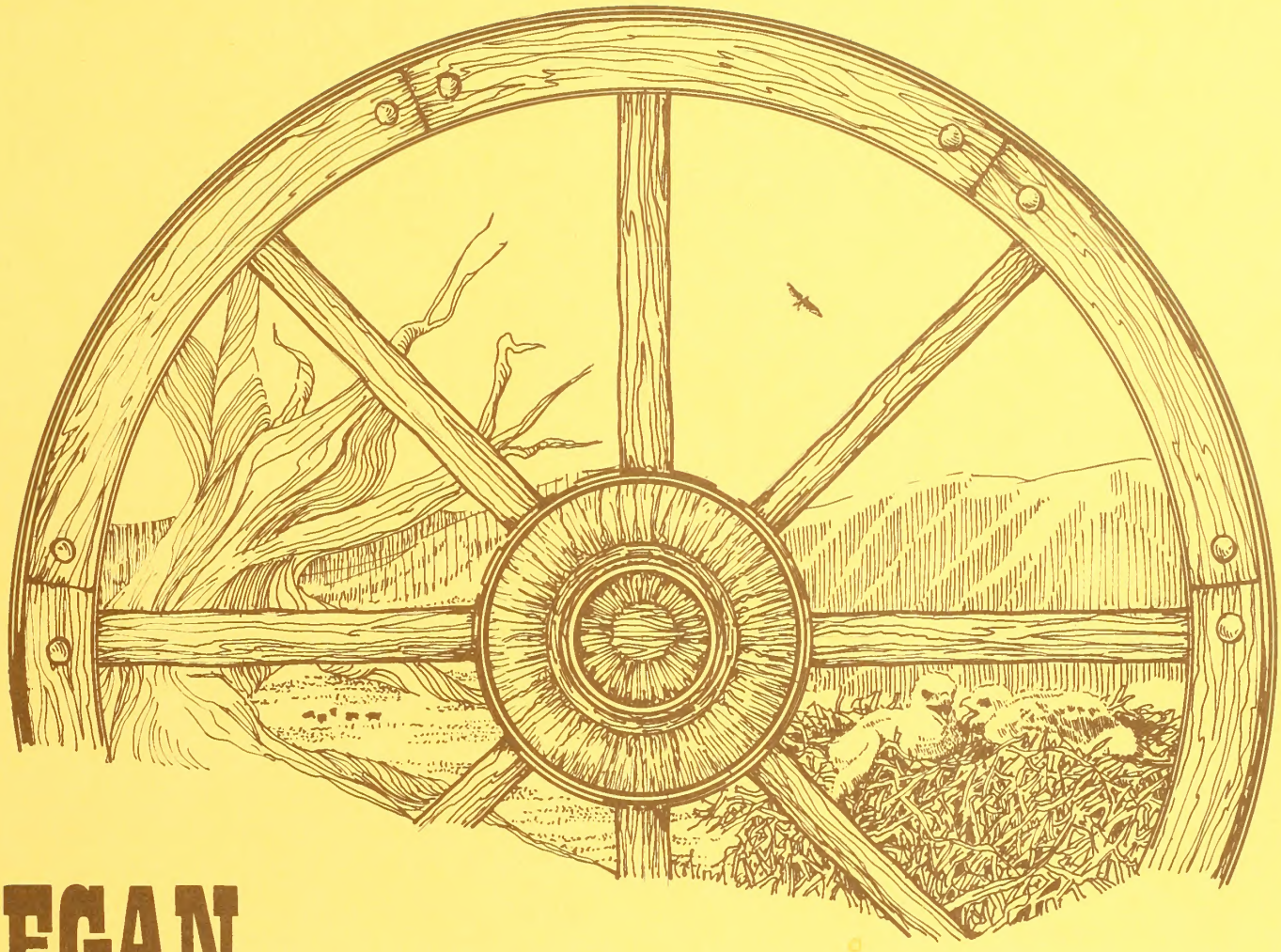


EGAN
Wilderness Technical Report

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ELY DISTRICT OFFICE
ELY, NEVADA

INTRODUCTION

The Egan Resource Area Wilderness Technical Report (a supplement to the Egan Resource Management Plan) addresses the criteria and quality standards, for four WSAs (see Map 1), as required by the Wilderness Study Policy dated February 3, 1982. These criteria and quality standards are listed below.

Criteria and Quality Standards

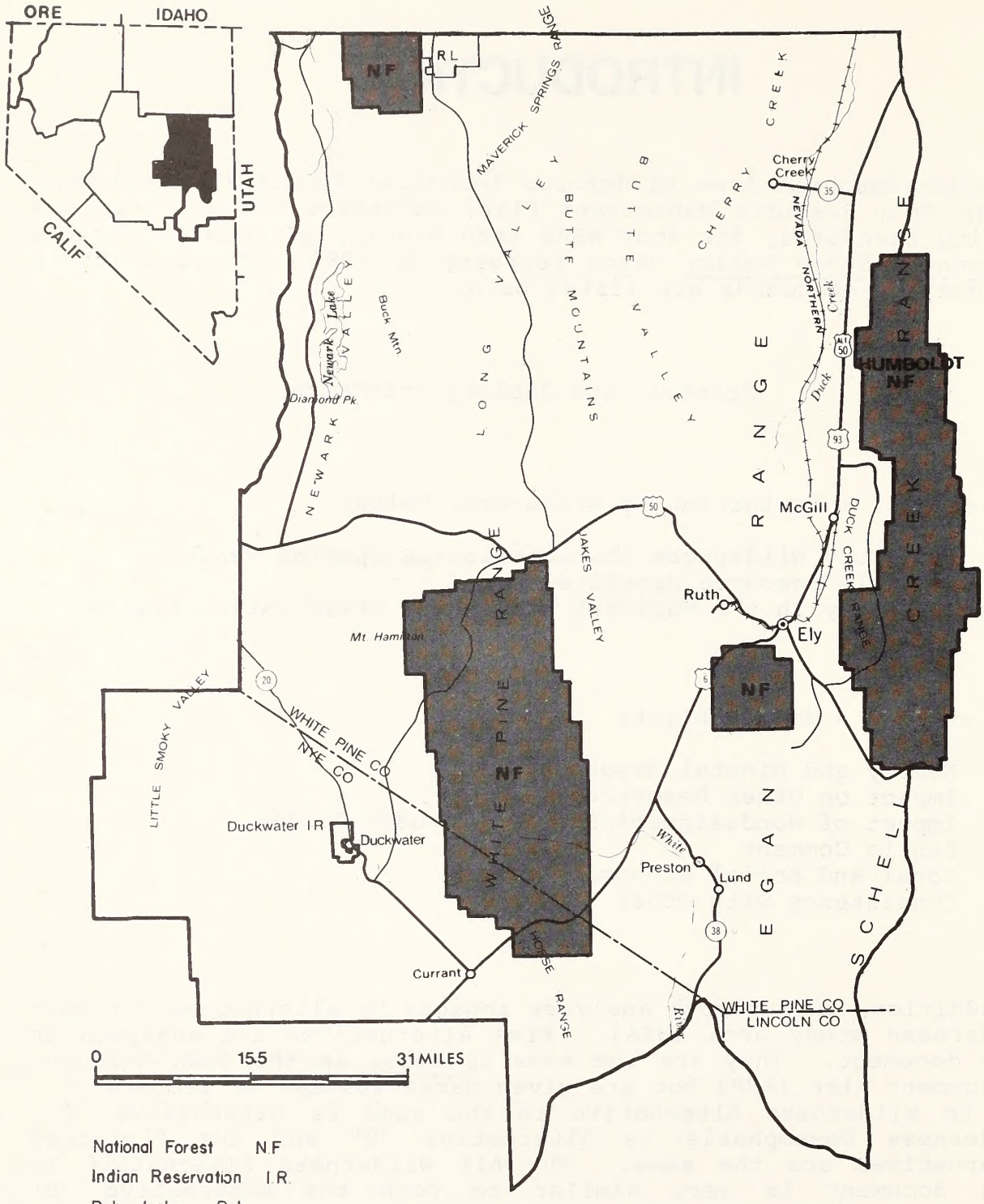
Criterion 1 - Evaluation of Wilderness Values

a) Mandatory Wilderness Characteristics Special Features
b) Multiple Resource Benefits
c) Diversity in the National Wilderness Preservation System

Criterion 2 - Manageability

1) Energy and Mineral Resource Values
2) Impact on Other Resources
3) Impact of Nondesignation on Wilderness Values
4) Public Comment
5) Local and Social Economic Effects
6) Consistency with Other Plans

In addition, this report analyzes impacts by alternative for each wilderness study area (WSA). Five alternatives are analyzed in this document. They are the same as those in the Egan Resource Management Plan (RMP) but are given names instead of letters. The No Wilderness Alternative is the same as Alternative "C", Wilderness De-emphasis is Alternative "D" and the Preferred Alternatives are the same. The All Wilderness Alternative in this document is very similar to both the Alternative "B" (resource protection and enhancement) and Alternative "E" (no grazing) in the RMP. In both of these, all four WSAs are recommended suitable in their entirety. The All Wilderness Alternative discussions include both of these alternatives. Where differences exist (such as in impacts to the wilderness resource in the Environmental Consequences Chapter) they will be noted.



EGAN RESOURCE AREA

MAP 1
LOCATION MAP

The number and acres of the WSAs recommended suitable and nonsuitable for each alternative are listed below:

ALTERNATIVES	WSAs SUITABLE/NONSUITABLE	ACREAGE SUITABLE/NONSUITABLE
ALL WILDERNESS	4 suitable	236,780
	0 nonsuitable	0
WILDERNESS EMPHASIS	4 partial suitable	168,460
	4 partial nonsuitable	68,320
PREFERRED	3 partial suitable	106,598
	1 entire	
	3 partial nonsuitable	130,182
WILDERNESS DE-EMPHASIS	3 partial suitable	80,965
	1 entire	
	3 partial nonsuitable	155,815
NO WILDERNESS	0 suitable	0
	4 nonsuitable	236,780

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CHAPTER 1

PUBLIC COMMENT AND ALTERNATIVE FORMULATION

Public Comment

An active public involvement process aided in developing the wilderness portion of the RMP and the Wilderness Technical Report. Public comment has been solicited and encouraged throughout the wilderness inventory. Public comment has been sought through workshops in Ely and Reno, news releases, Federal Register notices and mailings to an extensive list of organizations and individuals. Public comments are summarized below by different phases of the wilderness inventory.

Summary of Public Comment

PARK RANGE

Initial Inventory: The initial inventory unit for the Park Range was 61,800 acres. Six comments were received on this unit. Five identified wilderness characteristics and requested an intensive inventory and one comment noted a lack of wilderness characteristics.

A portion of the unit (50,600 acres) went forward into the intensive inventory.

Intensive Inventory: As a result of the intensive inventory 42,300 acres were recommended as a WSA and 8,300 acres were recommended dropped.

2,288 coupons (short form letters, some with individual comments, the result of a nationwide campaign by various conservation groups) were received generally supporting the area as wilderness. Thirty-eight personal letters were received in response to the Nevada Conservationists' Proposal. They supported this unit because of the rugged mountains, rock

climbing and nature study opportunities. Additionally, five specific comments were received supporting WSA designation for the above reasons as well as for the presence of pristine meadows and its remoteness. The Nevada Division of Wildlife supports this unit as a WSA.

The Nevada Cattlemen's Association and the Nevada Division of Mineral Resources opposed WSA designation because the area lacked wilderness characteristics. Two other comments opposed designation because of the presence of boundary roads, cherrystem roads and lack of relief.

After analyzing public comment, 46,500 acres were designated as a WSA and 4,100 acres were dropped.

Inventory Protests: Four protests were received in response to the November 1980 Final Inventory Decisions. The Women in Mining protested WSA designation because the unit was rugged and there were intrusions. Walter Benoit protested because acres were added to the unit between the draft and final decisions. The Nevada Cattlemen's Association disagreed with the inventory and the Nevada Division of Mineral Resources protested because the unit had cherrystem roads.

Appeals to IBLA: Two appeals were filed on this unit. Walter Benoit and the Nevada Division of Mineral Resources appealed for the same reasons as they protested.

The Interior Board of Land Appeals (IBLA) upheld the BLM's decision in both of these cases. Their ruling was handed down in IBLA Decisions 81-540 (Benoit) and 81-54 and 81-1095 (State of Nevada).

Study Period: The WSA acreage was more accurately calculated and changed from 46,500 acres to 47,300 acres.

ARCO stated that this unit has oil and gas potential as well as some potential for geothermal although no surface indications were present. They also mentioned a potential for gold, silver, lead and zinc.

Management Situation Analysis Comments: Four comments were received supporting wilderness designation because of the unit's extreme solitude, archaeological and ecological values. The Nevada Division of State Parks suggests joint management with the Battle Mountain District's Antelope WSA and says it should be managed as one unit. They also mention the results of a 1981 State Comprehensive Outdoor Recreation Plan survey showing that statewide 93 percent agree that Nevada's unique natural and unusual areas need preserving. This figure was 83 percent for Region IV (Eureka, White Pine and Lincoln counties).

The Nevada Prospectors Association and the California Association of 4WD Clubs opposed wilderness designation because they disagreed with the concept of wilderness and because it lacked attributes and features that would qualify it. The White Pine Chamber of Commerce opposes wilderness designation because of impacts on mining and other economically important industries. ARCO submitted a rating sheet showing the area to have a low intermediate favorability for oil and gas and metals and a high intermediate favorability for zeolites.

Sierra Pacific Power Company requested that consideration be given to future utility corridors.

Scoping Comments: Twenty-one scoping comments were received which mentioned wilderness. Three of these specifically mentioned the Park Range. The Bureau of Indian Affairs stated the Duckwater Shoshone Tribe concurs with wilderness designation. The Sierra Club said the area had high wilderness values and relatively low development potential. Hecla Mining Company objected to designation because they are against the concept of wilderness.

Comments which did not specifically mention the Park Range included: Nine comments supporting some wilderness (areas were not specified); four comments supporting the No Wilderness Alternative; the remaining comments requested consideration of utility corridors, mineral values, and air and water quality.

RIORDAN'S WELL

Initial Inventory: The initial inventory for the Riordan's Well unit was 190,700 acres. Thirteen comments were received for this inventory. Five requested an intensive inventory because of the unit's wilderness characteristics. Eight comments stated the area did not have wilderness characteristics and some noted roads or other intrusions.

The entire unit went into the intensive inventory.

Intensive Inventory: As a result of the intensive inventory BLM recommended 54,400 acres as a WSA and recommended that 136,300 acres be dropped.

2,288 coupons (short form letters, some with individual comments, the result of a nationwide campaign by various conservation groups) were received generally supporting the area as wilderness. Thirty-eight personal letters were received in response to the Nevada Conservationists' Proposal. They supported this unit because of its heavily forested mountains and because it was contiguous to the Forest Service's proposed wilderness in the Grant and Quinn Ranges. Additionally, the Nevada Division of Wildlife supports the unit for wilderness. A few individuals and groups supported the area for the above reasons as well as

because of the presence of water and the variety of life zones. The seven Nevada conservation groups objected to the BLM eliminating "unreviewed routes" without supporting documentation or a statement that they were roads.

Two letters were received opposing designation. One, from the Nevada Cattlemen's Association stated the unit had poor scenery. The other comment was from Getty Oil stating the unit had oil and gas potential, roads and mining impacts.

After analyzing public comments 56,800 acres were designated as a WSA and 133,900 acres were dropped.

Inventory Protests: Four protests were received in response to the November 1980 final Inventory Decisions. Charles Bagley wanted the unit to be upgraded to form a large complex with the Forest Service's wilderness proposal.

The Women in Mining wanted the 2,400 acres added to the unit between the draft and final dropped. They also mentioned ranching and mining activity. Walter Benoit wanted the unit dropped because of the acreage added back in. The Nevada Cattlemen's Association disagreed with the inventory.

Appeals to IBLA: One appeal was filed on this unit, objecting to its designation as a WSA. Walter Benoit appealed because acres were added to the unit between the draft and final inventory decision.

IBLA upheld the BLM's decision in this case in IBLA Decision 81-540.

Study Period: The WSA acreage was more accurately calculated and changed from 56,800 acres to 57,002 acres.

One comment was received from ARCO mentioning the unit had potential for oil and gas, geothermal, gold, silver, lead and zinc.

Management Situation Analysis Comments: Three specific comments were received supporting wilderness designation (Sierra Club, Nevada Wilderness Association and one individual) for this unit because it was an integral part of the Grant Range complex.

ARCO submitted mineral ratings showing this unit to have a low intermediate favorability for oil and gas, gold and silver; and a high intermediate favorability for zeolites and salts. The Hecla Mining Company opposed designation because of a favorability for gold. Three comments were received (Nevada Prospectors Association, California Association of 4WD Clubs, and the White Pine Chamber of Commerce) generally opposing wilderness because of a lack of sufficient attributes to qualify it or because of the impacts on mining or other economically important industries.

Sierra Pacific Power Company requested that consideration be given to future corridor needs.

Although solicited, no comments were received from Native American groups.

Scoping Comments: Twenty-one comments were received which mentioned wilderness. Two of these specifically mentioned Riordan's Well. The Sierra Club stated that the suitable area should include the western portion between Heath and Grant Canyons. They also stated the area has high wilderness values and relatively low development potential. Hecla Mining Company stated the area had a geologic environment favorable for low grade gold.

Comments which did not specifically mention the Riordan's Well area included: nine comments supporting some wilderness (areas were not specified); four comments supporting the No Wilderness Alternative; the remaining comments generally requested consideration of utility corridors, mineral values, and air and water quality.

SOUTH EGAN RANGE

Intermountain Power Project Inventory (IPP): This unit was inventoried in a special accelerated inventory before the regular initial/intensive inventory, to facilitate planning for IPP transmission lines.

The inventory unit was 158,200 acres. Two comments were received during the inventory. One noted wilderness characteristics and stated the area deserved further study. The other comment mentioned intrusions. As a result of the inventory and public comment, 84,240 acres were designated as a WSA.

Study Period: As a result of more accurate mapping and acreage calculation, the WSA acreage changed from 84,240 to 96,996 acres.

One comment was received during this time from Atlantic Richfield Company (ARCO) stating the unit had potential for oil and gas, geothermal, gold, silver, lead, zinc, berryllium and tungsten.

Management Situation Analysis Comments: Comments were received from the Sierra Club, Nevada Wilderness Association and one individual supporting wilderness designation because of archaeological, geological and scenic values as well as extreme solitude and diverse wildlife and vegetation. The Nevada Department of State Parks supports the area for wilderness for the above reasons and in addition states, "the Egan Range is probably the best example in the Great Basin that shows a complete paleozic sequence of geology."

ARCO submitted mineral ratings showing this unit to have low intermediate favorability for oil and gas, gold, silver, lead and zinc and a high intermediate favorability for limestone. The Hecla Mining Company opposes wilderness designation because of a favorability for gold. Three comments were received (Nevada Prospectors Association, California Association of 4WD Clubs, and the White Pine Chamber of Commerce) generally opposing wilderness because of a lack of sufficient attributes to qualify them; or because of the impacts on mining or other economically important industries. Sierra Pacific Power Company requested that consideration be given to future corridor needs.

Although solicited, no comments were received from Native American groups.

Scoping Comments: Twenty-one comments were received which mentioned wilderness. Of these, three specifically mentioned the South Egan Range. The Nevada Division of State Parks stated the area would provide quality short period wilderness experiences. The Sierra Club stated the area had high wilderness values and relatively low development potential. Hecla Mining Company objected to wilderness designation because the geological environment was favorable for low grade gold.

GOSHUTE CANYON

Initial Inventory: The initial inventory unit for the Goshute Canyon area was 223,700 acres. Twelve comments were received. Five noted wilderness values and requested an intensive inventory and seven noted roads or other intrusions.

A portion (195,100 acres) of the unit went into the intensive inventory.

Intensive Inventory: As a result of the intensive inventory, BLM recommended 31,000 acres as a WSA and recommended dropping 159,680 acres.

2,288 coupons (short form letters, some with individual comments, the result of a nationwide campaign by various conservation groups) were received generally supporting the area as wilderness. Thirty-eight personal letters were received in response to the Nevada Conservationists' Proposal. They supported this unit because of the rugged scenic mountains, fir and bristlecone pine, endangered trout, hunting and spelunking. The Division of State Parks stated the area should be expanded to include portions dropped in the inventory. They also mentioned the area includes the Cherry Creek's Engleman Spruce Ecological Area which was included as a part of the Nevada Natural Landmark Registry. Ten other specific comments were received from sportsmen, conservation groups and individuals supporting the area as wilderness for the above reasons. Additionally, eight of these wanted the area enlarged to encompass the more scenic northern area and they dis-

agreed with the northern boundary. One comment (from the seven formal Nevada conservation groups) objected to the cherrystemming of "unreviewed routes" or ways. One comment noted a tree ring research resource in the bristlecone area.

Seven letters were received opposing WSA status for this unit. Five were from ranching groups and individuals noting range improvements, roads or lack of wilderness quality. The Cattlemen's Association provided legal locations of range improvements and roads. The Nevada Department of Wildlife opposed designation because of unnatural features and outside sights and sounds of ranching and mining operations. Amselco noted geologic features favorable for mineral deposits, and a road.

After analyzing public comment a 35,100 acres unit was designated as WSA.

Inventory Protests: Seven protests were received in response to the November 1980 Final Inventory Decisions. Two of the protests opposed the deletion of subunit 015B. One was a joint protest from the Sierra Club, Audubon Society, Nevada Wilderness Association and the Nevada Outdoor Recreation Association. The other protest was from the Animal Protection Institute of America. Both cited similar reasons for the protest. Spectacular high country, a very scenic and diverse area, areas with outstanding opportunity for primitive recreation were excluded because of an erroneous boundary. The boundary routes in the north did not connect and one of them, the Indian Creek Way did not meet the definition of a road and should not have been a boundary.

Five protests were received stating the unit should not be a WSA. Valdez Mining and Milling and the Women in Mining objected to this unit being included because of ranching and mining activity. Walter Benoit objected to the fact that acres were added to the unit between the draft and final decisions. The Nevada Cattlemen's Assoc. disagreed with the wilderness inventory although no specifics were given for each unit. The Nevada Division of Mineral Resources protested because the unit contained cherrystem roads.

Appeals to IBLA: Four appeals were filed on this unit disagreeing with the State Director's Inventory Decisions. Two appealed the decision to drop the northern portion of the unit, 015B. A joint appeal was filed by the Sierra Club, Audubon Society, Nevada Wilderness Association, and the Nevada Outdoor Recreation Association. The second appeal was filed by the Animal Protection Institute of America. The reasons for the appeal were the same as for the protest.

Two appeals were filed opposing WSA designation for Goshute Canyon. The Nevada Division of Mineral Resources and Walter Benoit appealed for the same reason they protested.

IBLA upheld the BLM's decision in all of these appeals. Their rulings were handed down in IBLA Decisions: 81-616 (Sierra Club); 81-473 (Animal Protection Institute); 81-54 and 81-1095 (State of Nevada); and 81-540 (Benoit).

Study Period: As a result of more accurate acreage calculations the WSA acreage changed from 35,100 acres to 35,594 acres. One comment was received from ARCO stating the unit had potential for geothermal, antimony, silver, lead, zinc, gold and molybdenum.

Management Situation Analysis Comments: Comments were received from the Sierra Club, Nevada Wilderness Association and one individual supporting wilderness designation because of the speleological and archaeological values, Natural Area, endangered fish and because it would increase the diversity in the NWPS. The Nevada Wilderness Association objected to using the Indian Creek Way as the northern boundary and noted it was marked incorrectly and that IBLA rendered its decision on erroneous information. The Nevada Division of State Parks supports the unit for wilderness because of the excellent recreational opportunities and Natural Area.

ARCO submitted mineral ratings showing a low intermediate favorability for oil, gas, uranium and limestone and a high favorability for gold, silver, lead, zinc, tungsten, antimony, and molybdenum. The Hecla Mining Company opposed designation because of a high favorability for gold. A rancher opposed wilderness due to roads and mineral potential and because of the concentration of Las Vegas hunters ruining solitude. He also questioned future manageability if the WPPP is built nearby. Three comments were received (Nevada Prospectors Association, California Association of 4WD Clubs and the White Pine Chamber of Commerce) generally opposing wilderness because of lack of sufficient attributes to qualify it, or because of the impacts on mining or other economically important industries.

Sierra Pacific Power Company requested that consideration be given to future corridor needs.

Although solicited, no comments were received from Native American groups.

Scoping Comments: Twenty-one scoping comments were received which mentioned wilderness. Four of these specifically mentioned the Goshute Canyon WSA. The Nevada Division of State Parks supported the unit for wilderness because it had high scenic quality and three Nevada Natural Heritage Sites: Goshute Canyon, Goshute Cave and Cherry Creek Engleman Spruce Area. The Sierra Club stated this unit has the highest wilderness qualities and should not be dropped because of unproven speculative mineral potential. They further state more mineral information will be gathered by USGS/BM on the suitable areas. Hecla Mining Company stated the area had a geologic environment favorable for low grade gold. Another individual felt the unit was too narrow to be wilderness.

Comments which did not specifically mention the Goshute Canyon area included: eight comments supporting some wilderness (areas were not specified); four comments supporting the No Wilderness Alternative; the remaining comments requested consideration of utility corridors, mineral values, and air and water quality.

Development of the Alternatives

All Wilderness and No Wilderness

Two alternatives, the All and No Wilderness Alternatives, are included to comply with the Council of Environmental Quality's (CEQ) regulation 1502.14 and requirements of the BLM's Wilderness Study Policy. The All Wilderness Alternative recommends the four WSAs in their entirety as suitable for wilderness designation. Under this alternative, all four WSAs would be managed as wilderness, according to the BLM's Wilderness Management Policy.

Table 1 is a summary of the All Wilderness Alternative

TABLE 1: ALL WILDERNESS ALTERNATIVE

WSA NAME	Suitable Acreage	Unsuitable Acreage
Park Range (NV-040-154)	47,268	0
Riordan's Well (NV-040-166)	57,002	0
South Egan Range (NV-040-168)	96,916	0
Goshute Canyon (NV-040-015)	35,594	0
TOTAL	236,780	0

This alternative is dislayed by WSA on Maps 2 through 5.

The No Wilderness Alternative recommends the four WSAs in their entirety as unsuitable for wilderness designation. Under this alternative all four WSAs would be returned to regular multiple use management, and would be managed consistent with the Egan Resource Management Plan.

The No Wilderness and the No Action Alternatives are the same in this technical report. Impacts will be nearly the same in both alternatives since the major impacts of nondesignation (e.g. energy and mineral development) are largely unplanned by the BLM and so are unaffected by the Bureau Planning System. In

addition, many impacts that are discussed will occur in the long term (such as communication site location and forest product removal) and are not covered by the life of the plan (10 years). Lastly, range development as considered in the proposed action in the Resource Management Plan will not, by itself, significantly impact the wilderness resource.

Hereafter the No Wilderness and the No Action Alternatives will be referred to as the No Wilderness Alternative.

Table 2 is a summary of the No Wilderness Alternative.

TABLE 2: NO WILDERNESS ALTERNATIVE

WSA NAME	Suitable Acreage	Unsuitable Acreage
Park Range (NV-040-154)	0	47,268
Riordan's Well (NV-040-166)	0	57,002
South Egan Range (NV-040-168)	0	96,916
Goshute Canyon (NV-040-015)	0	35,594
TOTAL	0	236,780

Preferred Alternative

For this alternative, all WSA acreage was recommended as suitable where the preservation of wilderness values was deemed the highest and best use for the area. This recommendation was based on the best available information (including professional judgement) on existing and potential resource conflicts and manageability problems, and quality of the wilderness resource.

In the formulation of this alternative, those areas with the lowest wilderness quality were dropped. Significance of current resource conflicts and manageability problems was analyzed. Potentials and probabilities for future resource conflicts and manageability problems were also evaluated. Important conflicts and problems were excluded, but minor ones were excluded only in combination with other conflicts or problems, or apparent unnaturalness of an area.

To be recommended as suitable within this alternative the area must be capable of being effectively managed with reasonable effort to preserve its wilderness character over the long term. The phrase "effectively managed" means that the area can be managed to maintain the public benefits which justified wilderness designation.

The formulation of this Preferred Alternative was guided by public input received throughout the wilderness study process and especially during the scoping of alternatives. This alternative sought a balance between the different user groups by eliminating most major conflicts and problems while seeking to preserve good quality wilderness values.

Table 3 is a summary of the Preferred Alternative.

TABLE 3: PREFERRED ALTERNATIVE

WSA NAME	Suitable Acreage	Unsuitable Acreage
Park Range (NV-040-154)	46,831	437
Riordan's Well (NV-040-166)	37,542	19,460
South Egan Range (NV-040-168)	0	96,916
Goshute Canyon (NV-040-015)	22,225	13,369
TOTAL	106,598	130,182

This alternative is displayed by WSA on Maps 2-5.

WSA Specific Analysis:

Park Range: Virtually all of this WSA (46,831 acres) is recommended suitable. Wilderness values are high and in nearly all cases take precedence over current or potential incompatible uses. Demand for other uses of this land is low, and is expected to remain low. The only area excluded from this recommendation is the 437 acre portion of the crested wheatgrass seeding within the western edge of the WSA.

Riordan's Well: A portion (37,542 acres) is recommended suitable. Wilderness values are limited but appear to be the highest and best use for the core of the area. The boundary along the southeast edge excludes the less manageable bench areas, and on the western tip an area with moderate mineral potential is excluded. The northern boundary excludes an area with some unnatural features and manageability problems due to configuration and openness to off-road travel. An area of moderate mineral potential is recommended suitable on the southern side of Heath Canyon. In this area it was decided that the known high wilderness values were of more importance than a moderate potential for minerals based on geologic inference.

South Egan Range: The entire WSA is recommended unsuitable. Wilderness values are moderately high but manageability problems and resource conflicts exist. There is intensive livestock grazing throughout the area. Thirty-nine cherrystemmed routes

extend into the area and six of these extend into the backcountry. Three of these roads nearly cut the area in two and create three bottleneck portions in the center of the WSA. Thirteen parcels of private land are adjacent to the area, two parcels are within the WSA and there are two parcels of split mineral estate within the area. It is possible that mining in the northern end could expand into the area. Much of the area is easily accessible by off-road vehicles. Approximately 46,000 acres are leased for oil and gas. Within this WSA the combination of conflicts and problems and other potential uses of the land outweigh the wilderness values present.

Goshute Canyon: A portion (22,225 acres) is recommended suitable. This is essentially a compromise alternative based on the fact that the WSA has high wilderness values throughout but it also has important resource conflicts, particularly in the southern third. Resource conflicts are based primarily on mineral potential. The northern third of the WSA has a low favorability for mineral resources and high wilderness values and is recommended suitable. The southern third is recommended unsuitable because of a combination of high and moderate favorability mineral resource conflicts. The central portion includes areas of moderate favorability (based on minimal direct evidence) but it has high wilderness values. It was decided that known high wilderness values in this situation outweighed an unknown potential for mineral resources.

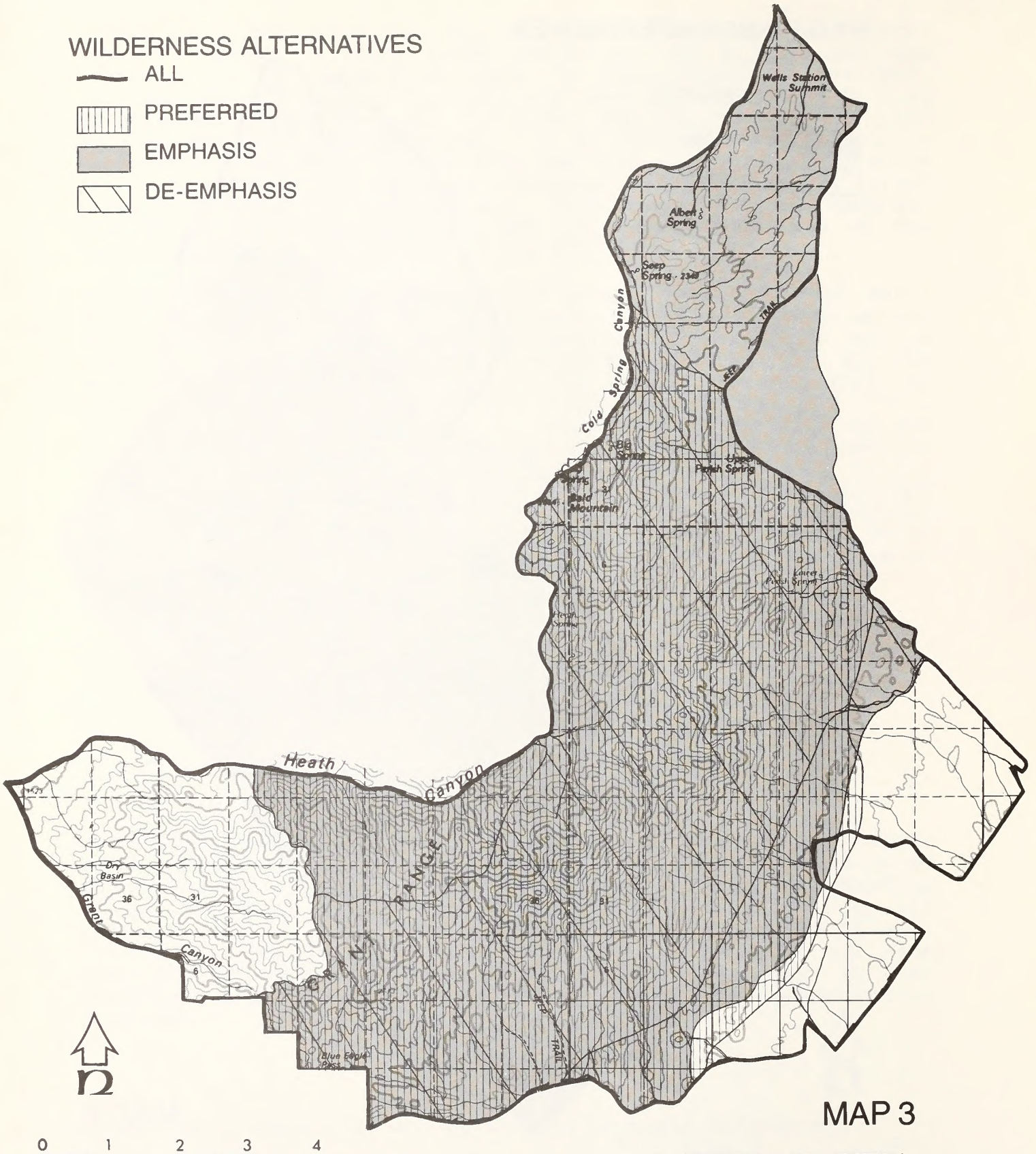
Wilderness Emphasis Alternative

For this alternative, all WSA acreage was recommended as suitable which did not have important existing resource conflicts or major manageability problems; or important combinations of existing lesser conflicts and/or problems. For this alternative, all portions of all areas were considered to have sufficient wilderness quality for designation. Only portions with the most unnatural features were eliminated, and this was done in combination with existing resource conflicts or manageability problems.

Table 4 is a summary of the Wilderness Emphasis Alternative.

MAP 2

PARK RANGE
NV-040-154



MAP 3

RIORDAN'S WELL
NV-040-166

MAP 4

SOUTH EGAN RANGE
NV-040-168

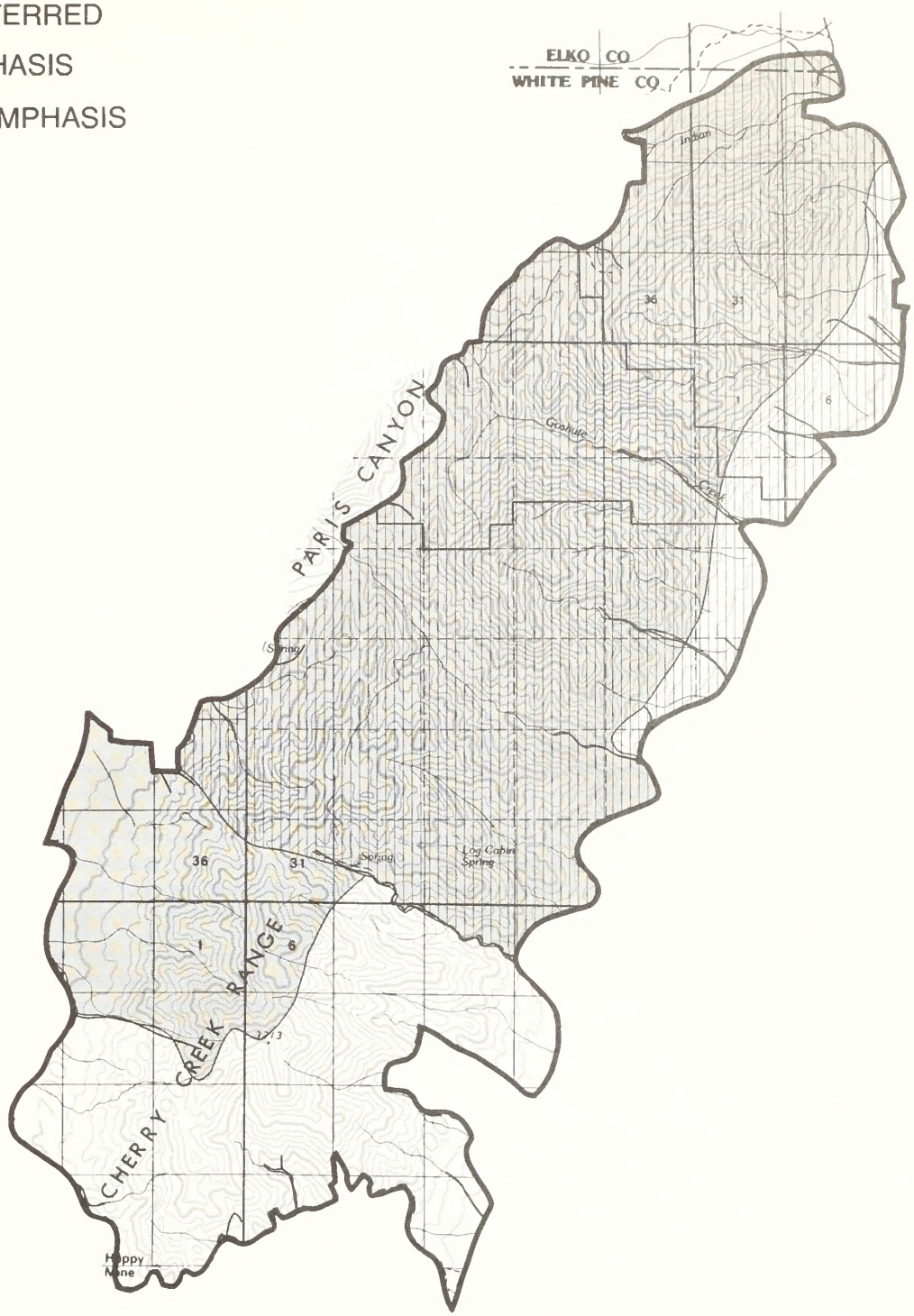
WILDERNESS ALTERNATIVES

ALL

PREFERRED

EMPHASIS

NONE DE-EMPHASIS



0 1 2 3 4 approx miles

MAP 5

GOSHUTE CANYON
NV-040-015

TABLE 4: WILDERNESS EMPHASIS ALTERNATIVE

WSA NAME	Suitable Acreage	Unsuitable Acreage
Park Range (NV-040-154)	38,573	8,695
Riordan's Well (NV-040-166)	45,791	11,211
South Egan Range (NV-040-168)	57,660	39,256
Goshute Canyon (NV-040-015)	26,460	9,158
TOTAL	168,460	68,320

This alternative is displayed by WSA on maps 2-5.

WSA Specific Analysis:

Park Range: A large portion (38,573 acres) is recommended suitable. Wilderness values are high and existing resource conflicts and manageability problems are minimal throughout most of the WSA. Approximately an 8,000 acre foothill portion around the northern perimeter is recommended unsuitable. This exclusion would eliminate six cherrystemmed routes which currently receive use, 437 acres of an unmanageable and unnatural crested wheatgrass seeding, and would remove portions along the west side which are used for woodcutting.

Riordan's Well: A portion (42,493 acres) is recommended suitable. Wilderness values are limited but existing resource conflicts and manageability problems impact only the southeast benchland area and the western edge. An approximately 7,000 acre area on the western edge is excluded because of moderate favorability for mineral resources based on indirect evidence, and because the Terrell Mine could logically expand into the WSA. An approximately 5,000 acre area on the southeast side is excluded because of cherrystemmed routes which currently receive use, and since this portion would be difficult to manage as wilderness. In addition approximately 2,000 acres are added to the WSA on the eastern side of the northern end to enhance manageability. The old boundary was a loop road which is no longer continuous and has reverted to a nearly natural condition. Also about 405 acres are added to the WSA on the southeast side to improve manageability and boundary identification.

South Egan Range: A portion (57,660 acres) is recommended suitable. Wilderness values are moderately high but most of the perimeter area has existing resource conflicts and/or manageability problems. Approximately 20,000 acres of low foothills along the entire west side and the southern tip are excluded. This eliminates a mining claim group, 20 cherrystemmed routes, a 1,042 acre seeding, portions of four Desert Land Entry applications, a large area of easy off-road vehicle access, 559 acres of

an old chaining, and active woodcutting areas. Also excluded is the northern tip which has moderate favorability for minerals based on minimal direct evidence. A 6,000 acre appendage which goes down into Cave Valley on the eastern side is eliminated because it is unmanageable. This also removes some private inholdings from within the WSA. A 5,000 acre portion on the northeast side is removed in this alternative. An inventory error failed to identify a route which would have eliminated this portion.

Goshute Canyon: A portion (26,436 acres) is recommended suitable. Wilderness values are very high but manageability problems are present and resource conflicts are high within portions of the WSA. The 2,500 acre low foothill portion along the northern half of the eastern side is excluded because of the presence of twelve cherrystemmed roads which receive use, and woodcutting areas. Approximately 7,000 acres on the southern end is excluded because of high favorability (based on abundant evidence) of the presence of mineral resources. This would also eliminate eight cherrystemmed routes. Also, it is probable that mining along the southern boundary would eventually extend into the WSA if the southern end were designated wilderness.

Wilderness De-emphasis Alternative

For this alternative, all WSA acreage was recommended as suitable which had good to high quality wilderness characteristics, and which did not have important existing or potential resource conflicts or manageability problems; or important combinations of lesser existing or potential conflicts or problems.

Table 5 is a summary of the Wilderness De-emphasis Alternative.

TABLE 5: WILDERNESS DE-EMPHASIS ALTERNATIVE

WSA NAME	Suitable Acreage	Unsuitable Acreage
Park Range (NV-040-154)	34,042	13,226
Riordan's Well (NV-040-166)	30,363	26,639
South Egan Range (NV-040-168)	16,560	80,356
Goshute Canyon (NV-040-015)	C	35,594
TOTAL	80,965	155,815

This alternative is displayed by WSA on maps 2-5.

WSA Specific Analysis:

Park Range: A large portion (34,042 acres) is recommended suitable. Wilderness values are high and existing and potential resource conflicts and manageability problems are minimal throughout most of the WSA. In addition to the portion excluded under the Wilderness Emphasis Alternative, a 1,000 acre area of less than good wilderness quality and some manageability concerns along the west side is excluded. This would eliminate one cherrystemmed route and an area used for woodcutting. Also excluded are about 3,500 acres in the southeast portion of the WSA. This would remove a cherrystemmed route, an area of easy off-road vehicle access and a portion of an area with moderate geothermal potential.

Riordan's Well: A portion (30,363 acres) is recommended as suitable. Wilderness values are limited and potential resource conflicts and manageability problems impact primarily the perimeter of the area. Rationales for excluding acreage are the same as in the Wilderness Emphasis Alternative, plus additional acreage on the southeast is excluded because of less than good quality wilderness, cherrystemmed routes and off-road vehicle access problems. Acreage in the western tip has been excluded to remove an area of moderate mineral potential. Additional acreage is also excluded at the northern end because of less than good quality wilderness characteristics, three cherrystemmed roads and easy off-road vehicle access.

South Egan Range: A portion (16,560 acres) is recommended suitable. Acreage is excluded for the reasons listed in the Wilderness Emphasis Alternative. Additionally, 40,000 acres (the southern half) are excluded because of manageability problems from the six cherrystemmed routes which extend into the back-country and intensive livestock management throughout the area. Also excluded is a 1,000 acre parcel on the northeast side because of private lands, two cherrystemmed routes, ease of off-road vehicle access and oil and gas leases.

Goshute Canyon: The entire wilderness study area is recommended unsuitable because of conflicts with mineral activity and potential, oil and gas leases and potential, woodland product harvesting and off-road vehicle use and access problems. Also there are manageability problems from the cherrystemmed routes. The area contains good wilderness characteristics throughout much of the high country but removing important resource conflicts would result in an unmanageable unit.

CHAPTER 2

AFFECTED ENVIRONMENT

The General Environment

INTRODUCTION

The information presented in this chapter is divided into two parts. The first part briefly describes in a general manner that part of the existing environment of the Egan RA that would be affected by the alternatives. Some of the information in this portion of the chapter is found in the Egan Resource Management Plan/EIS but is highlighted in this document to assist with impact analysis. The second part of the chapter more specifically describes the affected environmental features of the individual wilderness study areas.

REGIONAL SETTING

The Egan RA encompasses 3,842,216 acres in east-central Nevada within the Basin and Range Physiographic Province (see Map 1). The topography is characterized by a series of north-south oriented mountain ranges that border high, broad valleys. Extensive normal block faulting that created these landforms continues to the present day as evidenced by active fault scarps and frequent minor earthquakes. Elevations range from around 5,000 ft. to over 10,000 ft. Alluvial fans and benchlands line the rocky mountains and form gentle slopes and washes.

The region has a semiarid continental climate characterized by a small amount of precipitation and a high percentage of sunshine. The average annual precipitation in the valley floors is about 8 inches and generally increases with the rise in elevation to 16 inches or more in the mountains. Clear days average 79 percent per year with temperatures ranging from 99 degrees F. to -27 degrees F., with a mean annual temperature of 47 degrees F. There are typically 90 to 110 frost-free days per year.

Prevailing winds from the south and southwest in the summer act in conjunction with the moderate temperature to produce an annual free water evaporation rate of from 45 to 52 inches.

Air temperature inversions are common during all months of the year with the greatest occurrence during the cold months. Occasionally smoke from the Kennecott Copper smelting operation in McGill becomes trapped by inverted air layers in Spring and Steptoe Valleys.

Another factor affecting air quality within the Egan RA is the occurrence of blowing dust which is common around dry lake beds during late spring and summer. Usually, however, the air quality is excellent and visibility unlimited.

WILDERNESS

Of the 3,842,216 acres of public lands in the Egan RA, 139,464 acres, or about 3.6 percent, have been identified as having, wilderness characteristics. Portions of the four Egan Wilderness Study Areas (totaling 97,316 acres) are located in other districts and/or resource areas. The wilderness study areas are situated primarily in the mountains with some contiguous bench and valley areas. These are all in a natural condition, and offer outstanding opportunities for solitude or for primitive recreation or for both.

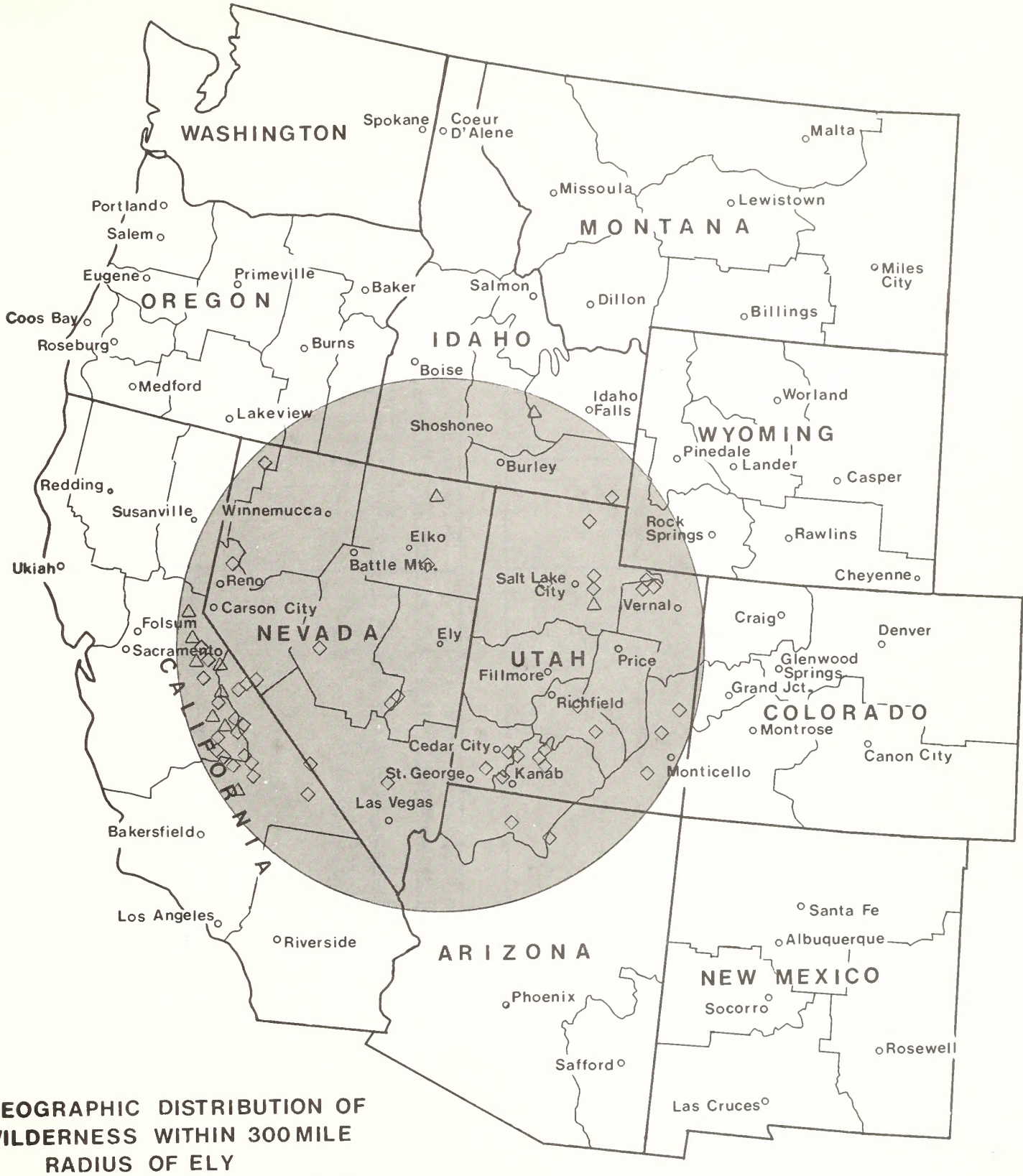
Diversity

Geographic Distribution: There is no designated wilderness in the Egan RA. The nearest wilderness area is the USFS Jarbidge Wilderness, about 270 road miles north of Ely in northern Nevada. The Jarbidge Wilderness is the only designated wilderness in Nevada.

The BLM currently has about 90 designated wilderness study areas in Nevada. Additionally, other agencies have nine areas which are administratively endorsed for designation, and 13 areas that are undergoing further wilderness study.

An examination of designated wilderness occurring within 250 miles of Ely serves little purpose in attempting to assess diversity based on geographic distribution since there are so few wilderness areas within this radius. However, an extension of the zone of consideration shows that within a 300 mile radius of Ely, by far the greatest concentration of wilderness areas is in southern California (see Map 6).

Opportunities within a 5-Hour Drive of SMSAs: Other factors must be considered in a diversity analysis. One of these is the number of Standard Metropolitan Statistical Areas (SMSAs) with a population of 100,000 or more within a 5 hour's driving time of the wilderness study area. The Egan RA contains four WSAs. Goshute Canyon is within 5-hour driving range of both the Salt Lake City and Provo, SMSAs. The South Egan Range and Riordan's Well WSAs can be reached from the Las Vegas SMSA within 5 hours. The Park Range is not within a 5-hour drive of any SMSA. Refer to the diversity sections under each WSA later in this chapter. Also, see Table 6.



GEOGRAPHIC DISTRIBUTION OF WILDERNESS WITHIN 300 MILE RADIUS OF ELY

△ Designated Wilderness
◇ Administratively Endorsed Wilderness Proposal

MAP 6

TABLE 6

PROXIMITY TO POPULATION CENTERS

A.

Unit Number	Total Acres	Population Centers within One Day's Travel Time of WSA's	Statutory Wilderness Within One Day's Travel Time of Identified Population Centers					
			BLM			Other Agency		
		Names of Cities and States	State	No.	Acreage	State	No.	Acreage
NV-040-015	35,594	Salt Lake City-Ogden Utah			None	ID	1	43,243
						UT	1	30,088
		Provo-Orem Utah			None	UT	1	30,088
NV-040-154	47,268	None						
NV-040-166	57,002	Las Vegas Nevada			None	AZ	1	47,762
						CA	3	79,921
NV-040-168	96,916	Las Vegas Nevada			None	AZ	1	47,762
						CA	3	79,921

B.

Unit Number	Total Acres	Population Centers within One Day's Travel Time of WSA's	Wilderness Areas Endorsed by the President Within One Day's Travel Time of Identified Population Centers					
			BLM			Other Agency		
		Names of Cities and States	State	No.	Acreage	State	No.	Acreage
NV-040-015	35,594	Salt Lake City-Ogden Utah			None	CO	1	205,671
						ID	1	15,770
						UT	17	1,207,346
		Prove-Orem Utah			None	CO	2	219,513
						ID	1	15,770
						UT	23	1,460,047
NV-040-154	47,268	None						
NV-040-166 &	57,002	Las Vegas Nevada			None	AZ	1	2,510
NV-040-168	96,916					CA	3	1,948,700
						NV	7	1,878,445
						UT	6	241,696

C.

Unit Number	Total Acres	Population Centers within One Day's Travel Time of WSA's	Other Study Areas Within One Day's Travel Time of Identified Population Centers					
			BLM			Other Agency		
		Names of Cities and States	State	No.	Acreage	State	No.	Acreage
NV-040-015	35,594	Salt Lake City	CO	3	38,885	ID	2	140,050
			ID	11	573,975	UT	6	141,840
			NV	4	202,118	WY	1	135,840
			UT	30	1,347,618			
			WY	10	140,432			
		Provo-Orem Utah	CO	7	153,875	ID	1	28,800
			ID	2	11,338	NV	3	235,141
			UT	45	1,600,901			
			WY	6	108,682			
NV-040-154	47,268	None						
NV-040-166 & NV-040-168	57,002 96,916	Las Vegas Nevada	AZ	47	1,074,392	CA	3	223,900
			CA	108	4,907,144	NV	14	252,585
			NV	32	2,229,194			
			UT	11	136,417			

TABLE 7

ECOSYSTEM/LANDFORM REPRESENTATION

A. Ecosystem/Landform		Existing Representations in Statutory Wilderness									
		BLM Areas		Other Agency Areas			BLM Areas - Other States			Other Agency Areas	
No.	Name	No. Areas	Acreage	Agency	No.	Acreage	State	No.	Acreage	State	No.	Acreage
3130-32	Great Basin Sagebrush		None			None			None	CA	2	7,020
3130-21	Juniper Pinyon Woodland		None			None			None	CA	3	43,168
3130-5	Mixed Conifer Forest		None			None			None			None

B. Ecosystem/Landform		Representations in Wilderness Endorsed by President - Pending Before Congress									
		BLM Areas		Other Agency Areas			BLM Areas - Other States			Other Agency Areas	
No.	Name	No. Areas	Acreage	Agency	No.	Acreage	State	No.	Acreage	State	No.	Acreage
3130-32	Great Basin Sagebrush		None	USFS F&WS	1 1	20,000 611,180			None	CA	4	6,830
3130-21	Juniper Pinyon Woodland		None	USFS NPS	1 1	60,000 35,000			None	CA UT	4 1	52,640 17,530
3130-5	Mixed Conifer Forest		None			None			None			None

C. Ecosystem/Landform		Potential Sources of Representations						
		BLM WSA's			Other Agency WSA's			
No.	Name	District	No.	Acreage	Agency	Region, Park, Refuge	No.	Acreage
3130-32	Great Basin Sagebrush	Elko-NV	3	23,556	USFS	5-California (includes part of the White Mtns. in NV)	12	140,430
		Winnemucca-NV	2	9,386				
		Carson City-NV	6	167,539				
		Ely-NV	11	194,867				
		Las Vegas-NV	2	303,600	USFS	4-Intermountain	2	7,409
		Battle Mountain-NV	2	152,650				
		Bakersfield-CA	26	226,274				
		CDCA-CA	6	25,856				
		Richfield-UT	1	6,406				
3130-21	Juniper Pinyon Woodland	Elko-NV	3	166,525	USFS	5-California	11	433,384
		Winnemucca-NV	2	14,079	USFS	4-Intermountain	7	105,828
		Carson City-NV	7	353,958				
		Ely-NV	12	285,944				
		Las Vegas-NV	8	277,566				
		Battle Mountain-NV	10	482,960				
		Bakersfield	7	82,962				
		CDCA-CA	12	243,502				
		Salt Lake-UT	3	64,573				
		Cedar City-UT	3	24,118				
		Richfield-UT	6	150,535				
3130-5	Mixed Conifer Forest	Ely-NV	9	138,182				None

Ecosystem and Landform Diversity: Another factor in considering diversity is the representation of ecosystems in the National Wilderness Preservation System (NWPS). According to the Bailey-Kuchler land classification system the Egan WSAs are in the Intermountain Sagebrush Province and are composed of three basic ecosystem types: Great Basin Sagebrush, Juniper Pinyon Woodland and Western Ponderosa Forest. In actuality, the WSAs have very little Western Ponderosa Forest. A mixed Conifer Forest ecosystem more accurately depicts what is there; however, the Bailey-Kuchler system does not provide for this ecosystem within the Intermountain Sagebrush Province. The system was modified by the Ely District to better portray the WSAs. Table 7 lists only Ely WSAs under this new category. It is somewhat misleading since there are several Administratively endorsed areas and other WSAs in eastern Nevada which probably contain this ecosystem.

The Great Basin Sagebrush ecosystem is the most underrepresented, with only about 7,000 acres in the National Wilderness Preservation System. There are currently six areas with this ecosystem type administratively endorsed for wilderness. Two of these are in Nevada and four are in California. There are about 60 WSAs and 14 USFS further planning areas with this type of ecosystem presently under study.

The Juniper Pinyon Woodland ecosystem is also underrepresented with about 43,000 acres designated as wilderness. There are currently eight areas with this ecosystem type administratively endorsed for wilderness. Three of these areas are in Nevada, four in California and one in Utah. There are approximately 70 WSAs with this ecosystem and about 18 USFS further planning areas.

In conclusion, the Great Basin area is currently poorly represented in the National Wilderness Preservation System. Many areas with these ecosystems are now being studied for possible inclusion into the system. At this time however, designation of any of the Egan WSAs would enhance the diversity of the wilderness system. (See Table 7.)

MINERALS AND ENERGY

The Egan Resource Area is entirely within the Basin and Range physiographic province. Most of the mountain ranges trend north-south and are relatively narrow compared to the valleys. The mountain ranges of the area are mainly folded and faulted blocks of sedimentary, metamorphic, and igneous rocks. The present topographic relief is largely the result of movement along many north-trending faults.

Locatable Minerals

The easily discoverable high grade ore deposits have already been extracted or are now being mined. The industry has resorted to

the mining of increasingly lower average grade ore deposits. The discovery and definition of new deposits and new mining districts is a future possibility. These two factors and their eventual mineral yields will depend upon 1) the evolution of technology, 2) the socio-economic demand for these minerals, and 3) the availability of lands open to prospecting and mining.

About 90 percent of the locatable mineral deposits in the Egan RA are in contact metamorphic zones, or within or in proximity to granitic intrusive rocks, such as Late Mesozoic and Early Tertiary Granodorite and Quartz Monzonite. Such rocks also contain the prophyry copper deposits, and other essential minerals.

Silver is a strategic mineral that occurs in the Egan RA. The U.S. produces about one-tenth but uses more than one-third of world silver production. The U.S. has large stockpiles of silver, and has no goals for more.

Copper is a strategic metal occurring in the Egan RA. The U.S. is very rich in copper reserves, although these tend to remain undeveloped while foreign producters supply it at artificially low prices.

Tungsten is a strategic metal used in tungsten carbide, alloy steels, light bulbs, and chemicals. The U.S. uses about four times what it produces, and the shortfall is provided by a diversity of nations including Canada so that reliability of supply is good. Demand in the U.S. will increase in the future, and supply would continue to be from other nations for whom profitability is not a concern. Tungsten deposits in the Egan RA would not figure prominently in U.S. efforts at stockpiling, especially since tungsten-bearing materials as a group show an excess in the "Stockpile Report to the Congress."

Fluorite is also a strategic mineral, and U.S. inventories show a deficit in comparison to 1980 goals for the mineral. The deposits of fluorite in the Egan RA are unlikely to contribute to the national stockpile effort.

Maps showing mineral potential and number of mining claims within the WSAs are located towards the end of this chapter (see Maps 8, 11, 14 and 17.

Oil and Gas

The geologic environment of the Egan RA is very complex and little information on oil and gas traps has been revealed. Due to the extensive faulting in the area, the possibility of structural traps is immense. Based upon other geomorphic occurrences of producing oil fields in Nevada, the consensus of opinion is that the valleys are probably the most likely targets for oil and gas reservoirs. Geophysical exploratory operations and oil and gas leasing supports this opinion.

Oil and gas are known to occur in commercial quantities adjacent to the Egan RA in the graben and downfolded area of Railroad Valley, particularly in the Eagle Springs and Trap Springs oil fields. These two fields are located within 7 miles of each other and about 53 miles southwest of Ely, outside the Egan RA. Reservoir rocks in these fields are fractured oilgocene tuff and Paleocene carbonate rocks of the Sheep Pass Formation. Chainman Shale is considered to be the main source rock. Latest studies show that the lake beds of the Paleocene Sheep Pass Formation are also important source rocks which contain hydrocarbons.

Confirmation of both Chainman Shale and Sheep Pass Formations as probable petroleum source rocks greatly increases the range of geological environments which can be considered favorable for oil occurrence in the Egan RA. There are no known occurrences of carbonaceous shales of the Elko Formation type.

Maps showing oil and gas leases in the WSAs are located towards the end of this chapter (see Maps 8, 11, 14 and 17).

Exploration

In the search for energy many miles of seismic line are run across open country. In fiscal year 1982, 5,400 acres were disturbed by seismic activity. Most of the impacts occur in valleys and bench areas, and consist primarily of vegetative disturbances which can last for from less than 5 years to more than 100 years, depending upon a number of factors.

Mineral exploration is concentrated in the bench and mountain areas. Impacts from road building, core drilling, and other earth disturbances result from the more intensive exploration efforts. These impacts vary in duration, but are generally more long-lasting than those of oil and gas exploration and development. In fiscal year 1982, about 100 acres were disturbed by mining operations filed under 3809 regulations.

RANGE

There are presently 62 livestock permittees in the Egan RA. Of these, 53 run cattle only, 3 run sheep only, 6 run both cattle and sheep.

Livestock movements generally correspond to changing seasons, climatic conditions, and current management practices. Livestock are restricted to the lowlands during the winter months. Grazing in the summer extends into the high country as well. Most allotments are grazed during the critical growth period for forage plants.

Portions of 21 allotments fall within the boundaries of the four WSAs. (See Table 8)

There are 19 individuals or companies with grazing privileges for allotments in the WSAs.

TABLE 8

Grazing Allotments in the WSAs

WSA	ALLOTMENT	DISTRICT ADMINISTERED BY	% OF ALLOTMENT WITHIN WSA	NUMBER OF PERMITTEES	CLASS OF LIVESTOCK	SEASON OF USE
Goshute Canyon	Indian Creek	Ely	74	1	Cattle	7/1-8/31
	Goshute Basin	Ely	68	2	Cattle & Sheep	7/1-10/30
	Medicine Butte	Ely	2	1	Sheep	4/1-8/31
	Cherry Creek	Ely	13	4	Cattle	yearlong
Park Range	Hick's Station	Battle Mountain	20	1	Cattle	9/1-12/1
	Snowball	Battle Mountain	1	1	Cattle	12/1-3/31
	Morey Unit	Battle Mountain	10	1	Cattle	5/16-9/15
	Duckwater (Hildebrard Use Area)	Ely	6	2	Sheep	11/30-4/15
Riordan's Well	Duckwater (Currant Ranch Use Area)	Ely	6	1	Cattle	10/1-6/1
	Hardy Springs	Ely	5	1	Cattle	10/1-5/15
	Butterfield	Battle Mountain	11	1	Cattle	yearlong
	Forest Moon	Ely	15	1	Cattle	yearlong
	Reserved for Wildlife	Ely	32	-	-	-
South Egan Range	Rock Canyon	Ely	41	1	Cattle	11/1-5/21
	Chimney Rock	Ely	80	1	Cattle & Sheep	6/1-8/30
	Brown Knoll	Ely	42	1	Cattle	4/1-5/30
	Sheep Pass	Ely	20	2	Cattle	4/1-11/30
	Six Mile Ranch	Ely	7	1	Cattle	11/1-2/28
	Cattle Camp/ Cave Valley	Ely	7	3	Cattle	5/16-11/30
	Shingle Pass	Ely	51	1	Cattle	5/16-2/28
	Hardy Springs	Ely	19	1	Cattle	10/1-5/15

Threatened and Endangered Plants

In field surveys conducted in eastern Nevada (Pinzl, 1978 and Harrison, 1980) no threatened or endangered species were located within the Egan RA. Although sensitive plant species are known to exist within the Egan RA, none have located within the WSAs. The field survey coverage is incomplete however, and locations of threatened, endangered or sensitive species may be discovered in the future. Sensitive species occuring in nearby ranges that could likely occur on some WSAs are Eriogonum homgrenii, Primula nevadensis, Lewisia maguirei, and Thelypodium laxiflorum.

WILDLIFE

The Egan RA provides habitat for 255 species of animal life. Types of habitat range from salt desert shrub to alpine timber, resulting in a highly diverse fauna. Of special importance to the wildlife species diversity are riparian zones. Riparian vegetation makes up 1.4 percent of the total vegetation within the resource area. Wildlife use riparian zones disproportionately more than any other type of habitat. Riparian areas create well-defined habitat zones within the much drier surrounding areas and generally are more productive in terms of biomass, both plant and animal. They provide habitat for species that otherwise would not inhabit the Great Basin Region. Riparian zones are also attractive for other uses, such as livestock grazing and recreation which sometimes directly conflict with wildlife.

In 1981, BLM's wildlife inventories of the entire Egan Resource Area were completed. A total of 176 species of birds, 52 species of mammals, 17 species of reptiles and amphibians and 10 species of fish were recorded for the Egan RA (Suminski, 1981).

Big Game

Mule deer, pronghorn antelope, elk, mountain lions, and bighorn sheep occupy the resource area. Of the five species, mule deer are the most abundant and widespread, followed by pronghorn antelope. Only small populations of elk and bighorn sheep use public lands within the resource area. Bighorn sheep use occurs only during severe winters.

Mule Deer: Mule deer populations in the Egan RA have fluctuated greatly in the past 25-30 years. Deer numbers peaked in the late 1950s and the early 1960s. The most recent trend information indicates that the population is static in the Egan- Cherry Creek mountain range and increasing in the other areas of the resource area.

Pronghorn Antelope: Pronghorn numbers within Steptoe and Ruby Valleys have been on the increase for several years. Generally, pronghorn antelope stay in the valley areas, only occasionally wandering into the higher country.

Elk: Elk occupy public land in the Egan RA on a yearlong basis. Resident populations inhabit the south Egan Range, Horse and Cattle Camp area, Mt. Grafton, and possibly on Heusser Mountain in the Egan-Cherry Creek mountain range. In the last few years elk have dispersed to many of the mountain ranges in the Ely area, including the Egan-Cherry Creek Range and the Egan Range south of Ward Mountain.

Bighorn Sheep: The Nevada Department of Wildlife is presently planning to re-establish mountain sheep in most of its former range. A remnant population inhabits the White Pine mountain range just north and east of Currant, Nevada. During severe winters the sheep leave Forest Service-administered land and winter on BLM-administered land. Bighorn were never numerous in Nevada, but historic populations were higher than at present (McQuivey, 1978).

Upland Game

Sage Grouse: Sage grouse habitat within the Egan RA occurs within all the valleys in the RA. Crucial to sage grouse survival is protection of strutting grounds, the land around them for a two mile radius, and associated meadow riparian habitat areas. As forbs dry up on upland sites, grouse begin to move onto meadows; these upland meadows then become additional areas crucial to sage grouse survival (Savage, 1969; Oakleaf, 1971).

Blue Grouse: Within the Egan RA blue grouse habitat exists in all mountain ranges with the exceptions of the Pancake and Butte Mountains. All non-pinyon conifers are critical for blue grouse survival in the winter months. The Egan-Cherry Creek Mountains are the most important habitat in the RA for the blue grouse. At the present time blue grouse populations are stable at relatively high numbers (San J. Stiver, NDOW, personal communication, 1982).

Chukar Partridge: Most of the mountain ranges within the RA have localized resident populations around perennial water sources. Localized populations can exhibit relatively high populations in good nesting years.

Aquatics

Habitat for game fisheries within the Egan RA consists primarily of small mountain streams typically 4 to 9 feet wide and usually not over 1 foot deep. There are 16 streams in the RA with fishable populations. Fishable streams total 30 miles. Game species present in these streams, lakes and reservoirs are the Utah cutthroat trout (a State sensitive species), northern pike, largemouth bass, rainbow, brown and brook trout.

Goshute Creek has a viable population of Utah Cutthroat trout, a State sensitive species since 1980. No stocking takes place at present. Habitat surveys since 1976 rated total habitat

condition as poor to fair in all but one year. The creek has a tremendous variation of physical conditions including two areas of livestock degradation. It is anticipated that the Nevada Department of Wildlife will continue to use the Goshute Creek population as brood stock for future transplants.

Other Wildlife

Nongame birds and mammals occur in all habitat types within the Egan RA. Habitat diversity within the normal monotypic shrub communities is the result of unique features such as springs, rock outcrops, aspen clones, riparian vegetation or wet and upland meadows.

Common wildlife found within the lower elevation shrub and grassland communities (sagebrush, rabbitbrush, wheatgrasses) include pygmy rabbits, desert cottontails, blacktail jackrabbits, least chipmunk, deer mouse, coyote, bobcat, badger, harrier, prairie falcon, American Kestrel, mourning dove, horned lark, sage sparrow, ferruginous hawk and Brewer's sparrow. Of particular interest is the ferruginous hawk, which was removed from the U.S. Fish and Wildlife Region I Sensitive Bird Species list in 1982, but remains on the Audubon's "blue list." Nevada's nesting population of this raptor is estimated to be between 200 and 250 nesting pairs, with 50% of the states yearly production of this raptor from the Ely BLM District. A ferruginous hawk nesting study conducted in 1981 and 1982 within the Egan Resource Area resulted in documentation of 56 active nest sites. One of the only documented Swainson hawk nest sites on public land in Nevada was located in White River Valley in the 1981 study. There are strong indications that the Nevada population of Swainson hawks is declining. (Gary Herron, NDOW, personal communication, 1982.)

Typical wildlife species found in mountain shrub communities (bitterbrush and mountain mahogany) include Nuttall's cottontail, least chipmunk, deer mouse, coyote, bobcat, mountain lion, red-tailed hawk, golden eagle, common flicker, bushtit, Townsend's solitaire, green-tailed towhee, chipping sparrow, elk, and mule deer.

Within the pinyon-juniper type the species include Nuttall's cottontail, cliff chipmunks, woodrats, coyote, bobcat, Cooper's and sharp-shinned hawks, hairy woodpecker, Say's phoebe, pinyon jay, scrub jay, mountain bluebird, rufous sided towhee and occasionally a Stellar's jay. Species which may be found in quaking aspen and white fir include Uinta chipmunk, bobcat, deer mouse, blue grouse, goshawk, Cooper's hawk, flycatchers, Clark's nutcracker, mountain chickadee, western tanager and gray-headed junco.

Mourning doves are found in all habitat types.

Reptiles and amphibians common to the Great Basin are found in the RA. The most common species encountered are the sagebrush lizard, collared lizard, Great Basin fence lizard, Great Basin gopher snake and the western diamondback rattlesnake.

Threatened and Endangered Animals

Endangered species found in the Egan RA are the bald eagle and peregrine falcon. Bald eagles migrate into the RA in December and depart as late as April. Peregrine falcons can be seen year round.

FORESTRY

The forest resource of the Egan Resource Area consists of about 1.33 million acres of juniper-pinyon woodland with mixed conifer stands occurring at higher elevations. The common species are single leaf pinyon, Utah juniper, Rocky Mountain juniper, white fir, limber pine, bristlecone pine, and quaking aspen. There are scattered occurances of Douglas fir, spruce, cottonwood and ponderosa pine. The mixed conifer stands are small and scattered in mostly inaccessible areas and are considered non-commercial. Approximately one third of the woodland acres can be considered manageable. This amounts to about 444,000 acres.

The major products removed from these areas are fuelwood, Christmas trees, pine nuts and fence posts.

WILD HORSES

At present, wild horses are found in nine identified herd use areas covering all or part of 23 grazing allotments in the Egan Resource Area.

The 1982 estimate of existing wild horse numbers based on aerial census in the Egan Resource Area is 2,011. The largest wild horse herd in the area is the Buck and Bald herd use area with an estimated population of 1,185 (excluding Elko), and the smallest herd is Jakes Wash with 20 horses.

The most recent information indicates that wild horse populations in the Egan Resource Area are static in the Jakes Wash, White River, Butte, Cherry Creek and Antelope Herd use areas, and increasing in Buck and Bald, Monte Cristo and Sand Springs.

Wild horses in the Egan Resource Area are generally in good condition since up to the present time there has been adequate forage, water, cover and solitude in their environment. Problems wild horses face in the future are competition for forage and water, and disruption of their free roaming behavior by fencing or other human activities.

WATER RESOURCES

Surface Water

Due to its geologic location and topographic character, the Egan RA has little available surface water, although ground water reserves are thought to be substantial in certain areas. Most valleys are closed basins with no external surface drainage. Surface water from the higher elevations is lost due to infiltration and evapotranspiration on the valley slopes; smaller portions are evaporated on the valley floors. The majority of the streams are intermittent, flowing only during spring snowmelt and occasional summer rainstorms.

Major drainage systems of the Egan RA were formed during the Pleistocene era, when considerably more surface water was available. Drainage systems were formed at that time, but today only flow for short distances below spring sources.

Water Quantity

Since most of the streams of the area flow only intermittently, flow gauging is rare and discharge is not well known. Runoff from the area is concentrated in the months of March through June. Most of the surface water, both streams and springs occurs in or very near mountainous areas. Groundwater recharge is estimated at over 150,000 acre feet annually, while estimated groundwater storage is considered to approximate 15,000,000 acre feet, most of which has not been developed. Except in Steptoe Valley where nearly all ground water has been allocated.

Water Quality

In general, the quality of most surface waters in the RA is good. Specific water quality data from sampling in 1980 and 1982 showed that 18 percent of the springs and none of the streams sampled exceeded 500 mg/l total dissolved solids (TDS) which is the suggested maximum for human consumption and irrigation. This is primarily a result of the movement of water through mineral rich alluvial slopes. The Nevada water quality regulation standard for fecal coliform bacteria was exceeded in 25 percent of those waters sampled.

There are no systematized ground water data from which conclusions can be drawn about ground water quality. There are no current or planned ground water monitoring efforts.

RIPARIAN AREAS

There are 45,234 acres of riparian vegetation in the Egan RA. These produce a disproportionate amount of forage for livestock and diverse habitat and forage for wildlife.

SOILS

Soils within the Egan RA vary considerably in texture and type. The area is generally dominated by loamy soils, with salinity increasing from the alluvial areas to the valley floors.

A "third order" soil survey has not been completed for the Egan RA. Erosion condition classes have been identified by Soil Surface Factors. About 58 percent of the RA is stable or exhibits slight erosion, 40 percent has moderate erosion, 2 percent has critical erosion, and there are no areas of severe erosion.

LANDS

Most of the private lands held in the Egan RA are located in urban areas or form base properties for ranching operations. In addition, scattered parcels of land are scattered through the mountains and bench areas. The purpose of these is most often to assure control of a spring source.

A corridor study conducted by the Western Utility Group (May 1960) has identified several corridors which will likely be required in the near future. These pass through the valleys and occasionally through mountain passes, but avoid the rough terrain of the mountains.

Very few communication networks in the Egan RA run north and south. Such networks require repeaters or reflectors on mountain tops and are often required for power transmission corridors, military projects and telephone communications. The need for these sites may increase in the future.

RECREATION

Recreation on public land in the Egan RA is dispersed and primarily occurs in the backcountry. The BLM does not provide any developed recreation sites. Recreation activities that can occur on most parts of the RA, include hunting, sightseeing, winter sports, photography, nature study, predator calling, trapping, hiking/backpacking, horseback riding, off-road vehicle (ORV) use, spelunking, rockhounding, camping and picnicking. Fishing is a major activity that occurs where there are fishable springs, streams, or reservoirs. Many areas are without yearlong surface water and this affects recreational activities. The Egan RA can be characterized as having a vast supply of backcountry recreation opportunities and values with only limited demand for their use. Specific use figures for public land in the Egan RA can only be derived indirectly. Recreation use is estimated to be about 40,000 visits per year, not counting the many thousands of sightseers who are simply passing through. Recreation use by activity for each WSA is displayed in Table 9. The Forest Service, United States Fish and Wildlife Service, Nevada State Parks, Nevada Department of Wildlife and National Park Service

Table 9

Estimated Recreation Visits Per Year, By Activity
1983

	015 Goshute Canyon	154 Park Range	166 Riordan's Well	168 South Egans
Fishing	40	0	0	0
Spelunking	250	0	0	40
Hiking/Mt. Climb./Backpack.	40	0	5	20
Camping	100	0	0	40
Trapping	100	60	110	200
Picnicking	10	0	0	20
Predator Calling	50	30	50	100
Vegetative Collecting	20	0	0	50
Deer Hunting	300	40	80	270
ORV Use	20	0	5	50
Horseback Riding	30	5	5	50
Rock Climbing & Scrambling	10	0	0	10
Rockhounding	10	10	10	20
Crosscountry Skiing	10	0	0	10
Antelope Hunting	10	0	0	0
Dove Hunting	10	10	30	60
Cottontail Hunting	20	0	10	40
Sage Grouse Hunting	100	0	0	50
Blue Grouse Hunting	20	0	0	10
Chukar Hunting	0	20	20	0
Mountain Lion Hunting	15	5	5	25
Hunting Total	475	75	145	455
TOTAL	1,165	180	330	1,065

all provide developed recreation areas and facilities within the region. The major site specific recreation areas within the region are Lehman Caves National Monument, Wayne Kirch Wildlife Management Area, Cave Lake, the Duck Creek Basin complex of Forest Service campgrounds, Illipah Reservoir, and Ruby Lakes National Wildlife Refuge. Off-road vehicle (ORV) use occurs throughout the Resource Area. However, at least 90 percent of this use is on existing trails. Little actual "off-road" use occurs. When it does occur, additional trails can be easily created through use. No significant resource damage is known to be occurring from ORV use. Competitive ORV or recreation events happen infrequently in the Egan RA, one or two per year.

According to the 1982 Nevada Statewide Comprehensive Outdoor Recreation Plan, the region which includes the Egan RA serves as a "playground" for people from the Las Vegas area.

VISUAL RESOURCES

The visual resource of the Egan RA is characterized by its openness and naturalness. Vistas of many miles are available from the valleys and the mountains. Imprints of man, while visible in most areas, are very subordinate on the landscape. Scenic quality is lower in the valleys, higher in the mountains where the diversity of features creates some instances of outstanding scenery.

CULTURAL RESOURCES

A total of 1,300 cultural resource sites have been identified within the Egan RA. Covering a timespan of over 12,000 years, these prehistoric and historic sites represent sporadic but continuous use of the resource area, and include isolated finds of the Paleo-indian tradition, the earliest prehistoric peoples known in North America. More abundant, however, are sites related to the hunter-gatherers of the Desert Archaic tradition and the more recent Shoshone and Southern Paiute groups in the Protohistoric period. The various remains of these aboriginal cultures are classified into a variety of site types: open campsites, rock art, artifact scatters, quarries, rockshelters, isolated finds, and structural sites.

Historical use of the Egan RA began with early exploration efforts during the first half of the nineteenth century. Later, the establishment of overland mail routes, mining, agriculture, and livestock operations led to the growth and settlement of the area. Historic trails, mining buildings, homesteads, and cemeteries are the remnants of these developmental stages.

Native American sources reported no known traditional or ritual sites within the WSAs.

PALEONTOLOGY

Published and unpublished data on the paleontology of the Egan RA show that important vertebrate and invertebrate fossils are widespread (records of fossil plants thus far are sparse) (Miller 1981). Fossil invertebrates abound in the RA, mostly in Paleozoic rocks of the mountain ranges. The known fossil vertebrates of the area generally occur along the exposed margins of the valleys and bases of the ranges. Fossils collected include horse, camel (at least two types), mastodont, antilocaprid, oreodont, carnivore, protoceroted, and others (Miller 1981). Considerably more field investigation is needed to fully evaluate the paleontological resources of the Egan RA.

SOCIAL VALUES

The following wilderness social data were collected by various means. This included a thorough review of secondary data sources, i.e., newspaper clippings from local and regional newspapers, journal articles, Ely District Office Social Economic Profile, Ely District Office Planning Area Analysis, a review of comment letters from various individuals and user groups in response to various wilderness meetings and issues, and data gathered from District sponsored public meetings, workshops and open houses regarding the Wilderness Program within the District and specifically within the Egan Resource Area. Informal discussions were held during the fall and winter of 1982 with fifty-two persons who were members of or spokespersons for various stakeholder groups, i.e., ranchers, mineralists, conservationists, elected public officials informal community leaders, members of the local media and residents of the area.

No attempt was made to select a random sampling of Egan Resource Area residents for participation in informal discussions. Rather, the Egan Resource Area Manager, as well as other District personnel, identified formal and informal community leaders. These individuals, in turn, recommended other community members whose opinions are considered to be representative of specific community groups. While the content of these individual informal discussions reflected both personal and professional points of view, the consistency in content would tend to indicate that these personal and professional opinions are probably representative of the various individuals and stakeholder groups who have concerns about the wilderness program in the resource area.

A number of common themes surfaced from the written comments and informal discussions. These included feelings about wilderness in general and perceived potential impacts resulting from wilderness designation.

An overwhelming majority of those with whom informal discussions were held favored the designation of some Bureau of Land Management administered lands as additions to the National Wilderness Preservation System. Most of them also favored

representation of all types of landforms in that system. Although the numbers of individuals with whom informal discussions were held is too small to permit generalizing the findings to the public at large within the resource area, the strong feeling evident to preserve lands is consistent with the findings of several recent statewide surveys. In a 1981 Nevada Division of State Parks Statewide Comprehensive Outdoor Recreation Plan (SCORP) survey of outdoor recreational issues, the following attitudes were recorded. Out of the sample statewide population surveyed, 67.39 percent strongly agreed and 25.60 percent agreed that Nevada's unique and unusual areas need preserving. Slightly over three percent disagreed and close to five percent of those surveyed did not respond.

In addition, the 1982 SCORP addressed wilderness in the first two high priority issues (A-1 and A-2). That document recommends that: "Federal agencies in Nevada should give particular priority to developing and maintaining recreational areas near population centers. They are further urged to complete planning for and designation of federally managed wilderness areas. . ." (1982 p. 7-2). Issue A-2 indicates a strong public desire to preserve wildlife habitat, public lands for outdoor recreation, historic structures an sites, unique natural and unusual areas, and wilderness (Ibid, p. 7-3).

The continuing concern of State Government about preserving recreational, natural and cultural resources which have superior or high public qualities are documented in Chapter 1 in the SCORP for 1982. Nine recreational issues that have reoccurred over the past 15 years are listed with a summary of accomplishment since 1965 for each of those issues. One of the reoccurring issues, Issue 3, Land Status, states, "recreational, natural and cultural resources which have superior or high public qualities are, in many cases, in need of protection. If such resources are not acquired, reserved or otherwise protected, many of them will be lost to other uses . . . . . The Federal Government, the State, counties and cities individually or cooperatively, should take immediate steps to protect lands possessing outstanding recreational, natural, and cultural resources, particularly at Lake Tahoe and near metropolitan centers. The classification and withdrawal of the public domain for protection purposes should receive increased attention by recreational agencies." (Ibid, p. 1-4).

Those with whom informal discussions were held have expressed similar concerns by overwhelmingly indicating that they either strongly value or value those wilderness characteristics of: (a) ecological relationships; (b) preservation of essentially natural conditions; (c) vegetative and wildlife habitat; (d) archaeological and historical resources; (e) scenic quality; and (f) geologic features. Former Senator Howard Cannon also conducted a survey of Nevada in 1981 in which he found that there was an overall significant support (50 percent support to 41 percent nonsupport) for designating areas as wilderness.

There was nearly unanimous agreement that protection of wildlife ranked first as far as users of public lands was concerned; mining ranked second; outdoor recreation third; livestock grazing fourth; wilderness fifth; and off-the-road vehicle activity ranked sixth.

There was general agreement in the relative rankings of specific groups which would or could gain if Federal lands are set aside as wilderness. Backpacking/hiking ranked first; children ranked second; big-city residents third; "myself" and family fourth; rural residents fifth; followed by hunters; ranchers; mining companies; mining prospectors; and off-the-road vehicle users. A number of persons indicated that off-the-road vehicle users can find unlimited, similar types of recreational opportunities elsewhere and, therefore, their ultimate exclusion from those areas that would be included in the National Wilderness Preservation System would not significantly impact those activities except from a perceptual point of view.

The consistent preservation theme that emerged involved the general feeling that some of the Great Basin areas should be preserved either under the Wilderness Program or some similar program. Strong support was evident when discussing the program at the national and regional levels. However, when discussing program implications at the local level, viewpoints diverged dramatically, especially when discussing the specific number, types and location of wilderness areas that could or should be set aside in the resource area. A number of area residents indicated that only those areas whose natural topographic features renders them virtually inaccessible are truly wilderness. According to those individuals, those areas do need wilderness designation to assure their preservation. These individuals also indicated that formal designation of any wilderness area is not only unnecessary but also counter-productive in the sense that formal designation may, in the long-term, attract more visitors and, in that process, almost assure the destruction of the wilderness characteristics the program purports to preserve. Man's imprint on the area may not only become more noticeable, but also may become irreversible. A number of residents, however, feel that without designation, wilderness values will be lost at some point in the future.

Area residents, according to several formal and informal community leaders, have reacted negatively to the wilderness program simply because it is another Federal program that intrudes into their private lives by placing additional constraints on both access to and use of specific public land areas. These residents view this as another case of a major decision about local public land resources being made by uninformed Federal bureaucrats at the national seat of Government. They object to these "absentee" decisions that affect what they consider to be historic and traditional public land use patterns.

Both those who support the wilderness program and those who oppose it expressed cautious uncertainty about the program and its future. They feel that future political administrations or congressional mandates may alter initial wilderness management policies and supporting regulations. They cite other natural resource management policies and regulations, specifically range management, that have fluctuated from political administration to to the detriment, in their view, of those user groups who depend on access to and use of public lands for their livelihood. This sense of uncertainty finds expression, to some extent, in opposition to the wilderness program.

Some of the respondents indicated that designation of certain areas as wilderness publicly mark those specific areas as "somewhat special." The implication of publicly marking these areas would, in the opinion of those individuals, be an increase in out-of-the-area visitors which they consider undesirable. Others, however, felt that designation of wilderness areas would be desirable since visitors may be attracted to the area and this would perhaps expand job opportunities. The point was made that with the closing of the mine at Ruth and the reduction of smelter activities at McGill, additional job opportunities are desperately needed in the area and if the wilderness program would create additional job opportunities, the community would benefit.

Outside visitors may place additional demands on, among other things, the supply of existing resource area recreational activities that would cause the demand to exceed the supply. For example, the 1982 SCORP (p-6-10) indicates that there is a current demand for 55 miles of fishing streams for Region IV (which includes White Pine County), with a supply of 319 miles; a demand for 140 tent campsites with a supply of 199, and a demand for 4 miles of hiking trails with a supply of 373 miles. While a significant influx of visitors could be accommodated before the supply of some of these recreational resources would be exceeded, the possibility of that happening in the three-county area of Region IV causes concern among some resource area residents.

There would appear to be some justification for the concern about outside demands on Region IV recreational resources. In a report entitled, Dispersed Recreation in Nevada, prepared by the Division of State Parks, dated June 1981, statewide use activity is documented for each of the six regions. For each of the recreational activities listed for Region IV, the statewide percentage of use for that activity within the region significantly exceeds the percentage of statewide population for the region. This means that the region is host for inter-region demands for those activities which far exceeds the local population demand. although not a serious problem at the moment for local residents, many feel it is just a matter of time until outsiders take over. For example, 1.7 percent of the statewide population reside in the three county area of Region IV. Yet, that region provides 23 percent of the statewide hunting

activity; 15 plus percent of the statewide off-highway vehicle use and horseback riding activity; 14 plus percent of both rockhounding and camping activity; 12 percent of the photography activity; 11 plus percent of the fishing and sightseeing activity; and 9 plus percent of the hiking and backpacking statewide activity. In some respects, the Wilderness Program is seen as attracting outsiders who will further negatively impact these recreational activities within and adjacent to the resource area.

In terms of local area residents recreational preferences in wilderness areas, day hiking and sightseeing ranked first; backpacking/camping ranked second; winter sports, photography and bird watching tied for third; followed by fishing, hunting, water sports, horseback riding, rock climbing and spelunking. These same individuals attached a great deal of significance to the visual attractiveness of the diverse landforms in White Pine County.

Some ambivalence in resource area attitudes on wilderness was evident when questioned as to whether they were more or less likely to visit an officially designated wilderness area rather than an area that had some wilderness characteristics, but which was not an officially designated part of the National Wilderness Preservation System. About one-third indicated that either they were much more likely or more likely to visit an officially designated area. The general feeling that finds expression on this issue is simply that there is no scarcity of natural environments in Nevada--with or without wilderness designation. Therefore, wilderness is in a very real sense in the eyes of the beholder--one seeing wilderness characteristics only in an officially designated area and others seeming similar or in some cases identical characteristics in non-designated areas.

Personal values, such as "rurality, independence and self-determination" are held strongly by many of the area residents. Individuality and the freedom to do what one pleases, when and where one pleases, are highly prized. This view is tied to their strong feelings about excessive Government regulation, which is seen as limiting personal freedom. These views are further substantiated in the "Governor's Commission on the Future of Nevada Survey Report of 1980" which indicated that (a) over ninety percent (90%) of White Pine County respondents do not want access reduced to the out-of-doors, and (b) 92 percent of the respondents indicated they would not accept increased Federal regulations that affect their lifestyles. The survey also indicated that out of a list of seventeen (17) possible problems, White Pine County residents ranked : "Unemployment/Economic Depression" first; "Federal Regulations" second; and "Economic Diversification/Lack of Industry" third.

The wilderness program is seen by many area residents as conflicting with some of these basic values and beliefs. Informal discussion during the fall of 1982 with a number of area resi-

dents indicate that they support the concept of multiple-use management but many view wilderness as essentially a single-user oriented activity, i.e., recreation. These residents expressed concerns about the perceived impact of wilderness designation on other multiple-use activities. They strongly value the relaxed social environment, the openness and unspoiled beauty of the natural environment, and consider this combination a favorable locale for raising families. While they see wilderness as preserving those values, they are also vitally concerned about the high rate of unemployment, feel some development is both desirable and necessary to improve the local economy, and to some extent, are willing to accept a reduction in the quality of their environment in order to increase employment in their community. While recognizing that one impact of gradual growth will be a continual erosion of the close-knit informal group community that they value, they nonetheless feel that the community can accommodate gradual, controlled growth while preserving the rural atmosphere.

Some members of the ranching sector indicated that ultimate wilderness designation would directly conflict with the range improvement program. Their rationale was that the constraints that accompany wilderness designation would preclude future range improvements. Any program that either prohibits or makes the future implementation of range improvements more difficult is seen as a threat to the western cattle industry. In the long-term, those constraints are seen as imposing an unwarranted, potentially adverse economic impact on the cattle industry. The Nevada Cattlemen's Association, in a letter dated December 20, 1979, objected to every WSA in Nevada. One of their stated reasons for objecting to the wilderness program is the potential impact on the range improvement program. However, in a letter dated March 25, 1983, addressed to Howard Hedrick, Egan Resource Area Manager, the Nevada Cattlemen's Association have responded somewhat differently. In response to Issue 3, "Which portions, if any, of the four Wilderness Study Areas (WSAs) are suitable for inclusion in the National Wilderness Preservation System," the association responded, "Portions of three WSAs which contain no roads, including those roads that cherrystem into the area, and where there is no major objection or conflict with the rights of the present paying users would be recommended for wilderness." On the same issue, the White Pine County Board of County Commissioners, in a letter dated April 21, 1983, addressed to the BLM Ely District Office, stated, "This Board has gone on record as being generally opposed to designation of Wilderness Areas unless they can be accomplished without adversely affecting existing elements of our economic base. The enclosed County Commission Resolution should be considered, or Alternative A would be the Alternative to apply to Issue No. 3." Alternative A is the No Wilderness Alternative.

One of the existing elements of the White Pine County economic base that many persons feel is threatened by the Wilderness Program is the mining element. This perception is based on the

fact that any WSA's that are ultimately included in the National Wilderness Preservation System would be withdrawn from appropriation under the mining laws on the date of designation as wilderness unless otherwise provided for in the enacting legislation. A great deal of uncertainty exists about the specific location, size and economic value of potential mineral and energy deposits within each wilderness study area. As a result of this uncertainity, many area residents withhold their support for the wilderness program.

A lesser number of persons saw no conflict with minerals or energy development if any or all of the WSAs were ultimately designated as wilderness. Those individuals point out that the Egan Resource Area includes approximately 3.8 million acres. In the opinion of these individuals, the remainder of the Egan Resource Area provides numerous other prospecting, mining, or energy development opportunities of equal or better potential than do the WSAs. However, these perceptions appear to be speculative. There is no thorough minerals or energy resource inventory for the Resource Area or specific WSAs that would tend to either prove or disprove those perceptions.

ECONOMIC CONDITIONS

The Egan Resource Area includes the western two-thirds of White Pine County and small portions of northeastern Nye and northern Lincoln counties. However, the affected environment, for purposes of economic analysis, is confined to White Pine County. Any potential for population, employment, or income effects beyond this area is negligible.

Population

White Pine County is predominately rural and sparsely populated with population density averaging about 0.9 persons per square mile. The reported 1980 population of 8,167 (Census) is projected to grow to 8,291 by 1990 and 8,410 by 2000 (Nevada State Planning Coordinator's Office), indicating an anticipated growth rate of slightly less than 3 percent over the 20-year period. These growth projections assume no substantial changes in the economic structure of the county, and no economic development. The implementation of the White Pine Power Project, or any economic development activity, such as a resurgence of copper mining could substantially affect the number and character of the population.

Eighty-three percent (6,757 persons) of the County's population is concentrated in the City of Ely (4,882), the county seat, and the towns of Ruth (456) and McGill (1,419). A small segment of the population lies on ranches and mining settlements scattered throughout the county.

TABLE 10

TOTAL INCOME AND EMPLOYMENT IN 1980

White Pine County

	EMPLOYMENT		INCOME	
	Persons	Percent	($1,000)	Percent
Agriculture	198	5.2	1,590	2.8
Mining	337	8.9	7,860	14.0
Construction	244	6.5	5,896	10.5
Manufacturing	357	9.5	9,133	16.3
Trade	681*	18.1	7,475*	13.3
Services	524	13.9	5,907	10.5
Transportation and Public Utilities	264	7.0	5,689	10.2
Government	808	21.4	10,969	19.6
Other	358*	9.5	1,543*	2.8
Total	3,771	100.0	56,062	

Source: Regional Economic Information System, Bureau of Economic Analysis, 1982.

* BLM estimates.

The closure of the Kennecott Copper Mine between 1976 and 1978 has been the single most important influence on County population. Employment at Kennecott operations fell from 1,600 in 1974 to 848 in 1977, a decline of 47 percent. This contributed to a net out-migration rate of 28 percent between 1970 and 1980, and an appropriately 20 percent decline in White Pine County population from 10,150 in 1970 to 8,167 in 1980.

Income and Employment

Table 10 lists the sectorial and total income and employment and relative importance of each sector for the study area. Figures for 1980 show government, trade services, and manufacturing to be the primary sources of employment.

The unemployment rate as of September 1980 was 7.2 percent for White Pine County. The Nevada State average rate was 6.4 percent at that time. The unemployment rate has increased since the 1980 figure, reaching 12.0 percent in January 1983. The more current high unemployment rates largely reflect the reduction of mining activities in response to national economic conditions.

In 1980, government (city, county, state and federal) provided the major source of income, estimated at 19.6 percent of total income for the county. Manufacturing, mining, and trade followed, in that order. Annual per capita for 1980 was $9,259 in White Pine County, while the state average was $10,723.

Affected Industries

Based on existing income and employment, livestock-oriented agriculture is the major basic industry that may be affected by wilderness designation. Presently there is no mineral population within the WSAs, although some unidentified explorative employment is occurring. Existing data on mineral potential are unamenable to analysis for economic significance.

Most of the commodities purchased or sold by the mining and agricultural industries are imported and exported. The economic structure is relatively simple, with even wholesale and retail trade composed largely of outside purchases.

Agriculture

Agriculture production in the Egan Resource Area consists of Alfalfa and other hay, cattle and sheep. Livestock predominates. Cash receipts from marketings in 1980 totaled $11.4 million in White Pine County, with $7.0 million from meat animals and other livestock and $4.4 million from crops.

Agriculture provided 5.2 percent of employment and 2.8 percent of income in White Pine County in 1980. While this ranks agriculture as the smallest economic sector in White Pine County, the

viability and success of this industry remains tied to the public lands.

Livestock have been using about 123,600 AUMs of public land forage in the Egan Resource Area. This accounts for about 46 percent of the total forage requirement and depicts the high average depending on public land.

Wildlife Associated Recreation

It is estimated that approximately 1,250 days were spent hunting and fishing in the Egan Wilderness Study Areas in 1982. Expenditures associated with these activities are estimated to total about $40,000 and provide $27,000 in income to the area economy. These activities are not economically significant in themselves, nor are they expected to be significantly impacted by wilderness designation.

The Wilderness Study Area

The following narratives describe specific environmental features of each of the four Wilderness Study Areas.

PARK RANGE NV-040-154

This WSA is located approximately 70 air miles southwest of Ely along the border between the Ely and the Battle Mountain BLM Districts.

Wilderness Characteristics

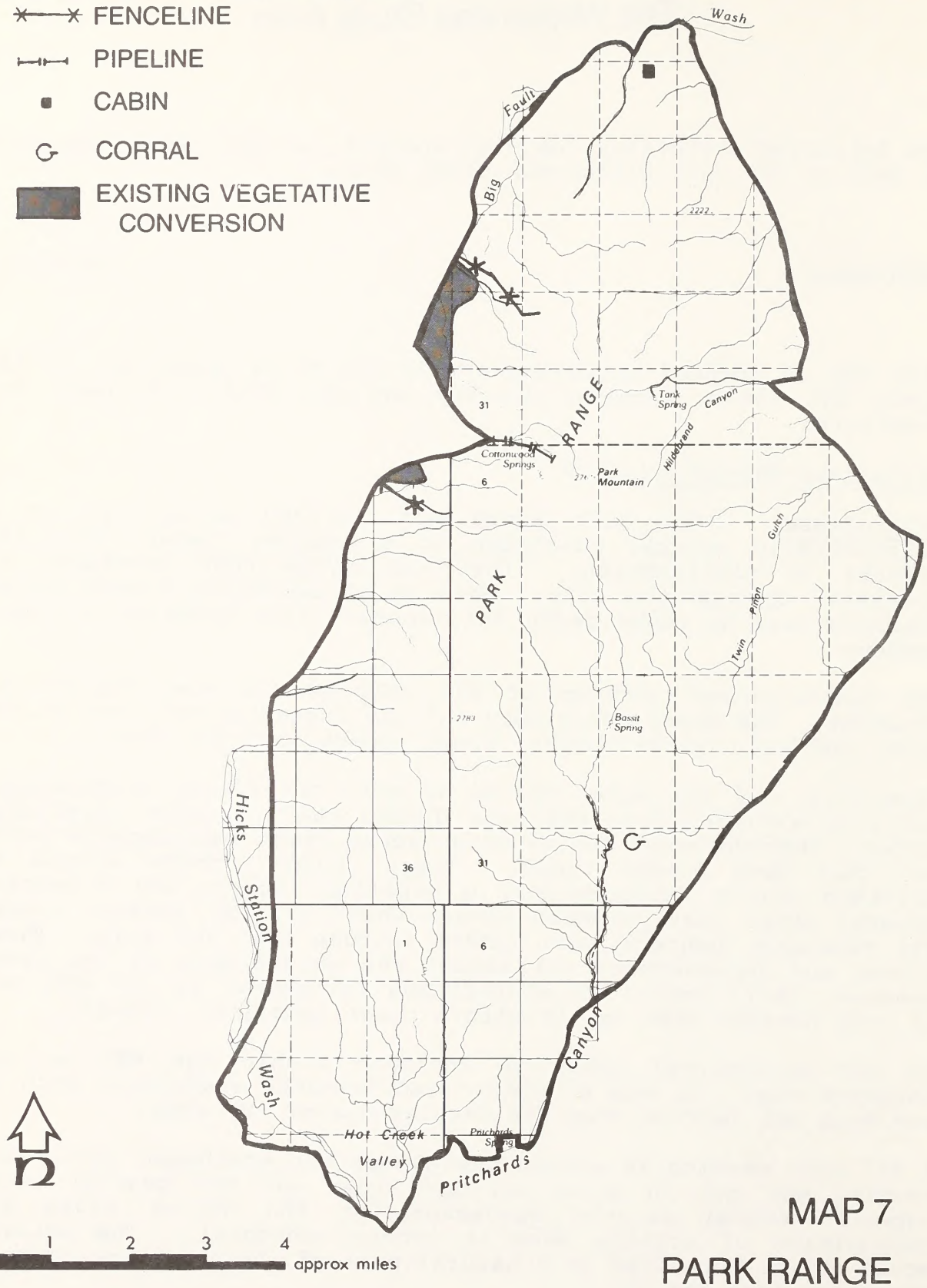
Naturalness: The Park Range WSA (47,268 acres) is in a substantially natural condition in a setting removed from the effects of civilization. The Park Range runs northeast to southwest through the unit. This is an extremely rugged range, characterized by rocky peaks interspersed with pristine mountain meadows.

The south-central portion of the unit is the most rugged and pristine. The steep topography and the rugged terrain has in the past, and will in the future, limit access into the area.

Generally, all man-made intrusions were considered significant, and were excluded from the area during the intensive inventory. Several cherrystemmed routes which serve range improvements enter the unit from border roads. These routes provide access to maintain spring developments, a pipeline, fences and a corral. Several other cherrystemmed routes which provide general access for ranchers, hunters, and miners intrude into the area. These routes and improvements all impact the naturalness of the area. However, their impact is minimal and peripheral in the WSA, and is only noticed when one is within their immediate vicinity.

An old uninhabited cabin is included within the WSA at the northern tip. It has no modern improvements associated with it and does not detract from the naturalness of the area.

A 437 acre seeding is within the WSA on the northwest side. The seeding was put in along contour lines and the general slope appears natural in the landscape but the abrupt edges and composition of grasses make it appear unnatural. The seeding would not be perceived as a natural part of the landscape by most observers (see Map 7).



MAP 7

PARK RANGE
NV-040-154

Outside sights and sounds consist of cherrystemmed perimeter and adjacent roads with associated range improvements and vehicular use, and some active ranches which can be seen from the interior. Overall, impacts of outside sights and sounds are very negligible.

Conclusion: The Park Range WSA is in a substantially natural condition with the exception of the seeding along the northwest border. The area generally appears to have been affected primarily by the forces of nature with the imprint of man's work substantially unnoticeable.

Solitude: This WSA is 47,268 acres in size. This, in combination with the other factors discussed below, provides outstanding opportunities for solitude.

The Park Range WSA is approximately 16 miles long and ranges from one to eight miles in width. The general configuration of the area enhances opportunities for solitude except for the northern third which is somewhat narrower. Topographic screening in the core of the unit is provided by the highly dissected and irregular Park Range mountains including steep canyons, large rock outcrops, both vertical and horizontal, and open, park-like meadows which combine to form a diversity of topography. The terrain around the base of the range varies from flat to gently rolling. The topographic screening, by itself, provides outstanding opportunities for solitude.

Vegetative screening is provided almost exclusively by the pinyon and juniper which completely cover portions of the unit. Tree density ranges from heavy, to none in the isolated open meadow areas. The vegetation provides excellent screening and enhances opportunities for solitude.

Impact of outside sights and sounds on solitude would stem primarily from the vehicle use on the perimeter roads and cherrystemmed routes. Actual use volume on the roads will determine this impact, however, future use is expected to be infrequent and of limited intrusiveness. A few ranches can be seen from within the area, but the viewing distance negates their impact.

Users within this area would have excellent opportunities to avoid others and find a secluded spot. The topographic and vegetative screening coupled with the size and configuration of the area would provide for maintenance of solitude opportunities, while sustaining general wilderness use, which is expected to be light. Some interaction among users can be expected at destination points including Park Mountain (the highest peak), at the springs and in the park-like meadows. Access into the core of the unit is difficult from any direction. This will tend to limit use and enhance solitude opportunities. Opportunities for solitude are also enhanced by the fact that the area is about 3 1/2 hours drive from Ely (pop. 4,900), and 2 hours from Eureka (pop. 800). No large population centers are nearby.

Conclusion: The Park Range WSA provides outstanding opportunities for solitude.

Primitive and Unconfined Recreation: All of the recreation activities listed in the General Environment portion of this chapter (except for fishing) are applicable here. Among the types of primitive recreation of a very good quality in this area are camping, wild horse viewing, hiking, rockclimbing and scrambling, backpacking, nature study, photography and horseback riding.

Conclusion: This unit offers very good opportunities for at least eight types of primitive recreation. This combination of diversity and quality is outstanding.

Special Features: The Park Range WSA contains archaeological sites and borders historic sites, pristine mountain meadows, wildlife values and wild horses.

Known archaeological resources include aboriginal sites, lithic scatters, isolates and possible camp sites. Historic sites bordering the WSA consist of the Overland Stage Routes and Stations including Pritchard's Station, Summit Station and Hick's Station (currently inhabited).

The pristine mountain meadows are rare within the Ely District and perhaps the state. They have been ungrazed by domestic livestock, although there is evidence of horse use decades ago. These meadows represent relic communities of scientific interest and are abundant within the Park Range WSA.

Wildlife values consist of eyries for Goshawk, prairie falcon, golden eagle, Kestral, and Cooper's hawk. The cooper's hawk is proposed to be included on the Nevada State Sensitive list. The eyries are located in the higher, mountainous portion. These would be of interest to sightseerers and for scientific interests. This WSA is highly significant as a nesting area for these species.

Conclusion: The variety and significance of the special features contributes to the suitability of a portion of this WSA for designation as wilderness.

Diversity: The Park Range is not within a five hour drive of any standard metropolitan statistical area.

The Park Range is divided into ecosystems as follows:

Mixed Conifer Forest	4,727 acres
Juniper-Pinyon Woodland	18,007 acres
Great Basin Sagebrush	23,634 acres

All of the above ecosystems are underrepresented in the NWPS. They would all add diversity to the Wilderness System.

Minerals and Energy

Overview: The Morey Mining District occurs about five miles to the southwest of the Park Range. In the last half of the 19th century, about $5 million worth of silver in present day dollars was produced. Within the WSA, there is no history of mineral production. No metallic mineral occurrences or mineralized areas are known within the WSA. A few miles east of the WSA there are several thermal springs and streams.

No mining claims are located in the WSA. Oil and gas leases covering 2,900 acres are located in the north end of the WSA. (See Map 8.)

Geology: The Park Range is a northeast trending, east tilted continuous fault block, composed primarily of Tertiary Volcanic units with outcroppings of Paleozoic sedimentary rocks occurring only in small areas at the north tip of the range. Rock types found in the area are described in detail in the GEM Report for GRA No. NV-12.

Potentials: The entire WSA is rated as having low potential for metallic minerals, primarily because it is covered by overlying Tertiary Volcanics. However, some of the underlying Paleozoic sediments, which include limestones and dolomites, are favorable for the accumulation of metallic mineral resources.

Except for some moderate potential along the benches where sand and gravel probably occur, potential for nonmetallic minerals is low, again because of the Tertiary Volcanic rock overlying nearly all of the area.

Potential for oil and gas is low. Sections of thick Tertiary Volcanics and overlying valley alluvium cover the area. However, some potential is present as evidenced by extensive faulting which has revealed strata of the Paleozoic age miogeosyncline, which may include oil and gas sources and reservoirs.

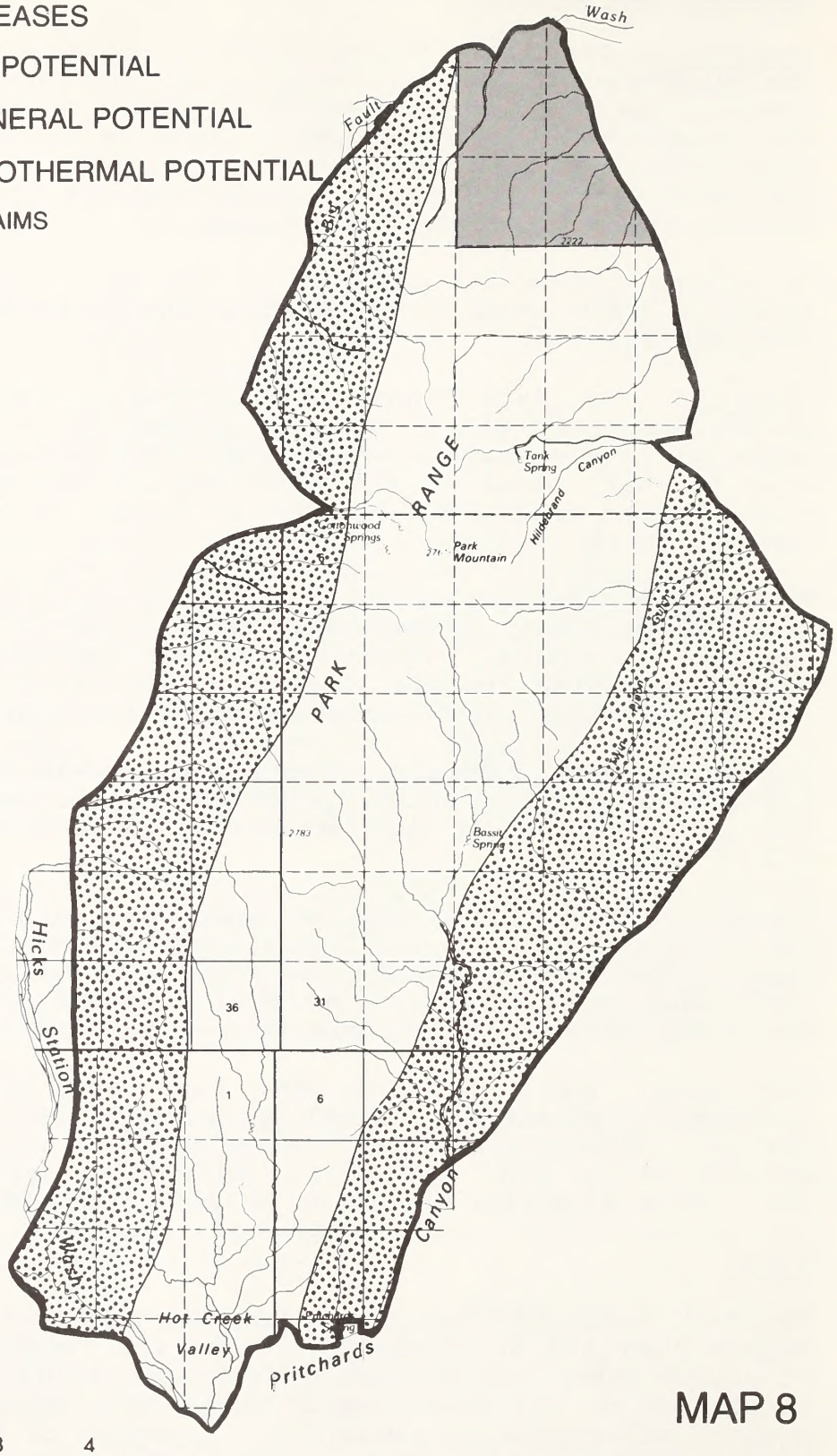
The bench areas on both the east and west have moderate geothermal potential, based solely on geologic inferrence. Thermal occurrences exist in wells and springs a few miles outside of the WSA, and similar geologic conditions exist in the WSA. This potential occurs on 22,230 acres. (See Map 8.)

Range

The Park Range WSA has low value for livestock grazing. On the slopes that are accessible, most of the vegetation is comprised of pinyon pine, juniper and various species of sagebrush. Though vegetation on the remaining areas is more palatable, these areas are not accessible to livestock. Examples of these inaccessible areas are the small meadows and sagebrush/grass basins located to the south of Cottonwood Peak. Portions of four grazing allot-

ENERGY AND MINERALS

- OIL AND GAS LEASES
- NONE — HIGH MINERAL POTENTIAL
- NONE — MODERATE MINERAL POTENTIAL
- MODERATE GEOTHERMAL POTENTIAL
- NONE — FLPMA MINING CLAIMS



0 1 2 3 4 approx miles

MAP 8

PARK RANGE
NV-040-154

ments cover the WSA. (See Table 8). Three allotments to the south and west are utilized by cattle. In the fourth, sheep are trailed along the east benches. Most existing projects have been excluded from the area. There is one seeding, about 437 acres along the western boundary of the WSA. No range projects are currently proposed for the WSA. Some of the slopes have marginal potential for vegetation conversions, but would have a low rate of return for the investment. There are 11 undeveloped springs within the WSA. Some of these may have potential for development. The water could be piped out to accessible areas on the lower slopes.

Wildlife

The Park Range WSA hosts several species of wildlife including Cooper's hawks, goshawks, prairie falcons, golden eagles, and kestrels. There are about 11,600 acres of deer yearlong range, about 7,550 acres of antelope yearlong range. Sage grouse, blue grouse, yellow-bellied marmots, mountain lions and bobcats also occur. (See Map 9.)

The Park Range is a possible desert sheep release area.

The Park Range wildlife habitat is like the area itself, undisturbed by human activity.

Forestry

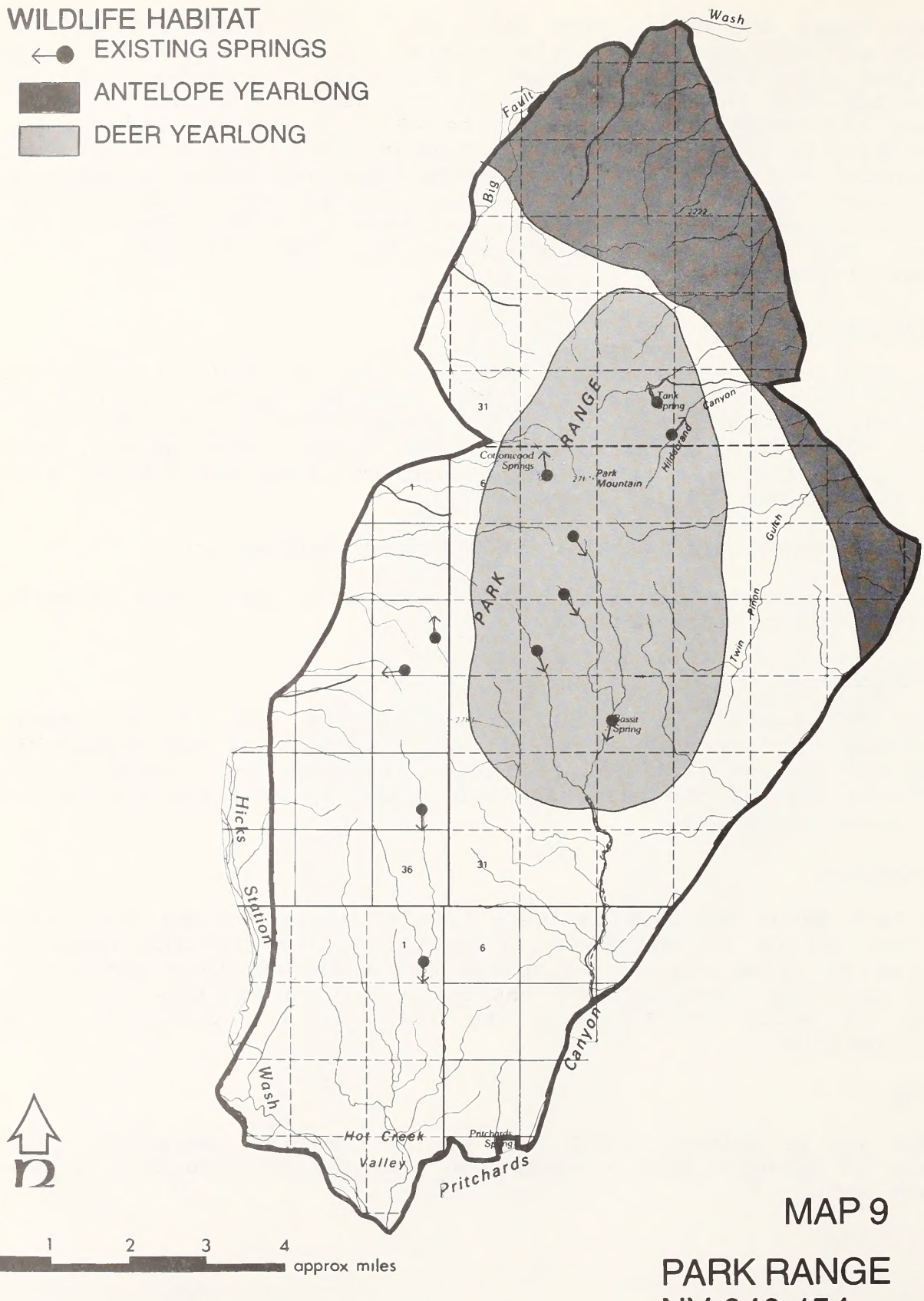
About 20 percent or 9,500 acres of the WSA is manageable woodland. It contains approximately 2 percent of the manageable woodland in the Egan RA. Although the area has usable forest products, use in the past has been almost nonexistant because of the areas remoteness.

Recreation

The Park Range WSA receives very little recreation use (See Table 9) but offers an abundance of backcountry recreation opportunities in primitive non-motorized and semi-primitive non-motorized settings. Most current use is by hunters and trappers. The area is quite remote, and the core of the area is quite inaccessible.

Lands

There are no private inholdings within the Park Range WSA. One tract of private land lies adjacent to the WSA boundary on the south end.



MAP 9

PARK RANGE
NV-040-154

This WSA is located approximately 50 miles southwest of Ely and includes a portion of the Grant Range.

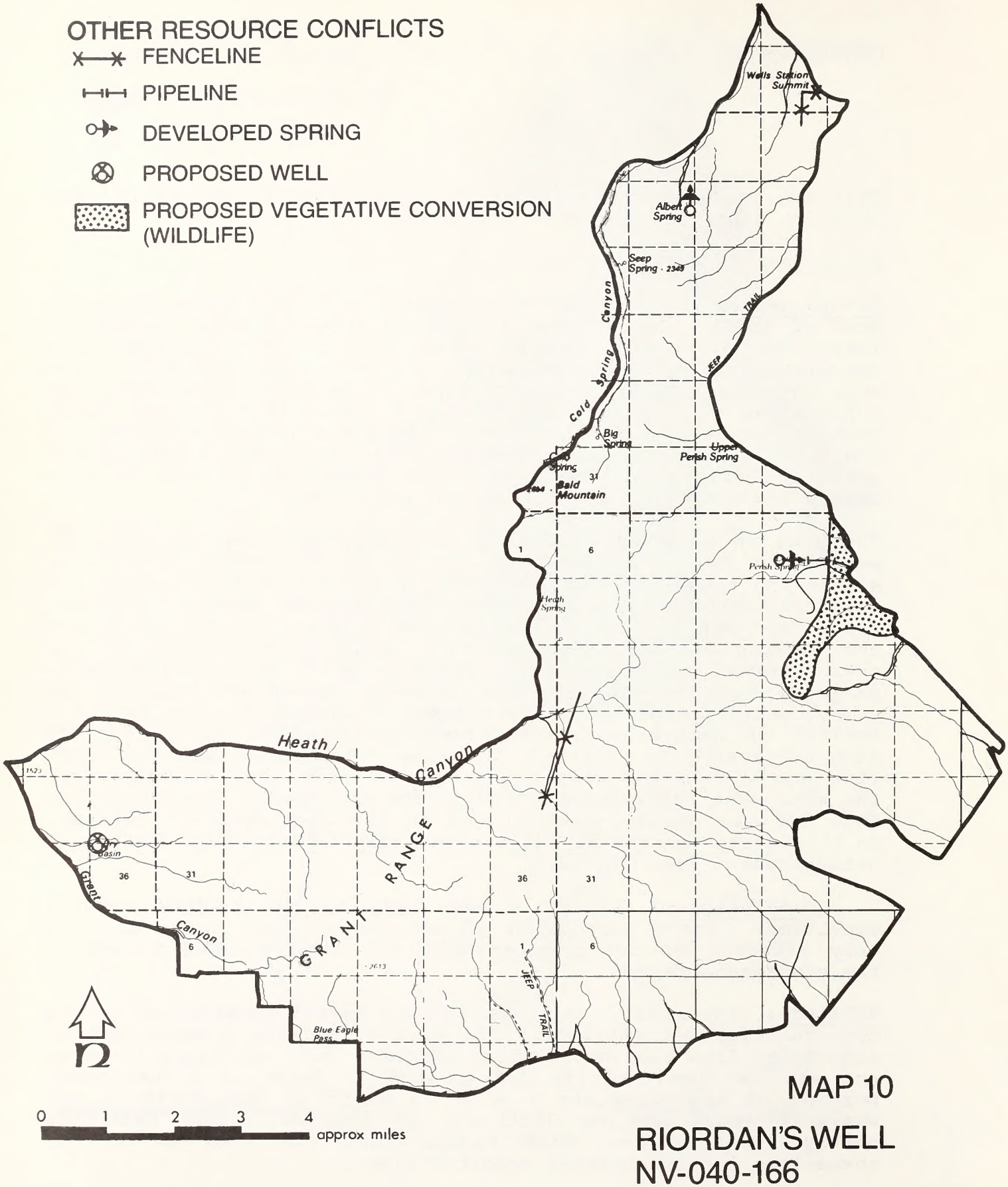
Wilderness Characteristics

Naturalness: The Riordan's Well WSA is 57,002 acres in size. Most of the intrusions were eliminated from the area during the intensive inventory. Routes which intrude into the area were cherrystemmed and are technically excluded from the WSA. The area includes some mountain portions of the Grant Range which are quite steep and rugged. It includes at least 18 peaks over 8,000 feet in elevation, with Heath Peak being the highest at 9,352 ft. The mountainous area is concentrated in the central and southwestern portions of the unit. The remainder of the unit is mostly low mountains and rolling alluvial fans.

The area is in a substantially natural condition: all developments have been excluded from the WSA. The impact of outside sights and sounds on naturalness is a concern in portions of the unit, but beyond the main boundary have minimal impact. Ranches, roads, and mining impacts can be seen from within the area, but the viewing distance negates their impact. The impact of the cherrystemmed roads is more significant. While technically excluded from the WSA, the cherrystemmed routes would impact the crosscountry traveller on the eastern bench and detract from the feeling of naturalness. Fifteen cherrystemmed routes intrude into the area. In addition, 2 spring developments and one fence line are within the main boundary, but have been excluded from the WSA. The cherrystemmed routes are not spaced throughout the WSA, but are mostly concentrated in the southeastern crescent. In this area, the routes could negatively impair one's feeling of naturalness. (See Map 10.)

Conclusion: Riordan's Well WSA is in a very natural condition. One's perception of naturalness within the area is only affected by the conglomeration of cherrystemmed routes in the southeast crescent.

Solitude: The size of the area (57,002 acres) contributes to the opportunities for solitude. The area is roughly crescent-shaped and varies from one to six miles across. This configuration does not enhance opportunities for solitude. There is a bottleneck portion of approximately 1 mile in width at the northern end where solitude may be difficult to achieve. The remaining cherrystemmed routes which extend into the area do not by themselves impair solitude opportunities.



MAP 10

RIORDAN'S WELL
NV-040-166

Topographic screening is provided by the mountains, hills, rock outcrops and rolling alluvial fans. Most of the core of the area is mountainous and is somewhat dissected by steep canyons. The mountainous portion is not dominated by a single ridgeline. The terrain around the base of the mountains varies from low hills to nearly flat benchland. The topographic screening contributes to the opportunities for solitude.

Vegetative screening is provided primarily by the mixed pinyon-juniper woodlands. There are some stands of ponderosa pine located along the western slopes of Heath Peak. The pinyon-juniper is dense with larger growth in the southern two-thirds of the WSA and less dense with smaller growth along the eastern periphery and in the northern third. The alluvial fans making up the eastern part of the unit are covered with low vegetation and do not provide very effective vegetative screening. Overall, good solitude can be found within most of the unit as a result of the combination of vegetative and topographic screening.

Impact of outside sights and sounds on solitude would stem primarily from vehicle use on the perimeter roads and cherry-stemmed routes. Use volume on the roads will determine the impact on solitude; however, future use is expected to be infrequent. The area along the southeastern portion of the crescent would potentially be most impacted from these outside sights and sounds since this is where the majority of cherry-stemmed routes exist. Impacts of other outside sights and sounds would not impair solitude opportunities with the possible exception of future mining activities in the western tip.

Users within the area would have good opportunities to avoid contact with others. The combination of screening and size would provide for insurance of a high degree of solitude while sustaining wilderness use. Should there ever be heavy use, some interaction among users can be expected at staging areas, and at destination points such as Heath Peak, the highest point. Use may be somewhat restricted since the area is removed from large population centers.

Conclusion: Opportunities for solitude vary from fair to excellent based on individual factors. However, the factors of size and topographic and vegetative screening in combination offer an outstanding opportunity for solitude over most of the unit.

Primitive and Unconfined Recreation: All of the recreation activities (except fishing) listed in the "General Environment" section of this chapter can occur within this area. The area offers good opportunities for hiking, backpacking, and camping.

Conclusion: While the area offers good primitive opportunities for a few activities, neither the diversity nor the quality of opportunity is outstanding.

Special Features: The Riordan's Well WSA contains ponderosa pine, wild horses, a cave, and wildlife values.

Several stands of ponderosa pine are located west of Heath Peak. These are viable stands with reproduction occuring. They would be of interest to wilderness users, and are valuable as seed sources and as a source of genetic diversity.

The wild horses are part of the Sand Springs Herd Unit. Approximately 25 horses spend part of their year within the WSA. This area is important to the horse herd. Users would likely enjoy wild horses.

A cave (Thunder Cave) is of unknown quality. It has been visited by Ely District personnel but the full extent of the cave is not known.

Wildlife values consist of eyries for golden eagle, kestrels, turkey vultures, red-tailed hawks, great horned and long-eared owls, and prairie falcons. These would be an attraction for visitors within the area.

Conclusion: The types and quality of special features adds to the suitability of a portion of this WSA as wilderness.

Diversity: The Riordan's Well WSA is within a 5-hour drive of Las Vegas. There are four designated wilderness areas within a 5-hour drive of Las Vegas. Three of these are in southern California and are heavily impacted by people from the Los Angeles area. The other is near Flagstaff, Arizona.

There are 17 administratively endorsed wilderness areas within 5 hours of Las Vegas. Most of these are in Nevada and Utah. Three National Parks with wilderness proposals - Death Valley, Zion and Cedar Breaks - are included in the 17. About 140 other study areas can be reached within a 5-hour drive from Las Vegas.

The Riordan's Well WSA would probably not receive a substantial increase in use from the residents of Las Vegas if it were designated wilderness.

The Riordan's Well WSA is divided into ecosystems as follows:

Mixed Conifer Forest	11,400 acres
Juniper-Pinyon Woodland	34,202 acres
Great Basin Sagebrush	11,400 acres

All of the above ecosystems are underrepresented in the NWPS and would all add diversity to the Wilderness System. There are also scattered ponderosa pine, which was not listed as an ecosystem since it was too small to typify the dynamics of an ecosystem. These ponderosa pine are uncommon in this portion of the Great Basin, but become more common to the North and West.

Minerals and Energy

Overview: There is no recorded production from within the Riordan's Well WSA. Southwest of the WSA is the Troy Mining District where a recorded production of $1 million in gold has occurred. An unknown quantity of tungsten was produced from the nearby Nye and Terrell Mines.

The geologic environments which host these ores are not known to occur in the WSA. There are no known mineral occurrences or prospects in the WSA.

There are two blocks of claims located within the WSA, one in the south end and another in the central portion. About 27,000 acres of the area are leased to oil and gas. (See Map 11).

Mining interest in the area is slight. Oil and gas exploration activity is strong to the east of the WSA in White River Valley, but interest seems not to extend into the WSA itself. (See Map 11 for claim and lease location). Several fields in Railroad Valley to the west have produced oil since the early 1950's. Interest continues in this area.

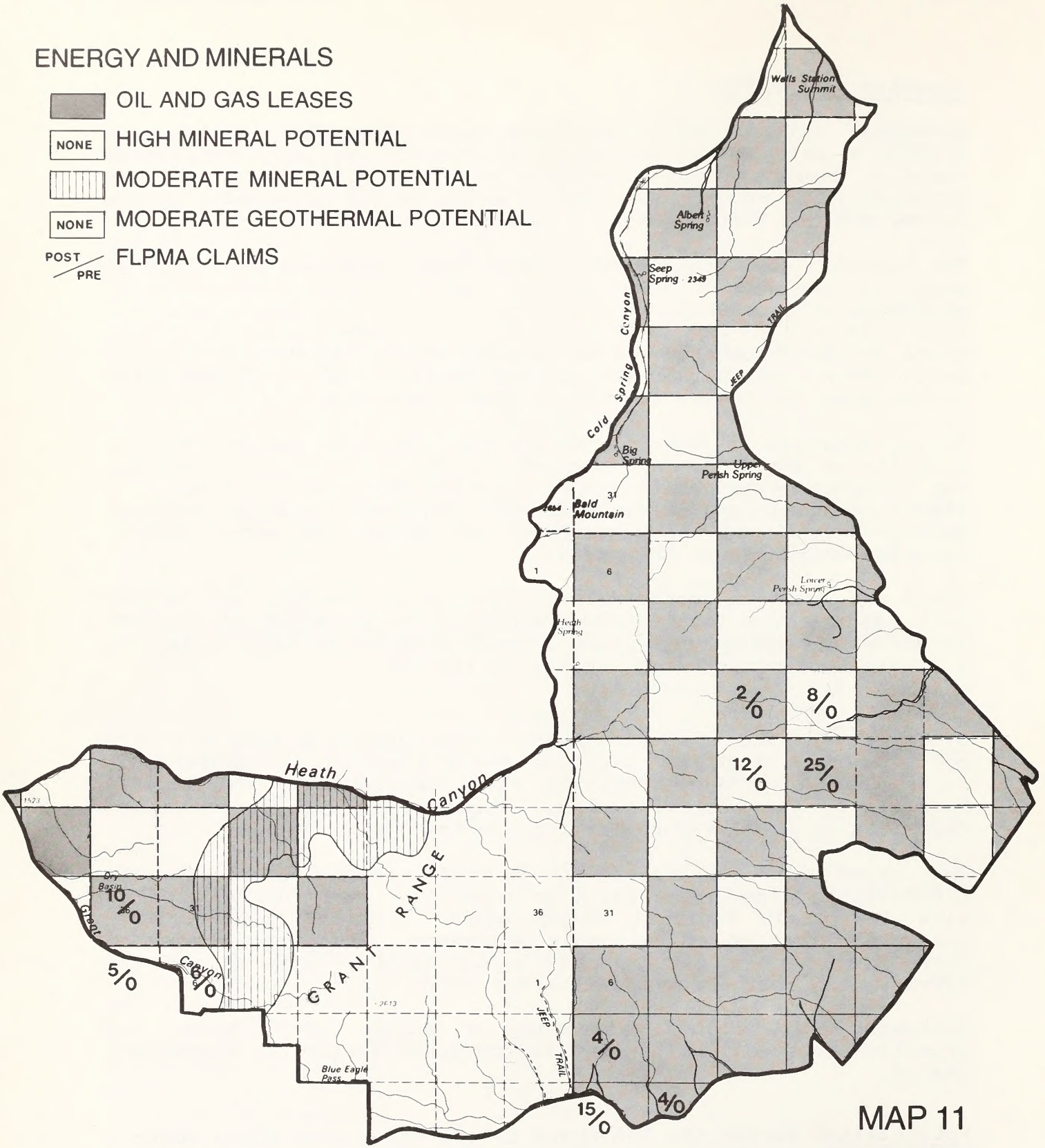
There are no known geothermal occurrences in the WSA, but several warm springs are located from within 5 to 15 miles of the WSA boundary. Temperatures range from 72 degrees F. to 100 degrees F. There are no geothermal leases in the WSA.

Geology: The Grant Range, of which the Riordan's Well WSA is a portion, is a northerly trending fault block of Paleozoic sediments that have been complexly thrusted, faulted, and locally overlain by Tertiary volcanics. Numerous rock units occur, as described by the G-E-M report for GRA No. NV-13, pp. 7-9.

The major mountain formation in the area occurred in the mid-Mesozoic time. The first part of this phase was associated with low grade regional metamorphism, the latter part with eastward thrusting of Paleozoic sediments. The upper plates of these thrusts are cut by high angle faults, both normal and reverse, and most occurred after the thrusting.

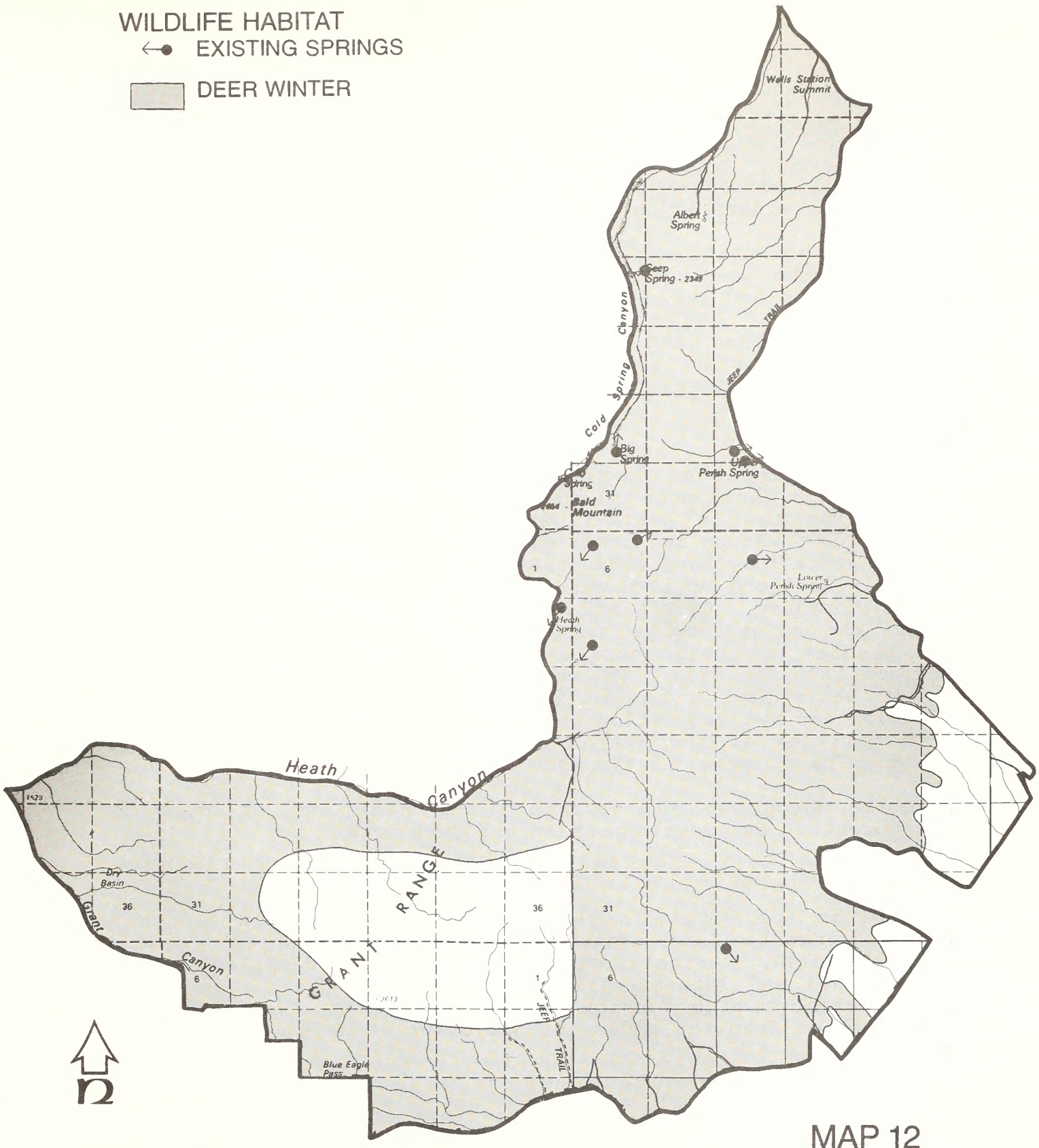
Following this period, extrusions of welded tuffs, flows, and breccias occurred. Volcanism also occurred during the Quaternary period.

Potentials: Within the WSA there is one small area where contact metamorphism may have occurred to produce tungsten or gold, as it did to the north. A thrust plate appears in the western portion of the WSA. This, along with possible hydrothermal influence, would provide the potential for a jasperoid breccia unit such as the Gold Point Mine which has a very similar geologic setting.



MAP 11

RIORDAN'S WELL
NV-040-166



MAP 12
RIORDAN'S WELL
NV-040-166

This area (2,950 acres) therefore has been rated as having moderate metallic mineral potential. The remainder of the unit has some low potential. Exposed Paleozoic sediments in the WSA include several units that are favorable for metal mineralization, and considerable structural complexity can serve as conduits for mineralizing solutions. (See Map 11.)

Nonmetallic mineral potential in the entire area is moderate because of the presence of limestones, dolomites, and - on the benches - sand and gravel.

The valley portions, totalling 10,064 acres of the WSA, have some low potential for oil and gas. The mountainous portion virtually have no potential.

Range

The large expanses of dense pinyon-juniper woodland and rough terrain which cover much of the study area are the main factors contributing to its overall low value for livestock grazing. About 3,000 acres on the lower east slopes have greater value for grazing since they have more palatable vegetation and less severe terrain. Portions of five grazing allotments are included within the WSA boundary. Cattle are grazed on four of these allotments. One of the allotments is reserved for wildlife, and livestock grazing does not occur here. All range improvements have been excluded from the area. The only proposed improvement is a well in Dry Basin (T. 7 N., R. 57 E., sec. 36, NW^4). There is potential for two vegetation conversions in the southeast and far north portions of the WSA totalling 16,500 acres. These are likely to be proposed in the future.

There are ten undeveloped springs in the unit. Some of these may have potential for development at a future date.

Wildlife

Wildlife in the Riordan's Well WSA includes mountain lion and bobcat, ringtail, gray fox, and several species of raptors (golden eagles, kestrels, turkey vultures, red-tailed hawks, great horned and long-eared owls, prairie falcons). There are 48,000 acres of high density deer winter range. (See Map 12.) Bighorn sheep from the adjacent USFS Grant Range unit range into the WSA, as do elk.

A vegetation conversion of 600 acres is proposed for wildlife in the east-central portion of the WSA. (See Map 10.)

Forestry: About 31 percent, or 17,892 acres, of the WSA is manageable woodland. It contains about 4 percent of the manageable woodland in the Egan RA. Pine nuts and fuelwood have been taken from this area in the past, mostly by local ranchers since the WSA is fairly remote.

Recreation

The Riordan's Well WSA receives very little recreation use (see Table 9) but has opportunities for backcountry recreaton in semi-private non-motorized and motorized settings. Most current use in the area is by hunters and trappers. The area is relatively remote.

Lands

There are no private inholdings in the Riordan's Well WSA.

SOUTH EGAN RANGE NV-040-168

This WSA is located approximately 25 miles south of Ely in the Egan Range.

Wilderness Characteristics

Naturalness: The South Egan Range is 96,916 acres in size. Most of the imprints of man's work were eliminated from the unit during the intensive inventory. This WSA includes all of the high country and some of the foothill area in a portion of the Egan Range. The mountainous portions are rugged and somewhat dissected, i.e. it is not a single ridgeline.

Portions of the area are in a very natural condition. The combination of steep slopes, limestone cliffs, and white fir along much of the west side south of Brown Knoll to Sheep Pass Canyon is virtualy impenetrable and quite awesome to behold. This high country is in a very natural condition. Around the base of the unit and extending into the interior, exist 39 cherrystemmed routes. At least six of these extend for 5 miles or more into the interior of the unit. Three come to within 1 mile of each other in the high country. These are cherrystemmed and are thus technically out of the unit. However, a traveler in the high country would come across these routes and they would impact one's perception of naturalness. The purpose of some of these routes is to serve ranching developments (fences, salting areas and springs). These developments also impact one's perception of naturalness while in their vicinity. There is some mining activity outside of the WSA's northern boundary. (See Map 13.)

No active mining is occuring within the WSA. A radio transmission structure is located on the southwest edge of the WSA. It is situated on the top of a small hill and is painted white, both of which accentuate its visual impact. Because it is in such glaring contrast to its surroundings, it impairs one's sense of naturalness when one is in its immediate vicinity.

Conclusion: The high country of the South Egan Range is in a natural condition. Other portions appear unnatural and are impacted by the presence of cherrystemmed routes and range improvements.

Solitude: The South Egan Range WSA is 96,916 acres in size. This in combination with other factors discussed below provides outstanding opportunities for solitude within portions of the unit.

The area is approximately 26 miles long and is 3 to 9 miles wide. The configuration is severely impacted by the cherrystemmed routes which create six bottleneck portions of approximately 1 mile each. The bottleneck portions do not provide adequate opportunities for solitude because of the presence of the routes and the impact of vehicles using the routes.

Topographic screening is provided by the rolling hills around the perimeter and the steep mountains of the interior. Within the WSA, especially in the central part, there exist massive limestone cliffs and bluffs which provide effective screening and barriers. The southern one-third of the mountainous area includes an open bowl (Long Canyon) between mountain ridges with a variety of grades in between. There is also a large amount of high mountain country on either side of the bowl. The northern one-third is generally mountainous but lacks the spectacular bluffs of the central portion. The topographic screening greatly enhances solitude opportunities within portions of the unit. Vegetative screening is provided primarily by pinyon-juniper and mixed conifer woodland. The eastern benches have fairly dense stands of pinyon-juniper. The mountainous portions have dense stands of pinyon-juniper and mixed conifer interspersed with open areas and meadows. Mountain mahogany and aspen exists small, scattered stands throughout the unit.

The area has effective vegetative screening which enhances oportunities for solitude.

Impacts of outside sights and sound on solitude are a problem within portions of the unit. The presence of the cherrystemmed routes which extend into the interior of the unit would allow for vehicles to be easily seen and heard by travelers within the high country. These impacts could have a serious detrimental effect on solitude opportunities within portions of the unit. Potential mining activity to the north of the WSA could negatively impact one's perception of solitude while in the immediate vicinity.

Other outside sights and sounds include roads, power lines, ranches, spring developments and the town of Lund all of which can be seen from points within the high country. However, the distance from which these developments are viewed negates their impact on one's sense of solitude, and serves even to enhance the perception of remoteness from human influence.

Users within the area would have excellent opportunities to avoid contact with others and find a secluded spot. The combination of topographic and vegetative screening with the size and configuration of the area would accommodate users while maintaining solitude opportunities. Interaction among users can be expected at staging areas, at springs, in the upper meadows, at the highest peaks and at specific attractions such as Angel Cave or the Bristlecone Pine areas.

Conclusion: Portions of the South Egan Range WSA provide outstanding opportunities for solitude.

Primitive and Unconfined Recreation: All of the recreation activities discussed in the "General Environment" portion of this chapter (except fishing) can occur in this area. Recreation activities of at least a good quality include backpacking, hunting, nature study, horseback riding, rock climbing, technical climbing and spelunking. The area provides a diversity of terrain, ecosystems, and scenic vistas which enhance hiking, horseback riding and nature study. The central third of the unit includes massive limestone cliffs which provide the full range of challenge opportunities for rock climbing and technical climbing. Hunting is good for mule deer and mountain lion since there are moderate to high population of these species. Spelunking opportunities are of at least a good quality at Angel Cave in the top of the Egan Range.

Access into the core of the unit ranges from quite difficult to quite easy. Access is difficult in the northern portion but fairly easy via the cherrystemmed roads which reach into the central part of the unit.

Conclusion: This WSA offers opportunities for the full range of recreation opportunities that normally can occur within the Ely Distict. In addition, it provides good opportunities for at least seven recreational activities.

The variety and quality of recreational pursuits make the area outstanding in the opportunities offered for primitive recreation.

Special Features: The area contains bristlecone pine, Angel Cave, massive limestone cliffs, archaeological features, and wildlife values.

The bristlecone pine occur in places along the ridgeline.

Angel Cave is a pit cave of undetermined significance but is reported to be more than 200 feet deep. It's location is unusual because it is at the top of the Egan Range, just under 9,000 feet. Nearly all limestone solution caves occur at a lower level where the ground water accumulates.

The massive limestone cliffs have scenic and geologic value and provide recreation opportunities. The cliffs are extensive along the western side of the mountainous portion of the unit. The extent and massiveness of the cliffs cause them to be of some significance.

Cultural values include several large lithic scatters and one quarry site. Much of the area has a very high potential for occurrence of archaeological sites. The known archaeological values are fairly extensive.

Wildlife values include raptor eyries for red-tail hawks, prairie falcons, golden eagles, kestrels, great horned and long eared owls. These are located along the limestone cliffs. Turkey vultures also nest in the area. This WSA also includes the highest prairie falcon nesting density area in the Ely District. This is of significance within the Ely District. Small numbers of Gambels quail can also be found within the WSA. They are an unusual occurrence within the Ely District and are confined to the lower foothills, springs, and riparian areas.

Conclusion: The variety, extent and significance of the special features contribute to the suitability of a portion of this WSA for designation as wilderness.

Diversity: The South Egan Range WSA is within a five hour drive of the Las Vegas Standard Metropolitan Statistical Area. Four statutory wilderness areas are within a five hour drive of Las Vegas. Three of these are in southern California and are heavily impacted by people from the Los Angeles area. The other is near Flagstaff, Arizona.

There are 17 administratively endorsed wilderness areas within five hours of Las Vegas. Most of these are in Nevada and Utah. Three National Parks with wilderness proposals, Death Valley, Zion and Cedar Breaks are included in the 17.

About 140 other study areas can be reached within a five hour drive from Las Vegas.

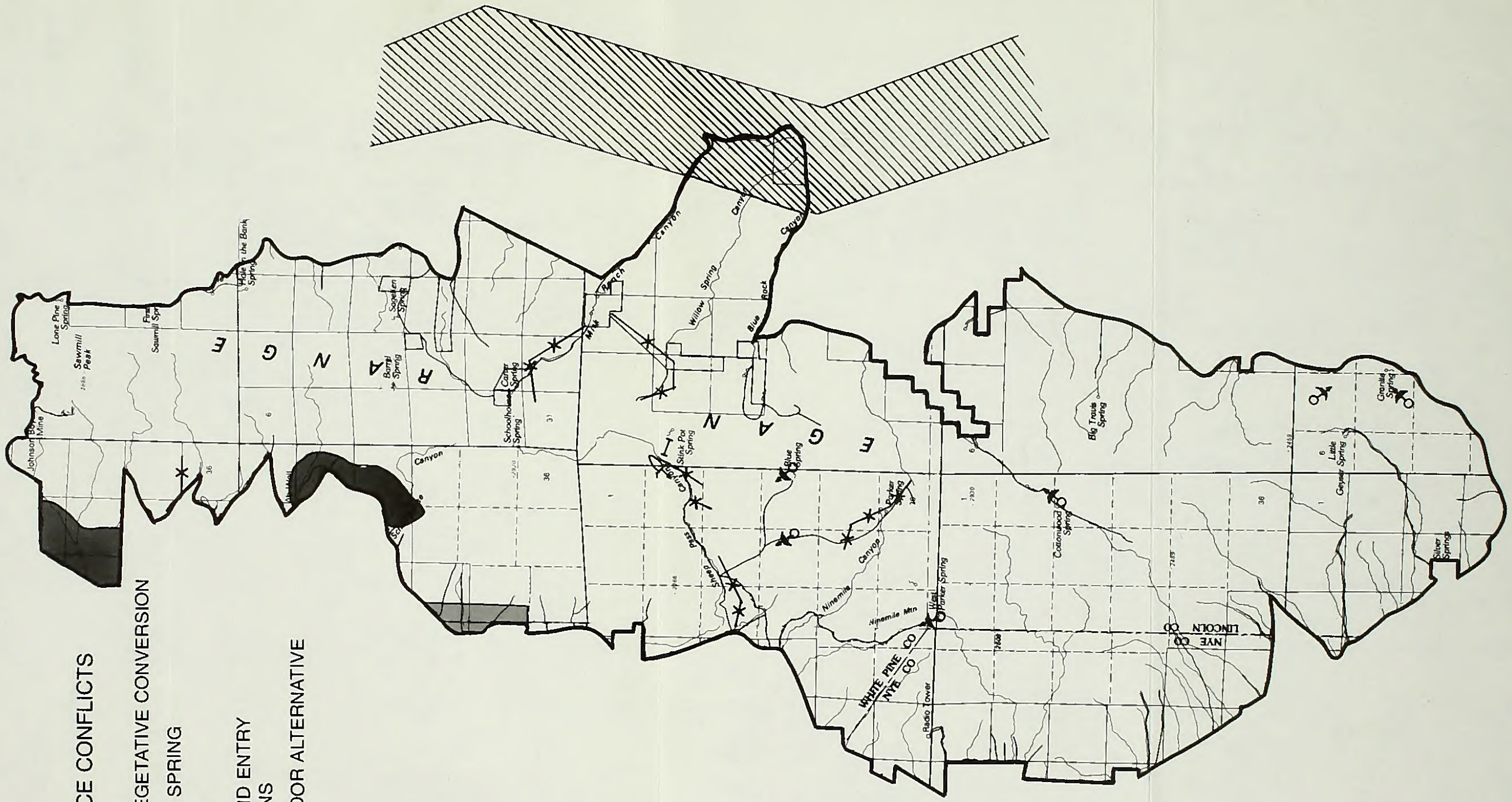
The South Egan Range unit is divided into ecosystems as follows:

Mixed Conifer Forest	38,798 acres
Juniper-Pinyon Woodland	43,568 acres
Great Basin Sagebrush	14,550 acres

All of the above ecosystems are under represented in the NWPS and would all add diversity to the Wilderness System. This unit also contains significant stands of Ponderosa Pine which are not very common in this portion of the Great Basin.

Recreation

This WSA is readily accessible from the towns of Preston and Lund and from highway U.S. 318. In addition several routes extend into the core of the high country from both sides of the area.



MAP 13

SOUTH EGAN RANGE
NV-040-168

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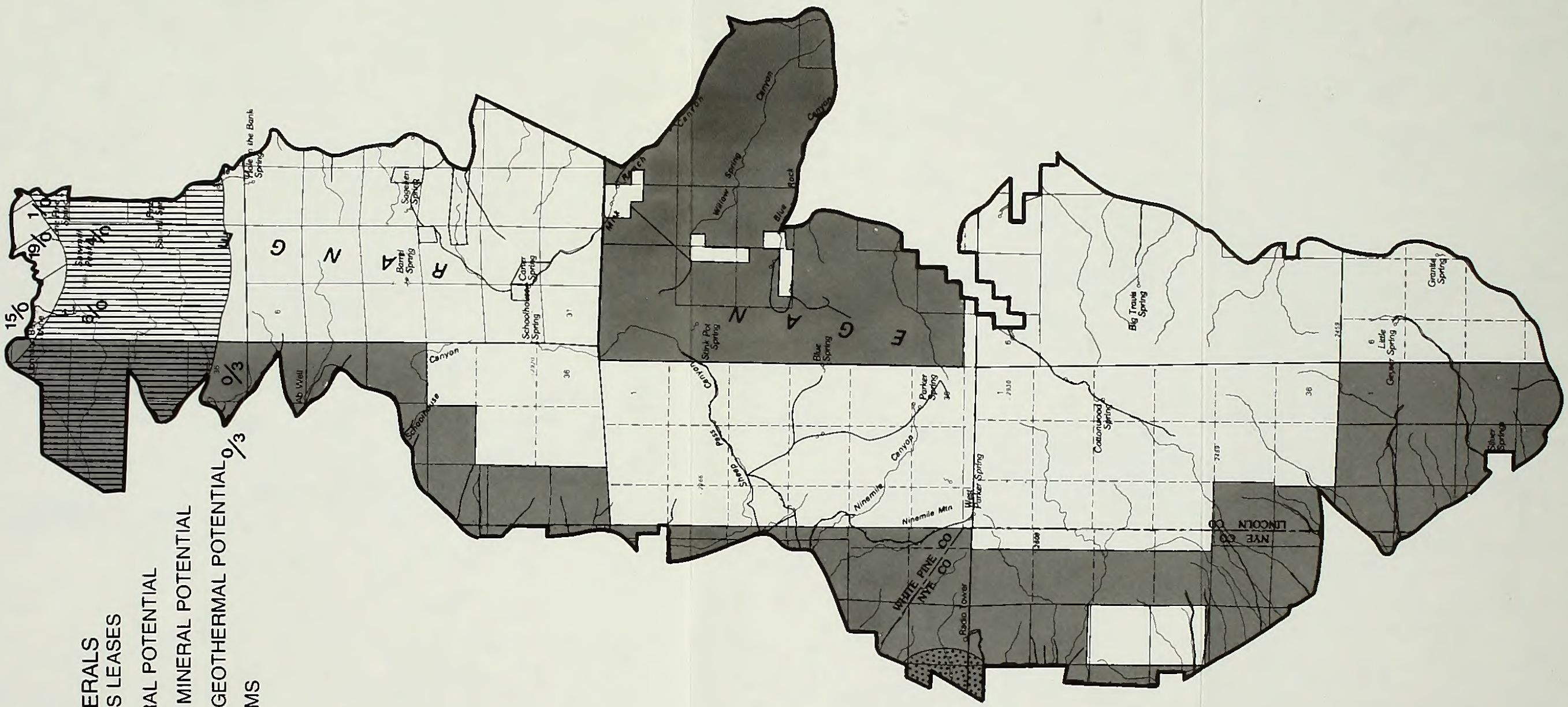


MAP 14

SOUTH EGAN RANGE
NV-040-168

7 3 & 7 4

MAP 15

SOUTH EGAN RANGE
NV-040-168

75&76

This portion of the South Egan Range is a popular area for a variety of recreation activities. The area receives about 1,100 visits per year (see Table 9). Use areas include nearly all accessible portions. The Cave Valley area which borders most of the eastern side is a popular camping and staging area for recreationists while they are in the vicinity.

The primary current use of the area is by hunters and trappers. However, the area hosts many other activities including spelunking, hiking, camping, off-road vehicle use, horseback riding and rockhounding.

Minerals and Energy

Overview: The Ellison Mining District is partly located in the north end of the WSA. Limited amounts of gold, silver, lead, copper, zinc, and fluorite were produced from the area in the 1930's and 1940's. Production totals were 3 ounces of gold, 801 ounces of silver, 11,427 pounds of copper, 4,325 pounds of lead, and 1,910 pounds of zinc. Rich oxidized near-surface ore has been mined out. Recent exploration was conducted in the district by U.S. Borax, but results were not encouraging.

Twenty-two exploratory oil and gas wells have been drilled in the valleys surrounding the WSA. Several have had shows, although none produce.

Mining claims are located on the north end of the WSA in the Ellison District, and on the northwest bench, just east of Lund (see Map 14). Oil and gas leases are held on about 45,000 acres of the WSA.

Geology: The Egan Range is a northerly trending fault block composed of Paleozoic eastern carbonate facies sediments that have been deformed by thrust and normal faulting. Tertiary volcanic units locally overlie the older sediments. Many rock units occur and are described in detail in the G-E-M Report for GRA No. NV-14. These units include the Prospect Mountain Quartzite, the Pioche Shale, the Pogonip Group, the Devonian Sevy Dolomite, the Guilmette Formation, the Devonian-Mississippian Group, Pilot Shale, and others. Structural features in the WSA include Early-Middle Paleozoic upwarping, Late Mesozoic-Early Cenozoic thrusting, large pre-Eocene reverse faults, low angle Oligocene-Miocene normal faults and Pliocene-Pleistocene Basin and Range normal faulting. (See G-E-M Report, pp. 9-12).

Ore bodies in the Ellison District occur as contact metamorphic deposits associated with volcanic stocks or plugs. In the claim group east of Lund, disseminated precious metals occur in a volcanic porphyry.

Potentials: A zone on the north end of the WSA totalling 802 acres has high metallic mineral potential. One of these is land within the Hollinger Mining District, which has produced in the past. Recent exploration here was disappointing, and near-surface ore is mined out.

A zone of moderate metallic mineral potential lies just south of the high potential area, totalling 7,633 acres. (See Map 14.).

In a portion of this, just east of Lund, disseminated gold has been discovered, although its grade is subeconomic at this time. The remainder of the WSA has low potential for metallic minerals.

Potential for nonmetallic minerals is high in the Ellison District because of the fluorite present along narrow veins in both limestones and Tertiary volcanics. Moderate potential occurs on the bench areas for sand and gravel. Some low potential for limestone and silica useable as construction material exists in most of the area (80,652 acres). The entire WSA has low or no potential for oil and gas. A small (328 acre) portion on the southwest bench has moderate geothermal potential, while the remainder of the WSA has low or no such potential. (See Map 14.)

Range

The western portion of the study area is generally unsuitable for grazing, except for some bench areas, due to steep, rocky terrain and low value forage. The eastern slopes are more accessible and vegetated with more palatable species. From late spring through winter these eastern areas receive substantial livestock use with heavy use in canyons containing springs. Portions of eight allotments are within the WSA boundaries. Permittees run primarily cattle in seven of the allotments and sheep in the other. (see Table 9). All existing range improvements except for one seeding (1,042 acres) in Rock Canyon allotment and part of an old chaining (559 acres) in Brown Knoll allotment have been excluded from the WSA boundaries. There are no improvements proposed within the WSA. There are approximately 28 undeveloped springs within the WSA. While potential may exist to develop some of them, it is not likely since most of the structural improvements that could be made in the unit have already been constructed. The seeding and old chaining within the unit may need to be maintained at some time in the future.

Wildlife

Golden eagles, kestrels, turkey vultures, red-tail hawks, great horned and long eared owls nest in this WSA. Prairie falcons have their highest nesting density in the Ely BLM District. There are about 66,600 acres of deer habitat, including 39,900 acres of deer summer range (24,700 acres of which are key habitat), 26,700 acres of winter range (13,500 acres of which are

key habitat). Sage grouse occur on about 15,250 acres of the WSA blue grouse on 17,450 acres. Gambel's quail, mountain lions, bobcats, and occasional elk also occur. The WSA is a potential bighorn sheep transplant area. (See Map 15.)

Forestry

About 16 percent or 15,000 acres, of the WSA is manageable woodland. It contains approximately 3 percent of the manageable woodland in the Egan RA. The area has been used heavily in the past and present for fuelwood cutting. Historic commercial logging took place in Sawmill Canyon at the turn of the century. Residents of Lund, Preston and Ely use the area for gathering Christmas trees and fuelwood. Unauthorized wood cutting in this area is a problem and signifies a heavy demand that is not being met elsewhere.

Lands

The following tracts of land are private inholdings located within the South Egan Range WSA:

T. 12 N.	R. 63 E.	sec. 21	(40 acres)
T. 11 N.	R. 63 E.	sec. 16	(40 acres)
T. 11 N.	R. 63 E.	sec. 17	(80 acres)
T. 11 N.	R. 63 E.	sec. 20	(40 acres)
T. 10 N.	R. 63 E.	sec. 8	(120 acres)
T. 10 N.	R. 63 E.	sec. 9	(40 acres)
T. 10 N.	R. 63 E.	sec. 17	(40 acres.

In two sections, surface rights are in public ownership, while subsurface mineral rights are privately held:

T. 11 N.	R. 63 E.	sec. 16	(40 acres)
T. 11 N.	R. 63 E.	sec. 30	(40 acres)

A Desert Land Entry has been applied for on about 250 acres in T. 11 N., R. 62 E., sec. 24 and 25. (See Map 13.)

A rail corridor has been identified by the developers of the White Pine Power Project that passes through the South Egan Range WSA on the east side, where the WSA touches the Cave Valley road. This corridor is one alternative route for coal delivery to the preferred power plant site in North Steptoe Valley. (See Map 13.)

The South Egan Range WSA is geographically situated so that it could serve as a link in a north-south radio communication system. Such a system could meet various needs, including those of the U.S. Air Force, the White Pine Power Project, and the local telephone company. One radio transmission facility already exists in the lower foothills on the west side. The easy accessibility of the high, open ridgeline lends itself to additional development.

This WSA is located approximately 60 miles north of Ely in the Cherry Creek mountain portion of the Egan Range.

Note: The Goshute Canyon Natural Area/Instant Study Area (7,650 acres) overlaps the Goshute Canyon WSA. The overlapping portion is 5,009 acres in size, while 2,641 acres lie outside the WSA, separated from it by a road (see map in Appendix A). A separate analysis has not been prepared for the Natural Area since the area is not a separate entity, but is rather an integral part of the WSA. The following description of the WSA fully considers the noteworthy features of the Natural Area and their contribution to overall wilderness values. Refer to Appendix A and B for a map and report on the Natural Area.

Wilderness Characteristics

Naturalness: This WSA is 35,594 acres in size with most of the imprints of man's work eliminated from its boundaries. The WSA includes a portion of the Cherry Creek mountain range and a portion of Goshute Basin, a large mountain basin. The mountainous portions are quite rugged and are interspersed with extensive limestone cliffs and bluffs. The highest point is Exchequer Peak (10,542 feet) located in the southern portion of the WSA.

The Goshute Canyon WSA is generally in a natural condition. There is a delapidated cabin at Log Cabin Spring which was judged to be substantially unnoticeable. There are 29 cherrystemmed routes within the WSA. All but four are short spur roads less than a half a mile extending from the perimeter road. The road up Goshute Canyon has been washed out for most of its length. There are numerous mining developments adjacent to and near the southern boundary of the WSA. These developments, while outside of the WSA, would affect one's feeling of naturalness while in their vicinity. (See Map 16.)

Conclusion: The Goshute Canyon WSA is in a substantially natural condition throughout most of the area. The existing impacts are located along the southern boundary or along the perimeter roads.

Solitude: This WSA is 35,594 acres in size. This, in combination with other factors discussed below, provides outstanding opportunities for solitude.

The area is approximately 14 miles long and averages four to five miles in width. The configuration of the area allows opportunities for solitude.

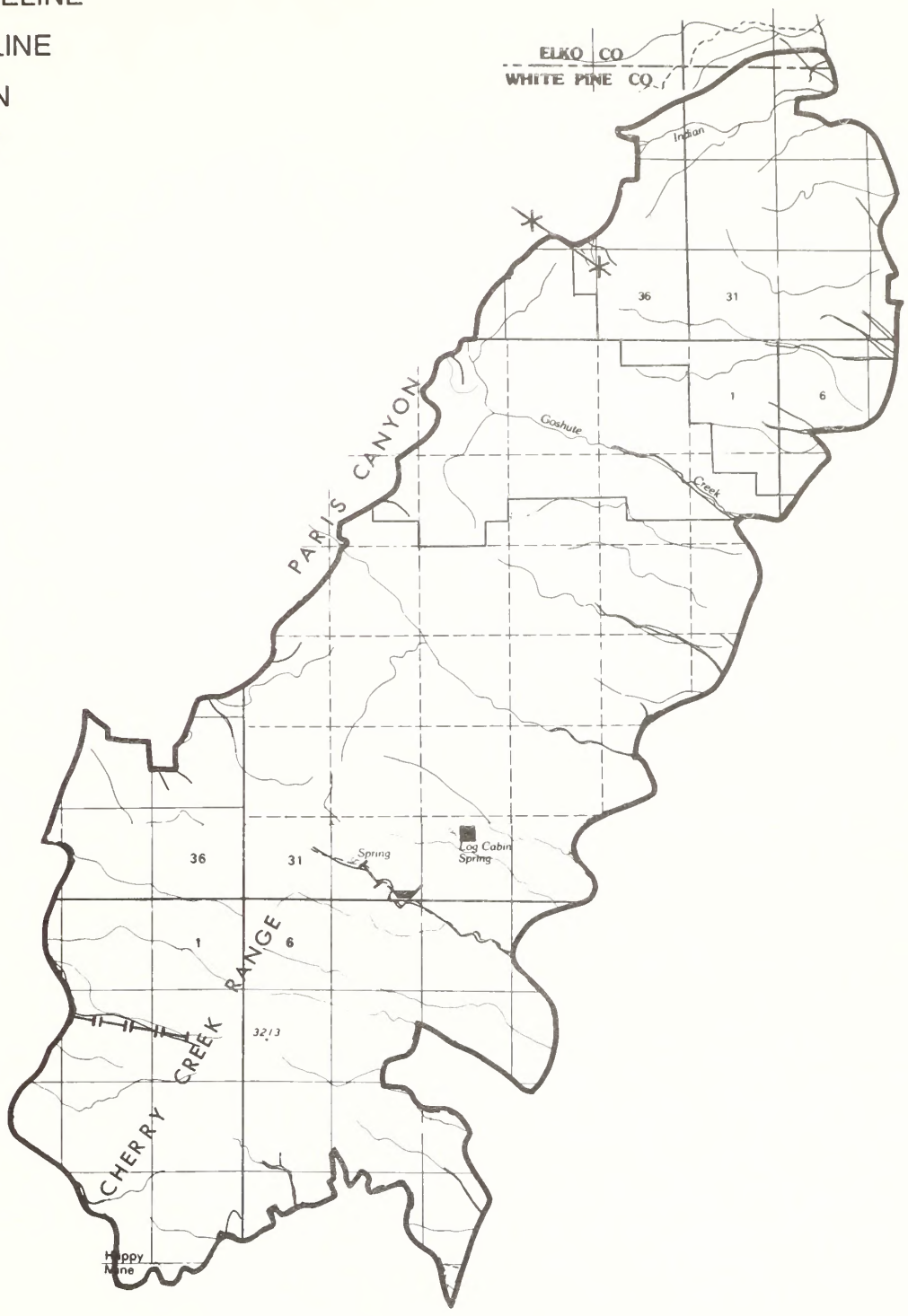
OTHER RESOURCE CONFLICTS

FENCELINE

PIPELINE

CABIN

TANK



0 1 2 3 4 approx miles

MAP 16

GOSHUTE CANYON
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Topographic screening is provided by rolling hills within the Goshute Basin and steep mountains and deep canyons associated with massive limestone ridges and cliffs dominating much of the rest of the area. While the range tends to be north-south, it is highly broken with ancillary east-west ridges. The topographic screening is a significant contributing factor to opportunities for solitude.

Vegetative screening is provided by a combination of pinyon-juniper, mountain mahogany, white fir and aspen. Bristlecone pine occur in sufficient density at the higher elevations to also provide screening. The density of this vegetative screening varies greatly, from no trees in the mountain meadows and major bowl in the upper Goshute Basin, to very thick in draws and on suitable sites on the mountainsides. The only truly large, open areas in the WSA are a burn of several 100 acres along the northwest border and the bowl in the upper Goshute Basin. Screening provided by the vegetation enhances opportunities for solitude.

Impact of outside sights and sounds on solitude would stem from vehicle use on the perimeter roads and cherrystemmed routes and from the mining activity along the southern boundary. Use of the roads and routes is expected to fluctuate seasonally. Traffic will vary from none to high. Heavy use occurs during the deer season.

A few ranches and highway U.S. 93 can be seen from within the area, but the viewing distance negates their impact and may enhance the feeling of solitude and remoteness. Sights and sound of mining activity could be quite obtrusive for a visitor along the southern edge of the unit, and from some vantage points would seriously detract from one's feeling of solitude.

Users within this area would have excellent opportunities to avoid contact with others and find a secluded spot. The screening combined with the size and configuration of the area would provide for solitude opportunitied while sustaining general wilderness use. Some interaction of users can be expected at the highest peaks, the ridgelines, streams and springs, and at likely staging areas such as the upper Paris road. Access into the core of the unit requires a strenuous hike. This would tend to limit use and enhance solitude opportunities. A few cherrystemmed routes provide limited access into the higher country.

Conclusion: The Goshute Canyon WSA provides outstanding opportunities for solitude except along the southern boundary.

Primitive and Unconfined Recreation: All of the recreation activities listed in the "General Environment" portion of this chapter apply to this area. Among the types of recreation activities of at least a good quality are hunting for deer, mountain lion, blue grouse and sage grouse; trapping for bobcats; fishing for Utah cutthroat trout; nature study; photography;

hiking; backpacking; camping; and spelunking in Goshute Cave. Crosscountry skiing and snowshoeing are viable activities within the upper basin. Rockclimbing opportunities are present along the limestone cliffs.

Hunting opportunities are enhanced by the moderate to high populations of mountain lion, mule deer, sage grouse and blue grouse. Nature study and hiking are enhanced by the diversity of terrain and ecosystems, and the presence of wildlife, numerous springs, and scenic vistas.

Numerous excellent campsites are available for the hiker and hunter. In particular there are springs, and stands of white fir mixed with aspen. Spelunking at Goshute Cave is of excellent quality. The cave contains most common cave formations as well as numerous rare ones including cave pearls, shields, folia, and mammalaries.

Conclusion: This WSA offers very good opportunities for numerous different recreational activities. This combination of diversity and quality is considered outstanding.

Special Features: The area contains bristlecone pine, wild horses (Cherry Creek Herd), archaeological sites, wildlife values, outstanding scenery and Goshute Cave.

The bristlecone pine is located in the central portion of the high country within the unit. It is quite extensive and covers several hundred acres. The stand contains examples of the classic gnarled forms as well as younger trees. All age classes of bristlecone pine are represented here. The stand is dense enough to have once carried a fire. Users within the area, would be attracted to these stands which would enhance the wilderness experience of the users.

A portion of the Cherry Creek wild horse herd use area occurs within the WSA. Only about 15 horses spend part of the year here and so have a low visibility in the area, but their presence would contribute to one's wilderness experience.

A known aboriginal camp site is located within the WSA. Of historic interest are the Basque sheepherder carvings on the aspen trees. These occur in scattered locations of limited extent.

Wildlife values include spotted bats in Goshute Cave. The spotted bat is on the Nevada State Sensitive list and its occurrence within the cave is significant. While the Ely District is within the center of the spotted bat's range, there has been only one sighting within the District.

Goshute Creek, which flows out of the eastern side of the WSA, contains the rare Utah cutthroat trout. Under current State wildlife law, users are allowed to fish for these trout. Fishable populations of this species are rare within Nevada.

Elk have been seen within the WSA although there is no known resident population within the area. Wilderness users would be unlikely to encounter them.

Raptor eyries exist on the cliff areas within the interior of the unit. Species represented include great horned owl, prairie falcon, golden eagle and kestrel. These would enhance a user's wilderness experience.

Goshute Canyon WSA is very scenic and preliminary inventory information from the Scenic Quality Rating analysis places the Goshute Canyon and Basin in a class "A" status, the highest attainable. The scenic quality would add to user's enjoyment of the area.

Goshute Cave, just within the north eastern boundary of the WSA is of geologic and spelunking interest. In 1970, an area of about 200 acres surrounding and including the cave was designated as the Goshute Cave Geologic Area. It was withdrawn from the general mining laws. (see Appendix A). The cave contains more than 1,500 feet of passage and examples of most common cave formations and examples of some unique and rare ones including cave pearls, folia, shields and blistered mammalaries. The cave provides excellent recreational spelunking and is highly decorated even though it has been subjected to 100 years of recreational use. The cave is considered to be quite significant because of its decorations, recreational value, and as a source of geologic interest.

Conclusion: The variety and significance of the special features contribute to the suitability of a portion of this WSA for designation as wilderness.

Diversity: The Goshute Canyon WSA is within a five hour drive of two Standard Metropolitan Statistical Areas, Salt Lake City and Provo. Two statutory wilderness areas are within a five hour drive of Salt Lake City. Lone Peak, just outside of Salt Lake City, is a very heavily used Forest Service Area. The second wilderness area, Craters of the Moon, is a lava flow in Idaho administered by the Park Service. Lone peak is the only statutory wilderness that can be reached from Provo in five hours driving time.

There are 19 administratively endorsed wilderness areas within five hours of Salt Lake City and 26 areas within five hours of Provo. Most of these units are within Utah.

About 65 other study areas are within the five hour driving time from Salt Lake City and 75 from Provo.

Use from the residents of Salt Lake City and Provo will probably not increase greatly if the Goshute Canyon area is designated wilderness. There are several similar types of areas closer to these population centers. The opportunities for solitude would

probably be greater in the Goshute Canyon WSA because it is further from large population centers.

The Goshute Canyon unit is divided into ecosystems as follows:

Mixed Conifer Forest	12,458 acres
Juniper-Pinyon Woodland	17,796 acres
Great Basin Sagebrush	5,339 acres

All of the above ecosystems are under represented in the NWPS. Aside from adding to the diversity in the Wilderness System, this unit contains Bristlecone pine.

Minerals and Energy

Overview: The Goshute Canyon WSA lies just north of the historic mining town of Cherry Creek. Cherry Creek is the center of the Cherry Creek Mining District, part of which extends into the WSA. Production from the district is reported at $4.8 million since reporting was instituted (1902), and before that $6 million to $20 million in production is estimated. Gold was first discovered in 1861, and the town of Cherry Creek boomed around 1883, but production practically ceased by 1893, and the town is now inhabited by only a few individuals. Production has since been sporadic. Minerals produced include gold, silver, lead, copper, and tungten.

Many mines are scattered through the Cherry Creek mountain range. These include the Teacup, Star, Exchequer, Black Metal (Baltic), Bullionaire, Only Chance, Yellow Jacket, and Mother Lode mines. The Gypsy, Mother Lode, Baltic, Bullionaire, and Yellow Jacket mines, although technically out of the area, are either adjacent to or surrounded by the WSA. These are not currently producing, but interest in several of them is active.
2 Mining claims are located in several parts of the WSA (see Map 17). Those located in T. 25 N., R. 63 E. belong to a large corporation, which drilled the claims in 1980 and 1981, had disappointing results, and dropped the claims. (See G-E-M report, GRA No. NV-03, pp. 12-13). The claims on the south and east are located mainly along the Black Metals and Exchequer faults, and several of these have been mined extensively in the past. Much of the interest in these is in the dumps left behind by the old miners. With increasing precious metal prices, what was once waste is now ore. In situ ore deposits also remain, although their extent and content are unknown to the BLM. The ore bodies are mostly vein and replacement deposits, although tungsten occurs in calcite and calcite-quartz pods and lenses. The ore bodies are estimated to be too small to be of interest to large modern corporations. (See G-E-M Report for GRA No. NV-03, p. 18).

Present mineral interest is primarily in silver, but also is in gold and tungsten. Small mining companies and several individuals have interests in the area. A few individuals have devoted a lifetime to the area and have a way of life dependent upon it.

A few oil and gas leases are located in the north and northeast portions of the WSA. These cover approximately 8,500 acres. (See Map 17.)

Geology: In this WSA, intrusive activity and volcanism with associated metamorphism occurred in the Early Tertiary period, subsequent to the laying down of Paleozoic marine sediments. Thereafter, Basin and Range faulting during the Miocene produced the Cherry Creek mountains.

The oldest rock unit in the WSA is the Precambrian McCoy Group. Other types include Pole Canyon Limestone, the Lincoln Peak Formation, Dunderberg Shale, the Pogonip Group, Simonson and Sevy Dolomites, and others (see G-E-M report for GRA No. NV-03).

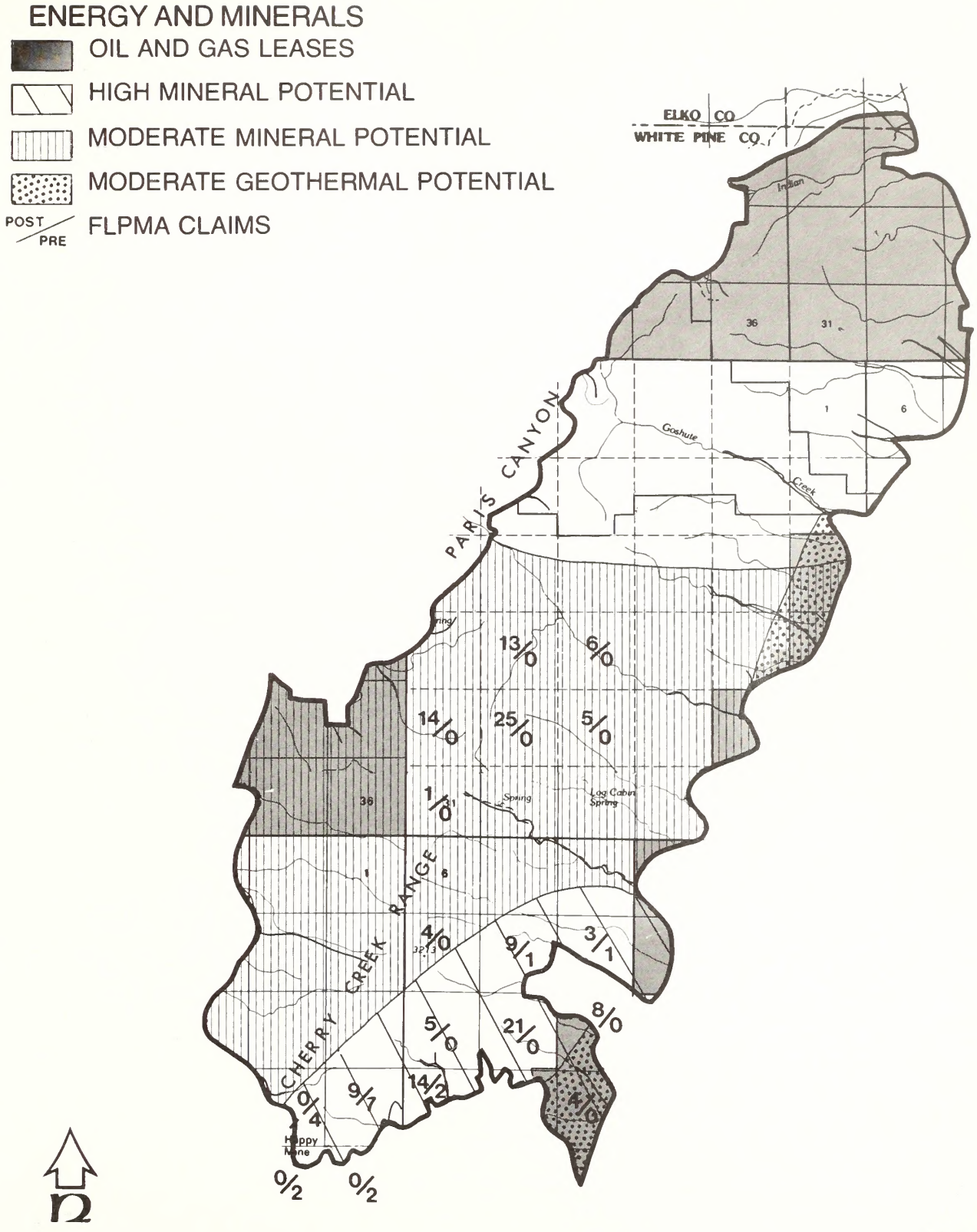
Potentials: Based on a composite of information, zones of mineral potential have been delineated as depicted on Map 10. Although the specific ore controls important within the Cherry Creek District are well known and therefore may have been completely explored, it is felt there are areas within the district with good prospecting potential remaining. The area of high mineral potential in the south of the unit (5,731 acres) is so designated because of the productive mines and high number of prospects and claims. The area to the north of this is shown to have moderate potentials due to its adjacency to the producing area and its structural complexity. The moderate classification also covers an area of jasperoid located in T. 25 N., R. 63 E., and covering sections 19, 20, 29, and 30. (Jasperoid is a target material for Carlin-type gold deposits). Total moderate potential is 18,733 acres. (See Map 17.) The remainder of the WSA has low potential for mineral deposition, based on the absence of claims, prospects, or geologic complexity.

The entire WSA has either low or no favorability for oil and gas. The underlying stratigraphy of most of the unit is older than the oil reservoir objectives which presently produce in the Basin and Range Province.

Moderate geothermal potential exists in a small fraction of the WSA (see Map 16). The remainder of the area has low geothermal potential.

Range

The majority of the vegetation in the southern half of the Goshute Canyon WSA consists of pinyon pine, juniper, bristlecone pine, limber pine and mountain mahogany. The lack of palatable forage, steep slopes, and rough terrain combine to render most of



MAP 17

GOSHUTE CANYON
NV-040-015

this portion of the WSA unsuitable for grazing. The northern half of the WSA is more suitable for grazing. Few areas are inaccessible for grazing and there is more palatable forage. Cattle are grazed in the two allotments on the north and east portions of the WSA. Sheep are primarily grazed on two allotments on the west side. (See Table 8). All existing range improvements have been cherrystemmed from the area. No new range projects are currently proposed for this area. There are seven undeveloped springs within the Goshute Canyon WSA. Some of these springs may have potential for development at some time in the future.

Wildlife

The Goshute Canyon WSA provides habitat for a large number of species. Raptors roost or nest in the area, and include great horned owls, prairie falcons, golden eagles, red-tail hawks, Cooper's hawk, and kestrels. Although as yet unconfirmed, it is believed that bald eagles and peregrine falcons roost in the area.

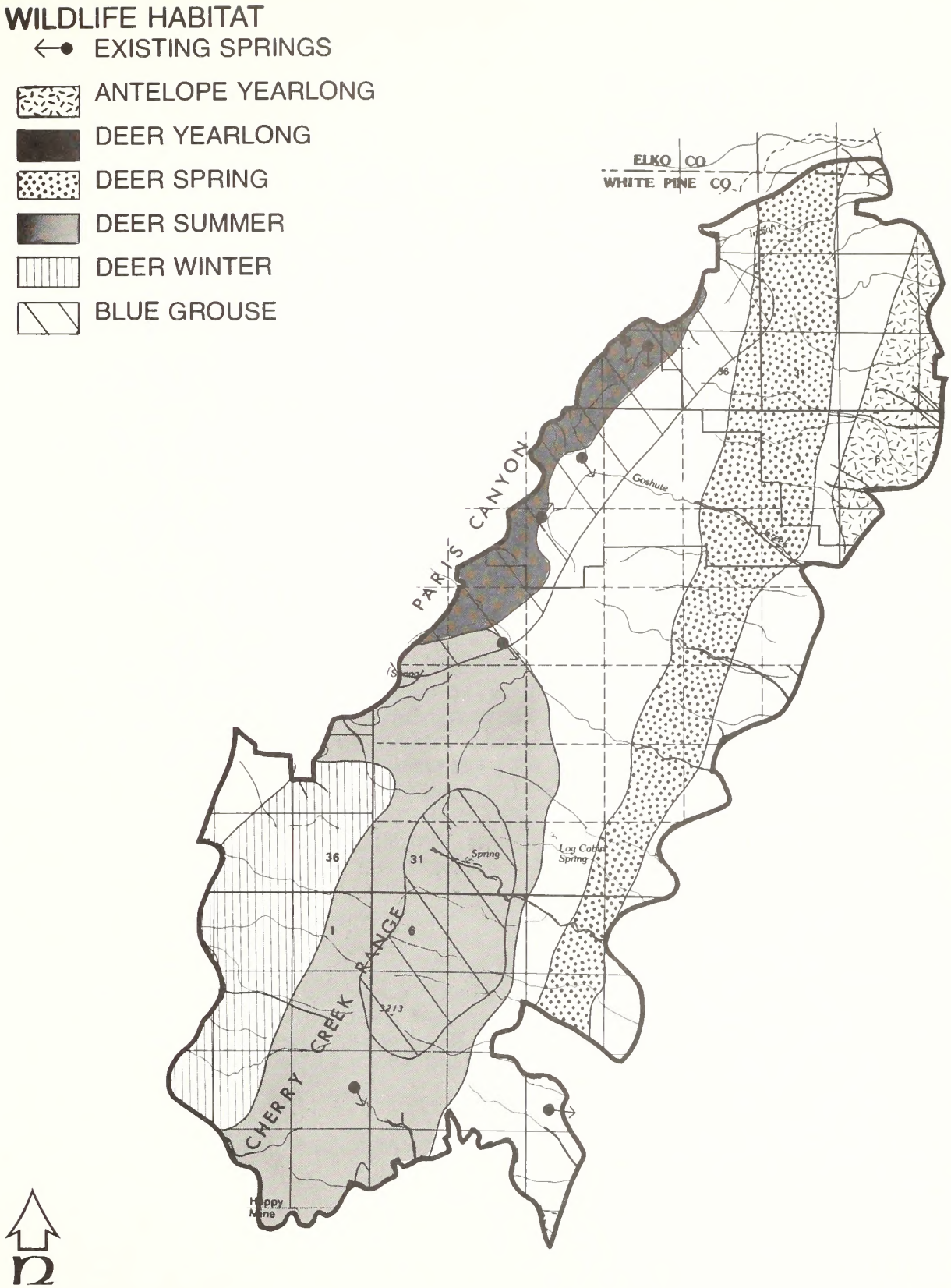
Deer habitat totals about 23,800 acres (6,750 acres spring range, 11,500 acres summer range, 3,950 acres winter range and 1,600 acres yearlong range). Recent elk sightings have been made in the WSA. Antelope occur on the Steptoe Valley bench on the east side of the area, where there are about 1,900 acres of identified habitat. Populations of Hungarian partridge, sage grouse and blue grouse (with 7,308 acres of identified habitat) exist. (See Map 18.) A state sensitive species, the Utah cutthroat trout, occurs in Goshute Creek. Other species extant are mountain lions, bobcats, and yellow-bellied marmots, as well as others that commonly occur in the region.

Forestry

About 16 percent or 5,600 acres of the WSA is manageable woodland. It contains about 1.2 percent of the manageable woodland in the Egan RA. Although much of the area is forested it is too steep and rugged for forest harvest. The Goshute Canyon Natural Area has already resulted in a 5,009 acre withdrawl within the WSA. The WSA has been used in the past by the few families living in Cherry Creek for Christmas trees and fuelwood. There is some evidence of historic logging about 80 years ago.

Recreation

The Goshute Canyon WSA is a popular area for a variety of recreation activities. The area receives about 1,200 recreation visits per year (see Table 9). Use areas include the Paris Canyon Road, the Upper Basin, Goshute Creek and Goshute Cave. The area provides a combination of semi-primitive motorized and non-motorized settings for a variety of recreational activities.



MAP 18

GOSHUTE CANYON
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Hunting for mule deer occurs throughout September and October for bow hunters, blackpowder hunters and rifle hunters. Sage grouse season only lasts for one week in late September, but it is a time of intense hunting activity along Paris Road and in upper Goshute Basin. Hunts within the WSA are usually associated with camping trips. Camping occurs during the summer and fall, mostly concentrated in the upper basin, along Paris Road and at the lower end of Goshute Creek. Fishing for Utah cutthroat trout occurs infrequently, but throughout the year. Goshute Cave along the eastern side of the WSA receives regular use by cavers at the rate of about 250 visits per year.

Trapping in the WSA occurs from about mid-September until late winter, for coyotes, and from mid-December until early February for bobcats. Trappers utilize every accessible canyon within the WSA.

Lands

A 15 acre mineral patent (#2685) lies surrounded by the WSA in the southern end (T. 24 N., R. 62 E., sec. 24). There are no other private inholdings in the WSA. Several tracts lie adjacent to the boundary (see Map 16).

The location of the White Pine Power Plant in the north end of Steptoe Valley would necessitate a major radio communication installation on a nearby ridge or mountain top. The most likely siting would be in the northern Cherry Creek Range, quite possibly in the Goshute Canyon WSA, since good access exists into the high country and near several promontory overlooks.

CHAPTER 3

ENVIRONMENTAL CONSEQUENCES

IMPACT ANALYSIS

The analysis of impacts is guided by the BLM's Wilderness Study Policy and Wilderness Management Policy.

The Wilderness Study Policy details the criteria to be considered in impact analysis, and the Management Policy describes which activities will and which will not be allowed in designated BLM wilderness areas.

In nearly every case, the impacts are potential impacts which are believed likely to occur. Further, the identified resources are in several instances potential resources, as in the case of minerals. In each such case, this information is the best available. Effort has been made to keep discussion of potential impacts and potential resources as realistic as possible.

The duration of impacts associated with designation or nondesignation is long-term since, in either case, the action taken will be for the long-term.

Designation of wilderness is intended as a long-term commitment of resources, but is technically reversible since it will remain within the power of Congress to revoke a designation. However, because this is highly unlikely, the impacts are irreversible in a practical sense. Similarly, while the impacts of nondesignation could be reversed with major effort over a very long time period, the likelihood of this in light of present funding and legislation is very small.

All impacts described are direct impacts unless otherwise stated.

ASSUMPTIONS

The following basic assumptions have been made throughout the impact analysis:

1. All baseline data are the best available.

2. Management actions on units not designated wilderness will be consistent with the Resource Management Plan.

3. The short-term is the 5-year period following a Congressional decision on a WSA. The long-term is the time after those 5 years. All impacts discussed will be long-term unless otherwise stated.

In addition to these general assumptions, several have been made in the analysis of impacts to specific resources:

Wilderness - The BLM will have funding adequate for implementing the selected alternative.

Lands - (1) Reasonable access will be granted to owners of private inholdings. (2) Development of private inholdings will not be prohibited.

Range - Funding for range development in the Egan RA island will continue to be limited.

STANDARD OPERATING PROCEDURES

The following standard operating procedures apply throughout the analysis:

1. Management of areas designated wilderness will be consistent with the letter and spirit of the Wilderness Management Policy.

2. A United States Geologic Survey/Bureau of Mines mineral survey will be performed on all areas which the Director recommends as preliminarily suitable for designation.

This would help correct inaccuracies in impact assessment which resulted from the incomplete nature of current mineral knowledge.

3. Grazing would not be curtailed on account of wilderness designation.

4. A Class 3 Cultural Resource Inventory will be conducted on potential sites when degradation is expected to occur as a result of wilderness designation.

DETERMINATION OF SIGNIFICANT IMPACTS

To assist in determining if impacts are significant, thresholds are established for each resource. When an environmental impact exceeds a threshold, it is said to be significant. Thresholds are determined by the resource specialist, who uses professional judgment, and may also be influenced by law, regulation, and public opinion. In every case the existing condition is the baseline against which impacts are measured. The following thresholds have been developed for use in this Technical Report.

WILDERNESS - Designation of an area as wilderness is considered to be a significant beneficial impact if it would preserve mandatory wilderness characteristics (size, naturalness,

opportunities for recreation or solitude) that would be lost without designation. A significant adverse impact occurs when an area will lose any one of these mandatory characteristics such that it would no longer qualify as a WSA.

ENERGY AND MINERALS: A significant impact occurs when 5,000 acres or more of high energy or mineral potential is withdrawn from mineral entry or leasing due to wilderness designation in the Egan RA; or when 10,000 acres or more of moderate potential is withdrawn.

RANGE: The threshold of significance in livestock grazing is a 10 percent or greater change over existing levels, or a disruption in the current livestock management practices on 10 percent or more of the allotments.

FORESTRY: The threshold of significance for forestry is the point when 15 percent or more of the manageable woodland in the Egan RA is removed from the supply for consumptive uses.

CULTURAL RESOURCES: The threshold would be destruction of scientifically or educationally valuable sites.

WILDLIFE: The threshold would be the destruction of 10 percent of the wildlife habitat or a 15 percent change in wildlife populations.

VISUAL RESOURCES: A signifiant adverse impact occurs when impacts to resources within a WSA result in a change in the Visual Resource Management class for the area.

RECREATION: A significant impact occurs with a 10 percent or greater change in recreation visitor days in the Egan RA.

SOCIAL CONDITIONS: A significant community impact occurs when there is a 10 percent or greater in migration or out-migration of people from the resource area.

ECONOMIC: No objective measure of what represents a significant impact is available. Therefore, for purposes of economic analysis, the following thresholds are assumed:

1. A 5 percent change in net ranch income.

2. A 10 percent change in rancher wealth.

3. A 5 percent change in the employment or sales of any economic sector.

4. A 1 percent change in total study area employment.

GENERAL IMPACTS

The following is a list of impacts by resource that would occur in any area if designated as wilderness. To avoid repetition, these impacts are stated here and referenced where appropriate in the following WSA-specific impact analysis.

WILDERNESS: Any wilderness designation in the Egan RA would benefit the National Wilderness Preservation System by expanding its ecosystem diversity. In addition, any designation would expand the opportunities for primitive and unconfined recreation within a day's drive of the Las Vegas, Provo-Orem, and Salt Lake City-Logan standard, metropolitan statistical areas.

ENERGY AND MINERALS: Mining claim location and mineral leasing will not be permitted in designated wilderness areas after midnight on December 31, 1983. Mining would be allowed on existing claims pending a validity exam to prove that a valid discovery exists. Operations would be subject to reasonable stipulations for the protection of wilderness values. Leasing operations on existing pre-FLPMA leases (leases taken before October 21, 1976) will be permitted under standard stipulations.

On post-FLPMA leases, operations would continue to be subject to the Wilderness Stipulation which requires that operations be nonimpairing.

RANGE: As stated in the Wilderness Management Policy, "There shall be no curtailment of grazing permits or privileges in an area simply because it is designated wilderness." Increases or decreases in AUMs would be made as a result of normal grazing and land management planning and policy setting processes.

Maintenance of existing range facilities would be permitted in designated wilderness, and can include use of motorized equipment where practical alternatives do not exist.

New range developments would only be permitted when they will better protect the rangeland or the wilderness resource. Costs of new developments would be higher in wilderness areas than outside because of the emphasis placed on use of the least impairing construction methods and most environmentally compatible materials. Planning and lead-time would also be greater than in nonwilderness areas. Cost increases would be within reason.

Positive impacts to grazing management could occur as a result of establishing a limited fire suppression policy for wilderness areas and allowing wildfire to naturally convert stands of pinyon- juniper or sagebrush to areas of more diverse and palatable species. Indirect beneficial impacts might also occur as a result of limiting other activities in wilderness areas that could disturb or destroy vegetation and range improvements or cause harassment of livestock.

The analysis of short-term impacts is limited to consideration of those projects which are actually proposed and feasible at this time. Range improvements which will be considered for analysis of long-term impacts (5 years) are those projects for which potential has been identified and funding could be realistically provided. Wilderness designation would have similar effects on other potential developments, but since resource and economic considerations which bear on the feasibility of these projects have not yet been developed, they are not considered in this document. After wilderness designation, potential developments would be considered on a case by case basis.

WILDLIFE: Wilderness designation would have a beneficial impact to wildlife resources through the overall resource protection it provides. Limiting man's intrusions and developments would benefit wildlife in the long-term.

Wilderness designation, though protection oriented, would preclude some wildlife habitat improvements. Management for big game would be complicated and costs associated with wildlife developments in wilderness would increase and could become cost prohibitive (see impacts to range developments, above).

Some increased disturbance will occur to wildlife as a result of increased recreation use in desigated areas. This would be especially true in riparian zones, which are attractive to the recreationist and essential to wildlife. These impacts will be minimized by the Wilderness Management Plans for designated wilderness areas.

FORESTRY: Impacts occurring to the forest resource would be both adverse and beneficial. Removal of manageable woodlands from production would impact to varying degrees the residents of nearby areas who have harvested fuelwood and Christmas trees in the past. Revenue could be lost from the sales of cordwood, posts and Christmas trees, to both private parties and commercial cutters, if other areas are not available to assume their load. With the exception of the South Egan Range, the WSAs have not been heavily used in the past for forest product harvesting. Beneficial impacts would stem from limiting mining disturbances. This would be beneficial to ponderosa, aspen, bristlecone and white fir. These species are sought by wilderness users for camping and picnicking. Management of ponderosa and aspen which are fire dependent species might be complicated by wilderness designation although a controlled burn policy within wilderness areas may eliminate the management needs for these trees.

RECREATION: Designation of an area as wilderness could cause some slight increase in recreation use by calling attention to it. Increased use would cause degradation of opportunities for recreation in some very localized areas that serve as staging areas, travel routes, and destination points. Adverse impacts would also result from disallowance of off-road vehicles, but since most actual vehicular use occurs on roads, this impact will not be great.

The existing recreation uses of the WSAs would benefit from wilderness designation by the preservation of current primitive and semi-primitive non-motorized characteristics. Designation would also provide legislative protection for special recreation sites such as caves.

VISUAL RESOURCES: Wilderness designation would provide a beneficial impact to visual resources by prohibiting certain visually impairing activities and developments, and by ensuring mitigation of those that are allowed.

LANDS: The increasing need for microwave communication sites is causing companies to look closely at many areas in the Egan RA for possible locations. In the short-term, areas outside of the WSAs can meet this demand. In the long-term, however, wilderness designation could adversely affect communications by precluding microwave site locations. Several WSAs are located in areas well suited for communication site development. When appropriate, these are discussed under the specific WSA sections.

There would be no significant adverse impact to the owners of private inholdings. Access to these inholdings is assured and no restrictions would be placed upon development of the private parcels. Developments on these lands which could affect wilderness opportunities if the private landowner wishes, land exchanges for parcels outside of the wilderness area can occur.

Other impacts to the lands/realty program are discussed under the specific WSA section affected. The lands program in the Park Range and Riordan's Well WSAs is not impacted.

CULTURAL RESOURCES: Impacts occurring to cultural resources as a result of wilderness designation would be both beneficial and potentially adverse, and will be offsetting. Adverse impacts would result from some increase in primitive recreational use and associated increase in vandalism and inadvertent damage to cultural resources. Adverse impacts would also occur due to much higher costs of intensive inventory and recordation in a wilderness area. Deterioration of sites would occur in most cases, since management would not normally include site stabilization.

Obeyance of laws protecting cultural resources would be more certain in designated wilderness areas because there would be more monitoring of activities than in nonwilderness. Beneficial impacts would result from inventories of areas where impacts of wilderness users are expected to be damaging. The prohibition of certain activities will mean that sites that would normally be inventoried and then destroyed or removed will be left intact and in context for future study with new techniques.

Nondesignation would cause both beneficial and adverse impacts, and these would be offsetting.

WILD HORSES: There would be no significant impact to wild horses. They would continue to be managed according to the Wild Horse and Burro Act. There would be some beneficial impacts from wilderness designation by limiting harassment, preserving their wild and free roaming nature and preserving their habitat. A possible indirect adverse impact would be placing restrictions on range developments which would benefit wild horses. Wild horse roundups with motorized equipment and aircraft would be permitted with State Director approval.

SOIL, WATER, AND AIR: There would be no significant impact to the soil, water or air resources as a result of wilderness designation. All these resources would benefit slightly from designation by restricting mining operations and limiting vehicular traffic to existing roads and trails. Adverse impacts to soil, water and air would be the result of other resource actions permitted if the areas are not designated. Impacts resulting from such projects will be addressed at the time the project is proposed in an appropriate environmental analysis.

SOCIAL IMPACTS: Any wilderness study areas designated as wilderness would be withdrawn from appropriation under the mining laws on the date of designation as wilderness unless otherwise provided for in the enacting legislation. They would perceptually be viewed as a significant adverse impact by the mining sector. The opportunities foregone for the individuals as well as for the community could be an adverse impact. This cannot be quantified since information on the exact location, size, and economic value of potential mineral and energy deposits within each wilderness study area has not been developed.

Wilderness designation would not introduce new people into the area permanently in any significant numbers nor would designation cause residents to leave in any significant numbers. Although designation may increase jobs in the service sector, those jobs would be in the same sector and basically the same occupations as existing jobs. Designation would not provide significant employment opportunities to the underemployed or unemployed, nor would it create new jobs in different wage structures or create jobs for particular employee groups in any significant numbers.

Wilderness designation would place additional regulatory constraints on the use of motorized equipment, as well as placing constraints on other activities within wilderness areas. This may be viewed as an adverse impact by many area residents, particularly those who enjoy off-the-road vehicle recreational activities in remote, pristine areas.

Some opposition to wilderness designation could be expected from the livestock sector. Opposition would probably center around the issue of regulatory constraints and increased costs of future range improvements. In the long term, this may be perceived by some ranchers or companies holding grazing permits in the WSAs as a minimal adverse impact on their ranching operation. A few

ranchers perceive wilderness as a beneficial impact because of the restraints placed on other activities.

For those individuals who view the federal presence in the resource area negatively, wilderness designation would be seen as "tightening the federal grip on local lands" to the detriment of local residents. These individuals view the wilderness progrm as a program that either prohibits or places restrictive constraints on the historic and traditional multiple-use activities that have been allowed on public lands for as long as many of the area residents can remember. For these individuals, wilderness designation would reinforce their negative perception of the Bureau of Land Management.

Over a prolonged period of time without designation, wilderness characteristics and values may be irretrievably lost in one or more of the four areas as a direct consequence of those areas not being afforded the protection mandated for those areas which are included in the National Wilderness Preservation System. This would undoubtedly be considered a significant adverse impact by those who endorse wilderness designation, as well as by those who enjoy the areas' naturalness and opportunities for primitive backcountry recreation opportunities.

ECONOMIC: Economic interest in the WSAs derives from their use for grazing, recreation, forest products, mineral production, and taxable assets. Analysis of these productive uses of the potential wilderness resource indicates that no significant alteration of the area economy may be expected to occur due to formal wilderness designation. While there may be some minor trade offs in income and employment impacts, with particular industries such as recreation being enhanced, and mineral extraction being discouraged, the basic structure of the local economy will remain intact. Impacts at the State national levels, exclusive of intangible wilderness preservation values and the state and county share of mineral leasing revenues, will be unnoticed.

Wilderness designation would not have any significant impact on range use because of the lack of restrictive grazing stipulations following designation. Extremely limited demand exists for forest products within the WSAs and these products are available in sufficient quantities in proximate areas to cover present and foreseeable demand.

There is no conclusive evidence that significant increases in recreation use will occur, or that the average annual rate of increase in recreation use will be accelerated due to designation. However, initial, temporary changes may be expected due to publicity and increased public awareness. Such changes as may occur do not hold the promise of either important economic benefits or disruptive impacts. The retail trade and services industries, particularly hotels and lodging places, eating and drinking places, and recreation services would benefit moderately

from any increased recreation use. Any additional demand, however, is expected to be insufficient to encourage the entry of new business, but would most likely be manifested in increased sales.

Presently, there is no mineral production within the WSAs. Existing data on potential are unamenable to analysis for economic significance.

Wilderness designation will have no significant effect on the tax structure itself, or the amount of revenues received. The Bureau of Land Management Payments in Lieu of Tax funds for White Pine County in Fiscal Year (FY) 1981 amounted to $328,000. Unless there is a change in this program, these funds will continue.

The State of Nevada receives 50 percent of all mineral leasing revenues, a percentage of grazing revenues, and 4 percent of all revenues from sale of lands and materials. Grazing revenues should remain the same, suffering only from the loss of development of potential additional animal unit months (AUMs). Revenues from sale of lands and material will be unchanged. Losses in mineral leasing revenues, while of estimable value, are insufficient to be considered significant.

Income and Employment: Income and employment occurring within the WSAs comes from livestock grazing and mineral exploration. Also associated with the WSAs is some unquantifiable recreation and commercial Christmas tree income and harvesting employment.

Income and employment in the livestock industry will remain within its present levels and trends, suffering only the loss that might occur from foregone development of additional grazing from AMP or manipulation projects. Presently, no such projects are proposed.

While there is no current mineral production within the WSAs, and therefore no income, there is some unidentified explorative employment occurring. This would be foregone along with any potential employment associated with mineral development.

Income and employment in the recreation-related trades and services sectors are expected to be moderately enhanced. The degree of enhancement which will occur will depend entirely on the tastes of the recreation public and the level of desirability and challenge which is attached to particular wilderness areas.

Grazing: Livestock production within the WSAs consists of cattle and sheep grazing, with grazing quality varying from poor to good. On the whole, the value of livestock production within the WSAs is insignificant on a regional or national level. Wilderness designation would not result in the reduction of present AUM preferences. However, there may be some loss of additional forage due to the preclusion of some vegetative

manipulation projects. Restrictions may also be imposed on the number and type of range improvements that may be implemented under present AMPs. However, if the required benefit/cost analysis should show improvements to be uneconomic, their restriction wold not involve economic losses. Water developments, such as catchments, springs, and pipelines that are necessary for the purpose of resource protection and the effective management of these resources would be allowed. New developments would be somewhat more costly - although not prohibitively so - due to the required use of environmentally compatible materials.

Minerals: The major problem underlying economic evaluation of minerals is the great uncertainty regarding the existence of mineral deposits in sufficient quantity and quality to be commercially feasible. At present, mineral existence is unknown or indeterminate. In addition, long range mineral resource evaluation and market demand estimate are at best speculative. Both mineral resource evaluation and development are directly dependent upon market demands that may be regional, national, or worldwide in scope.

After December 31, 1983 any areas designated wilderness will be withdrawn from mineral entry. Further, development of all valid mineral rights established prior to that date will be subject to reasonable regulations of access and reclamation in order to protect wilderness values. This may result in additional costs to potential operators and, therefore, discourage development.

Leaseable minerals are oil and gas, sodium, potassium, and geothermal steam. Much of the district is classified by the U.S. Geological Survey as prospectively valuable for oil and gas. Though a number of oil and gas leases have been established, no production has yet occurred. Potential reserves cannot be estimated. Oil and gas leases will expire as a result of wilderness designation if there is no production within the 10-year life of the lease.

Recreation: The restriction of vehicle use in the WSAs apply only to off-road vehicle use, and other vehicle supported recreation such as rockhounding. However, vehicle dependent recreation which may be excluded from WSAs will not simply cease to occur but instead, be displaced to adjacent public land areas which surround the WSAs in abundance. Thus, it is expected that any net impact on the area economy due to restriction of vehicle access will not be significant.

At the same time, it has been documented that some wilderness areas tend to attract recreation use by virtue of the publicity associated with formal wilderness designation. It is expected that primitive and unconfined recreation activities such as nature study, day hiking, camping, backpacking, horse packing, mountain climbing, rock climbing, and caving will increase at some small measure on an annual basis. This increased visitation

should result in a comparable increase in recreation expenditures and recreation-related local income and employment. An additional benefit will be realized in the increase in intangible values enjoyed by recreationists, which may be considered to accrue to the National Economic Development account. This account measures the national value of goods and services and includes the "willingness-to-pay" value of recreation.

None of these effects are sufficient to be considered significant.

Forest Products: The resource base for forest products within the WSAs offers substantial values in fence posts, Christmas trees, pine nuts, and firewood. However, these products are available in sufficient quantities outside the WSAs to meet present and foreseeable demands. An extraordinary and unanticipated increase in demand for Christmas Trees and firewood could make the bottling-up of these resources an issue, in the long-term. Nevertheless, there would continue to be little effect on the local economy.

Lands: Of the four WSAs, one (South Egan Range) contains a total of 400 acres of private inholdings. Access exists to all but one 40-acre inholding and would be provided for this one if necessary. Restrictions would be placed upon private development of these lands. The potential for development for recreation services does exist, but appears to be improbable. Present recreation use in the WSAs is dispersed, and documented.

No impacts on land values or the income and employment which derive from this use, are anticipated due to wilderness designation.

IMPACTS BY ALTERNATIVE

ALL WILDERNESS ALTERNATIVE

PARK RANGE

WILDERNESS: In this alternative, the wilderness values of the Park Range would be given maximum protection, and the integrity of the area would be ensured. Very few manageability problems would occur since the area is virtually self-protecting and there are no mining claims or private inholdings. The only concerns would be with light off-road vehicle use on the margins of the WSA; and with a 437 acre portion of a crested wheatgrass seeding on the west side where maintenance of the seeding - allowable under the Wilderness Management Policy - would be incompatible with management of the area as wilderness. The protection afforded by designation would be beneficial to the wilderness resource, but would not be significant since impacts expected without designation are slight and would not destroy wilderness values (see No Wilderness Alternative).

Designation of this area would enhance the National Wilderness Preservation System due to the distinctive nature of the area within the Great Basin setting.

ENERGY AND MINERALS: Designation in this alternative would remove from mineral entry only areas of low potential for minerals and for oil and gas. While there are two oil and gas leases in the WSA, active interest in the mineral resources of the area seems to be practically nil, so that designation would have very little impact on existing economic interests.

A total of 22,230 acres of moderate geothermal potential would be removed from productive uses. This technically constitutes a significant adverse impact by virtue of the acreage involved. However, geothermal development could more easily occur just outside the WSA where access is easier, and in any event, the area's remoteness and lack of infrastructure make development most unlikely. There are no geothermal leases in the WSA. Impacts of designation would be very minor. There are no critical and strategic mineral deposits known in the Park Range WSA.

RANGE: Designation under this alternative would cause negligible impacts to the range resource. The only existing range improvement in the area is about 437 acres of a seeding. Maintenance of the seeding will be allowed but the maintenance costs could be

higher than in nonwilderness. No new range improvements are planned nor is there much potential for new projects.

Maintenance of several cherrystemmed improvements (pipeline and fences) would be permissible with few or no limitations.

WILDLIFE: While a diverse habitat for many different species would be protected under this alternative, the protection afforded would be of low importance since little human disturbance is expected in the area. Impacts therefore are beneficial but negligible.

FORESTRY: Designation under this alternative would cause negligible impacts to the forest resource. Approximately 9,400 acres of manageable woodland would be removed from production. Some woodcutting has occurred in the WSA in the past, but use is slight because of the area's remoteness. There are enough forested areas nearby not under wilderness review to supply local demand.

Refer to General Impacts section for impacts to other resources.

RIORDAN'S WELL

WILDERNESS: In this alternative the wilderness resource would receive maximum protection, and the integrity of the area would be preserved. However, some unmanageable portions would be impacted by allowable or uncontrollable uses.

In particular, mining activity may extend into the western tip of the WSA from mines located just outside the boundary, but impacts would be restricted to the area of existing claims (see Map 8). Off-road vehicle use would be difficult to control on the east bench. There is no private land with the WSA. Some outside sights and sounds from vehicular use of cherrystemmed routes will result in very localized impacts to solitude and apparent naturalness, especially on the benchland in the southeastern quarter.

Designation will serve to protect the wilderness values of the area from the impacts of additional mineral exploration, range development, woodland product harvest, and casual road building associated with recreation. These would be beneficial impacts.

ENERGY AND MINERALS: Under this alternative, 2,950 acres of moderate mineral (metallic) potential would be removed from mineral entry. Most of the area has moderate potential for nonmetallic minerals, but withdrawal of this potential would be only nominally adverse because of the remoteness of this resource, absence of interest in its development, and abundance of occurrence outside of the WSA.

Oil and gas potential, which is low in the WSA, would be withdrawn from entry.

No existing mines would be impacted under this alternative. Current income and employment would be affected only as it relates to energy and mineral exploration, and this is very minimal in the WSA.

There are no known deposits of critical and strategic minerals in the Riordan's Well WSA. Potential exists for tungsten and silver which are critical and strategic minerals. (For status of these, see report in Goshute Canyon, Affected Environment).

RANGE: Designation under this alternative would cause minor impacts to the range resource. The proposed well in Dry Basin would not be allowed since it is not needed to better protect either the rangeland or wilderness resource. The benefits to the operator associated with opening up a new area to livestock grazing and improving livestock distribution would not be realized if the well is not built. The approval for the potential vegetation conversions would be handled on a case by case basis when they are proposed. Chaining would not be allowed, but a prescribed burn might be.

WILDLIFE: The All Wilderness Alternative would protect 48,000 acres of deer winter range from human disturbances which are expected to occur without designation (see No Wilderness Alternative). While these intrusions would not destroy the habitat, they would qualitatively affect what is now virtually untouched range. The benefits of preservation are not a significant impact.

About 600 acres of a proposed habitat conversion/seeding would fall within this alternative. Conversion would be allowed, but seeding would be prohibited. This would affect the benefit-cost ratio of the project, and would probably render it infeasible.

While this would result in some adverse impact to wildlife (with additional wildlife AUMs foregone), this effect would be more than offset by a wilderness fire policy which would allow fires to burn within prescription, since such a policy would result in added AUMs. Net, long-term impacts in this regard would be beneficial but insignificant.

SOUTH EGAN RANGE

WILDERNESS: In this alternative the wilderness resource would receive maximum protection, and this would ensure the wilderness integrity of the area as a whole. It would not, however, prevent some adverse impacts that are expected to affect the wilderness resource even with designation. Mining activity is likely to

continue to expand within the northern tip of the WSA. Loss of opportunities for solitude is expected to be a short-term impact from mining, and some permanent loss of naturalness is expected. Impacts of mining development and expansion are expected to be confined mainly to the northern end of the WSA.

Access development to one 40-acre tract of private land within the WSA would likely occur over the long-term. Loss of naturalness and opportunities for solitude will result immediately adjacent to road access, but it will not affect the area as a whole. Non-conforming developments on the many adjacent parcels of private land is possible, but unlikely.

Some outside sights and sounds from vehicular use of the 39 cherrystemmed routes will result in impacts to solitude and apparent naturalness around much of the perimeter and in the core of the WSA in the high country.

Designation of the entire WSA as wilderness would entail very high surveillance costs to ensure compliance with the Wilderness Management Policy. Off-road vehicle use would be especially difficult to control in certain portions, including much of the benchland on both sides, and in Sheep Pass Canyon.

The non-conforming use of intensive grazing would continue to impair solitude opportunities and perceptions of naturalness. Intensive grazing management occurs throughout the WSA. Cattle graze over most of the high country and range improvements are maintained within the interior. Management of the area as wilderness may be difficult in association with intensive grazing.

Forest product removal would be difficult to control or prohibit. The perimeter of the northern half of the WSA is used for gathering of wood products. This is an historic use and would be expected to continue.

Designation would serve to protect the wilderness values of the area from the impacts of additional mineral exploration and extraction, development of microwave communication sites, range development, woodland product harvest, and casual road building associated with recreation. These would be beneficial impacts occurring in both the long- and short-terms.

ENERGY AND MINERALS: Under this alternative, 7,633 acres of moderate metallic mineral potential and 802 acres of high potential would be removed from mineral entry. (This potential occurs in the north end, see Map 14).

However, ore deposits here are probably too small to be of interest to large mining companies. The disseminated, precious metals deposit is not of high enough grade to be profitable. Rich oxidized near-surface ore has been mined out, and recent exploration has been unsuccessful. Still, interest continues in the area.

About 800 acres of moderate nonmetallic mineral potential in the Ellison District would be removed from mineral entry. The potential here is for fluorite. Since the known deposit is small and only minor amounts of fluorite have been found in the vicinity, the impact is considered minor. The small size of the deposit and its distance from consuming markets preclude economic development at this time. Although it is a strategic mineral, the deposits of fluorite in the South Egan Range are unlikely to contribute to the national stockpile effort.

Areas of only low or no oil and gas potential would be removed under this alternative.

RANGE: Designation under this alternative would cause minor impacts to the range resource. Maintenance of the old chaining and seeding would be allowed although maintenance costs could be higher than in nonwilderness. Currently no new range developments have been proposed.

WILDLIFE: Protection would be afforded to large areas of wildlife habitat in the South Egan Range WSA under the All Wilderness Alternative. Deer winter and key deer winter range, as well as important raptor nesting areas along the entire west bench would be protected from such uses as more intense forms of recreation that would forge new roads and trails; Christmas tree and firewood collection; mineral and energy exploration; and vegetation conversion and seeding. Deer summer and key deer summer range would be protected from similar activities, although the activities in this case would be less impairing due to the location of summer range in the higher, less accessible country. Blue grouse habitat on the north end and south of Sheep Pass Canyon would be protected from impacts which could especially affect them, namely tree removal and degradation of riparian zones. Such protection is more significant on the north end because it is here that mining is a real possibility.

Sage grouse habitat on the southwest end would be protected from several minor types of impacts.

Overall, impacts to wildlife under this alternative would be beneficial. However, since the impacts which are expected without designation will be less than massive, and will not destroy large acreages, these beneficial impacts will not be significant.

FORESTRY: Designation under this alternative would cause adverse impacts to the forest resources. Aproximately 16,000 acres of manageable woodland would be withdrawn from forestry production. This includes some very productive Christmas tree areas. The people of Lund, Preston and Ely would have to go elsewhere for Christmas trees and fuelwood.

LANDS AND REALTY: Designation of the entire South Egan Range WSA as wilderness would eliminate the good potential of the area for communication relay site location. This would be an adverse impact for projects requiring a north-south communication system. Alternate sites are available (and have already been involved in planning for a White Pine Power Project system), so that impacts would not be severe.

Designation under this alternative would create difficulties for one possible coal delivery system which could serve the White Pine Power Project if it is located in Steptoe Valley.

This adverse impact is mitigated by the exclusion of portions of the Mount Grafton WSA from the Preferred Alternative in the Schell RA wilderness study, so that a rail route could be developed east of the South Egan Range.

A Desert Land Entry Application on the west side of the South Egan Range WSA would be denied if the entire WSA were designated as wilderness. This would be an adverse impact to the person or group by whom the application was submitted.

GOSHUTE CANYON

WILDERNESS: In this alternative the wilderness resource would receive maximum protection. Still, some adverse impacts are expected to affect the wilderness resource even with full designation. Mining activity is expected to impair wilderness values in the southern end of the area. Loss of opportunities for solitude would be a temporary, short-term impact of mining, and some permanent loss of naturalness would be expected. The scale of operations would likely impact the southern one-fourth of the area. There is no private land within the WSA. Adjacent parcels of private land are expected to have minimal impacts on the wilderness values. No non-conforming developments are likely to occur on the private lands.

Some outside sights and sounds from vehicular use of cherry-stemmed routes will result in very localized impacts to solitude and apparent naturalness, especially on the benches. The interior of the area would be unaffected by these.

Designation of the entire WSA as wilderness would entail very high surveillance costs to ensure compliance with the Wilderness Management Policy. Off-road vehicle use and mineral exploration and development would be difficult to control on the bench areas and in the south end of the WSA. This would be especially true if the White Pine Power Plant is constructed in north Steptoe Valley.

Generally, impacts of designation under this alternative would benefit the wilderness resource by preserving most of the areas's wilderness values.

ENERGY AND MINERALS: Designation in this alternative would result in the withdrawal of 5,731 acres of high mineral potential and 18,733 acres of moderate mineral potential from mineral entry. Existing mining operations would be largely unaffected, but new mines and extensions of old ones into the wilderness area would be encumbered by special mitigation requirements, regulatory delays, and validity exams required prior to such operations. Prospecting and exploration under the mining laws would be prohibited. Impacts would occur in the short-term as opportunities for employment in exploration are cut off, and as ongoing mining - currently employing about 15 persons - encounters limits and restrictions on its expansion. Long-term impacts will occur as a result of the removal of the mineral potential from development. The short-term employment and income effects would be insignificant to the local economy and social conditions, although individuals and small companies with economic and even lifetime interests in the area would be highly impacted. The impacts of withdrawal of such a large area with moderate and high potential would be significant in the long-term.

Silver is a strategic mineral that occurs in the Goshute Canyon WSA. By itself, the Goshute Canyon WSA probably has very little value for the national stockpile effort.

Tungsten deposits in the Goshute Canyon WSA will not figure prominently in U.S. efforts at stockpiling, especially since tungsten bearing materials as a group show an excess in the "Stockpile Report to the Congress."

RANGE: Designation under this alternative would cause negligible impacts to the range resource. There are no existing range improvements within the area so there will be no increased maintenance costs to the permittees. No range improvement projects are proposed. There are tentative plans for the fencing and piping of three springs in Goshute Basin. These projects would be allowed since they would protect the spring sources and improve riparian areas.

WILDLIFE: About 15,000 acres in this unit will be protected from major disturbances expected to occur without designation (see No Wilderness Alternative). This acreage includes habitat for deer, raptor nesting areas for which secluded, undisturbed habitat is desirable; habitat for the yellow-bellied marmot, and habitat for sage grouse and blue grouse.

Designation would be unable to prevent some mining activity in the south end along the east bench and lower mountains. Impacts from this activity will, however, be much reduced from those expected with no designation. Overall, impacts to wildlife in this alternative would be beneficial but insignificant.

FORESTRY: Designation under this alternative would cause

negligible impacts to the forest resource. Approximately 5,600 acres of manageable woodland would be removed from production. There may be some slight inconvenience to the people in the small hamlet of Cherry Creek who have in the past used the area to get fuelwood and Christmas trees. There are numerous other nearby places for them to go, however.

LANDS AND REALTY: Designation of the Goshute Canyon WSA as wilderness under this alternative would eliminate the potential of the area for communication relay site location, especialy important to the White Pine Power Project. Other locations are available, so that this adverse impact is not serious.

CONCLUSIONS

The All Wilderness Alternative would provide significant beneficial impacts to the wilderness resource in three of the wilderness study areas: Goshute Canyon, Riordan's Well, and the South Egan Range. In the Park Range, wilderness designation would help protect portions of the area from disturbance, but wilderness values are expected to be retained in the long-term even without designation (see Park Range - No wilderness Alternative)

Manageability problems would occur in all WSAs under this alternative. Portions of all of the WSAs are simply not manageable as wilderness. Other portions would be difficult and costly to manage as wilderness. Large portions of all of the areas could be managed as wilderness with sufficient money and emphasis.

Designation would enhance the ecosystem representation within the National Wilderness Preservation System. It would also help balance the geographic distribution of wilderness within a 300-mile radius of Ely and would enlarge the opportunities for primitive recreation within 5-hours driving time of Las Vegas, Salt Lake City-Logan and Provo-Orem SMSAs.

Impacts to energy and minerals would be adverse and significant under this alternative. Selection of this alternative would result in the removal of 29,316 acres of identified moderate mineral potential and 6,533 acres of high potential from mineral entry. About 25,000 acres of moderate geothermal potential would also be withdrawn. The removal of energy and mineral potential would barely effect the national effort to become self-sufficient because of the small areas and mostly low potential values involved. There will also be removal of potential for some strategic minerals, primarily silver. The National Defense stockpile currently includes a large amount of silver (139,500,000 Troy ounces) and there is no goal for additional stockpiles (1980).

Where potential for other listed minerals occur, they are usually of secondary interest associated with gold and silver. The

quantity and quality of known deposits of these other minerals is not high. The removal of potential for strategic minerals in this alternative is of little consequence to the national stockpile effort.

Some minor impacts would occur to livestock grazing. There would be some increased costs for; and some prohibitions of, new range improvements. Maintenance costs on some existing developments would be higher than without wilderness designation. Only one proposed project - a well in the Riordan's Well WSA - would not likely be allowed. No reductions in AUMs or change in range condition will result from this alternative. Some beneficial impacts would occur to the range resource (see General Impacts, Range). Impacts to the range resource would not be significant.

Under this alternative, wildlife habitat would be afforded protection from many human activities expected to occur in the long-term. Road building, mineral exploration and extraction, wood harvest, and off-road travel would be prohibited in most cases, resulting in protection of wildlife habitats. This would be a beneficial impact in all WSAs , but would in most instances be of little importance since most species seem capable of coexistence with all but the most intrusive human disturbances.

Some short-term adverse impact would occur if, as expected, fire in wilderness areas is allowed to burn within prescription. The short-term loss of habitat that would occur under such a fire management policy would be more than offset in the long-term by the benefits from allowing fire to operate as a natural component of the ecosystem. These would include increased available forage, greater species diversity, and prevention of pinyon-juniper encroachment.

The same benefits would offset any prohibitions of vegetative conversions for wildlife purposes, only one of which has been identified in a WSA.

The prevention of human disturbances would also benefit wildlife by assuring the relative seclusion of species which are sensitive to human encroachment. These include deer for whom seclusion or relative lack thereof affects fawning success; birds of prey, whose nesting success may be affected by close range disturbances of sight and sound; and bighorn sheep.

Benefits to deer would be primarily in the Goshute Canyon WSA, to raptors in the Goshute Canyon and South Egan Range WSAs, and to bighorn sheep in the Riordan's Well WSA.

While impacts to wildlife under this alternative would be mainly beneficial, they would not be significant.

About 11 percent (48,000 acres) of the manageable woodland in the Egan RA would be removed from availability within this alternative. This would result in adverse, although not significant

impacts to the forest resource.

Lands and realty would be insignificantly but adversely impacted by the removal of potential rights-of-way, communication sites, and land sales. These impacts are not significant since other sites are available to fill the same needs.

There would be increases in recreation visitor days in the Egan RA above what would be expected without designation. These increases will not be more than 10 percent, and would therefore not be significant.

The visual resources in these portions of the Egan RA would benefit from the prevention of visually impairing activities and from the mitigation of others under wilderness management. There would be insignificant beneficial impacts to the visual resources within the Goshute Canyon WSA in the long-term.

Cultural resources would receive offsetting beneficial and adverse impacts from the All Wilderness Alternative (see General Impacts, Cultural Resources). These impacts would be insignificant.

Wild horses would experience some minor beneficial impacts from protection of their natural habitat and from management of them as special features of the areas. Moreover, impacts would not be significant.

Soil, water, and air would all be beneficially impacted to a very minor degree under this alternative. The additional protection afforded the area by limitations on surface disturbance would enhance each of these resources, but beneficial impacts would be insignificant.

Designation of all four wilderness study areas as wilderness would not introduce new people into the area permanently in any significant numbers nor would designation cause residents to leave in any significant numbers.

The fact that 236,860 acres would be preserved as wilderness for the use of present as well as future generations. This could be considered a significant beneficial impact in the transmission of our cultural heritage.

There would be no significant social impacts under this alternative (see General Impacts, Social).

The Bureau of Land Management receives annual revenues from a total of 81,829 acres under noncompetitive or simultaneous oil and gas leases in the WSAs, with another 3,215 acres under application. This total is composed of 11,100 acres in Goshute Canyuon WSA (015), 2,900 acres in Park Range WSA (154)(, 25,892 acres in Riordan's Well WSA (166) and 45,152 acres in South Egan's WSA (168). Average annual lease revenues are estimated at $1.50 per acre.

Future receipts of lease payments are estimated to total $127,000 annually, of which 50 percent, or $63,500 would be paid to the State of Nevada. The state distributes its share of mineral leasing revenues back to the counties, on a pro-rata basis, through the Distributive School Fund.

In addition, the counties levy tax on oil and gas leases equal to the leasing fee paid to BLM. In sum, the three counties involved (White Pine, Lincoln, and Nye) receive approximately $190,500 anually from oil and gas leasing within the WSAs. The distribution of these revenues will provide an estimated $74,100 for White Pine County, $50,500 for Lincoln County, and $65,900 for Nye County. While these funds may be lost if the leases are allowed to expire, the amount is of no significance (less than 2 percent) in terms of the individual county budgets. Budgets for 1980-81 for the government of White Pine, Lincoln, and Nye counties were reported as $6.8 million, $2.5 million, and $7.4 million, respectively, for a total of $16.7 million.

The All Wilderness Alternative appears in both the No Grazing and the Resource Protection Alternatives of the Egan RMP. The impacts to wilderness would be nearly the same in both except in the South Egan Range WSA. Here, wilderness values would be enhanced by the removal of livestock grazing under the No Grazing Alternative. Numerous riparian zones currently experiencing degradation in the WSA would be relieved of livestock grazing pressure, and riparian habitat would move one condition class toward the desired. This would result in wildlife, vegetation, and water quality enhancement, which in turn would enhance naturalness and the overall wilderness experience.

NO WILDERNESS ALTERNATIVE

PARK RANGE

WILDERNESS: Under the No Wilderness Alternative, the wilderness resource would be given no special protection. No part of the Park Range WSA would be designated as wilderness. Short-term impacts would be negligible. In the long-term, some negative impacts are expected to occur. This would primarily result from primitive road extension, mining exploration activity, woodland product harvesting and possibly more intensive management for livestock production. Adverse impacts from nondesignation would significantly impair only portions of the WSA and wilderness values would not be lost throughout the entire area.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Wildlife habitat in the Park Range WSA would be only minimally affected under the No Wilderness Alternative. Some road extension and casual road building will affect the secluded nature of habitat on the benches. Most affected would be antelope habitat on the north end. Deer yearlong habitat in the center of the area would be unaffected. Overall, impacts to wildlife would be adverse but very slight.

VISUAL RESOURCES: Human modifications to the natural environment would have negative impacts to the visual resources. This would become a significant adverse in the long-term.

Refer to the General Impacts section for all other resources.

RIORDAN'S WELL

WILDERNESS: In this alternative the wilderness resource would be given no special protection. No part of the Riordan's Well WSA would be designated as wilderness. Short-term impacts would be negligible. In the long-term many impacts to the wilderness resource are expected to occur as a result of nondesignation. In the south eastern benchland portions, disturbances will result from vegetation conversion projects, uncontrolled off-road vehicle use and mineral exploration. Woodland product harvesting would be expected to continue and to expand to other portions of the WSA. The proposed water development project to enable livestock use of the western end of the WSA in Dry Basin would be implemented. In addition, it is expected that in the long-term more intensive livestock management would result in additional range projects.

With nondesignation mineral exploration and development could

severely impact about 5,000 acres in the western end of the WSA. Moderate mineral potential has been identified here. (See Map 11).

Other adverse impacts would result from casual road building associated with woodland product harvesting, recreation, ranching and mineral exploration.

Over the long-term because of the combination of impacts, wilderness values of the WSA would be impaired to the point that it would no longer qualify as a WSA.

ENERGY AND MINERALS: No impacts

RANGE: No impacts.

WILDLIFE: Under the No Wilderness Alternative, wildlife in the Riordan's Well WSA would receive both adverse and beneficial impacts. In the long-term, wildlife (primarily deer) would benefit from vegetation conversion projects that would increase forage. This impact, however, is not peculiar to this alternative, as a wilderness fire plan which would allow fire to burn within prescription would accomplish the same objective in the other alternatives.

Adverse impacts would occur due to road building associated with energy and mineral exploration, vegetation conversion, forest product harvest, and other activities. Opening the country to vehicular travel would result in harassment of wildlife by the sights and sounds of man. This is not especially important to any species except the bighorn sheep for whom seclusion from human disturbances is essential; and raptors who are adversely affected when disturbances come within a mile of their nesting sites.

SOUTH EGAN RANGE

WILDERNESS: In this alternative the wilderness resource would be given no special protection. No part of the South Egan Range WSA would be designated as wilderness. Short-term impacts would be negligible. In the long-term many impacts to the wilderness resource are expected to occur as a result of nondesignation. Intensive range and livestock management would continue and structural projects and vegetation conversions would occur. Communication site placement would likely occur without designation. Road construction and development would continue from rangeland management, placement of communication sites, fire control, mineral exploration, woodland product, harvesting, and motorized recreation use. Woodland product harvesting would be expected to continue around the northern perimeter and to expand into other portions of the WSA.

With nondesignation mineral exploration and development could severely impact about 8,000 acres in the northern end of the WSA, where moderate and high mineral potentials are found (see Map 9).

Over the long-term, cumulative impacts would impair wilderness values to the point the area would not qualify as a WSA.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Impacts that would occur with nondesignation include wood harvest, vegetation conversion, communication site location, and casual road building/extension due to off-road vehicle use. These could especially affect key deer winter and deer winter range, sage grouse habitat and high density, raptor nesting areas along the west bench.

Key deer summer and deer summer range, blue grouse habitat and mountain lion range in the high country would be affected to a lesser degree. In no case would the impacts be significantly adverse since all species seem capable of coexistence with these mild human and surface disturbances. Only on the north end in the Ellison mining district would major manmade impacts occur. These may displace some animals to other areas, but would not affect populations.

Refer to the General Impacts section for all other resources.

GOSHUTE CANYON

WILDERNESS: In this alternative the wilderness resource would be given no special protection. No part of the Goshute Canyon WSA would be designated as wilderness. Short-term impacts would be impairing, but not significant. In the long-term many impacts to the wilderness resource are expected to occur as a result of nondesignation.

Under this alternative it is very likely that communication sites will be placed within the WSA in the Cherry Creek Range especially if the White Pine Power Project is built in North Steptoe Valley.

Road extension and development would continue from rangeland management, fire control communication site development, mineral exploration and development, woodland product harvesting and motorized recreation use. Woodland product harvesting would be expected to continue around much of the WSA's perimeter and expand into other portions of the area.

With nondesignation mineral exploration and development is

expected to severly impact 15,000 acres in the southern end of the WSA.

In addition, mineral exploration and assessment work elsewhere would impair wilderness values in localized portions of the WSA.

Over the long-term, impacts to the wilderness values of the WSA would be impaired to the point it would no longer qualify as a WSA.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Under this alternative, large acreages of undisturbed wildlife habitat in the south end would be affected in the long-term by several activities, but primarily by mineral exploration and extraction. Access created for mining purposes would continue to be used by recreationists and others, perpetuating the disturbances. If the White Pine Power Project is built in North Steptoe Valley substantial increases in recreational use and poaching would likely occur. This could result in reduced populations of grouse, antelope and mule deer. Mineral intrusions would especially impact about 5,000 acres of deer summer range, 1,000 acres of deer winter range, and 1,100 acres of deer spring range. Only some qualitative loss associated with loss of seclusion will occur to the winter and summer range, but the impact to the spring range would be more severe because fawning success would be adversely affected by human disturbances.

Also impacted by these activities will be about 1,300 acres of blue grouse habitat. More deer spring range on the bench and lower mountains along the east side would be impacted to a lesser extent by casual road extension, forest product harvest, and some mineral exploration. About 1,600 acres of deer yearlong range and about 4,500 acres of blue grouse habitat would be affected in the long-term in Paris Canyon on the west side by increased disturbance, including mineral exploration and casual road extension associated primarily with recreation use.

While impacts would be insignificant in this alternative, adverse effects would occur to wildlife, especially as they affect deer spring range.

SOIL AND WATER: Without wilderness designation, the Goshute Canyon WSA would suffer soil disturbances from mineral exploration and extractionlocated in the southern third of the WSA and in Paris Canyon, these disturbances would result in increased soil erosion and deterioration of water quality in Paris Creek Goshute Creek, and other smaller streams.

Refer to the General Impacts section for all other resources.

CONCLUSIONS

The No Wilderness Alternative would have no impact on minerals and energy, lands and realty and range.

Soil, water, and air would be adversely impacted to a very minor degree by activities which would be prevented by wilderness designation. The additional protection afforded the area from surface disturbance would be lost.

The forest resource would suffer some adverse impact under this alternative. Protection which would be given by wilderness designation to special resources such as ponderosa pine and bristlecone pine will be forgone. However, this alternative would leave all manageable woodland open to consumptive uses. Impacts to the woodland resource will be insignificant.

Wild horses would experience some loss of protection for their natural and open habitat, and would be affected by manmade disturbances which would not occur with wilderness designation. These impacts would be insignificant.

The wilderness resource would be adversely impacted by the No Wilderness Alternative. All WSAs except the Park Range would be significantly impacted by activities which, under wilderness management, would be prohibited. The No Wilderness Alternative would also forego the inclusion of ecosystems in the National Wilderness Preservation System which would enlarge the system's representation, and it would forego the enlargement of opportunities for primitive recreation within 5 hour's drive of Salt Lake City, Las Vegas, and Provo-Orem Standard Metropolitan Statistical Areas.

Scenic values in all WSAs would be affected by activities which would not be permitted in designated wilderness. Visual resources would be adversely and in some cases significantly impacted by the No Wilderness Alternative in the long-term.

The recreation resource would be adversely affected by a long-term loss of primitive backcountry recreation opportunities. This would be a qualitative and unquantifiable loss, and would be insignificant.

Cultural resources in the No Wilderness Alternative would be impacted both adversely and beneficially, and these impacts would be insignificant.

Selection of the No Wilderness Alternative would result in the foregoing of several benefits to wildlife (see All Wilderness Alternative). As a direct result, there would occur some minor loss of habitat as roads are built, trees are cut, vegetation conversion occurs for range purposes, and other impacts result that destroy or alter habitat. Total habitat lost, however,

would be very small. A greater impact would result from the harassment of wildlife by greater human intrusion. This would in most cases also be a minor impact, as most species seem tolerant of the degree of disturbance expected with nondesignation. Exceptions would be areas where extensive mining would occur. The main such area is in the south end of the Goshute Canyon WSA where major impacts of a very local nature would occur with nondesignation; but even here, because of the size of the area affected, impacts would be insignificant. Harassment of wildlife is also expected throughout most of this WSA where substantial increased use is expected if the White Pine Power Project is constructed in North Steptoe Valley.

Some beneficial impacts would result to certain species from nondesignation in areas where vegetation conversion would occur. Such conversions would be very few in number, however, and their benefit would be offset by the adverse effect of the total suppression fire management policy under this alternative. This would probably result in pinyon-juniper encroachment and the accompanying loss of habitat.

Overall impacts to wildlife under this alternative would be adverse but insignificant.

It could be expected that those individuals and stakeholder groups who are conservationally oriented would, at the local, regional and national levels, adamantly oppose the implementation of the No Wilderness Alternative. The Nevada Division of State Parks could also be expected to oppose the implementation of this alternative since they supported the designation of both Goshute Canyon an South Egan Range as wilderness areas. Since the 1982 Statewide Comprehensive Outdoor Recreation Plan addresses wilderness in the first two high priority issues, the dropping of these two areas may be considered a significant adverse impact in statewide efforts to preserve "wildlife habitat, public lands for outdoor recreation, historic structures and sites, unique natural and unusual areas, and wilderness."

The Implementation of this alternative would probably be favorably received by those area residents who withheld support for the wilderness program because of their concern about potential mineral deposits within the study areas.

No significant economic effects would result from non-designation of wilderness. No significantly beneficial economic advantages would be lost and no major adverse impacts avoided. However, wilderness recreation opportunities and their potential income effects would be foregone, along with the benefits of preservation for future generations. In turn, mineral development potential will remain unfettered and present recreation uses and trends, particularly off-road vehicle use, will be continued.

PREFERRED ALTERNATIVE

PARK RANGE

WILDERNESS: Under the Preferred Alternative, the wilderness resource would receive complete protection. The only acreage excluded is a 437 acre portion of an old crested wheatgrass seeding along the northwest boundary of the unit. Impacts to the wilderness resource would be the same as those discussed in the All Wilderness Alternative, except for the excluded seeding.

ENERGY AND MINERALS: Same as for the All Wilderness Alternative.

RANGE: Same as for the All Wilderness Alternative.

WILDLIFE: Same as for the All Wilderness Alternative.

FORESTRY: Same as for the All Wilderness Alternative.

Refer to the General Impacts section for impacts to the other resources.

RIORDAN'S WELL

WILDERNESS: In this alternative the high wilderness values in the core of the unit would be protected from impacts of additional mineral exploration, range development, woodland product harvest, and casual road building associated with recreation. These are beneficial impacts.

There would be no manageability problems with incompatible but allowable uses.

ENERGY AND MINERALS: About 1,230 acres of moderate mineral potential would be included in the suitable portion of the Riordan's Well WSA in this alternative.

RANGE: Designation under this alternative would cause negligible impacts to the range resource. There are no proposed range improvements in the area recommended suitable. Some potential exists for vegetation conversion in the southeast portion of the unit.

WILDLIFE: Impacts to wildlife under this alternative would be approximately the same as for the All Wilderness Alternative. The main difference is that less bench area on the east would be designated as wilderness, thus offering less protection for gray fox and ringtail cat habitat.

FORESTRY: Impacts to the forest resource under this alternative would be negligible. About 8,000 acres of manageable woodland

would be removed from production. The area in the northern part of the unit which has received the most use in the past was eliminated in this alternative.

Refer to the General Impacts section for impacts to other resources.

SOUTH EGAN RANGE

WILDERNESS: Since none of the WSA is being recommended suitable in this alternative, the impacts to wilderness values will be the same as in the No Wilderness Alternative.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Same as the No Wilderness Alternative.

FORESTRY: Same as the No Wilderness Alternative.

LANDS: No impacts.

Refer to the General Impacts section for the other resources.

GOSHUTE CANYON

WILDERNESS: The northern 60 percent of the unit is recommended suitable for wilderness in this alternative. The wilderness values would be protected in this portion. Refer to the All Wilderness section for Goshute Canyon for the beneficial impacts resulting from designation.

The southern portion (13,369 acres) recommended unsuitable contains about 12,000 acres with high wilderness value. It was excluded because of resource conflicts with proven mineral resources, and high to moderate mineral potentials. An area with moderate geothermal potential was also excluded. Refer to the No Wilderness section for Goshute Canyon for the adverse impacts resulting to this area as a result of nondesignation.

Approximately 10,000 acres of moderate mineral potential was left in the suitable recommendation. This could present a manageability concern if valid claims are located within this area prior to wilderness designation since mineral development could take place.

ENERGY AND MINERALS: Under the Preferred Alternative, all of the high mineral potential in the south end of Goshute Canyon WSA would be recommended unsuitable for designation. This includes

all areas adjacent to existing or known historical mining. Conflicts are therefore greatly reduced even though some moderate mineral potential (about 10,300 acres) would still be withdrawn from mineral entry, as would be about 800 acres with moderate geothermal potential.

RANGE: Same as for the All Wilderness Alternative.

WILDLIFE: The boundaries as drawn in this alternative would leave open to mineral entry the southern one-third of the Goshute Canyon WSA (see Map 5). This would leave vulnerable the deer summer, winter and spring range and blue grouse habitat in the south where the most severe impacts are expected, so that much of the benefit to wildlife offered by the All Wilderness Alternative would be foregone. Some benefit would still be realized, though, as deer spring range on the northeast is protected from intrusion. Deer yearlong range and blue grouse habitat in Paris Canyon on the west would similarly benefit from this alternative since this area stands to suffer more egregious intrusion than the northeast bench.

FORESTRY: Designation under this alternative would cause virtually no impact to the forest resource. Approximately 1,200 acres of manageable woodland would be removed from production.

RECREATION: Increased visitor use would occur in Goshute Cave, Goshute Creek and Paris Canyon. This would not be significant.

VISUAL RESOURCES: There would be significant beneficial impacts to visual resources by including Paris Canyon where, otherwise, mineral exploration would degrade the scenic quality to a different visual resource management class.

There would be significant adverse impacts to the southern portion of the unit, where mining activity would expand into the unsuitable area.

CONCLUSIONS

The Preferred Alternative would protect the wilderness values and the integrity of two WSAs (Goshute Canyon and Riordan's Well) against impairing activities certain to occur without designation. It would also recommend a third WSA, the Park Range, whose wilderness values are not threatened except perhaps in the unforeseeable future. Management of the three areas as wilderness can be successfully done with only some relatively minor cost for patrol and, in the case of Goshute Cave, special area management. Some minor loss of wildernss values could occur in the Goshute Canyon WSA as a result of mining activity in the suitable portion.

The exclusion of the South Egan Range would result in a significant loss of its wilderness values in the long-term. Wilderness values will also be lost in the southern portion of the Goshute Canyon WSA. Significant adverse and beneficial impacts would therefore result to the wilderness resource under this alternative.

Most conflicts between mineral and wilderness values would be resolved in this alternative. The southern third of the Goshute Canyon WSA, the western tip of the Riordan's Well WSA, and the entire South Egan Range WSA would be recommended unsuitable. This leaves only 11,530 acres of identified moderate mineral potential (in the Goshute Canyon and Riordan's Well WSAs) which would be withdrawn from mineral entry. This is, however, a significant adverse impact.

There are no conflicts with oil and gas potential. Some geothermal potential would be included in the suitable portion of the Park Range WSA. This would be a significant adverse impact, but is mitigated by the circumstances of the area in which the potential is located (see "Park Range" in the All Wilderness Alternative).

This alternative would not affect the national efforts to become energy self-sufficient and to stockpile critical and strategic minerals.

Some minor adverse impacts would occur to range under this alternative. Maintenance of a very few existing range facilities would become more costly, and in the future, some potential range improvements could be disallowed. These impacts would not endanger the continued operation of any ranching operation, and would be insignificant in the Egan RA as a whole.

Wildlife in the Preferred Alternative would receive both beneficial and adverse impacts. Wildlife habitat would be preserved in its natural, undisturbed condition on 106,598 acres. This would be a beneficial impact, but would not be significant since the protection would not result in significant preservation of habitat or conservation of animal populations. Acreage of habitat preserved from actual destruction would be minuscule when considered on a resource area-wide basis. Disturbances from which wildlife would be protected would be in most cases insufficient to displace populations or affect reproductive success, so that the thresholds established for wildlife would not be crossed The same is true for impacts in those portions that are recommended as unsuitable by this alternative, where impacts would generally be adverse due to human encroachment. All species would experience some increased harassment which, however, would be insufficient to significantly affect habitat or populations.

The forest resource will experience a loss of 8.2 percent of the manageable woodland in the Egan RA. This is an insignificant impact. Beneficial impacts would result in the added protection for special resources such as ponderosa and bristlecone pines, but these would be insignificant.

There would be negligible adverse impacts to the lands resource. Since the South Egan Range WSA is recommended unsuitable there would be no conflict with the proposed rail corridor through Cave Valley. Communication sites could be placed within the South Egan Range WSA. Communication sites for the White Pine Power Project could be placed in the southern end of the Cherry Creek Range in the unsuitable portion of the Goshute Canyon WSA. There are no private inholdings or split estate lands within the WSAs recommended suitable.

The recreation resource would experience some adverse impacts in the long-term as primitive and semi-primitive recreation opportunities are lost in those areas recommended unsuitable for designation. Beneficial impacts would result from preservation of the same sorts of opportunities in the suitable areas. Increases in use are expected, especially in the Goshute Canyon WSA. However, the increase will not be significant.

The scenic quality of the suitable portions of three WSAs would be protected from impairing activities under this alternative. This would be a significant benefit in the Paris Canyon portion of the Goshute Canyon WSA. Adverse impacts would occur to the portions of WSAs recommended unsuitable. These would be significant only in the south end of the Goshute Canyon WSA where mining would expand into the unsuitable portion.

Soil, water and air would benefit from prevention of disturbing activities in the suitable areas, and would be adversely impacted by disturbing activities in the unsuitable areas. These impacts would be insignificant.

Wild horses would benefit in the suitable areas from protection of their habitat and their wild and free roaming nature. These impacts would be insignificant.

Cultural resources would be beneficially and adversely affected in both the suitable and unsuitable areas (see General Impacts, Cultural Resources). These impacts would be insignificant.

Since this alternative attempts to achieve a balance between competing user groups while strengthening the manabeability of the areas recommended as suitable by minimizing and/or eliminating the majority of resource conflicts, it would probably find a broader base of community support than would the other alternatives. It is expected this support would follow established community response patterns. It is not expected that new community coalitions would evolve as a result of the implementation of this alternative.

The implementation of this alternative would not introduce new people into the area permanently in any significant numbers (greater than ten percent of the existing population) nor would designation cause residents to leave in any significant numbers.

Social impacts under this alternative would not be sigificant (see General Impacts, Social.)

Economic impacts would be similar to the All Wilderness Alternative except that the county revenue and gas leases that would be foregone would be less. The three counties involved (White Pine, Lincoln and Nye) would forego approximately $74,000. While these funds may be lost if the leases are allowed to expire, the amount is of no significance in terms of the individual county budgets. Economic impacts under this alternative would not be significant (see General Impacts, Economics).

WILDERNESS EMPHASIS ALTERNATIVE

PARK RANGE

WILDERNESS: The wilderness resource would be protected in this Wilderness Emphasis Alternative. All portions with the highest wilderness values are included in this recommendation. The northern foothill area, with a combination of manageability problems from the seeding, woodcutting, cherrystemmed routes and off-road vehicle access is the only portion excluded. Impacts would be beneficial to the wilderness resource, as discussed in the All Wilderness Alternative.

The primary manageability problem in this alternative would be identification of the wilderness boundary in the field. Approximately 13 miles of the northern boundary is along contour lines. The seeding and six cherrystemmed routes are removed from the northern end of the recommended area by drawing the boundary back to a contour line.

ENERGY AND MINERALS: Impacts under this alternative would be essentially the same as in the All Wilderness except that less acreage is involved.

RANGE: Same as All Wilderness Alternative.

WILDLIFE: Impacts under this alternative will be approximately the same as in the All Wilderness Alternative, except that most of the yearlong antelope range on the north end would not be included in the suitable portion. Some adverse but very minor impacts are expected to occur in the north as a result of casual road building/extension, forest product harvest, and low intensity mineral and energy exploration.

FORESTRY: Impacts to the forest resource would be similar to the All Wilderness Alternative, but fewer (6,700) acres of manageable woodland would be removed from production.

RIORDAN'S WELL

WILDERNESS: Impacts to the wilderness resource would be as discussed in the Preferred Alternative except that the northern foothill area is included and the WSA would be expanded slightly to the east on the northern end (see Map 3). The addition of this northern acreage (as compared to the Preferred Alternative) would slightly enhance solitude opportunities and manageability and would add more lower benchland to the WSA.

Some areas of easy off-road vehicle access and woodcutting activity are included in the suitable portion and may create manageability problems. Although most of the benchland along the southeast side is eliminated, the boundary is based on topographic features, and this may make management of the area as wilderness difficult.

ENERGY AND MINERALS: Same as the All Wilderness Alternative.

RANGE: Designation under this alternative would cause negligible impacts to the range resource. There are no proposed range improvements. The Dry Basin area in which one well was proposed would be excluded under this alternative.

Approval or denial of the potential vegetation conversion in the north of the unit will be decided at the time the conversion proposal is made. Chaining will not be allowed but a prescribed burn might be. The area with potential for vegetation conversion in the southeast part of the WSA was almost entirely eliminated under this alternative.

WILDLIFE: Same as the Preferred Alternative.

FORESTRY: Under this alternative there will be minor adverse impacts to the forest resource. Approximately 18,000 acres of manageable woodland would be removed from production. Ponderosa pine in the Heath Canyon area would receive management considerations as a supplemental value that it otherwise would not receive. This would be a beneficial impact.

SOUTH EGAN RANGE

WILDERNESS: Most of the wilderness values would be protected in this alternative. Some adverse impacts to wilderness values could occur even with designation. Access to the private land in the northern end would be allowed. Non-conforming developments could conceivably be developed on the adjacent private land. Several cherrystemmed routes which extend into the interior of the area and the use thereof would impact solitude and naturalness. Intensive grazing throughout the area will continue to impair solitude opportunities and perceptions of naturalness. The South Egan Range WSA would possibly be unmanageable in the north end, where there is high and moderate mineral potential.

Impacts to wilderness values would be beneficial, and similar to those in the All Wilderness Alternative.

ENERGY AND MINERALS: Under this alternative about 4,300 acres of moderate metallic mineral potential would be withdrawn from mineral entry.

RANGE: Designation under this alternative would cause negligible impacts to the range resource. There are no exisitng range improvements nor are there any proposed improvements within this recommended portion of the WSA. Most of the benchland that receives heavy livestock use has been eliminated in this alternative, thus alleviating the potential adverse impacts that might occur on these portions if, under wilderness management range projects were prohibited. Maintenance of an existing chaining and a seeding on the west side could proceed without the additional encumberances imposed by wilderness management. Adverse impacts use therefore greatly reduced from the All Wilderness Alternative.

WILDLIFE: In this alternatve, much of the deer winter range and the sage grouse habitat on the west side of the WSA would not receive the benefits of wilderness designation, and would instead receive minor adverse impacts from human intrusions (see No Wilderness Alternative). Some mountain lion, blue grouse, and key deer summer habitat on the north end would also fail to receive the protection of designation, although the acreage here is relatively small (see Maps 4 and 15). The lack of protection would be an adverse impact since manmade intrusions are expected to occur in these acres if found unsuitable for wilderness designation.

Beneficial impacts would result to key deer summer and winter range, blue grouse and sage grouse habitat and mountain lion summer range where these occur in the suitable portion. These impacts will only be of minor impact, however, since impacts without designation would not be severe enough to reduce or displace populations or reduce available habitat to any measurable degree.

FORESTRY: Designation under this alternative would be similar to the All Wilderness Alternative except that fewer (12,000) acres of manageable woodland would be removed from production.

GOSHUTE CANYON

WILDERNESS: Most of the wilderness resource would be protected in this alternative. In the long-term approximately 8,500 acres in the southern end, in the nonsuitable portion, would lose their wilderness character because of mining exploration and development. The nonsuitable benchland area along the north half of the eastern side would, in the long-term lose its wilderness values from an eventual loss of naturalness. Otherwise, impacts to wilderness are as discussed in the All Wilderness Alternative.

Manageability problems expected in the All Wilderness Alternative due to the mineralized area in the southern portion of the unit are largely resolved in this alternative. The area with high mineral potential and all of the area adjacent to the active mining is excluded in this recommendation. The difficulty of

field identification of much of the eastern boundary may be a manageability problem.

ENERGY AND MINERALS: The Wilderness Emphasis Alternative for the Goshute Canyon WSA would include none of the high mineral potential acreage, but would include most of the WSA acreage rated as having moderate potential. The exclusion of the high potential greatly reduces the conflicts of designation, for it is here that practically all of the mining interest is centered. While the inclusion of the moderate mineral potential is a significant adverse impact based solely on the amount of acreage included, it will have little or no impact on existing mines or existing claim areas, now or in the future. Income and employment should be unaffected, as should be the unique life-style of several individuals who have long held interest in the area. There will be some minor adverse impact resulting from exclusion of a portion of the WSA from exploratory work, but this will be minor.

RANGE: The impacts to range under this alternative are about the same as for the All Wilderness Alternative. Some of the east bench of the WSA which receives livestock use has been eliminated in this alternative, and this would reduce the adverse impacts to potential developments which would not be permitted in a wilderness.

WILDLIFE: Under this alternative protection would not be given to the portion where it is most necessary, namely in the south end where about 1,100 acres of deer spring range, 5,000 acres of deer summer range, and 1,000 acres of deer winter range would not be designated as wilderness and would be left open to mineral entry.

It is here that mineral exploration and extraction would occur, and this would affect the deer spring habitat and fawning success. Adverse impacts would therefore result from this alternative in this WSA.

Beneficial impacts would result in the suitable portion of the WSA, where designation would protect habitat from impairing activities. This is especially true for the western edge in Paris Canyon, where mining exploration and possible extraction activities would otherwise destroy some habitat and create visual and audible disturbances in adjacent areas.

FORESTRY: Designation under this alternative would cause virtually no impact to the forest resource. Approximately 2,000 acres of manageable woodland would be removed from production. The southern portion of the WSA nearest Cherry Creek has been removed in this alternative. No inconvenience to the local people should result since they could gather fuelwood and Christmas trees in their traditional areas.

RECREATION: Some increased use would occur in Goshute Canyon, Paris Canyon, and in Goshute Cave as a result of designation. This increase would not be significant. However, designation would necessitate a recreation area management plan for Goshute Cave, more as a result of the extra attention focused on the cave than due to any increased use caused by designation.

VISUAL RESOURCES: There would be significant beneficial impacts to visual resources by including Paris Canyon where, otherwise, mineral exploration would degrade the scenic quality to a different visual resource management class. There would be significant adverse impacts to the southern portion of the unit, where mining activity would expand into the unsuitable area.

CONCLUSIONS

The Wilderness Emphasis Alternative would result in significant beneficial impacts to the wilderness resource by preserving in a natural condition portions of three WSAs that otherwise would lose their wilderness character. A fourth WSA, The Park Range, would be designated as wilderness. Its designation as wilderness would be a very important addition to the National Wilderness Preservation System, even though designation is not essential to preserve its high wilderness values.

A total of about 25,000 acres of moderate mineral potential would be removed from mineral entry in this alternative. This is a significant adverse impact to this resource. Impacts to the national efforts to become energy self-sufficient and to stockpile strategic and critical minerals would be affected only to an extremely slight degree.

Impacts to the range resource and livestock industry would be insignificant in this alternative. There would be no prohibition of proposed range developments, and very little effect on potential developments which have not reached the proposal stage. Some slight inconvenience and added cost would result to individual ranchers who perform maintenance on facilities within or surrounded by wilderness, but this adverse impact would be very minor, and would be insignificant to affected individuals as well as within the Egan RA.

Wildlife in this alternative would benefit from the preservation of undisturbed habitat on acres. This impact would not be significant for any species since it would not prevent the significant decline of populations or habitat condition in any case. Some adverse impact would result to wildlife due to prohibitions of certain types of intensive range development, but this would be insignificant since only one such project is proposed, and many other equally suitable areas are available for yet-to-be proposed developments. Moreover, the beneficial impacts of wilderness fire management would offset most such adverse impacts. All impacts to wildlife under this alternative would be insignificant.

Under the Wilderness Emphasis Alternative, 38,700 acres of manageable woodland would be removed from consumptive uses. This is 8.7 percent of the manageable woodland in the Egan RA. This would be an adverse but insignificant impact.

Minor adverse impacts would occur to the lands and realty resource under this alternative, primarily as a result of the inclusion of several good potential communication sites in the suitable portions of the South Egan Range and Goshute Canyon WSAs. Other sites are available to offset these impacts. This alternative would resolve the conflict with the White Pine Power Project planning corridor in Cave Valley.

Impacts to recreation would be insignificant. Primitive, backcountry values would be preserved over the long-term in portions of the suitable areas. The same sorts of values would be lost over the long-term in portions of the areas recommended unsuitable. Designation would result in some increase in use by wilderness users. Projected increases in use are not expected to either increase recreation use by a significant amount or cause serious degradation to the resource base or to the user's experience.

Visual resources would benefit under this alternative from the protection afforded by wilderness designation. This would be a significant benefit in the Paris Canyon portion of the Goshute Canyon WSA. A significant adverse impact would result in the south end of Goshute Canyon as mining expands into the unsuitable portion.

Cultural resources would experience both adverse and beneficial impacts as discussed in the "General Impacts" section of this chapter. Impacts would not be significant.

There would be virtually no impact to wild horses under this alternative.

Impacts to soil, water, and air would be beneficial, especially in the Paris Canyon portion of the Goshute Canyon WSA. These impacts will not be significant.

There would be no significant social impacts in this alternative. Impacts would be nearly the same as those listed in the All Wilderness Alternative and under the General Impacts section in this chapter.

Economic impacts would be similar to the All Wilderness Alternative except that the county revenue from oil and gas leases that would be foregone would be less. The three counties involved (White Pine, Lincoln, and Nye) would forego approximately $111,000. While these funds may be lost if the leases are allowed to expire, the amount is of no significance in terms of the individual county budgets. Economic impacts under this alternative would not be significant (see General Impacts, Economics).

WILDERNESS DE-EMPHASIS ALTERNATIVE

PARK RANGE

WILDERNESS: Benefits to wilderness under the Wilderness De-emphasis Alternative would not be significant even in the long-term.

This is so because wilderness values within the area are expected to be retained in the long-term even without designation. Impacts to wilderness values are as discussed in the Wilderness Emphasis Alternative with the additional exclusion of a small foothill portion on the west/side and about 2,500 acres on the southeast side. The exclusion of these portions will have a minor impact on solitude oportunities and diversity of natural environments within the WSA.

ENERGY AND MINERALS: Impacts under this alternative would be similar to those in the All Wilderness Alternative except that there would be less area recommended suitable that has potential for geothermal.

RANGE: Same as for the Wilderness Emphasis Alternative.

WILDLIFE: Some degradation of antelope yearlong range on the north end of the Park Range WSA would occur in this alternative as a result of casual road building/extension, forest product harvest, and low intensity mineral and energy exploration. This would be a very minor impact and would not result in a change in numbers of animals . Likewise, the beneficial impacts of designating a portion of the WSA as wilderness, thus affording protection to several species, are minor since there is little need for protection.

FORESTRY: About 5,600 acres of manageable woodland would be included in the suitable portion of the WSA, and withdrawn from consumptive uses. This would be an adverse impact.

RIORDAN'S WELL

WILDERNESS: Wilderness values would be preserved in this alternative. The core of the high country is recommended suitable. The northern and southeast benchland are eliminated because of manageability problems and lower quality wilderness, leaving a highly manageable unit. Part of this area removed is on the south side of Heath Canyon here wilderness values are high. Removal of these portions from the area will impact solitude opportunities but the opportunities will remain outstanding.

ENERGY AND MINERALS: Impacts under this alternative would be minimal. The area identified as having moderate mineral potential was excluded from the suitable portion. The remainder of the area has low mineral potential.

RANGE: Designation under this alternative would cause negligible impacts to the range resource. There are no proposed range improvements, and only a small area with potential for vegetation conversion remains in this alternative.

WILDLIFE: Impacts under this alternative would be similar to those in the Preferred Alternative, except that even less bench area is included in the suitable portion, thus limiting the protection from disturbances afforded gray fox and ringtail; and less of the Heath Canyon area is recommended as suitable, thus reducing the protection afforded wildlife in this area where mineral exploration is most likely. A substantial amount of deer winter range acres would still be protected from human intrusion, although this is a minimal benefit.

SOUTH EGAN RANGE

WILDERNESS: Under the Wilderness De-emphasis Alternative, Wilderness values would be preserved in the high country in the northern half of the South Egan Range WSA. Benefits to wilderness would be significant over the long-term. Wilderness values would eventually be lost on these excluded portions.

ENERGY AND MINERALS: Designation in this alternative would result in the same adverse impacts to energy and minerals as in the Wilderness Emphasis Alternative. About 4,300 acres of moderate mineral potential would be withdrawn from mineral entry.

RANGE: Designation under this alternative would have very little impact on the range resource. The boundary has been reduced to the point where virtually no foreseeable conflicts exist.

WILDLIFE: Impacts to wildlife under this alternative would be approximately the same as in the No Wilderness Alternative except that some key deer summer range, blue grouse habitat, and mountain lion summer range would receive protection from most surface disturbances. Because of the location of these, however, they are the ones least likely to experience degradation, so that the benefit is only nominal.

FORESTRY: Designation under this alternative would cause negligible impacts to the forest resource. Only about 2,000 acres of manageable woodland are included. There are numerous other areas in the unsuitable portion from which the residents of Lund, Ely and Preston can harvest Christmas trees and fuelwood.

GOSHUTE CANYON

WILDERNESS: Same as for the No Wilderness Alternative.
ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Same as for the No Wilderness Alternative.

FORESTRY: Same as for the No Wilderness Alternative.

RECREATION: There would be loss of primitive backcountry recreation opportunities over the long-term in this alternative. Losses would be substantial in the WSA but insignificant in the Egan RA. Loss of opportunities for recreation would affect, to some degree, traditional and family-oriented activities centered around hunting and camping.

VISUAL RESOURCES: Significant adverse impacts would result to visual resources as mineral exploration and extraction occur on the south end and in Paris Canyon. Impacts will principally result from road building, secondarily from earth displacement.

SOIL AND WATER: Same as for the No Wilderness Alternative.

CONCLUSIONS

The Wilderness De-emphasis Alternative would provide significant beneficial impacts to the wilderness resource in two of the four WSAs. Portions of the Riordan's Well and South Egan Range WSAs are recommended suitable and impacts to the wilderness resource would be significant in these WSAs.

In the Park Range, wilderness values are expected to remain over the long-term even without designation. In this alternative, none of the Goshute Canyon WSA or the Goshute Canyon Natural Area is recommended suitable, and significant adverse impacts would result to the wilderness resource.

Wilderness values would be lost over the long-term in excluded portions of three of the WSAs.

About 4,300 acres of moderate mineral potential would be withdrawn from mineral entry in this alternative. This is an adverse but insignificant impact. About 11,600 acres of moderate geothermal potential would be withdrawn, but because of extenuating circumstances, this is an insignificant impact.

Very few impacts would occur to range and livestock under this alternative. No proposed projects would be disallowed, and most

areas where grazing occurs and potential for developments exists have been excluded from the suitable portions. Only three range projects would be surrounded by suitable acreage, resulting in some inconsequential cost increases for project maintenance. Therefore, adverse impacts will be insignificant and very few.

Wildlife habitat on 80,965 acres would be kept in its natural, undisturbed condition in this alternative. This does not include most of the specific habitat identified on Maps 15 through 18. Because of the much reduced boundaries for the South Egan Range WSA and the unsuitable recommendation for all of the Goshute Canyon WSA, only small areas of habitat would be afforded protection from surface disturbances. The benefits of protection would be insignificant (see All Wilderness) and are made even more so by the fact that the suitable areas in this alternative are those least likely to experience disturbances without designation.

Adverse impacts as described in the No Wilderness Alternative would occur to wildlife habitat on the nonsuitable acreages, including all of the Goshute Canyon WSA and most of the accessible portions of the South Egan Range WSA. These would be insignificant impacts.

About 15,600 acres of manageable woodland would be removed from consumptive uses in this alternative.

This is 3.5 percent of the manageable woodland in the Egan RA, and would be an adverse but insignificant impact.

There would be no impacts to lands and realty under this alternative.

Opportunities for primitive, backcountry recreation would benefit from protection in the suitable portions, and would be adversely affected in the unsuitable portions as development invades and changes the primitive character of the areas. The Goshute Canyon WSA will experience especially severe losses as mining exploration and extraction occur in several portions. Impacts to recreation would be insignificant.

The visual resources of the suitable portions would benefit from protection from human developments. In no case, however, would this be significant, since designation would not prevent degradation of visual resources sufficient to cause a change of visual resource management class. A significant adverse impact would occur to the visual resources of the Goshute Canyon WSA, and adverse but insignificant impacts would accrue in the other unsuitable acreages.

Cultural resources would experience adverse and beneficial impacts in both the suitable and unsuitable areas. These would be insignificant impacts.

There would be no measurable impacts to wild horses as a result of this alternative.

Soil and water resources would experience adverse impacts in the unsuitable acreages due to terrain disturbances, in particular mineral exporation and extraction. The main area affected would be the Goshute Canyon WSA. Beneficial impacts would accrue to the soil and water resources in the suitable portions due to the prevention of such impairing activities. All impacts to soil and water would be insignificant.

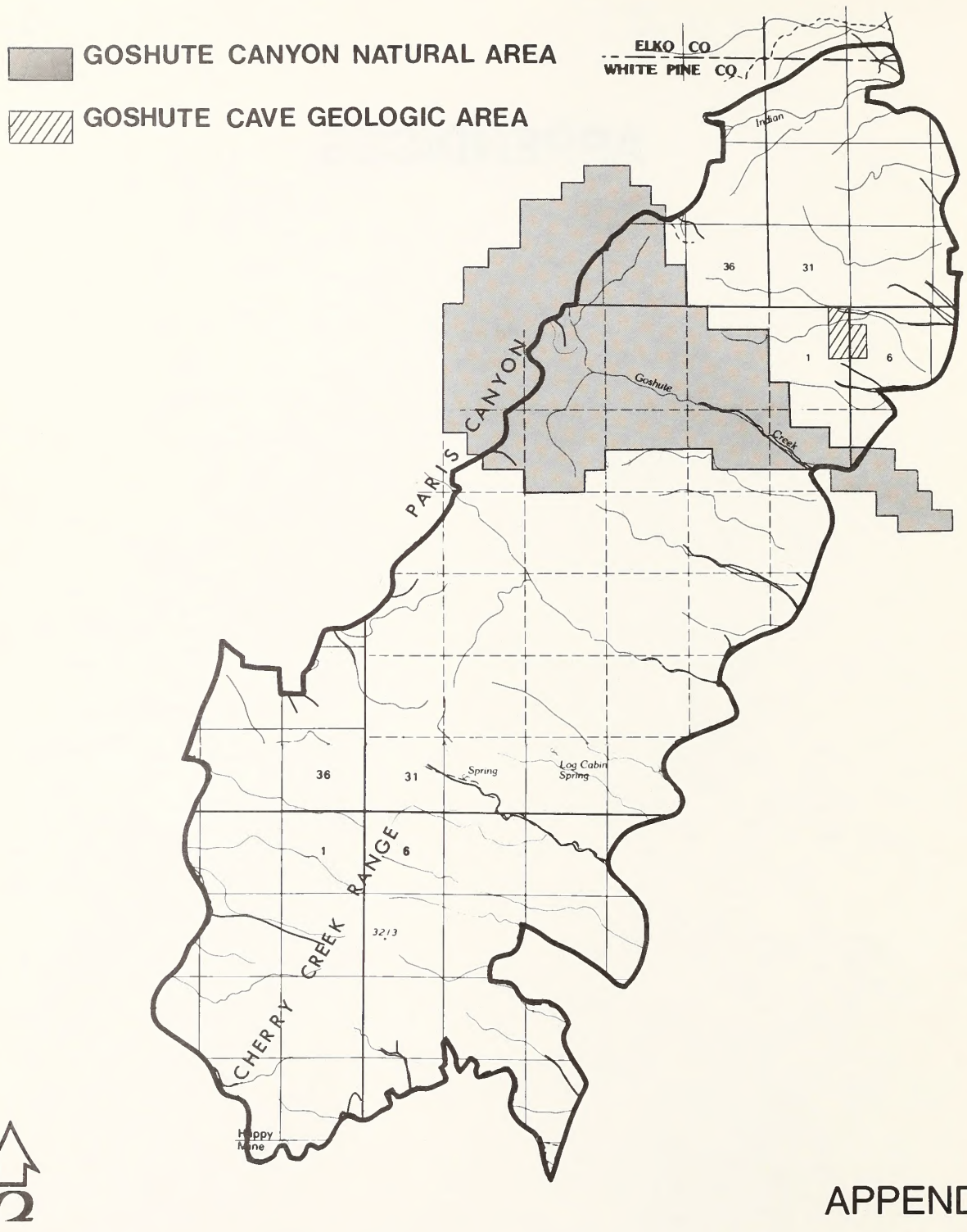
Over a prolonged period of time, wilderness characteristics and values may be irretrievably lost on the nonsuitable acres. This would be considered a significant adverse impact by those who endorse wilderness designation.

The implementation of this alternative would probably be favorably received by those area residents who withheld support for the Wilderness Study Program because of their concern about potential mineral deposits within the study area.

There would be no significant social impacts. (See General Impacts, Social.)

Economic impacts would be similar to the All Wilderness Alternative except that the county revenue from oil and gas leases that would be foregone would be less. The three counties involved (White Pine, Lincoln, and Nye) would forego a total of approximately $27,000. While these funds may be lost if the leases are allowed to expire, the amount is of no significance in terms of the individual county budgets. Economic impacts under this alternative would not be significant (see General Impacts, Economics).

APPENDICES



APPENDIX A

GOSHUTE CANYON
NV-040-015

APPENDIX B

Goshute Canyon Natural Area

Assessment of Wilderness Characteristics:

After an intensive inventory, it has been determined that the Goshute Canyon Natural Area does not by itself possess wilderness characteristics. The basis for this determination is as follows:

Area Description and Size - This Natural Area consists of a narrow, wooded creek canyon and an upper basin containing sagebrush and other low-lying shrubs. The total size of the area is 7,650 acres; however, a road divides the Natural Area into an eastern and western portion.

Naturalness - The eastern portion of the unit (N1) contains 4,400 acres that appear to be in a substantially natural condition. The western portion is further divided into two apparently natural portions: (N2 (1,580 acres) and N3 (740 acres).

Outstanding Opportunities -

Solitude: There are no outstanding opportunities for solitude in the designated Natural Area. The sizes of the natural portions of the designated Natural Area serve to restrict opportunities for solitude. Additionally, neither the vegetative nor the topographic screening is sufficient to provide outstanding opportunities for solitude.

Primitive and Unconfined Recreation: Neither the diversity nor the quality of opportunities for primitive and unconfined recreation is outstanding in the designated Natural Area.

Supplemental Values - Scenic, archaeological, and scientific values (the presence of an endangered fish) is present in the unit.

Because this area does not meet either the naturalness or solitude or primitive recreation criterion set by the Wilderness Act for wilderness qualification, this Natural Area does not by itself qualify for wilderness designation.

Description of Status of Contiguous Roadless Lands:

The lands contiguous to the designated Natural Area make up, along with the Natural Area, wilderness review area NV-040-015, 195,100 acres of which are currently in the intensive inventory phase of the wilderness review process. Much of this area is highly intruded with undocumented routes and imprints of man's work associated with ranching and mining activities. A 28,600 acre portion of the unit, NV-040-015A, was dropped from further wilderness consideration during the initial inventory. It is, however, part of the roadless land contiguous to the Natural Area. The total area of the contiguous roadless lands is 223,700 acres. About 6,700 of these acres are privately owned, with the rest under management by the Bureau of Land Management. At this time, the Natural Area and its contiguous lands that are being inventoried remain under the interim management protection provided for all lands under wilderness review.

Documentation of the Reason for Deferral of the Recommendation on Wilderness Suitability:

A special, separate intensive inventory was conducted on the designated Natural Area, and the conclusion drawn by this inventory was that the Natural Area does not qualify by itself for wilderness. There is a possibility, however, that the Natural Area might possess wilderness characteristics when considered together with its contiguous roadless lands. These contiguous roadless lands are currently under intensive wilderness inventory. Until this inventory is complete, a recommendation on the Goshute Canyon Natural Area will be deferred.

Schedule for Completion Date of the Study on Contiguous Lands:

The schedule for completion of the intensive inventory of the contiguous lands is the same as for all intensive inventory units in Nevada. Final State Director decisions will be made on September 30, 1980. If the unit is found to qualify for wilderness study, a suitability recommendation on the Goshute Canyon Natural Area and its contiguous roadless lands will be made following the completion of the Resource Management Plan for the Egan Resource Area, scheduled for June 30, 1985. An environmental impact statement is also scheduled for completion in 1985.

If the contiguous lands are found to lack wilderness characteristics, a final report will be submitted on the inventoried area by January 30, 1981. If protests or appeals are registered on the September 30 decision, the final report will be submitted three months after the protest or appeal is resolved.

A Geological Survey - Bureau of Mines mineral survey should be scheduled for the Natural Area and its contiguous lands in 1983.

BACKGROUND INFORMATION

I. Statement of Previous Designation:

Goshute Canyon was designated a Natural Area on December 22, 1970. It was thereby segregated from all forms of appropriation under the public land laws, except the Recreation and Public Purposes Act and the material sale and mineral leasing laws. It has also been segregated from appropriation under the general mining laws. The purpose of this designation is to protect the Utah Cutthroat Trout, a fish which inhabits Goshute Creek and which is on the State's endangered species list. (See Federal Register, 22 December, 1970, p. 19367).

II. Significant Resource Data:

A. The Utah Cutthroat Trout, listed by the State of Nevada as an endangered species, inhabits Goshute Creek, located within the Goshute Canyon Natural Area.

B. Two minor archaeological finds have been located in and collected from the Natural Area.

III. Description of the Report Area:

The Goshute Canyon Natural Area and its contiguous roadless lands are located in the central portion of the Cherry Creek Range. The Natural Area consists of a high meadow bowl and a creek canyon. Much of the contiguous roadless land south of the Natural Area consists of rugged mountains, while the contiguous roadless land to the north is composed of less rugged, more rolling mountains, plus a significant portion of valley floor and benchlands.

Vegetation in the Natural Area includes some pinyon pine, juniper, and aspen, as well as conifers, cottonwoods and willows in Goshute Canyon, but the dominant vegetative form is sagebrush. South of the Natural Area, tree cover is thicker, and in some areas, in particular in several draws, is very dense. A forest fire has recently burned a portion of the unit south of the Natural Area. The mountains north of the Natural Area support only scattered stands of pinyon, juniper and white fir, and the dominant vegetative forms are low brush forbs. The valley portions are entirely treeless.

The Goshute Canyon Natural Area is located in the Ely District's Cherry Creek Planning Unit which is over 2,000,000 acres in size. Approximately 196 persons were directly and indirectly employed in the recreation industry in the Planning Unit around 1972, but only about 21 of these persons were dependent on recreation activities in Natural Resource Lands.

A survey of residents of the Cherry Creek Planning Unit discovered that most residents utilized public lands for recreation purposes, but are opposed to preservation of recreation values at the expense of jobs and income. Most also want development of National Resource Lands. Certain specific groups such as the White Pine Sportsmen, the Nevada Outdoor Recreation Association, and the Bristlecone Pine Riders generally oppose development of these lands.

WILDERNESS INVENTORY

An accelerated intensive wilderness inventory was conducted on the designated Natural Area. A 30-day public comment period on the results of the inventory was announced in the Federal Register and held from January 1 to January 30, 1980. An open house was held in Ely on January 14, 1980.

Only two comments were received during the public review period. One comment noted intrusions and a lack of solitude opportunities while the other supported wilderness designation.

GLOSSARY

ABBREVIATIONS

AUM - Animal Unit Month
BLM - Bureau of Land Management
EIS - Environmental Impact Statement
FLPMA - Federal Land Policy and Management Act of 1976
RMP - Resource Management Plan
O/G - Oil and Gas
ORV - Off-Road Vehicle
RA - Resource Area

TERMS

ACRE-FOOT: The volume (as of irrigation water) that would cover one acre to a depth of one foot. This equals 325,851 gallons or 43,560 cu. ft.

ALLOTMENT: An area allocated for the use of the livestock of one or more qualified grazing permittees including prescribed numbers and kinds of livestock under one plan of management.

ANIMAL UNIT MONTH (AUM): The amount of forage necessary for the sustenance of one cow or its equivalent for a period of one month.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC): Areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage in important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.

BENCH: A series of confluent alluvial fans along the base of a mountain range.

CHAINING: A method of vegetation manipulation consisting of dragging an anchor chain through vegetation to break off or uproot shrubs or trees.

CHERRYSTEM: A boundary configuration in which the boundary of a wilderness study area or proposed wilderness is drawn around a dead-end road or other linear feature so as to exclude that road or feature from the wilderness study area or proposed wilderness.

CHERRYSTEM ROAD: A dead-end road excluded from wilderness study by means of a cherrystem.

CULTURAL RESOURCE INVENTORY CLASSES:

Class I - library, archival, and literature research with consultation to identify known cultural resources.
Class II - a field inventory of an area, systematically designed to provide a predictive model of the nature and distribution of the cultural resources in the area.
Class III - an intensive field search of surface-evident cultural resources for an entire area.

CULTURAL RESOURCES: Those fragile and nonrenewable remains of human activity, occupation, or endeavor, reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture and natural features, that were of importance in human events. These resources consist of (1) physical remains, (2) areas where significant human events occurred-- even though evidence of the event may no longer remain and (3) the environment immediately surrounding the resource.

DISCOVERY: A term used in connection with mining claims. As stated in a legal ruling which has been upheld in many later decisions, it is "where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine..."

ECOSYSTEM: A complex self-sustaining natural system which includes living and non-living components of the environment and the interactions that bind them together. Its functioning involves the circulation of matter and energy between organisms and their environment.

ENDANGERED SPECIES: Any species in danger of extinction throughout all or a significant portion of its range, as identified in accordance with the Endangered Species Act of 1973, as amended.

EROSION: Detachment and movement of soil or rock fragments by water, wind, ice, or gravity.

FLPMA: The Federal Land Policy and Management Act of 1976 (Public Law 94-579, 90 Stat. 2743, 43 USC 1701).

FORAGE: All browse and herbaceous foods that are available to grazing animals. It may be grazed or harvested for feeding.

HABITAT: All elements of an organism's environment needed to complete its life cycle through reproduction including, but not limited to food, cover, water and living space in the amounts, qualities and locations which the organism requires to complete its life cycle.

HABITAT MANAGEMENT PLAN: An officially approved plan for a specific geographic area which identifies wildlife habitat and related objectives, establishes the sequence of actions for achieving objectives and outlines procedures for evaluating accomplishments.

HUNTER DAY: One hunter spending 12 hours hunting on BLM land, or 12 hunters spending 1 hour each, or any combination of these.

INHOLDING: State or privately owned property surrounded by the WSA.

KEY RANGE: Range on which a species depends for survival; there are no alternative ranges available.

LEASABLE MINERALS: Those minerals subject to lease by the Federal Government. Includes oil and gas, coal, geothermal, phosphate, sodium, potash and oil shale.

LITHIC: Pertaining to stone.

LOCATABLE MINERALS: Minerals subject to disposal and development through the Mining Law of 1872 (as amended). Generally includes metallic minerals such as gold and silver and other materials not subject to lease or sale.

LONG-TERM: Five years or more from the implementation of the Congressionally selected alternative.

MANAGEMENT SITUATION ANALYSIS: This is the second major step leading to the preparation of a resource management plan. It's a document which provides the manager with a brief analytical evaluation of the existing situation with a discussion of future management opportunities.

MANAGEABLE WOODLAND: Any woodland area of 10% or greater crown cover located on a slope of 30% or less which has existing or potential feasible access.

MINERAL ENTRY: is claim location on Federal lands open to mining for the purpose of exploration or exploitation of minerals located there.

MINERALS POTENTIALS:

High Potential - High potential is assigned to areas that contain or are extensions of active or inactive properties which show evidence of ore, mineralization and favorable geologic characteristics. All producing properties fall within this category.

Good Potential - Good potential is assigned to areas with several geologic characteristics indicative of mineralization, relatively lower economic value of past production and similar environments out at greater distances from known ore and mineral occurrences. This category may include areas adjacent to known districts or in mineral belts.

Speculative Potential - Speculative potential is assigned to areas having some favorable geologic parameters and inferences based on geologic models and analogies to known favorable environments. Increasing depth of alluvial cover over areas of potential deposists is also a consideration in this category, except in the case of oil and gas potential.

Low Potential - Low potential is assigned to areas that are outside any construed favorable geologic and mineral trend projections or are buried by over 1,500 meters of alluvium (except oil and gas).

MINING DISTRICT - A section of country usually designated by name and described or understood as being confined within certain natural boundaries, in which gold or silver or other minerals may be found in paying quantities.

MULTIPLE USE: Balanced management of the various surface and subsurface resources, without permanent impairment of the productivity of the land that will best meet present and future needs.

NATIONAL REGISTER OF HISTORIC PLACES: The official list implemented by the Historic Preservation Act of 1966, of the Nation's cultural resources worthy of preservation.

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." (From Section 2(c), Wilderness Act).

OFF-ROAD VEHICLE (ORV): Any motorized vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other terrain.

OUTSTANDING: 1. standing out among others of its kind; conspicuous; prominent. 2. superior to others of its kind; distinguished; excellent.

PATENTED MINING CLAIM: A claim in which title has passed from the Federal Government to the mining claimant under the mining laws.

PERMITTEE: One who holds a permit to graze livestock on public land.

PINYON AND JUNIPER ENCROACHMENT: The invasion of pinyon pine and juniper trees into a dominant brushland area where pinyon pine and juniper have not previously occurred or in an area where the dominant brushland is essential to the sustenance of wildlife species.

POPULATION: All of the individuals belonging to a single species occupying a particular area or space.

POST-FLPMA: The period of time after the enactment of the Federal Land Policy and Management Act (October 21, 1976).

PRE-FLPMA: On or before October 21, 1976.

PRELIMINARY WILDERNESS RECOMMENDATION: Refers to a wilderness recommendation at any stage prior to the time when the Secretary of the Interior reports his recommendation to the President. Until the Secretary acts, the recommendation is "preliminary" because it is subject to change during administrative review.

PRESCRIBED BURNING: Controlled application of fire to wildland fuels in either their natural or modified state, under such conditions of weather, fuel, moisture, etc., as to allow the fire to be confined to a predetermined area while producing the intensity of heat and rate of spread required to achieve certain planned objectives of silviculture, wildlife management, grazing, fire hazard reduction and insect and disease control.

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

PUBLIC LANDS: Lands administered by the Secretary of the Interior through the Bureau of Land Management.

RANGE CONDITION: The present state of vegetation of a range site in relation to the climax plant community for that site. It is an expression of the relative degree to which the kinds, proportions and amounts of plants in the present plant community resemble that of the climax plant community for the site. Range condition is basically an ecological rating of the plant community. Four range condition classes are used to express the degree to which the composition of the present plant community reflects that of the climax: Excellent (76-100%), Good (51-75%), Fair (26-50%), Poor (0-25%).

RANGE IMPROVEMENT: Any activity on or relating to rangelands designed to improve production of forage, change vegetation composition, control pattern of use, provide water, stabilize soil and water conditions and enhance habitat for livestock, fish, wildlife and wild horses and burros.

RAPTOR: A bird of prey.

RECREATION VISITOR DAY: A 12-hour period spent in recreation activities by one or more individuals in a public land area. The time may be spent, for example, by one individual for 12 hours or 3 individuals for 4 hours each. This unit helps to calculate recreation use.

RIPARIAN: Situated on or pertaining to the bank of a river, stream, or other body of water. Normally used to refer to plants of all types that grow along streams or around springs.

RESOURCE MANAGEMENT PLAN (RMP): The basic decision document of BLM's resource management planning process, usd to establish allocation and coordination among uses for the various resources within a Resource Area. An RMP is a "land-use plan" prescribed by Section 202 of the Federal Land Policy and Management Act. The RMP regulations appear at 43 CFR 1601.

ROAD: A vehicle route which has been improved and maintained by mechanical means to ensure relatively regular and continuous use.

ROADLESS: For the purpose of the wilderness review program, this refers to the absence of roads which have been improved and maintained by mechanical means to ensure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road.

SCOPING SESSION: An early and open process for determining the significant issues related to a proposed action which are to be addressed in the environment impact statement.

SHORT-TERM: The five-year period following the implementation of the Congressionally selected alternative.

SIGNIFICANT IMPACT: A meaningful standard to which an action may impact the environment. The impact may be beneficial, adverse, direct, or indirect.

SOLITUDE: 1. The state of being alone or remote from habitations; isolation. 2. a lonely, unfrequented, or secluded place.

STANDARD METROPOLITAN STATISTICAL AREA (SMSA): A population center which has a population of 100,000 or greater. An SMSA is a county which contains at least one city of 50,000 inhabitants or more plus as many adjacent counties as are metropolitan in character and are socially integrated with that central city or cities.

SUITABLE FOR PRESERVATION AS WILDERNESS: Refers to a recommendation that certain Federal lands satisfy the definition of wilderness in the Wilderness Act and have been found appropriate for designation as wilderness on the basis of an analysis of the existing and potential uses of the land.

SUPPLEMENTAL VALUES: Values that may be present in an area under consideration for wilderness, such as ecological, geological, or other features or scientific, educational, scenic, or historical value. They are not required for wilderness designation, but their presence will enhance an area's wilderness quality.

THREATENED SPECIES: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

VALID MINING CLAIM: A mining claim on which a discovery has been made. (See "discovery.")

VEGETATION MANIPULATION: Alteration of vegetation by fire, mechanical, chemical, or biological means to meet management objective.

WATERSHED: A total area of land above a given point on a waterway that contributes runoff water to the flow at that point.

WAY: A vehicle route which has not been improved and maintained by mechanical means to ensure relatively regular and continuous use.

WILDERNESS: An uncultivated, uninhabited, and usually roadless area set aside for preservation of natural conditions. According to Section 2(c) of the Wilderness Act of 1964.

> A wilderness, in contrast with those areas where man and his own works dominate the landscape; is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation;
>
> (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

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

WILDERNESS CHARACTERISTICS: Key characteristics of a wilderness listed in Section 2(c) of the Wilderness Act of 1964 and used by BLM in its wilderness inventory. These characteristics include size, naturalness, outstanding opportunities for solitude, outstanding opportunities for primitive or unconfined recreation and supplemental values.

WILDERNESS MANAGEMENT: The management of lands which have been designated by Act of Congress as wilderness areas.

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

WILDERNESS STUDY AREA (WSA): A roadless area or island that has been inventoried and found to have wilderness characteristics as described in the Wilderness Act of 1964.

WILDERNESS STUDY CRITERIA: The criteria and quality standards developed in the Wilderness Study Policy to guide planning efforts in the wilderness EISs.

WILDLIFE HABITAT IMPROVEMENT: Any procedure or activity designed to maintain or improve aquatic or terrestrial habitat, including, but not limited to seeding and other methods of vegetative management, water development, fence construction and/or modification and installation of in-stream structures.

WITHDRAWAL: Removal, or withholding, of public lands by statute, or Secretarial order, from operation of some or all of the public land laws ("surface", mining and/or mineral leasing laws).

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