are in and around Leslie Gulch and the Sucker Creek Formation.**

In 1991, the US. Fish and Wildlife Service received a petition to list *Senecio ertterae, Mentzelia packardiae, Ivesia rhypara* var. *rhypara,* and *Astragalis sterilis.* Reasons cited for the petition to list included potential impacts from cyanide heap-leach gold mining, invasion of weedy species, and the mechanical disturbance of sites due to livestock grazing. *Senecio* and *Mentzelia* are also listed by the State of Oregon as threatened.

The table below shows the federal candidate species, the number of acres of habitat in the Leslie Gulch ACEC, the total number of habitat acres for the entire species range, and the number of acres in areas used by livestock in Leslie Gulch.

Leslie Gulch Species

Species:	Fed. Stat.	State Status	Global Acres Habitat	L. Gulch Acres Habitat	L. Gulch Grazed Acres
Senecio ertteras	C1	LT	227	184	93
Mentzelia packardiae	c 2	LT	<100	93	93
Ivesia rhypara var. *ryhpara*	c 2	C	<20*	4	4
Trifolium owyheense	c 2	c	<60	40**	35"

* Estimate of habitat for *Ivesia rhypara* var. *rhypara* is highly optimistic, allowing for discovery of new habitat in Nevada,
* Estimate of habitat for *Trifolium owyheense* is based on inadequate inventory. Total after completion of further inventories will probably be closer to 120 acres.

Populations of several of these species are so restricted in extent that any man-caused disturbances that reduce population numbers or create opportunities for exotic weed species are a major concern for future viability of the species. In the case of the *Senecio* and *Mentzelia*, the habitat patches for each species are so close together that spread of disease or weedy competitors would be very difficult to control. With *Ivesia* and *Trifolium*, the remaining habitat patches are so small that the risk of local extinction is relatively high.

In particular, *Ivesia* is directly and immediately threatened by loss of genetic material due to death of plants because of the extremely small number of plants and area of habitat.

Both *Ivesia* and *Trifolium* appear to be palatable to animals.

While the remaining rare plants have survived nearly a hundred years of livestock grazing, there is no method to compare pre-grazing and post-grazing populations. It is certain that large portions of the rare plant habitat have been affected to some degree and are surrounded with poor condition range sites. There appears to be suitable habitat in the vicinity which is not occupied by these species. It is not possible to determine whether any of these species were much more widespread in the past. However,-they all seem to require specific soil substrates which are found only near Leslie Gulch or similar centers of volcanic activity.

II. Habitat Conditions

Ecological conditions of the upland plant communities in Leslie Gulch vary from late seral stages on the north-facing and more inaccessible slopes to early and mid seral stages, particularly near the reservoir. In the canyon bottoms near the reservoir and on some of the south-facing slopes, exotic species such as Russian thistle, cheatgrass, and wooly mullein are common. Canyon bottoms near the reservoir are generally in early seral condition, with desirable grass species such as basin wildrye, sand dropseed and needlegrass reduced to trace occurrences. Other canyon bottoms are in at least mid seral stage. Livestock forage utilization studies taken since 1985 show that recent use levels have been between 10 and 16 percent of annual production on bluebunch wheatgrass. Existing monitoring studies are not designed to determine if recent range management changes are allowing canyon bottom habitats to improve. Observed apparent trend in Slocum Creek was static in September, 1992.

Senecio ertterae occurs on steep talus slopes,, moderate to gentle slopes, and in canyon bottoms and washes wherever there is sufficient material of the ash tuff gravels present. *Mentzelia packardiae* is found nearly exclusively at the base of loose talus slopes. Some of this habitat has been removed by construction of the roads in Leslie and Dago Gulchs. The lower slopes and canyon bottom habitat are crossed by numerous compacted trails which are no longer suitable habitat, and which may provide opportunities for establishment of exotic

weeds. The steeper upper slopes, which are habitat for Senecio, but not *Mentzelia*, do not have significant signs of trailing. Recent research (1983) in Leslie Gulch and the adjacent Honeycombs indicates that the observed trails are caused by livestock which spend all of their time on slopes less than 40%, while the bighorn sheep predominately use slopes over 40%. It appears that bighorn sheep numbers are too small to cause a significant disruption of the rare plant habitat on the steeper slopes. Deer populations are also too small to have any effect.

Ivesia and *Trifolium* occur on flat to gently sloping clay sites, but there is apparently a distinct difference in the types of suitable clay substrate composition since the species do not occur together. Some habitat of both species has been destroyed by road construction. One population of *Ivesia* at the edge of the Honeycombs WSA (northeast of Leslie Gulch) has been partially destroyed by road construction associated with mining exploration, and may be affected by 'current mining claims. In Leslie Gulch ACEC, the primary access road cuts through one population of *Ivesia* and livestock are presently trailed through the site into and out of the pasture.

III. Factors Affecting Special Status Plants and Habitat

Impacts to rare plant species in the ACEC include potential and known effects. Destruction of plant habitat, damage to the plants themselves, and the invasion of noxious weeds are the biggest concerns that have been identified. Soil compaction and road construction in *Senecio, Mentzelia*, and *Ivesia* sites are examples of habitat destruction. Causes of damage to the plants include herbivory on *Ivesia* and *Trifolium*, as well as trampling, breakage, and uprooting from livestock trailing through *Mentzelia, Senecio,* and *Ivesia* sites.

Invasion of noxious weeds presents one of the greatest threats to rare species and their habitats. Cheatgrass has become established throughout all habitat types, but is more abundant in disturbed soils and canyon bottom sites. Russian thistle is most abundant along roadsides and on disturbed soils. These species do not appear to have the ability to fully colonize and dominate the rare plant habitat. However, within the last ten years, extensive infestations of whitetop have become problematic in the areas east of Leslie Gulch. Cattle have been observed to ingest this species, and there is little doubt that viable seed may be transported by various animals. Vehicles may carry the seeds into the area along roads. To date, whitetop is found only along the road at approximately four sites in Leslie Gulch where control measures have been initiated. It is a major concern that seed may be carried to less accessible areas, where the plants could become well-established before control measures can effectively remove the infestations. Scotch thistle and yellow star-thistle are also of concern at present. These aggressive species may be able to outcompete the rare plants. Disturbed habitat along the roads is the primary avenue of weed invasion into Leslie Gulch. Livestock trails are the main source of disturbance which could allow the weeds to spread directly into rare plant habitat, Ungulates including cattle, horses, bighorn sheep, and deer could spread weeds into the rare plant habitats by carrying seeds on hooves or through their digestive tracts. Concentrated hiking and camping activity also have the potential to create disturbed, compacted soils and transport weed seeds into rare plant habitat.

Since the late 1800's, Leslie Gulch has experienced grazing from domestic animals, both cattle and sheep. Numbers of animals and seasons of use in the canyon are unknown for the earlier years. From 1983 to 1990, there were 140 head of yearling cattle from March 1 to May 1 in the Leslie Gulch pasture of the ACEC. In 1991 and 1992, the only use was from trespass cattle. During the winter of 1992-93, trespass livestock used areas near Owyhee Reservoir, including Slocum Creek.

Wild horses were present in Leslie Gulch during the 1960's. Although Leslie Gulch ACEC is still part of a wild horse herd management area, the wild horses generally have been using habitat north of the ACEC for the past twenty years. There are no natural or manmade barriers to prevent movement into the ACEC.

Water sources in the pasture are limited to Mud Spring, ephemeral seeps in Slocum Creek and Juniper Gulch, and at the Owyhee Reservoir. Because of the steepness of the canyons and the somewhat poor distribution of water in the Leslie Gulch ACEC, livestock use may be concentrated on the lower slopes and near the water sources at certain times of the year, intensifying the potential of damage to rare plant habitat from livestock trailing and bedding.

Recreational use has been concentrated near the developed campground, along roads, at the reservoir, and in areas offering rock climbing opportunities. The Slocum Creek trail is the only obvious hiking trail crossing or impacting rare plant habitat. This primary hiking access trail to the WSA was probably created by livestock,

which still actively use the trail. The rock climbing areas known to be in active use do not appear to be near rare plant habitat. Recreational vehicles and horse use have the potential to create the same types of impacts as cattle, particularly if they are allowed off of the main roads. As noted above, access roads have destroyed some habitat of all four rare species, but present motor vehicle use does not appear to be causing extension of the damage.

IV. Possible Management Actions to Resolve Problems and Conserve Rare Species

Plant sites impacted by the main Leslie Gulch Road could be restored in one or two areas by outsloping the road to allow the outwash to pass over and form new habitat downstream of the road. This would increase the requirement for road maintenance on these sections. Closing or re-routing the public access road could also be considered. However, moving the road would destroy additional habitat in some areas, Where the road went through *Ivesia* habitat, there is no option of repair because the clay soil was cut away.

If livestock were kept off the slopes, the ash tuff talus would naturally cover the compacted trails in a few years and restore the habitat. In addition to restoring lost habitat, this restoration would also discourage noxious weed invasion. Compacted clay soils on the Ivesia habitat could be expected to recover more slowly. The only feasible way to keep livestock and horses off *Senecio* and *Mentzelia* habitat is to exclude them from the Leslie Gulch pasture. These species occur in too many small patches scattered along the canyon to allow site specific exclosures. Fencing to protect Ivesia would require approximately 2.5 miles of fence and installation of one cattleguard. The alternative to installing a cattleguard would be to close and reroute part of the main Leslie Gulch Road, or to close it and upgrade the old access road. Without the exclosure, trailing damage and compaction could be reduced on the *Ivesia* habitat by trailing the livestock along the old access road.

Changing the season of use of livestock would not substantially reduce the trampling and trailing effect observed on the ash tuff habitat. Trespass livestock use in the winter resulted in concentrated use near the reservoir due to adverse weather, thereby increasing compaction on rare plant sites in Slocum Creek. Change in season of use might encourage an upward trend in species composition in poor condition range sites. A winter season of use might actually cause increased browsing on *Ivesia rhypara* since this is a perennial rather succulent species. Winter grazing use will increase utilization of sadscale, a plant that grows on the ash tuff sites occupied by *Senecio* and *Mentzelia*. In 1993, cattle actively searched for and browsed on shadsclae on open slopes in winter, causing significant degress of disturbance to the rare plant habitat. Repeated, cumulative impacts could result in substantial loss of habitat.

One of the most effective means of reducing the risk of spreading weeds into the rare plant habitat is to exclude livestock from the pasture. Although the area has been grazed by livestock for a hundred years, the invasion by noxious weeds is a relatively recent phenomenon.

To further reduce the risk of weeds being carried into Leslie Gulch, horse use could be banned except for administrative purposes (such as rounding up livestock). A weaker, less enforceable measure would be to require the horses be provided with weed-free hay and restricting them to road surfaces.

Modifying the wild horse herd management area boundary to exclude Leslie Gulch would remove any potential impacts of wild horse use on rare plants.

While motor vehicles could be banned as a means to reduce the risk to spread weeds, it is probably more appropriate to maintain aggressive weed control along the road. Banning vehicles would mean abandoning the road. Reclamation of the abandoned road would take a long time and provide habitat for invasion of weeds.

Dago Gulch road could be closed to public motor vehicle access. It dead ends at private land where there is no adequate turn-around constructed. Widening the road or constructing a turn-around at the gate would destroy habitat for *Senecio ertterae*. Public vehicular traffic is presently creating minor impacts to the rare plant habitat. Alternatively, the road could be closed at the proposed Dago Gulch campsite.

Road maintenance activities should be carefully planned and coordinated between the botanist and engineering staff. Some modifications may be feasible to allow recovery of lost habitat, but the primary concern is to avoid further losses.

Dust from the road does not appear to coat the plants. If such a problem were discovered, we could consider using dust control measures on the road surface on a site specific basis.

The number of campsites or users at Slocum Creek campground should be monitored and regulated if people start climbing on the nearby ash tuff slopes. The trail up Slocum Creek could be rerouted to avoid the best quality habitat. Another option would be to place interpretive signs at the campground trail access to encourage people to stay off the old trail and slopes to let them heal. However, these options would only be effective if livestock use was removed. Closing the trail completely is an option, but probably an unreasonable one since this is the best access point to the WSA from Leslie Gulch (access in Dago Gulch results in trespass).

V. Conclusions

BLM's policy is to ". ..ensure that actions do not contribute to the need to list..." any species as threatened or endangered (BLM Manual 6840). Several of the rare plant species in Leslie Gulch ACEC are so restricted in terms of range of occurrence, acres of habitat, and in one case, low numbers of individuals, that any factor reducing plant vigor, numbers, or available habitat may increase the risk of local extinction.

The best management practices for rare plants in Leslie Gulch include the following:

1. Restriction of the Dago Gulch road to public access;
2. Elimination of grazing from the Leslie Gulch pasture;
3. Mineral withdrawal;
4. Control of noxious weeds;
5. Careful road maintenance;
6. Control of recreational uses, particularly intensive campsites and use of horses.

Appendix II

Find of No Significant Impact

On the basis of the information contained in the Environmental Assessment and all other information available to me, it is the determination of the Bureau that none of the four alternatives consitutes a major federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement is unnecessary and will not be prepared. In addition, the amendment to the Malheur Management Framework Plan does not affect the entire resource area and does not substantially affect other resource programs to the extent that the resource area would initiate an Environmental Impact Statement.

Recommended to the State Director:

Ralph J. Heft, Area Manager
Malheur Resource Area Manager

Date

James E. May
Vale District Manager

Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VALE DISTRICT OFFICE
100 Oregon Street
Vale, Oregon 97918

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

FORWARDING AND ADDRESS
CORRECTION REQUEXTED