APPENDIX Q
AREAS OF CRITICAL ENVIRONMENTAL CONCERN

APPENDIX Q
AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACECs)

The ACEC designation is an administrative designation used by the BLM that is accomplished through the land use planning process. It is unique to the BLM in that no other agency uses this form of designation. The Federal Land Policy and Management Act states that the BLM will give priority to the designation and protection of ACECs in the development and revision of land use plans.

BLM regulations (43 Code of Federal Regulations part 1610) define an ACEC as an area "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 to 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." Private lands and lands administered by other agencies are not included in the boundaries of ACECs. ACECs differ from other special management designations such as wilderness study areas in that designation by itself does not automatically prohibit or restrict other uses in the area (with the exception that a mining plan of operation is required for any proposed mining activity within a designated ACEC). In order to be designated, special management beyond standard provisions established by the plan must be required to protect the relevant and important values.

RELEVANCE AND IMPORTANCE CRITERIA

Relevance

An area meets the relevance criteria if it contains one or more of the following:

- A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to American Indians).

- A fish and wildlife resource (including but not limited to habitat for threatened, endangered, or sensitive species, or habitat essential for maintaining species diversity).

- A natural process or system (including but not limited to threatened, endangered, or sensitive plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features).

- Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the RMP process that it has become part of a natural process.

Importance

The value, resource, system, process, or hazard described in the relevance section must have substantial significance and values to meet the importance criteria. This generally means that the value, resource, system, process, or hazard is characterized by one or more of the following:

- Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource.

- Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.

- Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of Federal Land Policy and Management Act.

- Has qualities that warrant highlighting in order to satisfy public or management concerns about safety and public welfare.

- Poses a substantial threat to human life and safety or to property.

SUMMARY

A total of 127 nominations, including 3 existing ACECs, were considered as part of the Ely land use planning process. Several of these nominations pertained to the same areas and, therefore, were combined for a total of 100 nominated areas. The work of an internal review group is summarized in **Table Q-1**. This table displays the nominated areas and explains why 77 of these areas met relevance and importance. **Table 2.5-22** summarizes how relevant and important resources within these areas are protected by the different alternatives and if ACEC designation is needed.

The 3 existing and 20 new potential ACECs are described in this appendix and shown on **Maps Q-1** and **Q-2**. Legal descriptions for these 23 potential ACECs are presented in **Table Q-2**.

Table Q-1
Determination of Relevance and Importance of Nominated ACECs

Nomination	Acres/Miles	Primary Resource Values	Met Relevance	Met Importance
ACECs should be established to protect the largest old growth of pinyon-juniper forests and their habitats	Unknown	Old growth pinyon-juniper	No	No
Alamo Pictograph Site (Pahranagat Rock Art)	480 acres	Rock art	Yes	Yes
All remaining sage grouse and pygmy rabbit habitats	Approximately 5.0 million acres	Sage grouse and pygmy rabbit habitats	Yes	Yes
All riparian areas should be inventoried for their potential or historic status as fisheries. They should have special management to achieve and maintain this potential.	Unknown	Riparian habitats	No	No
Andy's Mine Trilobites	100 acres	Trilobites	Yes	Yes
Ash Springs (Pahranagat Rock Art)	160 acres	Rock art	Yes	Yes
Baker Archaeological Site	80 acres	Freemont habitation site	Yes	Yes
Baking Powder Flat	11,326 acres	*Euphilotes bernardino minuta* (butterfly)	Yes	Yes
Beaver Dam Slope ACEC	36,900 acres	Critical desert tortoise habitat	Yes	Yes
Bennett Springs	520 acres	Earliest settlement in district. Lost 49ers Trail passed through the area.	Yes	Yes
Black Canyon (Pahranagat Rock Art)	400 acres	Rock art	Yes	Yes
Blue Mass Scenic Area	950 acres	Scenic pastoral setting with rock art	Yes	Yes
Bristol Wells	400 acres	Historic mining town, cemetery, and charcoal kilns	Yes	Yes
Carbonari sites	21,279 acres	Historic charcoal production sites	Yes	Yes
Cave Valley Cave Geologic Area	40 acres	Cave resources	Yes	Yes
Chisolm Mine Trilobite Area	160 acres	Trilobite area	Yes	Yes
Christmas Wash (Snake Range Rock Art)	1,920 acres	Rock art	Yes	Yes
Condor Canyon	6,900 acres	Riparian habitat and scenic canyon	Yes	Yes
"The Crack"	5 miles	Earthquake upheaval that snakes over floor of Dry Lake Valley	No	No
Crystal Wash (Pahranagat Rock Art)	1,440 acres	Rock art	Yes	Yes
Currant/Lund Route	35 miles	Historic emigrant and teamster road with remnants	No	No
Delamar	4,160 acres	Historic mining town and cemetery	Yes	Yes
Delamar Mountain Range	90,000 acres	Aid in management of desert bighorn sheep	No	No
Evergreen Flat (Pahranagat Rock Art)	960 acres	Rock art	Yes	Yes
Flat Spring	42 acres	Cold spring system for the *Pyrgulopsis cruciglans* (snail)	Yes	Yes
Frenchy Flat (Pahranagat Rock Art)	220 acres	Rock art	Yes	Yes
Garnet Hill	1,210 acres	Rock hounding area	Yes	Yes
Garrison Archaeological Site	160 acres	Freemont village site	Yes	Yes
George Keil Memorial Botanical Area	464 acres	Gigantic limestone monolith, ancient and rejuvenated bristlecone pines, Sonoran cactus, virgin Engelmann spruce	No	No
Gleason Canyon and Panaca Charcoal Kilns	4,000 acres	Region of sandstone shelters, and side canyons, with tall scattered ponderosa pines and pioneer charcoal kilns	Yes	Yes
Goshute Canyon Natural Area	25,400 acres	Riparian habitat and scenic canyon	Yes	Yes
Goshute Lake	18,360 acres	Paleo-Indian site	Yes	Yes
Hampton Creek	½ mile on public land	Nomination stated creek was inhabited by the state endangered Utah cutthroat trout (correctly named the Bonneville cutthroat trout)	Yes	Yes

Table Q-1 (Continued)

Nomination	Acres/Miles	Primary Resource Values	Met Relevance	Met Importance
Hell's Half Acre (Pahranagat Rock Art)	320 acres	Rock art	Yes	Yes
Hendry's Creek	0.3 mile on public land	Nomination stated creek was inhabited by the state endangered Utah cutthroat trout (correctly named the Bonneville cutthroat trout)	Yes	Yes
Hendry's Creek/Rock Animal Corral	3,300 acres	Archaeological site	Yes	Yes
Heusser Mountain Bristlecone Research Natural Area	480 acres	Bristlecone pine trees	Yes	Yes
Highland Range, including Highland Peak and Anderson Canyon	10,626 acres	Virgin ponderosa, ancient bristlecone pines, *Hypaurotis crysalus intermedia, Satyrium saepium, latilnea,* intermountain bristlecone pine woodland, montane shrublands	Yes	Yes
Hiko Canyon (Pahranagat Rock Art)	15 acres	Rock art	Yes	Yes
Hiko Mountain Range	21,000	Aid in management of desert bighorn sheep	No	No
Honeymoon Hill/City of Rocks	3,900 to 5,900 acres	Rock art	Yes	Yes
Jakes Valley Paleo Shoreline	19,209 acres	Paleo-Indian site	Yes	Yes
Kane Springs ACEC	65,900 acres	Critical desert tortoise habitat	Yes	Yes
Kious Springs Scenic Area	40 acres	Scenic monolith and flora area	No	No
Kixmiller Ranch	10 acres	Historic charcoal kilns	Kilns are located on private land	
Leviathan Cave Geologic Area	160 acres	"Picture window" cave entrance with huge interior room and wondrous speliothems	Yes	Yes
Lote's Canyon	Unknown	Scenic cultural values and rock art	No	No
Lower Meadow Valley Wash	10,100 acres	Biological resources (endangered, threatened, and candidate species)	Yes	Yes
Magnolia and Boundary Canyons and North Creek	Unknown	Unique natural arches	Could not determine their location and the nominator did not respond to requests for information.	
Mahoney Canyon Jasperoid Source	200 acres	Tool stone quarry	Yes	Yes
Meadow Valley Mountain Range	165,000 acres	Aid in management of desert bighorn sheep	No	No
Meteor Crater	1 acre	Reported meteor impact site	No	No
Modena Obsidian Source	13,260 acres	Obsidian source	Yes	Yes
Mojave/Utah Yucca Natural Area	Unknown	Farthest known northern occurrence of yucca cactus	No	No
Moriah Site (Pahranagat Rock Art)	640 acres	Rock art	Yes	Yes
Mormon Barrel Cactus	45,772 acres	Scenic quality of barrel cactus	No	No
Mormon Mesa ACEC	109,700 acres	Critical desert tortoise habitat	Yes	Yes
Mormon Mountain Range	90,000 acres	Aid in the management of desert bighorn sheep	No	No
Mormon Peak Caves, Mormon Mountains and Mormon Peak	123,000 acres	Agave roasting pits, rock shelters and caves	Yes	Yes
Mount Grafton and North Creek Scenic Area	16,100 acres	Scenic quality	Yes	Yes
Mount Irish	26,200 acres	Rock art	Yes	Yes
Negro Creek (Snake Range Rock Art)	560 acres	Rock art	Yes	Yes
Oak Spring Summit Trilobite Trail	40 acres	Trilobites	Yes	Yes
Oak Spring Summit, Delamar Joshua Tree Forest	2,400 acres	Joshua tree forest and fossils	No	No
Osceola and Osceola Ditch	14,600 acres	Historic townsite and ditch	Yes	Yes
Pahroc Rock Art	3,200 acres	Rock art and rock shelters	Yes	Yes
Park Range Aboriginal Sites	42,154 acres	High altitude aboriginal sites	Yes	Yes
Park Range Pristine Meadows	1,280 acres	Pristine meadows	Yes	Yes
Pennsylvania Canyon	15,000 acres	Geological sight-seeing	No	No

Table Q-1 (Continued)

Nomination	Acres/Miles	Primary Resource Values	Met Relevance	Met Importance
Pine (Ridge) Creek	2.5 miles	Nomination stated that the creek was inhabited by the state endangered Utah cutthroat trout (correctly named the Bonneville cutthroat trout)	Yes	Yes
Pony Springs Open Space Reserve	39,100 acres	Pinyon pine and juniper area	No	No
Pygmy Sage Research Natural Area	160 acres	Pygmy sage habitat	Yes	Yes
Quaking Aspen Spring	40 acres	Recreation	No	No
Rainbow Canyon	45,827 acres	Scenic volcanic gorge and rock art	Yes	Yes
Rose Guano Bat Cave	40 acres	Historic guano mine and cave	Yes	Yes
Ruin Wash and Klondyke Gap	160 acres	Fossils	Yes	Yes
Sawmill Canyon	9,920 acres	Historic timber operations and rock art	Yes	Yes
Schlesser Pincushion at Bennett Springs Wash	5,207 acres	Schlesser Pincushion cactus	Yes	Yes
Shooting Gallery	20,700 acres	Rock art	Yes	Yes
Shoshone Ponds Natural Area	1,240 acres	Rocky Mountain juniper trees living in hostile alkali valley soils. Spring-fed pools containing rare and endangered Pahrump killifish and Relic Steptoe Dace.	Yes	Yes
Six Mile Flat (Pahranagat Rock Art)	2,160 acres	Rock art	Yes	Yes
Snake Creek Indian Burial Cave	40 acres	Archaeological resource and cave	Yes	Yes
South Pahroc Range	28,395 acres	Geologic sight-seeing and desert bighorn sheep habitat	No	No
Spring Valley Waterfowl Area	9,733 acres	Natural wildlife resource system	No	No
Stateline Canyon Graveyard (Rice Family Cemetery)	10 acres	Historic graveyard	Yes	Yes
Steptoe Valley Crescentspot	1,937 acres	Sensitive status species of butterfly and its habitat	Yes	Yes
Sunnyside	4,213 acres	*Frasera gypsicola, Cryptantha welshii, Lepidium nanum, Mentzelia tiehmii, Phacelia parishii, Townsendia jonesiivar, tumulosa,* pygmy sagebrush dwarf shrublands (sensitive plants)	Yes	Yes
Sunshine Locality National Register District	34,540 acres	Paleo-Indian site	Yes	Yes
Swamp Cedar Natural Area	3,200 acres	Rocky Mountain juniper trees living in hostile alkali valley soils. Battlefield of the Goshute War of 1863.	Yes	Yes
Tempiute Obsidian Source	29,767 acres	Obsidian source	Yes	Yes
Tepee Rocks	160 acres	Geologic sight-seeing	No	No
Tri-county Paleo Site	19,967 acres	Paleo-Indian site	Yes	Yes
Tunnel Canyon	200 acres	Fremont pictographs	Yes	Yes
Turnley Spring	41 acres	Cold spring system of the *Pyrgulopsis peculiaris* (snail)	Yes	Yes
Tybo/Duckwater Route	60 miles	Historic emigrant, stage and teamster route	No	No
Upper Meadow Valley Archaeological Zone	980 acres	Prehistoric campsites and rock art	Yes	Yes
Ward Mining District	2,500 to 11,000 acres	Historic mining area	Yes	Yes
Weaver Creek Scenic Area	½ mile of public land	Nomination stated the creek was inhabited by the state endangered Utah cutthroat trout (correctly named the Bonneville cutthroat trout).	Nevada Department of Wildlife cannot establish a Bonneville Cutthroat trout fishery because water levels are not dependable.	
Weepah Spring (Pahranagat Rock Art)	5,120 acres	Rock art	Yes	Yes
Whipple Cave Geologic Area	160 acres	Cave resources	Yes	Yes
White River Narrows (Pahranagat Rock Art)	8,960 acres	Rock art	Yes	Yes

Table Q-1 (Continued)

Nomination	Acres/Miles	Primary Resource Values	Met Relevance	Met Importance
White Rock Ponderosa/Scarlet Buckwheat	345 acres	*Eriogonum Phoenicium*	Yes	Yes
Worthington Peak, Golden Gates, Mount Wilson and Scottie's Cabin	Unknown	Ponderosa pine groves	No	No
Yucca Gardens	Unknown	Unique suspect succulent cactus hybrid ecology	Field visit to the area did not reveal the unique suspect succulent cactus hybrid ecology identified in the nomination.	

Table Q-2
Legal Descriptions for Potential ACECs

Township and Range	Sections
Beaver Dam Slope	
T10S, R70E	36
T10S, R71E	9, 17, 19
T11S, R70E	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 33, 34, 35, 36
T11S, R71E	4, 5, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33, 34
T12S, R70E	1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 23, 24
T12S, R71E	3, 4, 5, 6, 7, 8, 9, 10
Kane Springs	
T9S, R62E	10, 11, 14, 15, 22, 23, 24, 25, 26, 27, 34, 35, 36
T9S, R63E	19, 30, 31
T10S, R62E	1, 2, 3, 10, 11, 12, 13, 14, 23, 24, 25, 26, 36
T10S, R63E	1, 6, 7, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T10S, R64E	5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T10S, R65E	19, 20, 29, 30
T11S, R62E	1, 12, 13, 24
T11S, R63E	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 36
T11S, R64E	2, 3, 4, 5, 6, 7, 8, 9, 10, 16, 17, 18, 19, 20, 30, 31, 32
T12S, R63E	1, 12, 13, 24, 25
T12S, R64E	5, 6, 7, 8, 17, 18, 19, 30
Mormon Mesa	
T11S, R65E	36
T11S, R66E	8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T11S, R69E	34, 35, 36
T11S, R70E	20, 28, 29, 30, 31, 32, 33
T11.2S, R65E	36
T12S, R64E	25, 26, 27, 28, 29, 30,31, 32, 33, 34, 35, 36
T12S, R65E	1, 12, 13, 19, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T12S, R66E	All sections
T12S, R67E	6, 7, 8, 16, 17, 18, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 33 ,34, 35
T12S, R68E	22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T12S, R69E	1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T12S, R70E	3, 4, 5, 6, 7, 8, 9, 10, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28, 29, 30, 31, 32, 33, 34
T13S, R64E	1
T13S, R65E	2, 3, 4
Baker Archaeological Site	
T14N, R70E	33
Bat Cave and Guano Mine Historic Area	
T15N, R67E	25
T15N, R68E	30

Table Q-3 (Continued)

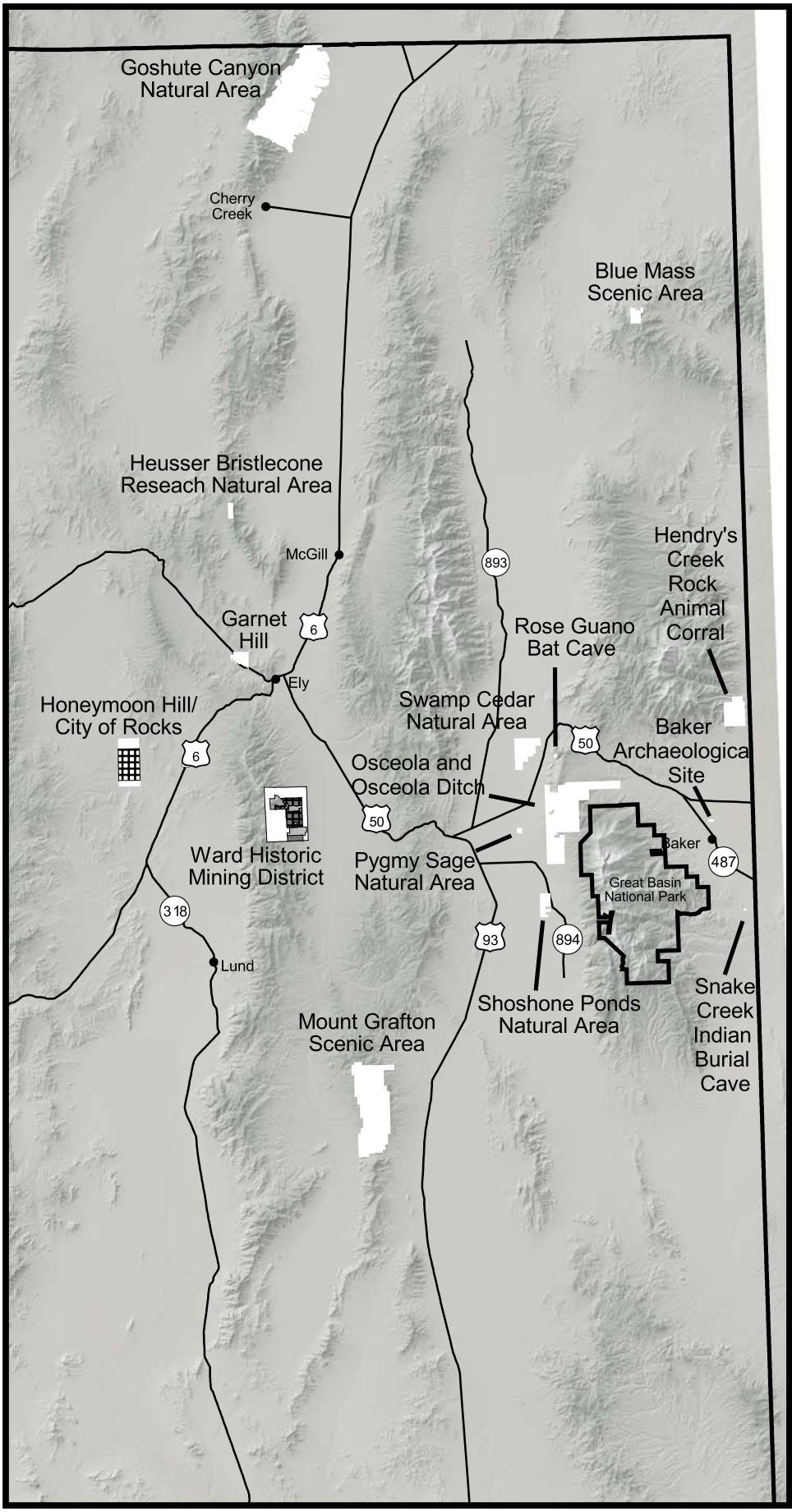
Township and Range	Sections
Blue Mass	
T21N, R68E	1, 6, 36
T22N, R69E	31
Condor Canyon	
T1S, R68E	9, 10, 11, 12, 13, 14, 15, 16, 21, 22, 23, 24, 25, 26, 27, 28, 33, 34, 35, 36
T1S, R69E	18, 19, 30, 31
Garnet Hill	
T16N, R62E	1, 2, 11, 12
T16N, R63E	6, 7
Goshute Canyon	
T24N, R63E	3, 4, 24, 25
T25N, R63E	1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35
T24N, R64E	5, 6, 7
T26N, R63E	24, 25, 26, 34, 35, 36
T26N, R64E	19, 20, 21, 28, 29, 30, 31, 32, 33
Honeymoon Hill / City of Rocks	
T14N, R60E	1
T14N, R61E	5, 6
T15N, R60E	24, 25, 36
T15N, R61E	19, 20, 29, 30, 31, 32
Huesser Bristlecone	
T19N, R62E	
Lower Meadow Valley Wash	
T6S, R66E	Section 36, NW¼, E½SW¼, W½SE¼
	Section 25, W½W½
	Section 26, NE¼NE¼, SE¼SE¼
	Section 23, NE¼, E½SE¼
	Section 14, E½E½, NW¼NE¼, NE¼NW¼
	Section 11, E½W½, W½E½, NW¼NW¼
	Section 2, S½SW¼, NW¼SW¼
T7S, R66E	Section 12, NE¼, NW¼SE¼
	Section 1, S½SE¼, NW¼SE¼, E½NW¼, W½NE¼
T10S, R66E	Section 34, all
	Section 35, NW¼
	Section 27, SE¼
	Section 26, S½, NE¼
	Section 25, W½
	Section 24, W½, NW¼SE¼, W½NE¼, W½E½, NE¼NE¼NE¼, SE¼NE¼NE¼
	Section 23, E½
T10.2S, R66E	Section 33, E½, SW¼
	Section 34, W½
T11S, R65E	Section 36, all
	Section 35, SE¼
	Section 25, W½

Table Q-3 (Continued)

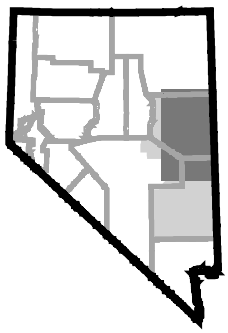
Township and Range	Sections
T11.2S, R65E	Section 35, S½, NE¼
	Section 36, W½, E½ (within)
T11S, R66E	Section 31, NW¼NW¼ (within)
	Section 30, W½ (within)
	Section 19, W½, E½ (within)
	Section 18, SE¼SE¼
	Section 17, W½ (within)
	Section 8, SW¼ (within), E½ (within)
	Section 5, SE¼
	Section 4, N½, SW¼
T12S, R65E	Section 13, W½SW¼ (within)
	Section 14, E½SE¼, SE¼NE¼
	Section 23, E½NE¼, SE¼SE¼
	Section 24, W½NW¼ (within), S½SW¼ (within)
	Section 2, NE¼, E½NW¼, N½SE¼
	Section 1, NW¼, NW¼SW¼, W½NE¼ (within), NW¼SE¼ (within)
T17S, R67E	Section 7, S½NW¼
Mount Grafton	
T9N, R64E	1, 2, 11, 12, 13, 14, 23, 24, 25, 26, 35, 36
T9N, R65E	5, 6, 7, 8, 17, 18, 19, 29, 30, 31, 32
T10N, R64E	13, 14, 22, 23, 24, 25, 26, 27, 35, 36
T10N, R65E	19, 20, 21, 28, 29, 30, 31, 32
Mount Irish	
T3S, R58E	23, 24, 25, 26, 35 36
T3S, R59E	19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T4S, R58E	1, 2, 11, 12, 13, 14
T4S, R59E	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18
Osceola and Osceola Ditch	
T13N, R67E	1, 2, 11, 12, 13, 14, 23, 24
T13N, R68E	4, 5, 6, 7, 18
T14N, R67E	11, 12, 13, 14, 23, 24, 25, 26, 35, 36
T14N, R68E	7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32 33
T14N, R69E	7, 18
Pahroc Rock Art	
T3S, R62E	13, 14, 15, 22, 23, 24, 25, 26, 27, 34, 35, 36
T3S, R63E	18, 19, 30, 31
Pygmy Sage	
T13N, R67E	4
T14N, R67E	33
Rock Animal Corral Archaeological Site	
T15N, R70E	1, 2, 11, 12, 13, 14
T15N, R71E	6, 7, 18
T16N, R70E	34, 35
Shooting Gallery	
T6S, R59E	23, 24, 25, 26, 35, 36
T6S, R60E	19, 20, 29, 30, 31, 32

Table Q-3 (Continued)

Township and Range	Sections
T7S, R59E	1, 2, 11, 12, 13, 14, 23, 24, 25, 26, 35, 36
T7S, R60E	4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32
Shoshone Ponds	
T12N, R67E	2, 3, 10, 11
T13N, R67E	35
Snake Creek Indian Burial Cave	
T12N, R70E	13
Swamp Cedar	
T14N, R67E	4
T15N, R67E	21, 22, 23, 26, 27, 28, 33, 34
Ward Mining District	
T14N, R63E	10, 11, 13, 14, 15, 16, 22, 23, 24, 25, 26



Regional View



100 0 100 200 Miles

Legend

- Cities and Towns
- Federal & State Roads
- Ward Alternative E and Honeymoon Hill Alternatives B and E Potential ACECs
- Ward Alternative C Potential ACEC
- Potential ACECs

N
W E
S

0 15 Miles

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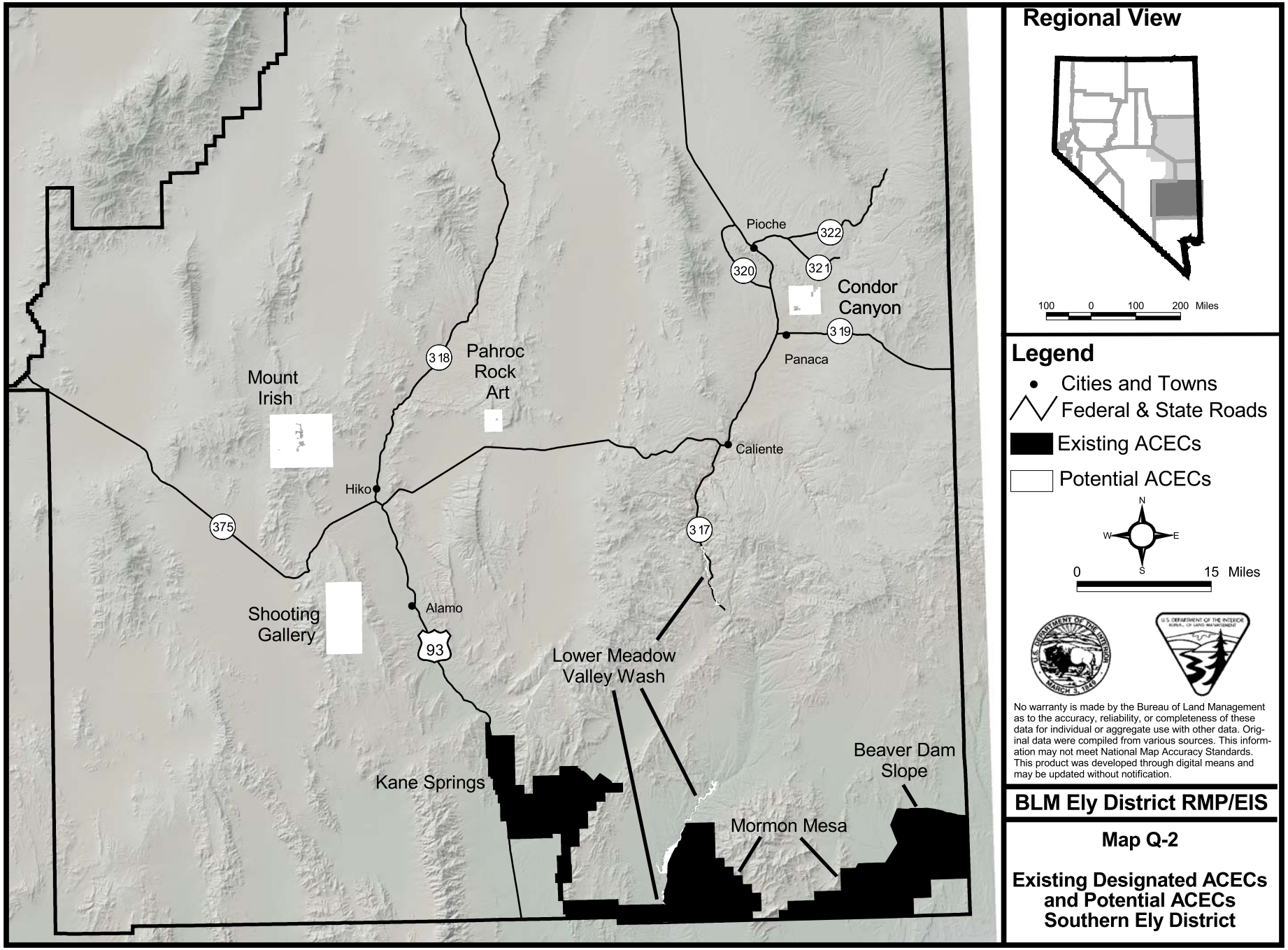
BLM Ely District RMP/EIS

Map Q-1

Potential ACECs
Northern Ely District

6/10/05


Pioche
322
320
321
Condor Canyon
319
Panaca
318
Pahroc Rock Art
Mount Irish
Caliente
Hiko
375
317
Shooting Gallery
Alamo
93
Lower Meadow Valley Wash
Kane Springs
Beaver Dam Slope
Mormon Mesa
Regional View
100 0 100 200 Miles
Legend
Cities and Towns
Federal & State Roads
Existing ACECs
Potential ACECs
N
W
E
S
0 15 Miles
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BLM Ely District RMP/EIS
Map Q-2
Existing Designated ACECs and Potential ACECs Southern Ely District

6/10/05

DETAILED DESCRIPTIONS OF EXISTING AND PROPOSED ACECs

Existing ACECs

Beaver Dam Slope, Kane Springs, and Mormon Mesa ACECs

The Beaver Dam Slope ACEC is located in south east Lincoln County east of the Mormon Mesa ACEC and west of the Nevada/Arizona/Utah border. The ACEC extends north from the Lincoln/Clark County line and northwest of the city of St. George Utah. The Kane Springs ACEC is located in southwestern Lincoln County, west of the Mormon Mesa ACEC. The ACEC extends north along U.S. Highway 93 towards Alamo from the Lincoln/Clark County border. The Mormon Mesa ACEC is located in south central Lincoln County west of the Kane Springs ACEC and east of the Beaver Dam Slope ACEC. The ACEC extends north from the Lincoln/Clark County line and the cities of Mesquite and Moapa Nevada, near the Mormon Mountain Range.

These ACECs offer several relevant and important features and encompass important desert tortoise and hot desert wildlife habitats in Lincoln County. The Mormon Mesa ACEC also includes riparian habitats on BLM-administered land along the Lower Meadow Valley Wash for several other sensitive or listed Mojave species including the federally threatened southwestern willow flycatcher and federal candidate yellow-billed cuckoo.

The current condition, state, and trend of the relevant and important values of these ACECs are byproducts of historic human uses, present human uses, and unnatural and reoccurring fire regimes. The area is composed of a mixture of Mojave vegetative communities, including northern and southern desert shrub and annual grasslands. In some areas native shrubs, cactus, yuccas, and Joshua trees composition has been replaced with non-native red brome and native annual grasses due to increased fire frequency and intensity. Previous grazing use by domestic cattle and sheep and wild horses and burros, have additionally altered the vegetative state and composition of the Mojave habitats within the ACECs. Development in adjoining non-ACEC designated areas is increasing near the communities of Las Vegas, Mesquite, Moapa, and Alamo. The ACECs also are receiving tremendous increases in recreational utilization and off-highway vehicle use due to an ever increasing demand placed on these resources from the growing populations of the greater Las Vegas area. Desert tortoise populations in the Northeastern Mojave remain relatively low, but mostly stable.

The current threats and risks to the wildlife and critical Mojave Desert wildlife habitats of Kane Springs, Mormon Mesa, and Beaver Dam Slope ACECs include: conversion of Mojave shrub habitats to annual grassland from altered fire regimes, habitat fragmentation from past development/actions within ACECs and current development and habitat loss adjacent to ACECs, direct mortality and indirect alteration of habitat from vehicles and off-highway vehicle use, and increased predation rates due to habitat fragmentation and increased predator abundance and distribution from human activity and actions.

The Kane Springs, Mormon Mesa, and Beaver Dam Slope ACECs have several relationships to existing rights. Several highway and utility right-of-way corridors exist within the ACECs. Additionally, several existing mining claims, oil and gas leases, and water filings/appropriations occur within the ACECs.

The Kane Springs ACEC lies within portions of the Delamar Mountain and Meadow Valley Mountain wilderness study areas. The Mormon Mesa ACEC lies with portions of the Meadow Valley Mountain and Mormon Mountain Wilderness Study Area and Mormon Mountain herd management unit.

Proposed ACECs

Baker Archaeological Site

The Baker Archaeological Site is located in White Pine County, Nevada, about 1.5 to 2 miles northwest of Baker, Nevada. This ACEC, in Snake Valley, is located on the eastern edge of the Ely District. This area is a potential ACEC based on the prehistoric values it contains.

Wheeler (1879) first noted the existence of this site. This site was located as a result of numerous irregularly shaped mounds on the ground surface, and shallow depressions/basins, as well as the pot sherds, obsidian flakes, 2 broken quartz points, and groundstone found on the surface.

The Baker Archaeological Site is a Fremont habitation site containing foundations of several structures. The positioning of the structures indicates the inhabitants' use of the sun to aid them in determining seasons. Evidence of agriculture was found during the excavations. To date, this site is the furthest west and north Fremont site in the U.S.

From 1991 to 1994, Brigham Young University, in cooperation with the BLM, conducted summer excavations at the Baker Archaeological Site. The excavations revealed a settlement of great complexity (approximately 13 structures). While including typical Fremont-style pit houses and mud-walled food storage structures (which had an outstanding ability to buffer against the extreme climate of the high desert), the Baker Archaeological Site's cluster of buildings was carefully aligned to a single compass direction. In the center, a large mud-walled structure, referred to as the *Big House*, shows intriguing alignments with sunrise on the winter and summer solstices.

At the end of the 1994 field season, the site was backfilled to protect the fragile structures. As a result, the foundations of the village can no longer be seen on the surface. The walls now visible at the site are modern walls, built in 2002. They cap the buried walls and protect them from wind erosion.

Several threats and risks exist that may effect the relevant and important values in the Baker Archaeological Site ACEC. These threats and risks are livestock grazing, visitor use, and weathering.

The current condition, state, and trend of the relevant and important values in the Baker Archaeological Site ACEC include:

- Livestock grazing – Stable. Without physical barriers, interpretation facilities and archaeological features are threatened.

- Visitor Use – Stable. Maintenance of roads, weed control, litter, and solid waste removal needs to occur on a regular basis. Improving with interpretative signs, on site exhibits, and seasonally guided tours.

- Weathering – Deteriorating. Requires cyclical maintenance on approximately 5-year rotation.

The Baker Archaeological Site has several relationships to existing rights. There is no private land within this area. There are no active mining claims within the Baker Archaeological Site. Several lands and realty actions have occurred immediately adjacent to or within the Baker Archaeological Site. The Baker Archaeological Site occurs within the Baker Creek grazing allotment. The site does not exist within or immediately proximate to any wilderness study areas or any wild horse herd management areas.

Blue Mass Scenic Area

Blue Mass Scenic Area is located in northern White Pine County approximately nine miles from the Utah border in the Kern Mountains. This area is a potential ACEC based on high scenic values. The geology of the area is mostly granitic. The area is made up of a winding canyon and many rock hoodoos with Blue Mass creek flowing through. (Hoodoo: A fantastic column, pinnacle, or pillar of rock produced…by differential weathering.)

Blue Mass is relevant and important for its significant scenic values related to the unusual geology and bucolic setting of the area.

Several threats and risks to the scenic qualities of Blue Mass exist. Increased recreation and visitation have led to an increase in off-highway vehicle use and vehicle route proliferation. Increased recreation also has lead to a proliferation of informal campsites. This increase could result in negative impacts to the resource.

The proposed ACEC has relationships to existing rights. There is private property adjacent to the proposed area to the east and a second area to the south. There also is active grazing within the proposed area. There are no active mining claims within the scenic area.

The proposed area is not within or adjacent to any wilderness or wilderness study areas.

Condor Canyon

Condor Canyon is a steeply confined and isolated canyon located within the Meadow Valley Wash of Lincoln County Nevada, 4 miles north of Panaca. The Canyon encompasses 4 miles of perennial stream reach, which is moderately to deeply entrenched by 10-foot sandy high flow walls and a man made railroad levee. Condor Canyon is comprised only of BLM-administered lands.

Condor Canyon offers several relevant and important features, including; significant historic, cultural, archaeological, and scenic values and critical terrestrial and aquatic wildlife habitats. During prehistoric time period, the canyon was a prominent permanent water source that also flourished with wild game and plants for hunters and gathers life style. This is evident with the numerous prehistoric lithic/ceramic scatters within the canyon and along the canyon periphery that includes rock shelters and overhangs. Within a 1-mile periphery of the canyon, and within the canyon, there are over six rock art locations encompassing hundreds of panels of both pictograph and petroglyphs. Condor Canyon is a geographical feature that is directly associated with the settlement for both agriculture and mining activities in the Eastern Great Basin. In 1870, Bullionville was established at the mouth of the canyon to mill the extracted ores from Pioche. There are still remnants of mill foundations, dugouts, trails, and artifact scatters within the canyon. Both the Pioche-Bullionville Narrow Gauge Railroad (Circa 1870) and Union Pacific Pioche/Caliente Railroad (Circa 1900), remain evident within the canyon. Condor Canyon contains designated critical habitat (50 Federal Register 12298) for Big Spring spinedace (*Lepidomeda mollispinis pratensis*) and harbors the only known population of this federally threatened species. Additionally, the U.S. Fish and Wildlife Service Species of Concern and Nevada State Sensitive, Meadow Valley Wash desert sucker (*Catostomus clarki* ssp.) and Meadow Valley Wash speckled dace (*Rhinichthys osculus* ssp.) occur within Condor Canyon.

The current condition, state, and trend of the relevant and important values Condor Canyon are a byproduct of historic human uses, present human uses, and an intense wildfire in 1999. Historically, the natural hydrology of the system was modified and altered to accommodate mining railway, infrastructure, and facilities. Alterations include rails, roads, stream diversions, inflow diversions, dikes, and impoundments. Currently, the Condor Canyon population of Big Spring spinedace, Meadow Valley Wash desert sucker, and Meadow Valley Wash speckled dace are stable, with slight yearly upward and downward population trends detected. The 1999 wildfire burned over historic railroad trussles and artifacts and altered the vegetative

state of habitats. The current wildlife habitat is comprised of burned and degraded uplands with substantially reduced shrub cover and herbaceous understory. Notable increases in sediment and silt loads and subsequent soil deposition within the riparian corridor are occurring. At present, woody habitats are comprised of early stages mix of native willow states, with a decreased frequency of mature black willow or box elder trees. Additionally, tamarisk and cattails are greatly increasing in both distribution and density in the canyon. Recreational use to the canyon is increasing yearly, with notable increases in visitation occurring within the summer months.

Several threats and risks exist to the critical wildlife habitats and cultural resources of Condor Canyon. Pre-historic pictograph and petroglyphs rock art panels are highly susceptible to intense heat and subsequent rock exfoliation from reoccurring wildfires. Additionally, fish species of Condor Canyon are extremely vulnerable to catastrophic events, habitat modification, or loss and associated habitat fragmentation from natural and human induced biotic and abiotic impacts. The historic hydrologic alteration and post-fire vegetative succession has severely diminished the critical habitat values of Condor Canyon, jeopardized spinedace recovery, and altered the riparian habitats or habitat potential. The 1999 wildfire directly eliminated the canopy cover of mature trees and created a dominant early regenerating state of a native willows, with few stands of mature boxelder and black willow communities. Increases in tamarisk have lessened native diversity of woody and herbaceous vegetation, and potentially could decrease perennial stream flow. The initial post wild fire increase in cattail and bulrush densities in the slower gradients and unshaded stream gradients has allowed cattails to trap the vastly increased sediment loads. Consequently, cattail and bulrush have greatly expanded their range and density within the stream reach. The indirect result has been a monotypic stand of undesirable and invasive cattails, which have created impregnable blockades to natural fish movements, created substrates for non-native predatory crayfish, impeded the natural flow of the stream, and severely reduced native submerged aquatic diversity and the available aquatic fish spawning habitats. Increased recreation and visitation to the canyon have brought increased off-highway vehicle and impacts to the terrestrial and aquatic habitats during all periods of the year and has therefore increased the likelihood of the spread or introduction of non-native species, vandalism or removal of historic artifacts and resources, and toxic or unwanted substance releases or dumping into the stream.

Condor Canyon has several relationships to existing rights. The area is immediately bordered by private property at both the upper and lower entrances to the canyon. One parcel of private property also exists within the center of the proposed ACEC boundary. There is a 200-foot relinquished Union Pacific Railroad right-of-way held by BLM along the established railroad grade. Portions of four BLM grazing allotments lie within the area. There also are three existing mining claims and two existing oil and gas leases within the area. Also, there are three points of diversion for water filings/appropriations for agriculture flood irrigation in the southwest portion of the proposed ACEC. A fourth instream flow filling is maintained by the Nature Conservancy, with a reserved beneficial use applied for the maintenance of Big Spring spinedace habitat.

Condor Canyon does not exist within or in immediately proximate to any wilderness study areas. It is located 3 miles to the east from the border of the Deer Lodge wild horse herd management area.

Garnet Hill

Garnet Fields rock hound area (Garnet Hill) is located in White Pine County approximately 6 miles west of Ely. Garnet Hill is a nationally known rock hound area, famous for dark red garnets.

Garnet Hill is relevant and significant for the dark red garnets found in the pink to grey rhyolite rocks covering the hillside.

Several threats and risks to the resource include the potential for commercial mining activity as well as illegal collecting of garnets for commercial sale. An increase in recreation in the Ely area has led to increased visitation and vandalism at the Garnet Hill site.

The proposed ACEC's bounded by private property on the entire eastern boundary. The area surrounding Garnet Hill is covered with mining claims; however, there are no existing rights within the proposed area.

The proposed area is not within or adjacent to any wilderness or wilderness study area.

Goshute Canyon Natural Area

The Goshute Canyon Natural Area is located in the Cherry Creek Range of White Pine County, Nevada. The natural area consists of a high meadow and creek canyon. The area is habitat to the Bonneville cutthroat trout as well as having outstanding scenic qualities, and several small archaeological sites.

Goshute Basin provides a crucial watershed for several perennial streams and riparian areas that are an integral part of the outstanding scenic values of the area. There are uncharacteristically abundant stands of Bristlecone pine.

This fishery in Goshute creek will forever be in jeopardy. A flash flood in July 2002 hit the Goshute Basin/creek area. Although previous surveys had found over 1,000 fish/mile, after the 2002 event, the creek was electro-shocked from the county road to the upper gabion, a distance of approximately 4 miles. Only 11 fish were located. Every big event that comes down Goshute Creek appears to cut the lower end of the creek a few feet deeper. At the location of the lower gabion and fish ladder prior to the last big event, the creek is 30 feet below ground level.

The proposed ACEC has relationships to existing rights. There is private property within the proposed area as well as to the east and west of the proposed area. There also is active grazing within the proposed area. Improved springs and reservoirs exist within the proposed area. There are no active mining claims within the scenic area.

The Goshute Canyon Natural Area lies almost entirely within the Goshute Canyon Wilderness Study Area. In addition, the natural area also is an Instant Study Area that lies entirely within the Cherry Creek wild horse herd management area.

Honeymoon Hill/ City of Rocks

The proposed Honeymoon Hill/City of Rocks ACEC is located in White Pine County, Nevada, about 25 to 30 miles southwest of Ely, Nevada. This area, in Jakes Wash, is located in the central portion of the Ely District. This area is a potential ACEC based on the prehistoric values and geologic scenic values it contains.

The Honeymoon Hill archaeological site is a part of a much larger archaeological site complex known as the City of Rocks. It includes an extensive prehistoric chert quarry, a large, upland Paleo-Indian site, later Archaic occupation, numerous rock shelters exhibiting red pictographs, and scattered sherds of brown ware pottery, presumably of Numic origin. Honeymoon Hill is the only identified petroglyph location within this complex.

The Honeymoon Hill site is composed of four different locales, containing rock art and/or prehistoric artifact scatters. Four different types of petroglyphs have been recognized at the site, produced by both pecked and scratched techniques. These four include pit-and-groove, curvilinear abstract, rectilinear abstract, and representational. The most common element is the recurrent representation of anthropomorphic stick

figures. Fowler (1973), Heizer and Hester (1974), and others using standard Great Basin works such as Heizer and Baumhoff (1962) delineate the styles as Great Basin Curvilinear Abstract (circles, concentric circles, tailed circles, chained circles), Great Basin Rectilinear Abstract (hatching, grids, rakes or fences, dots and dotted lines), and Great Basin Representational (hundreds of mountain sheep, deer lizards, anthropomorphic forms, including horned figures, human feet, and handprints).

Dates suggested by Heizer and Baumhauf (1962:234) for the styles include:

Great Basin Representational	A.D. 1 to A.D. 1500
Great Basin Curvilinear Abstract	1000 B.C. to A.D. 1500
Great Basin Rectilinear Abstract	A.D. 1 to A.D. 1500

Based on the differential patination of the stick figure elements, the techniques of manufacture, and the presence of the midden deposit and its associated diagnostic artifacts, the site was occupied from Archaic (3,000 to 5,000 years ago) to Protohistoric (1850) times or later.

Several threats and risks exist that may effect the relevant and important values in the Honeymoon Hill/City of Rocks area. These threats and risks are off-highway vehicle use, visitor use, and oil and gas mineral exploration.

The current condition, state, and trend of the relevant and important values in the Honeymoon Hill/City of Rocks area include:

- Off-highway Vehicle Use – Stable to deteriorating. Designation of existing roads and trails is needed. Ongoing unrestricted use would further damage or destroy the resource.

- Visitor Use – Stable. Without etiquette/information posting, unintentional damage could cause resource loss and destroy or damage resource values.

- Oil and Gas Mineral Exploration – Stable. Motor vehicle traffic form seismic exploration has resulted in roads and trail incompatible with setting. Existing disturbance should be reclaimed and new exploration should be allowed limited to hand operations and limited to designated roads and trails, subject to special reclamation stipulations.

The Honeymoon Hill/City of Rocks area has several relationships to existing rights. There is no private land or existing active mining claims within the Honeymoon Hill/City of Rocks area. This proposed ACEC is within two grazing allotments: Giroux Wash and Indian Jake. Several lands and realty actions have occurred within or immediately adjacent to the Honeymoon Hill/City of Rocks area. The proposed Honeymoon Hill/City of Rocks ACEC is within the Jakes Wash herd management area. It does not exist within or immediately proximate to any wilderness study areas.

Heusser Bristlecone Research Natural Area

The Heusser Bristlecone Research Natural Area is located high on the western slopes of the Egan Range in White Pine County just west of Ely and McGill. This area is a potential ACEC based on the stand of Bristlecone Pines and high scenic values.

Heusser Bristlecone Research Natural Area is relevant and important for its significant scenic values and stands of Bristlecone pines.

Several threats and risks to the scenic qualities of Heusser Bristlecone exist. Increased recreation and visitation have led to an increase in off-highway vehicle use and vehicle route proliferation. Increased

recreation also has lead to a proliferation of informal campsites. This increase could result in negative impacts to the resource.

The proposed ACEC has known relationships to existing rights. The proposed area lies within two grazing allotments (Thirty Mile Spring and Heusser).

Heusser Bristlecone Research Natural Area does not lie within any wilderness or wilderness study area; it is an Instant Study Area. The area does not lie within any wild horse herd management area.

Lower Meadow Valley Wash ACEC

The Lower Meadow Valley Wash is an 80-mile perennial stream stretch of the historic Meadow Valley Wash. The Lower Meadow Valley Wash begins 2 miles east of Barclay Nevada near the Utah/Nevada State Line, at the Big Springs in the Clover Creek drainage. It then flows west-by-northwest through Caliente, then south through Elgin, Carp, and Rox Nevada toward the Lincoln Clark County Line. It includes the perennial inflows of Ash and Pine Creek from the Clover Mountains. The Lower Meadow Valley wash feeds into the Muddy River and Virgin River drainage of the Lower Colorado River System. The Meadow Valley Wash hosts a plethora of federally endangered, threatened, and candidate species, as well as Nevada State protected species and BLM Sensitive species. Fourteen of the twenty-two species on the U.S. Fish and Wildlife Service species list for Section 7 consultation on the RMP/EIS, occur or are impacted by BLM management actions within the Lower Meadow Valley Wash. Some of the more prominent terrestrial and aquatic species include southwestern willow flycatcher (endangered), desert tortoise (threatened), Big Springs spinedace (threatened), yellow-billed cuckoo (candidate), Meadow Valley Wash desert sucker and speckled dace (sensitive), Arizona toad (sensitive), and chuckwalla (sensitive).

The Lower Meadow Valley Wash has undergone significant hydrologic alterations and intensive uses resulting in both the direct degradation and indirect modification to habitat potential for terrestrial and aquatic wildlife species. Impacts include: poorly managed grazing, railroad right-of-way alteration of hydrologic regimes, State highway right-of-way alteration of the hydrologic regime, damming and channelization of the stream flow, re-direction/diversions of stream flows, habitat removal/fragmentation, non-native weed (salt cedar, tall whitetop, etc.) monotypic dominance, loss of terrestrial understory, decreased native vegetative resiliency, increased fire and flood frequency, increased fire and flood impacts from sedimentation and down cutting, and degraded water quality. The results of these impacts have lead to a preponderance of listed species within the Lower Meadow Valley Wash, with complicated private/public management challenges. A U.S. Fish and Wildlife Service Habitat Conservation Plan also is currently in draft for Lincoln County for Endangered Species Act Section 9 coverage for private land owners within the Lower Meadow Valley Wash. No current programmatic or site specific (i.e., Habitat Management Plans) has occurred by the BLM to date for the Lower Meadow Valley Wash.

Mount Grafton Scenic Area

The Mount Grafton Scenic Area is located in the Schell Range along the Lincoln County and White Pine County boundary. The scenic area includes the North Creek drainage and extends up to the Mount Grafton Summit and south across Patterson Pass. The area has outstanding scenic qualities.

This highly scenic mountain contains numerous rock outcrops, crags and peaks. There are beautiful aspen groves, rare stands of bristlecone pine, and high meadows.

The area represents important habitat in maintaining species diversity, including Rocky Mountain bighorn sheep. Though Rocky Mountain bighorn sheep are not unusual or rare, they are uncommon in the Great Basin. Mount Grafton is a true “island in the sky” offering essential habitat to many diverse species.

Primary threats and risks to the area include an increase in motorized recreation as well as an increase in unauthorized vehicle routes. A comparison of current vehicle routes with historical routes within the Mount Grafton Wilderness Study Area showed an increase of 25.7 miles of unauthorized vehicle routes on approximately 87 segments of routes. Many of these unauthorized routes are within the scenic area. These linear disturbances can affect wildlife habitat, as well as create intrusions in the areas outstanding scenery. The increase in recreation also has led to a proliferation of campsites. This increase in campsites may lead to negative impacts on the resources.

The proposed ACEC has relationships to existing rights. There are several private property parcels adjacent to and near the proposed area to the west. There also is active grazing within the proposed area. The area lies within two grazing allotments (Cave Valley and Geyser). There are no active mining claims within the scenic area.

The Mount Grafton Scenic Area lies almost entirely within the Mount Grafton Wilderness Study Area. The southern portion of the scenic area lies outside of the Wilderness Study Area.

Mount Irish

The proposed Mount Irish ACEC is located in Lincoln County, Nevada, about 8 miles west of Hiko, Nevada. This ACEC, in the Mount Irish Range, is located in the southwest portion of the Ely District. This area is a potential ACEC based on the prehistoric and historic values it contains. The area includes the Mount Irish Archaeological District, as well as two historic sites; remnants of the Pahranagat Mining District, Crescent Mill, and Logan City.

Mount Irish Archaeological District

Thousands of petroglyphs have been located on Mount Irish, but the archaeological district is still incompletely explored. It contains hundreds of images pecked or incised into boulder outcroppings on the east flanks of Mount Irish. Isolated design elements and groups of elements, or panels, occur in individual localities within the proposed ACEC. Petroglyph panels are associated with other cultural features including lithic scatters, pottery scatters, rockshelters with deposits, and an occasional pictograph. The archaeological district currently consists of over 200 separate panels of rock art.

The Mount Irish Archaeological District contains several different rock art styles. Fowler (1973), Heizer and Hester (1974), and others using standard Great Basin works such as Heizer and Baumhoff (1962) delineate the styles as Great Basin Curvilinear Abstract (circles, concentric circles, tailed circles, chained circles), Great Basin Rectilinear Abstract (hatching, grids, rakes or fences, dots and dotted lines), and Great Basin Representational (hundreds of mountain sheep, deer lizards, anthropomorphic forms, including horned figures, human feet, and handprints).

Dates suggested by Heizer and Baumhauf (1962:234) for the styles are:

Great Basin Representational	A.D. 1 to A.D. 1500
Great Basin Curvilinear Abstract	1000 B.C. to A.D. 1500
Great Basin Rectilinear Abstract	A.D. 1 to A.D. 1500

Cross dating for these rock art styles and time diagnostic artifacts that have been recorded from the District (including Elko and Rosegate point types and Paiute and Shoshone pottery wares) suggest two periods of use beginning with the Desert Archaic (c. 1000 B.C.) and extending through the ethnohistoric Numic occupation (c. A.D. 1500).

The Mount Irish rock art is particularly important because of its research potential. Mount Irish offers a research situation in which the determination of dates appears possible, the assumptions of past subsistence patterns can be tested, the distribution of prehistoric populations in southeastern Nevada can be confirmed, and Great Basin petroglyph styles can be more fully studied.

Crescent Mill and Logan City

Crescent Mill and Logan City are part of Nevada's earliest mining era. They also are part of the Pahranagat mining district, which was organized in 1865, and Crescent Mill is a remnant of Southern Nevada's first major mining booms.

Crescent Mill is located on public land in a drainage area on the west side of Mt. Irish. Crescent Mill was an ore reduction mill used to reduce silver bearing ores from the late 1860s into the mid-1870s. It currently consists of a tall red brick chimney resting on a stone foundation, a stone cabin and several foundation ruins. A rock lined ditch runs into the smelter's hearth from a northeasterly direction. The chimney, which is approximately 35 to 40 feet tall, is still in good condition with only a few bricks missing. Across the wash is the stone cabin that has standing walls, a hearth, and is partially covered by log beams and a ceiling. Bits of ceramics, glass, and cans are scattered throughout the area.

According to *Nevada Ghost Towns and Mining Camps* (Paher 1970)), Crescent Mill was built around 1866 and operated in conjunction with Logan City. The *Nevada Bureau of Mines*; however, it states that a 10 stamp mill (Crescent Mill) occupied the site and was built sometime after 1869.

Logan City is located in the hills south of Mount Irish on the east side of the range at the base of a cliff with dramatic horizontal strata of water deposited volcanic ash. The "discovery" that led to founding Logan City in 1865 was Southern Paiutes quarrying for pigment. An "old Indian" led Euro-American prospectors from Austin to a rich silver ore ledge on Mt. Irish. The exploring party filed locations in March and went to Panaca for supplies. Returning in June to begin working the ledge, the miners were chased away within a few weeks by hostile American Indians. A post office was established at Logan City in 1867, by which time the mining district contained a few hundred inhabitants. By 1868, the District had already begun to decline, and by 1869, the shallowness of the rich ores led to the virtual abandonment of the District. At present, all that remains of Logan City are stone foundations (Paher 1970).

The Pahranagat Mining District is on Mount Irish in the Pahranagat Range about 10 miles northwest of Hiko. This district has a long history. An Indian of the Pahranagat tribe, who showed it to a party of prospectors in 1865, discovered the ore ledge in 1864. A thousand claims were made, and to accommodate the new mining district Lincoln County was formed on February 26, 1866, from a portion of Nye County. The county seat was first Crystal Springs and then Hiko before it was moved to Pioche in 1871. Production never met expectations, and it is doubtful if the district ever produced as much as was spent on development (Paher 1970).

In 1867, an unsuccessful stamp mill was built at Hiko, which in 1869 was moved to Pioche. This mill failed because the sulfide ore required roasting before milling. Later two more successful mills were built, a 5 stamp mill at the List mine and a 10-stamp mill at the Crescent mine. The ores processed in these mills were readily amalgamated after roasting. Several unsuccessful attempts were made to smelt the ores, and the stack of one of these smelters still stands in the vicinity of the Crescent Mine (Crescent Mill) (Paher 1970).

Raymond (1869:15) reports that $1.0 million was spent in 1868, but only $20,000 in bullion had been shipped up to this time. The following year (1870:201), he estimated the total production at no more than $80,000. The district was largely abandoned after the discovery of the rich ores at Pioche.

Several threats and risks exist that may effect the relevant and important values in the proposed Mount Irish ACEC. These threats and risks are off-highway vehicle use, visitor use, locatable mineral development, and unauthorized occupancy.

The current condition, state, and trend of the relevant and important values in the proposed Mount Irish ACEC include:

- Visitor Use – Stable but deteriorating with increased visitor use, more target shooting at rock art taking place, fire pits near rock art, and litter. Without physical barriers and interpretation facilities the archaeological features are threatened.

- Off-highway vehicle Use – Stable but without designation of roads and trails only for off-highway vehicle use, off-highway vehicle damage could further destroy the resource.

- Locatable mineral development – Stable but constant vigilance is needed for permitted and unauthorized collection.

- Unauthorized occupancy – Stable but hazardous materials need to be removed and unauthorized structures cleaned up or if not suitable for management removed.

The Mount Irish ACEC has several relationships to existing rights. There is private land related to the historic mining located within the proposed ACEC. According to the 1997 database, existing active mining claims are present. Several lands and realty actions have occurred within the area. The proposed Mount Irish ACEC is located within portions of three grazing allotments, Mount Irish, Wildhorse, and Crescent N 4. The area does not exist within or immediately proximate to any wilderness study areas or any wild horse herd management areas.

Osceola and Osceola Ditch

The proposed Osceola/Osceola Ditch ACEC is located in White Pine County, Nevada, about 35 miles east of Ely, Nevada. This area, in the Snake Range, is located in the eastern central portion of the Ely District. It is a potential ACEC based on the historic values it contains.

Osceola

The Osceola district was organized in October 1872 after placer gold was discovered the previous summer. Lack of water to wash the gravel initially hindered development. At peak times between 1873 and 1877 as many as 400 miners worked claims employing pans, rockers, and arrastras to recover the ore. By 1878, a small five-stamp mill was pressed into service, the same year the district got its post office.

Beginning in 1880, the Osceola Placer Mining Company began two decades of operations, with the best years coming after the ditches were completed in 1884. That company was the first in Nevada to use hydraulic hoses, a process imported from California. The ditches lost efficiency about 1900 and major work ended, but the company had recovered an estimated $2 million in gold. Various individuals continued working claims and enough miners remained to support a store, saloons, and the post office which finally closed in 1920. Thereafter, some activity was evident most of the time at lest through the 1960s.

In the early days, Osceola had the reputation of being a good steady district. While other placer camps wavered between lean and fat years, this one had consistently produced gold and the “dry wash boys” always had plenty of coin. Osceola has gained at least three distinctions: its pioneering use of hydraulic hoses in the 1880s, a 46,000 nugget (probably Nevada’s largest) that was found in 1886, and most

important, it survived longer than any other placer camp in Nevada. (All information about Osceola from Paher 1970 – Nevada Ghost Towns and Mining Camps.)

Osceola Ditch

The Osceola (east) Ditch was constructed in 1889 1890 by the Osceola Gravel Mining Company. It consists of the east ditch, a wooden flume, and a rock dam. The Osceola (east) Ditch extended some 18 miles from Lehman Creek on a north-northwesterly course, carrying water for hydraulic mining operations at Osceola. The ditch included wooded flumes and a 600-foot tunnel and incorporated water from Lehman, Mill, Strawberry, Sage, and Weaver creeks. Approximately 10 miles of the ditch are in Great Bastion National Park. Many part of the extant ditch in the park are eroded, overgrown with brush and trees, and partially filled with rock rubble, while the wooden flume remains are in a state of severe deterioration. The eastern portal of the tunnel near the north boundary of the park in Strawberry Canyon had collapsed.

As part of the Osceola (east) Ditch construction in 1889-1890, a rock dam and headgate were built at Stella Lake in Upper Lehman Canyon to increase the lake's storage capacity and thus the flow of Lehman Creek. There are extant structures of the rock dam, but there are no visible headgate remains. The ditch structures and related improvements at the placer operations in Osceola fell into disuse, disrepair, and decay during the early 1900s and were destroyed entirely by a fire in the 1940s.

The Osceola (east) Ditch was completed, and water from Lehman Creek passed through to the reservoir near Osceola's Dry Gulch on July 4, 1890. The total length of the ditch, including flumes and tunnel, was 95,133 feet or 18 miles and 93 feet. Total cost of the ditch's construction was $108,222.65. The ditch had a carrying capacity of 2,500 miners' inches of water. Together with the 1,000-1,100 miners' inches of water provided by the 16 mile Osceola (west) Ditch that had been constructed on the west side of the Snake Range in 1884-1885, the Osceola (east) Ditch was designed to meet the water requirements of the Osceola Gravel Mining Company for hydraulic operations on its 712 acres of placer ground at Osceola, nearly 500 of which were patented, in the Dry Gulch area just west of the town site.

Since 1877, the Osceola Gravel Mining Company, a Salt Lake City based firm owned principally by Benjamin Hampton, had been interested in the Osceola placers, endeavoring to extract gold from its claims using hydraulic methods similar to those employed in the California gold fields. In August 1889, the Osceola Gravel Mining Company was reorganized and its controlling stock sold to the Osceola Placer Mining Company, a firm that recently had been incorporated in New Jersey. The directors of the new firm were W. B. Kunhard and I. A. Harrison of New York and Benjamin Hampton of Salt Lake City. James H. Marriot was named general superintendent and had charge of day-to-day operations of the Osceola Gravel Mining Company which retained its organizational identity.

The ditch portion of the Osceola (east) Ditch was 82,891 feet in length. Its dimensions were four feet wide in the bottom, tow and a half feet deep in solid ground with sloping sides of a half to one or an angle of 22.5 degrees. The uniform grade of the ditch was 14 feet per mile, and it had a carrying capacity of 40 million gallons per 24 hours. The excavated material, consisting of gravel, boulders, loose rock, and solid rock, was placed on the lower side of the ditch. Altogether, 81,198 cubic yards of material were excavated by blasting or gadding at a cost of $58,307.86.

There were 14 main sections of wooden flumes. The flumes were located in places where it was impracticable to excavate a ditch such as the sides of "rocky and precipitous mountains." This was especially true in Lehman Canyon where 3,768 feet of flume had to be built. The longest single flume section was 2,808 feet and the shortest 96 feet. The aggregate length of flume was 5,352 feet. The dimensions of the wooden flumes were 4 feet wide and 4 feet deep with uniform grade of 32 feet per mile. Considerable lengths of the flumes had to be supported with trestlework.

There were six drop flumes or chutes along the length of the Osceola (east) Ditch. The dimensions of these flumes varied according to the vertical fall at their respective locations. The total length of the flumes was 6,258 feet with an aggregate vertical fall of 1,352 feet.

The total length of the main flumes and drop chutes was 11,610 feet, the total cost of which was $21,494.05. This sum included the cost of four ditch tenders' houses, each 14 by 20 feet and furnished with bunks and tables, 16 waste gates, and timbers for trestles, stringers, and ties. The total amount of lumber used in the flumes was 316,800 feet (board measure). In addition 28,240 linear feet of hewn timbers were used for stringers, trestle posts, and ties, the sizes varying from 8 to 12 inches in diameter. The timber used was yellow pine, most lumber was cut at a sawmill near Mount Moriah, although smaller amounts were cut in sawmills in Baker Creek Canyon and the South fork of the Big Wash.

The route of the Osceola (east) Ditch was shortened by at least 2 miles by the excavation of a tunnel "through a projecting spur of the main mountain range" in Strawberry Canyon (just inside the north boundary of Great Basin National Park). The tunnel was 632.5 feet long, 5 feet wide, 6.5 feet high, and had a grade of 4 feet. The tunnel was bored through "fairly solid granite except at its approaches where the rock was somewhat decomposed, requiring a few sets of timbers and lagging". W.I. Aiken of Osceola excavated and timbered the tunnel under contract at a cost of $5,060.

The total cost of the Osceola (east) Ditch was $108,222.65. This sum was broken down as follows: Purchase of Lehman creek water rights, with ranch and improvements - $10,000; engineering expenses - $6,221.99; ditch excavation - $58,307.86; flume construction - $21,494.05; tunnel - $5,060; and general expenses for teamsters, cooks, construction superintendent, etc. In addition and "properly chargeable to the east-ditch account was the work of cutting and draining a small lake (Stella Lake) at the head of Lehman's Canyon, putting in a culvert and gate, constructing cabin, etc." at a cost of $949.28.

Associated with the construction of the Osceola (east) Ditch was improvements at the placer mines in Osceola which were outside the present boundaries of Great Basin National Park. The distributing reservoir was enlarged some 50 percent in March 1890 by the excavation of nearly 4,000 cubic yards of "cemented gravel" and rock from the interior and placing it upon the bank. The enlargement, together with a new gate tower and waste gate, cost $2,875. Two large-sized giants or monitors (Hoskin-Marysville-California patent, size #5) having 15-inch inlets and 8-inch nozzle butts, were added to the plant. The giants, with two 18-inch water gates and deflectors, cost $900.

Some 1,100 feet of large bedrock sluice also was constructed at Osceola having dimensions of 60 inches in width and 35 inches in depth. Since all of the gravel in the existing workings passed through the sluice, it was "strongly built and supported" and "absolutely tight in the bottoms to prevent loss of quicksilver and gold." The bottoms of the sluice were selected lumber 1.75 inches thick, planed, tongued, and grooved. The sides of the sluice were doubled, the inner lining consisting of 2-inch plank. Riffle blocks were square timbers 12 inches by 12 inches by 12 inches placed in rows across the bottom and divided by a 2-inch strip, which left an aperture in which the gold could settle. Total cost of the sluice, which required approximately 80 feet of lumber per lineal foot, was $3,300.

In connection with construction of the sluice, a tunnel was driven some 135 feet through the north end of the bedrock into the deep channel at a cost of $1,225. The tunnel was 8 feet wide and 7 feet below the head of the sluice. The set was 24 feet by 48 feet, divided into four compartments with a grade of 1 in 12 feet, and cost $385.

Miscellaneous improvements were added to the hydraulic operations in Osceola. A small pipeline was constructed to furnish the water to a Pelton wheel for power generation. New buildings and an electric lighting plant were constructed. Two arc lights of 2,000 candlepower were erected at the placer, thus enabling increased hydraulic operations to be conducted at night.

During its construction and immediately after its completion in 1889-90, the ditch received attention and publicity in nationally circulating mining periodicals such as the *Engineering and Mining Journal* and the *Mining and Scientific Press*. The ditch only was utilized for its intended purpose for some 11 years (1890-1901) and never did provide the necessary quantity of water required to permit the Osceola Gravel Mining Company's hydraulic operations to reach their widely anticipated development and production potential. The engineering work, however, is an outstanding example of a mining-related water conveyance system designed to facilitate exploitation of rich placer gold deposits in late nineteenth century eastern Nevada. Despite the present state of deterioration and decay of the ditch and related works, it is the only extant example of such an engineering system in eastern Nevada with the exception of scattered traces of its companion Osceola (west) Ditch. (All information about Osceola Ditch from Dave Tilford 2001.)

Several threats and risks exist that may effect the relevant and important values in the proposed Osceola/Osceola Ditch ACEC. These threats and risks are locatable mineral development, visitor use, off-highway vehicle use, natural deterioration of the ditch and cemetery, and trespass/unauthorized use.

The current condition, state, and trend of the relevant and important values in the Osceola/Osceola Ditch ACEC include:

- Locatable mineral development – Stable. Hazardous mine adits, shafts, and facilities need physical barriers or closures and public safety notices. Mining and prospecting has destroyed and continues to threaten to destruction of historic mining features.

- Visitor Use – Stable. Without physical barriers and interpretative facilities, archaeological features are threatened (Osceola townsite). Stable. Maintenance of roads, weeds, control litter needed (Osceola ditch). Deteriorating. Without visitor facilities and cyclical maintenance weed control and fence repair an increasing problem (Osceola cemetery).

- Off-highway Vehicle Use – Stable. Need designation of existing roads and trails.

- Natural Deterioration of ditch and cemetery – Ongoing. Seasonal floods, debris flows, and erosion require physical protection of ditch and other mine features.

- Trespass/Unauthorized Use – Stable. Past unauthorized mine activities and road maintenance/construction could reoccur.

The proposed Osceola/Osceola Ditch ACEC has several relationships to existing rights. There is private land related to the historic mining adjacent to the area, and there are active mining claims within the area. Several lands and realty actions have occurred within the proposed Osceola/Osceola Ditch ACEC. The area is within portions of three grazing allotments (Majors, Sacramento Pass, and Willard Creek). The area does not exist within or immediately proximate to any wilderness study area or any wild horse herd management area.

Pahroc Rock Art

The proposed Pahroc Rock Art ACEC is located in Lincoln County, Nevada, about 35 miles west of Caliente, Nevada. This area, in the North Pahroc Range, is located in the south central portion of the Ely District. This area is a potential ACEC based on the prehistoric values it contains.

There are several petroglyphs, rock shelters, and other artifacts indicating ongoing use in this area. The following are the sites that have been recorded:

- The Ropeclimber site contains anthropomorphic petroglyphs and a rock shelter. Surrounding the rock shelter was a lithic scatter and metate fragments.

- The Looking for Les site contains one small anthropomorphic petroglyph on the north side of the boulder. Two grinding slicks were noted on the top of a boulder to the east of the petroglyphs. A lithic scatter of obsidian and multicolored cherts cover a large area.

- The Two Sheep site contains a petroglyph of two sheep. One glyph faces east the other faces north. On the north face there is another faint petroglyph above the sheep. Three tinajas are located on top of a granite boulder below the petroglyphs.

Several threats and risks exist that may effect the relevant and important values in the proposed Pahroc Rock Art ACEC. These threats and risks are recreational bouldering, livestock grazing, and visitor use/vandalism.

The current condition, state, and trend of the relevant and important values in the proposed Pahroc Rock Art ACEC include:

- Recreational Bouldering – Deteriorating. Interpretative facilities and etiquette signs are needed, without physical barriers, archaeological features are threatened.

- Livestock Grazing – Deteriorating. Physical barriers are needed to prevent or reduce livestock rubbing against rock art.

- Visitor Use/Vandalism – Stable. Past looting could reoccur. Constant vigilance and on-site etiquette signs may reduce the hazard.

The proposed Pahroc Rock Art ACEC has several relationships to existing rights. There is no private land or existing active mining claims within the area. Several lands and realty actions have occurred within or immediately adjacent to the proposed Pahroc Rock Art ACEC. The area is within one grazing allotment, the Pahroc Allotment. It does not exist within or immediately proximate to any wilderness study areas or wild horse herd management areas.

Pygmy Sage Research Natural Area

The Pygmy Sage Research Natural Area is located in White Pine County in Spring Valley, northwest of Wheeler Peak. This area is a potential ACEC based on its designation as a research natural area to assist in the preservation of an example of a pygmy sage ecosystem for comparison with other ecosystems influenced by humans. The 160 acres is entirely flat and covered in low vegetation including pygmy sage.

Pygmy Sage is relevant and important for the unusual pygmy sage (*Artemesia pygmia*) species.

Several threats and risks to the unusual vegetation exist. Increased recreation and visitation have led to an increase in Off-highway Vehicle use and vehicle route proliferation. An increase in the spread of noxious and invasive weeds also could impact the area.

The proposed ACEC has no relationships to existing rights. The Research Natural Area was designated in 1965. The area is entirely surrounded by public land. The nearest private property is 0.25 mile to the north of the proposed. There also is active grazing within the proposed area. There are no active mining claims within the area.

The proposed area is an instant study area but is not within or adjacent to any other wilderness or wilderness study areas.

Hendry's Creek/Rock Animal Corral Archaeological Site

The proposed Hendry's Creek/Rock Animal Corral ACEC is located in White Pine County, Nevada, about 15 miles north of Baker, Nevada. This proposed ACEC, in the Snake Range, is located along the eastern border of the Ely District. This area is a potential ACEC based on the prehistoric values it contains.

The Hendry's Creek area includes several rockshelters, pictographs, and lithic scatters, indicating ongoing prehistoric use. The rockshelters may be habitation sites or temporary campsites, or they may have had other seasonal uses. The rock art and lithic scatters contribute to information on prehistoric settlement patterns as well as possible prehistoric resource use of this area.

The Rock Animal Corral site was first recorded in 1953 by Jack P. Rudy in *An Archaeological Survey of Western Utah*. He describes the trap, the setting, and the use of the trap.

"Antelope Trap (26Wp13). Approximately 16 miles north of Garrison, Hendry's Creek has cut a gap in the range of hills bordering the west side of Snake Valley. The creek drains a basin some 2 to 3 miles in diameter, which lies immediately west of Snake Valley. The gap in the easternmost fringe of hills formed by the creek is about 0.25 mile wide. South of this gap and south of the creek, a saddle has been formed between a single, low hill and the larger range of hills bordering the valley. East of, and extending into the eastern slope of this saddle, a rock wall was constructed to form an animal trap.

The trap, roughly U-shaped, is located on the valley side of the saddle. Its walls of piled stones vary in height, but average three feet at their highest point. The area enclosed by the walls is approximately 800 feet by 1,200 feet. Approximately 600 feet west of the open end of the trap a second wall runs along the edge of a shallow wash. Several stone cairns also are located near the approaches to the trap.

The method of trapping animals (assumed to have been antelope) in the corral was most like as follows: Across the gap just north of the saddle some form of barrier must have been erected to prevent the animals from escaping from the hunters into the basin leading to Snake Valley. The hunters went into the basin and drove the animals toward the valley. As the animals went into the gap and found it blocked, they probably turned toward the saddle where no obstacle was visible. The crest of the saddle conceals the corral when approach is from the west or basin side. The animals, unable to see the corral, then raced over the saddle into the trap, and were killed by hunters concealed in the gap at the center of the U."

Several threats and risks exist than may affect the relevant and important values in the proposed Hendry's Creek/Rock Animal Corral ACEC. These threats and risks are decorative stone removal, off-highway vehicle use, and visitor use.

The current condition, state, and trend of the relevant and important values in the proposed Hendry's Creek/Rock Animal Corral ACEC include:

- Decorative Stone Removal – Stable. Constant vigilance is needed for permitted and unauthorized collection.

- Off-highway vehicle Use – Stable. Designation of existing roads and trails is needed. Ongoing unrestricted use would further damage or destroy the resource.

- Visitor Use – Stable. Without etiquette/information posting, unintentional damage could cause resource loss and destroy or damage resource values.

The proposed Hendry's Creek/Rock Animal Corral ACEC has several relationships to existing rights. There is no private land within the area. There are existing active mining claims within this area. The proposed Hendry's Creek/Rock Animal Corral ACEC is located within the Smith Creek grazing allotment. Several lands and realty actions have occurred immediately adjacent to or within the proposed Hendry's Creek/Rock Animal Corral ACEC. The area does not exist within or immediately proximate to any wilderness study area or wild horse herd management area.

Rose Guano Bat Cave

The Rose Guano Bat Cave ACEC is located in White Pine County, Nevada, about 40 miles east of Ely, Nevada, on U.S. Highway 50. This ACEC, in the Snake Range, is located in the east central portion of the Ely District. This area is a potential ACEC based on the historic values and sensitive species relevance and importance.

Historic Importance

Rose Guano Bat Cave (also known as Rose Cave, Bat Cave, Bat Cave and Guano Mine, or Osceola Cave) consists primarily of two large rooms, one of which was mined extensively for guano or phosphate starting in 1913. In 1926 miners made a second entrance (adit) into the cave and constructed wood steps between the cave rooms. The guano mine entrance (adit) is approximately 4 feet wide and 5 feet high through solid rock. The mine adit is about 200 feet long accessing the cave. The cave is an estimated 483 feet long.

Rose Guano Bat Cave is 4 miles north of the Osceola Mining District (1872-1900), the only predominantly placer gold district in White Pine County, where the largest ($6,000) gold nugget in Nevada was found. The cave, however, was mined only for phosphate rock and bat guano. Both phosphate rock and bat guano have historic and modern use as fertilizers. "Phosphate rock discovered sometime prior to 1917 and reported by Lincoln (1923, p. 253) refers to bat guano at Rose Cave, also known as Bat Cave. About 1926, a tunnel 170 feet long was driven into the lowest part of the cave to extract the guano"(Smith, 1976:60-61).

McLane (1974), reports "guano was mined for fertilizer from the cave as early as 1912 or 1913. The guano was mined again in 1940's and during this time a 200-foot adit was driven to the guano deposit to facilitate its removal. The adit intersected a small cave that had developed along a fault-brecciated zone." Although it is not rare for caves to be mined, guano mines are uncommon in this area of Nevada.

Records show phosphate mining permits were issued for 1928-1937 and 1945-1950. In 1971 the cave and mine were surveyed by the U.S. Army Corps of Engineers and found unsuitable for use as a fallout shelter. The most recent activity was a prospecting permit issued in 1986.

There are several locations within the U.S. where phosphate rock is mined. The majority (86 percent) of the phosphate rock is located in Florida and North Carolina with the balance (14 percent) being mined in Idaho, Montana, Tennessee, and Utah (USDOI 1993). In Nevada, the majority of the phosphate rock is located in the northeast corner of the state.

Sensitive Species Importance

Visits to the cave by Great Basin National Park personnel, Nevada Department of Wildlife, and BLM personnel indicate a large roosting summer population of bats. Estimates run as high as 82,000 bats. Trapping indicates use by male and non-reproductive female Mexican (or Brazilian) free-tailed bats (*Tadarida brasiliensis*) and winter use by a smaller population of Townsend's big eared bats (*Plecotus townsendii pallenscens*), a Nevada BLM sensitive species. An earlier report by Tueller et al. (undated) entitled "An Evaluation of the Research Possibilities of the South Snake Range in Eastern Nevada"

estimated the bat population at 0.5 million and claimed that a maternity colony existed. It is possible that the change in the airflow into and out of the cave after the adit was installed made the cave unsuitable for a maternity roost while remaining acceptable as a bachelor colony.

In the past, there have been unsuccessful efforts to close the mine entrance with boards. In 1997, a temporary reversible metal gate/door was installed approximately 30 feet inside the mine adit so that the airflow to the cave by this route could be sealed off. The intent was to seal the airflow in order to stabilize humidity and temperature in the cave. If it is later determined that the airflow should be reestablished, for all or part of the year, the door would be opened. Installation of the door involved drilling into the rock walls of the mine adit to provide a seal around the door jam. The door also helped make casual entrance into the cave more difficult. Also, since the door is well within the mine adit (not visible from the outside), this may allow any winter hibernating bats to still use the outer portion of the adit, and reduce opportunities for vandalism and removal of the door by casual users

Several threats and risks exist that may affect the relevant and important values in the Bat Cave. These threats and risks are visitor use/visitor safety and wildlife protection.

The current condition, state, and trend of the relevant and important values in the Rose Guano Bat Cave include:

- Visitor Use – Stable but physical barrier needed to prevent off-highway vehicle access. Without physical barriers, interpretative facilities/signs, and etiquette signs, the wildlife and historic features are threatened.

- Visitor Safety – Visitor safety signs regarding airborne pathogens.

- Wildlife – Currently stable with installation of door on adit to restore proper bat habitat.

The Rose Guano Bat Cave has several relationships to existing rights. There is no private land located within the area. According to the 1997 database, there are no active mining claims located within the Rose Guano Bat Cave. Several lands and realty actions have occurred near the Rose Guano Bat Cave. The Rose Guano Bat Cave is within the one grazing allotment, the Majors Allotment. The Rose Guano Bat Cave does not exist within or immediately proximate to any wilderness study area or any wild horse herd management areas.

Shooting Gallery

The proposed Shooting Gallery ACEC is located in Lincoln County, Nevada, about 7 miles west of Alamo, Nevada. This area, between the Pahranagat Range and the East Pahranagat Range, is located in the southwest portion of the Ely District. This area is a potential ACEC based on the prehistoric values it contains.

The Shooting Gallery Game Drive District is a multi-component cultural landscape consisting of a large complex of scattered rock art sites (seven sites, approximately 200 to 300 panels) in association with several well-developed habitation areas. There also are at least five areas of stacked rocks, upright rock slabs, and small rock circles likely to have functioned as a game-drive complex used for hunting large game (bighorn sheep, deer, or pronghorn antelope).

The Shooting Gallery Game Drive District is located in and around a small interior mountain valley nestled between the Pahranagat Range and the East Pahranagat Range, at an altitude of about 5,150 feet. This valley gently slopes south to north, and is approximately 0.75 mile long by 0.5 mile wide. The main wash and several smaller gullies channel seasonal runoff, and there are several natural tanks (tinajas) that are

capable of holding several thousands of gallons long after the gullies are dry. The area is part of a system of natural travel corridors for movement from the Pahranagat Valley to the upper slopes of the Pahranagat Range. Located at the transition between the Joshua/Blackbrush and Low Sage and Pinyon-Juniper zones, pockets of riparian vegetation also are found in the narrower drainages.

At either end of the valley there is a small hill; along the spine of each is a long line of stacked rocks and supported upright rocks. Rock circles and semi-circles (hunting blinds) are positioned at the ends of the lines of stacked rocks. A third site (West Trap) has a concentration of blinds at the top of a long sloping hill. The rock features may have functioned as diversion fences to channel herds of game that were surprised as they were coming to water at the tinajas.

The rock features at Shoot 'em Up Pass and the Sentinel Ridge originally were recorded in 1996. Due to increasing visitation and subsequent vandalism, the BLM Ely Field Office had these two sites rerecorded in more detail. Most of the rock art and habitation sites are in a rocky area on the western edge of the District. The habitation sites show evidence (midden deposits, groundstone, hammerstones, debitage, pottery, basketry, etc.) of a wide range of activities.

The rock art consists of primarily of petroglyphs on large boulders and cliff faces, although a small number of red pictographs also are found here. The rock art imagery includes a large percentage of abstract elements, as well as many bighorn sheep, deer, and a variety of anthropomorphs (human-like figures), several of which are indicators of the Pahranagat Representational Style (Heizer and Baumhoff 1962; Heizer and Hester 1974; Green 1985; Zancanella, Ferris 1990; Stoney 1991).

Several threats and risks exist that may effect the relevant and important values in the proposed Shooting Gallery ACEC. These threats and risks are off-highway vehicle use, visitor use, and vandalism.

The current condition, state, and trend of the relevant and important values in the proposed Shooting Gallery ACEC include:

- Visitor Use – Stable but deteriorating with increased visitor use, more target shooting at rock art taking place, fire pits near rock art, and litter. Without physical barriers and interpretation facilities the archaeological features are threatened.

- Off-highway vehicle Use – Stable but without designation of roads and trails only for off-highway vehicle use, off-highway vehicle damage could further destroy the resource.

- Vandalism – Stable, but past looting can and has occurred. Constant vigilance and on site etiquette signs may reduce the hazard

The proposed Shooting Gallery ACEC has several relationships to existing rights. There is no private land or active mining claims within the proposed ACEC. Several lands and realty actions have occurred within the area. The proposed Shooting Gallery ACEC is within portions of three grazing allotments (Pahranagat West, Pine Cone, and Lower Lake West). The area does not exist within or immediately proximate to any wilderness study area or any wild horse herd management area.

Shoshone Ponds Natural Area

The Shoshone Ponds Natural Area is located in White Pine County in Spring Valley, just west of the Snake Range. Three ponds designed to hold endangered fish are within the area. The endangered fish include the Pahrump killifish and the Relic Steptoe dace.

Shoshone Ponds is relevant and important for its significant habitat for endangered species, as well as important vegetative communities. This is a second example of valley bottom Rocky Mountain Junipers. In addition, the original ponds were built by the Civilian Conservation Corp in the 1930s. Remnants of the Civilian Conservation Corp camp are located within the Natural Area. These ponds also represent an important water source for the Brazilian Free-Tailed bats found in the Bat Cave and Guano Mine Historic Area. The Pahrump killifish is found no where else in the world. In the early 1970s, the U.S. Fish and Wildlife Service, BLM, and Nevada Department of Wildlife transplanted killifish from their last remaining native location at Manse Ranch Spring near Pahrump.

Threats and risks to the Shoshone Ponds Natural Area include drought and a decrease in the natural runoff necessary for the plant communities' health, increasing off-highway vehicle use, and the spread of noxious and invasive weeds. Drought and increased recreational use also could impact the endangered fish found in the ponds.

There is active grazing within the natural area within the Bastian Creek allotment. Several roads and fence lines cross the natural area. The proposed areas southeast boundary is adjacent to private property.

Shoshone Ponds Natural Area does not lie within or adjacent to any wilderness or wilderness study areas though it is an Instant study area.

Snake Creek Indian Burial Cave

The proposed Snake Creek Indian Burial Cave ACEC is located in White Pine County, Nevada, about 7 miles southeast of Baker, Nevada. This proposed ACEC, in western Snake Valley, is located on the eastern edge of the Ely District. This area is a potential ACEC based on the prehistoric archaeological, geological, and zooarchaeological values it contains.

Zooarchaeology

Snake Creek Indian Burial Cave is a unique paleontological deposit. The cave is the first natural trap excavated in the Great Basin and one of the few localities describing a valley-bottom community. The recovery of extinct *Camelops* sp. (camel) and *Equus* spp. (horse), in addition to radiometric dates, indicates at least some of the deposits to be of late Pleistocene age. Eight mustelid species have been identified from Snake Creek Indian Burial Cave, including three species not previously reported from the late Rancholabrean of the Great Basin: *Mustela nigripes* (black footed ferret), *Mustela nivalis* (least weasel), and *Gulo gulo* (wolverine). A review of late Pleistocene deposits indicate that there are more species of mustelids recovered from Snake Creek Indian Burial Cave than from any other locality in the Great Basin.

Geology

What makes Snake Creek Indian Burial Cave so geologically unusual is its outstanding examples of moonmilk folia and at a lower level, an interesting sedimentation sequence. The form of the cave is unusual because of the sinkhole entrance, the entrance drop, the different levels and rooms, and the opportunity to observe a variety of speleothems.

Archaeology

The cave has been severely vandalized over a period of many decades with little or no record of the actual materials recovered. According to the native residents of Baker, Nevada, and Garrison, Utah, artifacts and remains of what were considered Indians have been taken from the cave since early pioneer days. The presence of existing artifacts and human remains had not been verified in 1969. The author of the Anthropological Paper "Garrison Site," University of Utah, speculated that the cave was very likely used as

burial ground for Indians inhabiting the area during the Development Pueblo Period, more specifically Pueblo II. Human remains (portions of a human pelvis and cranium) were reported to be visible on the cave floor in 1980 and more human remains reported in 1987. The American Indians living in Garrison, Utah, report that the cave had been used as a burial ground until fairly recent times and complained about the ransacking and desecration of the gravesite.

Several threats and risks exist that may effect the relevant and important values in the proposed Snake Creek Indian Burial Cave ACEC. These threats and risks are visitor use, public safety, and vandalism.

The current condition, state, and trend of the relevant and important values in the proposed Snake Creek Indian Burial Cave ACEC include:

- Visitor Use – Deteriorating due to litter and trash and unauthorized fires in the cave. Climbing protection has scarred and gouged rock surfaces.

- Public Safety – Improving. Will improve when planned bat gate is installed and closure without permit is implemented.

- Vandalism – Stable. Until locked gate is installed, human remains, archaeological resources and zoo archaeological resources, and geological resources are vulnerable to continuing unauthorized use and destruction.

The Snake Creek Indian Burial Cave ACEC has several relationships to existing rights. There is no private land located or active mining claims located within the proposed ACEC. Several lands and realty actions have occurred immediately adjacent to or within the proposed Snake Creek Indian Burial Cave ACEC. The area is located within one grazing allotment, the Baker Creek Allotment. It does not exist within or immediately proximate to any wilderness study area or any wild horse herd management area.

Swamp Cedar Natural Area

The Swamp Cedar Natural Area is located in White Pine County, Nevada. This natural area is a potential ACEC based on being habitat for endangered, sensitive or threatened species, habitat essential for maintaining species diversity, and rare and endemic plant communities. In addition, the Swamp Cedar Natural Area is a significant historical site, the battlefield of the Goshute War of 1863.

The Swamp Cedar Natural Area, in central Spring Valley, is the largest of three known occurrences of a valley bottom ecotype of Rocky Mountain juniper woodlands. Although they are locally called swamp cedars, they are described by the national vegetation classification system as Rocky Mountain juniper (*Juniperus scopulorum*) temporarily flooded woodland. In addition to the rare plant community, the Spring Valley Swamp Cedars site provides habitat for slender thelypody (*Thelypodium sagittatum* ssp. *Ovalifolium*), a rare plant endemic to the Great Basin ecoregion.

The Rocky Mountain juniper temporarily flooded woodland is endemic to the Central Mountains section of the Great Basin ecoregion. This plant association is ranked G1 by NatureServe indicating that it is critically imperiled because of extreme rarity, imminent threats, and/or biological factors. All three known locations occur on Ely District public lands (with some private lands included). As the largest stand, Spring Valley Swamp Cedars is an exemplary occurrence of this rare plant community. The slender thelypody is ranked T2G4 indicating that it is imperiled because of rarity and/or other factors. It is known from about seven valleys in eastern Nevada and four valleys in adjacent Utah, thus, restricted to the eastern Great Basin.

In mid-June, 1827, Jedediah Smith, American mountain man, and two companions crossed central Nevada in the area of the Spring Valley Swamp Cedar.

The earliest systematic study by a scientist-explorer of this area was that attempted by Captain James Harvey Simpson of the Topographical Engineers and his party of experts/scientists in 1859. On his return to Utah, Simpson's party traveled through the Swamp Cedars area.

In 1872-1873, Captain George Montague Wheeler and party traversed the area in one of his surveys west of the 100 Meridian. The engineering corps, of which Wheeler was a member took over the western exploration and surveys from the then defunct Topographical Engineers who had conducted these kinds of surveys before the Civil War. Wheeler Peak is named after Captain Wheeler.

According to Steward (1938), there were at least four Shoshone single-family units located within the Swamp Cedar area. This village was named "Basiamba", after Basiandoya, the mountain in back of Osceola. People from the villages of Basiamba and Tuhuva, located to the north, traveled to the Swamp Cedar area to participate in antelope hunts (Steward 1938). The Village of Basonip, whereat least seven family units lived, was located two to three miles north of Swamp Cedar along Cleve Creek. The spring antelope drive was held at a corral one mile to the west. In the late fall or early winter, local rabbit drives were held near Basonip and probably down into the Swamp Cedar area. Communal mud-hen drives were held near the Biabauwundii village, north of the Swamp Cedar.

Steward (1938) records that white soldiers murdered seven Indian families at Basonip. This incident is possibly connected with hostilities which broke out in the 1860s. Essentially arising between white settlers and the Bannock Shoshone and Ute, the conflict was carried into the Spring Valley area, primarily along mail wagon routes. There are conflicts with locating the historic Indian massacre site. One reference located the site within the Swamp Cedar Natural Area in T15N, R67E, Sections 27, 33, and 34. Another reference puts the site in T15N, R67E, Section 9 N½ while another reference relates the historic site location to a water source located in Section 9. Another reference yet describes the massacre "near" the Cleveland Ranch as late as 1875. It is therefore proposed that the massacre could have occurred somewhere at or between the section 9 location and Cleve Creek, a distance of about 3 miles.

Several large prehistoric sites have been located within this area.

Swamp Cedar – Goshute War of 1863 T15N, R67E, Sections 21, 22, 23, 28, 33

This area, which is now known as the Swamp Cedar Natural Area, was the site of a battle between the Goshutes and Captain S.P. Smith's Company of California Cavalry on May 16, 1863. "Surprised another Indian Camp in a cedar swamp, south of the Cleveland Ranch. The Cavalry charged down upon the hostile band, but were brought to a halt by the swampy nature of the ground. Many horses were mired, but some floundered through, and the consequent confusion, with temporary delay, enabled most of the Indians to escape. Twenty-three were found dead after the short, sharp conflict which ensued. The casualty to the Whites was a soldier wounded and one horse disabled." (History of the State of Nevada, Thompson and West 1881).

The juniper woodlands are dependent on temporarily flooded hydrologic regimes that rely on recharge from local runoff and soil features that create a perched water table. Otherwise, the junipers would not be able to survive the desert environment of the valley floor. Management that maintains a functioning hydrologic regime is required, therefore, uses that compromise basin hydrology should be carefully considered.

Threats and risks to the Swamp Cedar Natural Area include drought and a decrease in the natural runoff necessary for the plant communities health, increasing off-highway vehicle use, and the spread of noxious and invasive weeds.

A power line does cross through the Natural Area. The proposed area lies within the Bastian Creek allotment. The proposed areas southern boundary is adjacent to private property.

The Swamp Cedar Natural Area does not lie within or adjacent to any wilderness or wilderness study area though it also is an Instant Study Area.

Ward Mining District

The proposed Ward Mining District ACEC is located in White Pine County, Nevada, about 17 miles south of Ely, Nevada. This proposed ACEC, in the Egan Range, is located in the center of the Ely District. This area is a potential ACEC based on the historic values it contains.

Silver ore was discovered at the Willow Creek freighting stop in 1872, while two freighters, William Ballinger and John Henry, were searching for their bull oxen that had been left to graze at Willow Creek. Ore samples were collected and assayed in Cherry Creek, and tested favorably. In short order, the bullwhackers returned to Willow Creek with more men, supplies, and tools, and began staking claims (Miller 1924:341).

The most promising ore lay 3 miles to the north, around what is now Ward Gulch. Claims were staked, and many of these were sold to Judge Frizell in the fall of 1873. The townsite of Ward was located at this time and named after B. F. Ward, one of the locators (Miller 1924:346; Carlson 1974:241). By December of 1874, a small crew of miners was working the Judge's Paymaster Mine. Approximately 12 persons occupied the townsite. In April of 1875, the mine properties were examined by a group of experts. Their evaluation resulted in the sale of the Paymaster Mine to the Martin White Mining Company. This particular transaction kicked off the Ward boom in earnest (Miller 1924:347; Read 1965:83).

The town grew dramatically in 1876, claiming a population of 1500 by year's end. The Ward Reflex, the town's primary newspaper, started up on April, 1877 (Bancroft 1981:281; Miller 1924:294; Thompson and West 1958:663). According to Thompson and West (1958:664), a good supply of water was brought to Ward from Willow Creek.

By the summer of 1877, Ward, with a population of 1,500, was the county's largest camp. Two smelters, which had been built in 1875, were joined by a twenty-stamp mill with three furnaces (costing $85,000) connected with the mines by a tramway. Two breweries kept the town in good spirits' fraternal orders were established; a hook-and-ladder company was founded and a city hall was built. Within another year's time, Ward's 680 registered voters controlled county elections (Paher 1970).

In sharp contrast with most young mining camps which experienced frequent shootings and robberies, Wards vigilance committee dispensed with lawbreakers immediately. After a camp follower, without provocation, gunned down a local merchant on the main street, morning found the drifter hanging from a tree. Later when a stage was held up while approaching the camp, one bandit was shot during his attempt at robbery and his partner escaped, only to be captured and sent to prison (Paher 1970).

While not directly stated anywhere, the building of the Ward Charcoal Ovens probably was precipitated by the Martin White Mining developments. Once several mines were exploited in earnest, the company needed roasting furnaces for ore processing. In 1874 and 1875, ores were shipped to the Robinson District (near Ely) and to San Francisco, California, for milling. But by 1876, two roasting furnaces and a leaching plant were operating at Ward, creating a local need for large amounts of fuel (Smith 1976:80). The ovens likely were constructed in late 1875, to provide fuel in the form of charcoal. Perhaps the undertaking was initiated and financed by the Martin White Company.

John Townley (1970) states that the ovens were constructed in 1875, and that several hundred men were employed in cutting and hauling wood in the nearby mountains. A community of wood haulers and their

families apparently developed along the South Fork of Willow Creek, where the ovens stood (Townley 1970:6). Exactly how long the ovens were used in not known. They may have been active in 1876, and were definitely in operation by September 1877, the charcoal-making supervised by a James Innis. The ore roasting and leaching set-up at Ward yielded little silver. In late 1878, this process was abandoned in favor of a roasting-chlorinating-amalgamation system. Recovery by this means was not much better, but the mill and its three roasting-chlorinating furnaces continued to operate until the mines closed, in 1883 (Smith 1976:80; Ward Reflex Sept. 27, 1879a:p.3, col 2).

Aside from the mention of the foreman at Ward, there is no indication of how many other people were required to operate the complex. An 1885 article in the Carbonate Chronicle regarding the operations at a similar kiln complex near Leadville, Colorado, suggests what kind of work force may have been present and their relative status. They included a foreman who made $100 or more a month, two burners at $50 to $80 per month, four fillers at about $60, and a whitewasher who maintained the exterior of the kilns and a roustabout who were paid from $40 to $60 a month. The kilns were owned by large-scale coal contractors who also hired the choppers and teamsters (article quoted by Griswold and Griswold 1968).

The heyday of the Ward Mining District lasted from 1876 to 1880. By the spring of 1877, only 500 of the 1,500 residents remained. This did not prevent the Ward townspeople from attempting to steal the county seat from Hamilton, in 1878. The coup failed. By 1883, the ore had “pinched out” (Elliot 1939:157; Paher 1969:100; Thompson and West 1958:663-664). It is assumed that the community of charcoal-makers and woodcutters around the charcoal ovens disbanded at about the same time as the town and the mines at Ward.

Support industries for the milling of ore once existed within the Ward District. The Ward Mining District takes in all of Township 14 North, Range 63 East, plus the easternmost strip of Township 14 North, Range 62 East. Charcoal making was the primary industry carried out at South Fork Willow Creek; it supplied the fuel needed for the roasting furnaces in the mills at Ward. Quarrying of stone for the massive charcoal ovens, burning of lime for mortar to hold the stone blocks, fabricating and firing of bricks for workers’ housing, cutting hauling, and burning of wood for charcoal production – all of these activities were carried out within the Ward Mining District.

Within the Ward Mining District, the town of Ward and its mines and mills, and the charcoal oven complex at South Fork Willow Creek are the only resources. No other camps existed within the district. At the local level, within the Ward District, the charcoal oven complex and its related industry are significant.

The Ward Charcoal Ovens are spectacular examples of stone architecture and masonry craftsmanship. According to Stephan McMillan, the Ward Ovens are the best examples of beehive-shaped stone charcoal ovens in Nevada. Nell Murbarger (1956:8), in a comparative study of kilns throughout the West, regards those at Ward as “the best ovens I have seen.” Similar ovens have been recorded at 22 other locations in the state (McMillan 1990). The ovens themselves are significant resources.

When the lead content of the ore decreased substantially in 1878, the larger of the two smelters was converted into a mill, and mining continued into the early 1880s. Revival of Cherry Creek in 1880 beckoned the mining camp crowd and Ward declined further when a major fire in the summer of 1883 destroyed one-third of the town. The Reflex then moved across Steptoe Valley to the growing town of Taylor and the post office was discontinued by 1887. Short-lived revivals of mining took place in 1906, in the late 1930s and in the 1960s (Paher 1970).

Several threats and risks exist that may effect the relevant and important values in the proposed Ward Mining District ACEC. These threats and risks are visitor use, right-of-way access, off-highway vehicle use, locatable mineral development, vandalism, and woodcutting/fire hazards.

The current condition, state, and trend of the relevant and important values in the proposed Ward Mining District include:

- Visitor Use – Deteriorating. The lack of interpretative facilities and etiquette/educational materials creates damage to graves, townsite, and setting.

- Right-of-way access – Deteriorating. Location in urban interface continues to create conflicts with development of residential housing, recreational use, and woodcutting.

- Off-highway vehicle – Deteriorating. Designation of roads and trails only could help stabilize and protect resources.

- Locatable mineral development – Currently stable. Changing market conditions could reopen conflicts with mining exploration and mine operations which have damaged townsite and historical setting.

- Vandalism – Deteriorating. Patrols, educational, and interpretative materials would reduce metal detecting and bottle hunting on townsite and defacing and unauthorized burials in cemetery.

- Fuel wood collecting/fire – Deteriorating. Fuelwood harvesting has damaged historic setting and recreational sightseeing.

- Wildfire – Currently stable. Risk of fire increases with camping at Ward Charcoal Ovens State Park and recreational sightseeing. Fire could destroy cemetery markers, damage historic artifacts, and foundations at the Ward townsite.

The proposed Ward Mining District ACEC has several relationships to existing rights. There is private land related to the historic mining and there are active mining claims within the proposed ACEC. Several lands and realty actions have taken place within the proposed Ward Mining District ACEC. The proposed Ward Mining District is located within the Lake Area grazing allotment. The area does not exist within or immediately proximate to any wild horse herd management areas or wilderness study areas.