

BLACK ROCK/HIGH ROCK

InterDistrict Management Summary

Sonoma/Gerlach Resource Area
Winnemucca District

Surprise Resource Area
Susanville District

DRAFT

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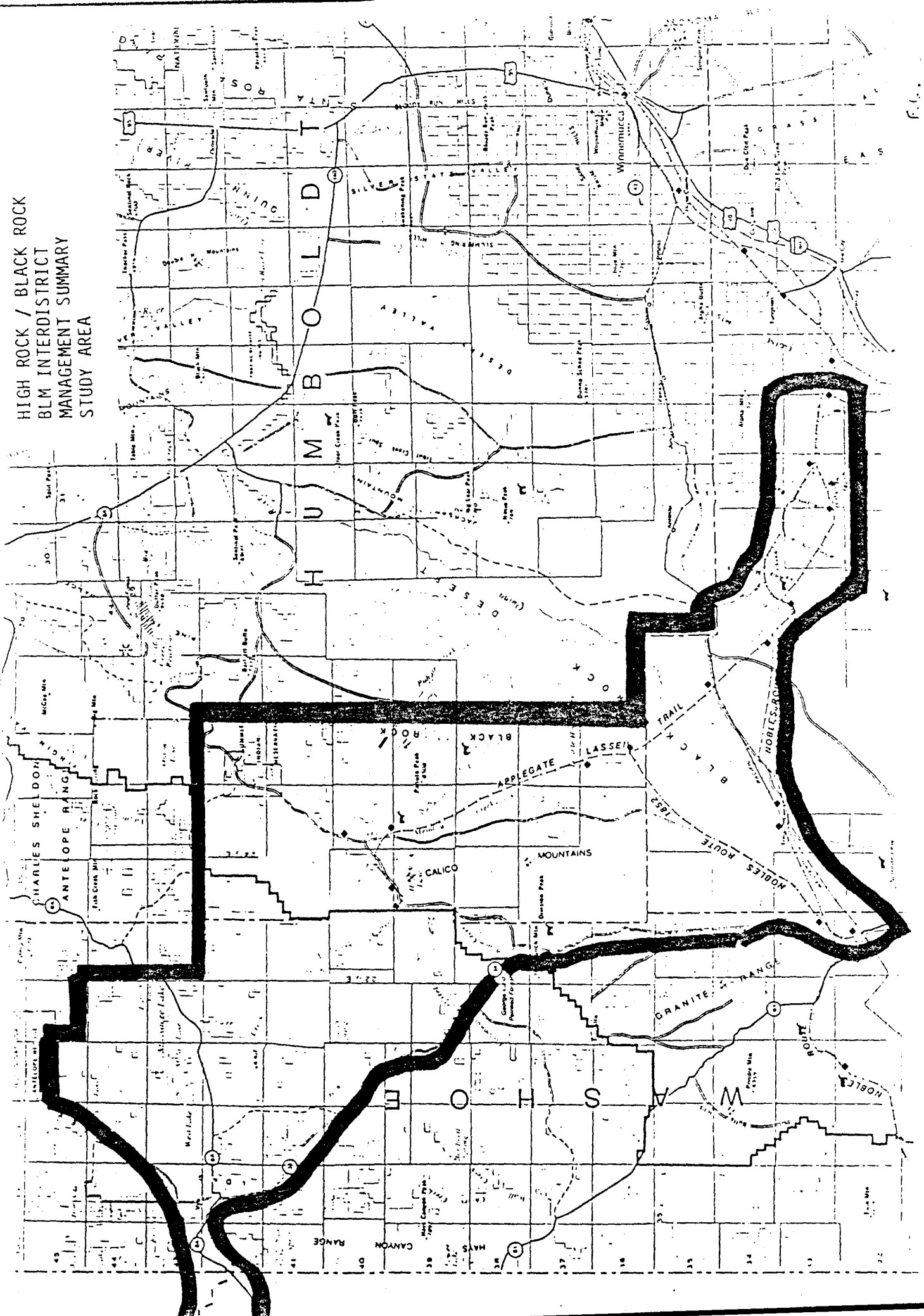
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Table of Contents

PURPOSE AND NEED	1
BACKGROUND	1
GENERAL LOCATION AND SETTING	3
CURRENT MANAGEMENT OBJECTIVES	3
Sonoma/Gerlach Management Framework Plan	3
Cowhead/Massacre Management Framework Plan	4
Tuledad/Home Camp Management Framework Plan	5
RESOURCE VALUES AND LAND MANAGEMENT	8
Historical/Archaeological	8
Paleontology	11
Wildlife	12
Riparian/Wetland	16
Watershed	17
Visual Resource	19
Wilderness	20
Wild Horses and Burros	23
Minerals	25
Livestock Grazing	28
Lands	31
Fire Management	33
PUBLIC USE AND VISITOR SERVICES	35
Recreation	35
Visitor Services and Safety	37
Emergency Services	38
Hazardous Materials	38
Transportation	38
SUMMARY OF INTERDISTRICT MANAGEMENT OPPORTUNITIES	40
Appendix 1:	
Summary of Land Use Plan Decisions and Implementation	41
Appendix 2:	
Summary of Accomplishments on Implementation of Activity Plans ...	57

HIGH ROCK / BLACK ROCK
BLM INTERDISTRICT
MANAGEMENT SUMMARY
STUDY AREA



BLACK ROCK/HIGH ROCK Interdistrict Management Summary

PURPOSE AND NEED

The purpose of the High Rock/Black Rock Interdistrict Management Summary is to consolidate in one document current management policy and planned actions for the areas under consideration as a National Conservation Area (NCA). Public discussion of the issues and BLM interdistrict management coordination will be facilitated by this single reference document. A number of new BLM policies, evaluation of the existing land use plans, and changes in public demand have created new management issues which need to be considered.

High Rock Canyon and the Black Rock Desert of northwestern Nevada contain an important segment of the historic Overland Emigrant Trails. Two formal proposals have been drafted to legislate management of the areas through designation of a National Conservation Area (NCA). An NCA is an area of public lands designated by Congress to conserve resources of outstanding or exceptional national value. Each Act by Congress establishing an NCA identifies specific resources and values which are to be protected, conserved and enhanced. There is no overall law or regulation governing the designation and management of NCAs. All existing NCA statutes direct the BLM to prepare a plan for the protection and management of the NCA. The NCA designation serves to give identity, definition, and focus to the area and serve as a pragmatic means to conserve public lands with natural and cultural resources of national interest.

The study area for this Management Summary is larger than either of the current NCA proposals. The study area corresponds to an earlier NCA proposal and is being retained here to allow for future boundary changes as well as to provide information on resources, issues, and actions which could affect management of the area in the future. In this document, the term *study area* will be used to describe the entire area. The term *High Rock portion* refers to that portion of the study area in the Surprise Resource Area, Susanville District and the term *Black Rock portion* refers to the portion of the study area in the Sonoma/Gerlach Resource Area, Winnemucca District.

BACKGROUND

The concept of a special designation within the study area dates to the 1960's. The late Dr. Bob Griffin and other members of Trails West, Inc. proposed to the National Park Service that the area be declared a National Monument. After the BLM negotiated a land exchange for the bottom of High Rock Canyon in the 1970's, the NPS sent an evaluation team. They were impressed with the resources, but found that it did not fit into their themes at that time.

A proposal was received on July 16, 1990 from the High Rock/Black Rock Emigrant Trail Coalition (The Coalition) to create a NCA on 1,132,000 acres of BLM Public Lands administered by the Susanville District (High Rock Canyon 466,240 acres) and Winnemucca District (Black Rock Desert 665,860 acres) of northwestern Nevada. The Coalition members include: The Oregon-California Trails Association, Sierra Club, Public Resources Associates, National Park and Conservation Association, Nevada Wildlife Federation,

Nevada Bighorn Unlimited, Nevada Historical Society, Trails West, and Friends of Nevada Wilderness.

The Modoc/Washoe Experimental Stewardship Steering Committee has developed a separate, but very similar, legislative proposal for the High Rock portion of the study area. The Stewardship Committee is a 23 member group of agencies and interest groups formed to recommend cooperative management solutions to livestock grazing related problems in the Warner Mountain Ranger District of the Modoc National Forest and the Surprise Resource Area of the Susanville BLM District. The Stewardship members include:

Nevada Department of Agriculture	Modoc County Agricultural Stabilization and Conservation Service
Washoe County Agricultural Stabilization and Conservation Service	Modoc County Supervisors
Tuledad/Home Camp Livestock Permittees	USDA-Soil Conservation Service
California Department of Fish and Game	California Sportsmen (Mule Deer Foundation)
University of California Cooperative Extension	Timber Industry
Surprise Valley Resource Conservation District	Warner Mountain Livestock Permittees
Vya Resource Conservation District	USDI-Fish and Wildlife Service
Bureau of Land Management, Susanville Modoc Cattlemen's Association	Cowhead/Massacre Livestock Permittees Modoc National Forest
Nevada Department of Wildlife	California Environmental Groups (Audubon Society)
	University of Nevada, Reno Cooperative Extension
	Nevada Environmental Groups (Nevada Wildlife Federation)
	Wild Horse Groups (American Mustang and Burro Association)

The main emphasis of both NCA proposals is the historic emigrant trail and its setting. The Lassen/Applegate Trail, Nobles Trail and Capt. John C. Fremont's California Trail pass through this area. Many traces of the overland emigrants can be seen, including wagon wheel ruts and carvings and paintings on the rocks. The US military also left unique traces in this area in the form of Camp McGarry, Camp Black and major transportation routes linking the gold fields of the late 1800's. The last Indian Massacre in North America occurred in Little High Rock Canyon in 1911. Representative relicts of the homestead era occur along the trail corridor and throughout the study area.

The landscape the proposals seek to protect includes the remote primitiveness, the wildlife, vast vistas, and vegetation communities similar to those seen by 1850's emigrants.

GENERAL LOCATION AND SETTING

The study area is located in portions of Washoe, Humboldt and Pershing counties in northwestern Nevada (Map 1). The study area is about 110 miles northeast of Reno, Nevada and 30 miles east of Cedarville, California. The total area encompasses about 1.1 million acres, with about 90% administered by the BLM.

The two towns closest to the NCA study area are Gerlach, Nevada (population 430) located at the south end of the playa of the Black Rock desert, and Cedarville, California, on the High Rock Canyon side. Residents of these towns are primarily employed in mining at one of the several gold mines in the area, ranching, the Union Pacific railroad, or government.

There are approximately 14 people who actually live within the study area, all on the Winnemucca District side. About half who live on mining claims, and half who live and work on private ranches.

The Black Rock portion of the study area is dominated by the playa remnants of ancient Lake Lahontan. The playa one of the largest, flattest places on earth, over 25 miles long, with a silt base. The silt is as much as 10,000 feet thick in some places and so flat that the curvature of the earth is evident. The High Rock Canyon portion represents the culmination of geological events beginning 15 million years ago. Massive flows of lava spilled across the future northwestern Nevada, forming a broad volcanic tableland. The effects of wind and water carved the soft lava into awesome gorges which are among the Great Basin's most spectacular erosional masterpieces. The area contains critical raptor and potential bighorn sheep habitat and a significant array of prehistoric and historic human occupation sites.

CURRENT MANAGEMENT OBJECTIVES

The Bureau's management objective for the study area is to manage the programs and resources of the area in such a manner as to maintain the integrity of the emigrant trails and the resource values that make up the surrounding environment, while managing other uses so as not to impair study area values.

Federal lands within the proposed NCA are managed in accordance with existing laws, regulations and planning decisions. The most important law is the Federal Land Policy and Management Act (FLPMA) that mandates management of public lands for the protection of resources, while recognizing the need for production of minerals and livestock. Other important laws are the Public Lands Improvement Act, the National Historic Preservation Act, and the Endangered Species Act.

The study area is covered by portions of three Management Framework Plans (MFPs). The three MFPs were completed by the early 1980s. They are:

Sonoma/Gerlach Management Framework Plan

The Sonoma/Gerlach MFP was completed in 1982. It covers the Black Rock portion of the study area. The MFP provides for multiple use management on most of the lands within the study area while complying with pertinent laws regarding protection of cultural resources and wildlife. The management emphasis and workload since the MFP was approved focuses on ecological monitoring of range resources, and minerals management.

Management goals are:

- Provide maximum acreage of public land for multiple use and sustained yield.
- Make suitable lands available for community and public purposes, agricultural uses and lease, rights-of-way, and legal access.
- Preserve the quality and quantity of water necessary to support current and future land uses.
- Reduce soil loss and associated flood and sediment damage on public land caused by accelerated wind and soil erosion.
- Maintain a viable population of wild horses and burros on public land where there was use as of December 15, 1971 while achieving and maintaining a thriving natural ecological balance on the forage resources.
- Provide forage on a sustained yield basis through natural regeneration; allocate all increases to permittees. Increase livestock forage by artificial methods.
- Provide for improvement or maintenance of wildlife habitat to assure sufficient quantity, quality, and diversity throughout the resource area to meet the needs of wildlife.
- Improve or maintain the condition of all aquatic habitat in each stream, lake, or reservoir having the potential to support a fishery or a threatened or endangered fish species at a level allowing the establishment of a healthy fish community.
- Provide as many recreational opportunities as possible without undue environmental degradation in the resource area; ensure public access to recreation resource areas, protect and enhance the visual resources in the resource areas.
- Conserve and protect cultural resources.

Cowhead/Massacre Management Framework Plan

The Cowhead/Massacre MFP was completed in 1981 and amended in 1983. The plan covers the majority of the High Rock portion of the proposed NCA. The MFP is subdivided into Sub-Units.

The High Rock Sub-Unit encompasses High Rock Canyon. It emphasizes the preservation of the scenic, cultural and wildlife values in the area. Livestock grazing and mineral development are restricted within much of the High Rock Area of Critical Environmental Concern (ACEC).

Specific management goals are:

- Maintain High Rock Complex in a primitive state by preservation of the natural characteristics of the area.
- Preserve 1,953 archaeological sites, 12 historical sites, and 16 miles of the Lassen/Applegate Trail.

- Provide wildlife habitat in suitable condition for bighorn sheep, 100+ species of nongame wildlife, 650 antelope, and 125 deer.

The Massacre/Nut Sub-Unit encompasses the upper portions of the High Rock watershed and the Massacre Lakes watershed. Management emphasis is on wildlife habitat, protection of significant archaeological sites and livestock grazing.

Management goals are:

- Provide 260,000 acres in good condition for wildlife by 1998.
- Protect significant archaeological sites and districts, and increase public awareness of their values and sensitivity.
- Improve 232,000 acres of range from poor/fair to good condition by 1998 and provide a 10,000 AUM increase in livestock grazing.
- Provide 90,000 acres of habitat in good condition for 205 wild horses.

The Long Valley/Sand Creek Sub-Unit takes in the western edge of the study area. The management emphasis is on livestock production.

Management goals are:

- Improve range condition to reach good condition on 280,000 acres and produce 15,000 AUMs of additional livestock forage by 1998.
- Improve wildlife habitat to good ecological condition on 260,000 acres by 1998.
- Protect significant archaeological sites and enhance public awareness of their values.

Tuledad/Home Camp Management Framework Plan

The Tuledad/Home Camp MFP was completed in 1977. The plan covers a band three to five miles wide in the southern and southwestern section of the High Rock portion. Management emphasis is on improvement of rangelands for wildlife habitat and livestock forage.

Specific management goals are:

- Protect and manage wild free-roaming horses as components of the public land in a manner to achieve ecological balance with other uses.
- Manage land which is suitable for livestock grazing in such a manner that within 20 years all plant communities are on an upward trend toward site potential.
- Reduce the soil erosion class to slight within 30 years.
- Accelerate and expand protection measures at sites of threatened cultural resources. Avoid impacting otherwise unthreatened but valuable cultural resources.
- Provide habitat for reasonable numbers of mule deer and pronghorn antelope by 1990.

- Maintain and improve existing raptor nesting habitat and expand nesting range by 1985.
- Achieve maximum reproduction, survival and growth of riparian vegetation on 75% of this type within 10 years.
- Maintain at least 25% of each native vegetation type in a natural or near natural condition and improve non-game bird habitat on all range improvement projects.

The MFPs direct the management goal achievement through decisions that allocate resources, set resource condition objectives, and place limitations on the use and development of certain resources. Appendix 1 contains a summary of the MFP decisions and their implementation.

MFP decisions are often implemented through activity plans prepared for specific resources and areas. Several types of activity plan have been completed within the study area. Habitat Management Plans (HMPs) deal with wildlife and wildlife habitat. Allotment Management Plans (AMPs) deal with livestock grazing management. Cultural Resources Management Plans (CRMPs) deal with management of historical and archaeological resources. Herd Management Area Plans (HMAPs) deal with management of wild horses. Fire Management Plans (FMPs) deal with restrictions for fire suppression and methods to lower suppression costs. An Area of Critical Environmental Concern (ACEC) Management Plan has been completed for the High Rock ACEC that provides overall management guidance as well as summarizes other activity plans in the ACEC. A total of ?? activity plans have been prepared within the study area. Actions to implement the activity plans and progress toward implementation is summarized in Appendix 2.

Activity plans are prepared to deal primarily with one resource, but the management actions usually result in benefits for other resources. Wildlife and wild horses benefit from implementation of effective grazing management. Archeological sites often benefit from the construction of livestock exclosures specified in HMPs for wildlife.

Interdisciplinary activity plans will receive increased emphasis in the future. The High Rock ACEC Management Plan is an example of activity planning for multiple resources. The 1987 plan covers approximately 24,000 acres within the High Rock portion of the study area. The High Rock ACEC Management Plan identifies six primary ACEC resource objectives:

- Maintain the natural biological systems as free of human disturbance as possible.
- Give special management attention to the historical and archaeological sites of national significance.
- Provide habitat for bighorn sheep, other game and non-game wildlife and wild horses.
- Improve the High Rock watershed condition by reducing peak flows, streambed channel erosion, and overland erosion.
- Conserve rare plants.
- Allow compatible uses.

The plan also identifies two primary ACEC management and evaluation tools:

- Management actions will be assessed utilizing a Limits of Acceptable Change (LAC) process. In this system, the amount of change allowed is defined explicitly by means of quantitative standards, the appropriate management actions needed to prevent further change are identified, and procedures for monitoring and evaluating management performance are established.
- The Friends of High Rock, a group of four organizations, including the California Association of 4-Wheel Drive Clubs, the Desert Trails Association, Trails West, the Oregon-California Trails Association, meets annually to assess monitoring data and prepare conclusions and management recommendations for the BLM to implement.

RESOURCE VALUES AND LAND MANAGEMENT

This section contains a summary of the study area's past, present, and future. The section is organized by resource or management program. Within each topic there are five headings. *Existing Information* provides background on the resources values and past uses of the resources. *Primary Issues in Past Land Use Planning* identifies the issues that have driven our management actions to date. *Summary of Ongoing Management Actions* describes management actions that have been undertaken or are planned for implementation in the near future. *New Issues* delineates additional concerns and opportunities that have been identified as a result of the NCA proposal, changes in public demand, changes in BLM policy, or from evaluation of the Land Use Plans. *Future Management* is intended to identify potential actions which could be considered in order to address the new issues and concerns.

Historical/Archaeological

Existing Information

The magnitude and importance of the archaeological resource within the PNCA was recognized in the 1940's. Professional and amateur interest preceded the Bureau's commitment to protect and study the resource by several decades. When the BLM began a Cultural Resource program in the mid-1970's, much was known, but much more remained unknown.

The record indicates that human occupation has existed in the proposed NCA for at least 12,000 years. Over 2,000 archaeological sites have been identified with widely varying degrees of complexity, size, location, and densities. They include: rock shelters and caves as well as dune and lakeshore occupation sites with buried deposits, temporary camps at all major spring sites, dense and prolific petroglyph panels, pebble mounds--possibly associated with prehistoric water harvesting, native plant manipulation, or water fowl hunting, specialized hunting-related look-outs, obsidian, chert and basalt quarries with chipping stations on elevated topographic features.

The Black Rock Desert, the lakebed of Pleistocene Lake Lahontan, contains evidence of some of the oldest prehistoric occupation in the area--dating to as early as 10,000 to 12,000 years ago. Artifact assemblages found in the Black Rock Desert have led to speculation that big game hunting sites may exist in the Black Rock Desert. These finds have generated considerable scientific interest in the area. Large animal sites have also been found in or near other parts of the study area, in proximity to artifacts which may be associated with early occupation of the area. The Rye Patch National Register District at the southeast end of the study area includes both megafauna and evidence of early human occupation but no evidence of direct association has yet been found.

This resource not only represents a rich and extensive data base for archaeologists, it is potentially a data base for resource managers, providing 13,000 years of information. Perhaps more importantly, it can provide Native Americans with the links to their heritage, that are so necessary for the future.

Historic events within the proposed NCA have helped to mold and change the course of American history on a national scale. Unknown American "Mountain Men" and trappers from the Hudson's Bay Company were very likely the first to traverse, and spread the word about, this area in the 1820's. The route of Captain John C. Fremont and Kit Carson, on their famous 1843 expedition to California, passed from north to south along the edge of the

Massacre Bench, then east across the Massacre Basin and down High Rock Canyon. They were no doubt following Indian trails.

This event helped lead the Applegate brothers through the area in 1846, when they pioneered the Applegate Trail as an escape route for Americans already in the Oregon Territory. The Applegate/Lassen Trail (after 1848), carried as many as half of the gold seekers into the California goldfields on the mistaken belief that it was a shortcut. It was listed on the National Register of Historic Places on December 18, 1978.

Following the Civil War, the United States created many military outposts in the west to absorb the standing army and protect mail and freight routes in an expanding country. Fort Bidwell and Camp McGarry are two of the better known in this area. Camp Black, probably located at present day Massacre Ranch, monitored the freight roads transecting the study area.

The study area also includes several historic sites associated with historic mining in the district. Of particular interest is Hardin City which dates to 1866.

Of interest within the study area is the site where Peter Lassen (the Lassen of the Lassen/Applegate Trail) and a companion were murdered while searching for the Lost Hardin Silver Ledge.

By the 1870's, huge numbers of cattle, and later sheep, were driven throughout the region. These were followed by homesteaders. Some tried to farm the bottoms and others were agents for large outfits wanting to control the water. Their traces remain as stone houses and fences scattered through out the PNCA study area.

Primary Issues in Past Land Use Planning

- Direct and indirect loss of significant portions of the resource base through erosion, looting and vandalism, livestock and wild horse trampling, was occurring at a rapid rate.
- Much of the PNCA study area has not been surveyed for Cultural Resources. Estimates of the significance of known sites and districts has been made from the less than 10% of the area that has been done.

Summary of Ongoing Management Actions

The major goals and actions for the cultural resource program within the PNCA study area are:

1. *Manage all cultural resources within the existing laws, rules, orders and regulations.* Management of cultural resources is mandated by several laws and executive orders. This guidance has been incorporated into the MFPs and activity plans. Two Cultural Resource Management Plans (CRMP) have been written for areas within the study area. Through the CRMP's, selected sites and areas have received additional protection and attention. Cooperation with other management plans has resulted in further benefits and cost sharing.
2. *Include Native American concerns in all actions which may affect sites or locations important to them.* An agreement with the Fort Bidwell Indian Community Council facilitates close coordination. Additional agreements with other Indian Community Councils with interests in the study area are being pursued.

3. *Utilization of the resource base for management purposes.*

These sites are important not only because they represent a unique non-renewable resource, but also because they represent a link to the past, to a data base relevant to management efforts.

4. *Provide research opportunities for scholars.*

Three doctoral theses have been produced from the rich archaeological resource base within the proposed NCA and many more await additional research. Currently, a cooperative agreement with the University of Nevada, Reno provides site evaluations and graduate degrees for students.

5. *Provide for the education and enjoyment of the public.*

The archaeological resources provide a tremendous interpretive opportunity. The Lassen/Applegate Trail is one of the more visible and easily interpreted historic resources.

6. *Maintain a high level of professional expertise and awareness among the cultural resource specialists.*

A Tri-State/District agreement between the Susanville, Lakeview, and Winnemucca Districts facilitates communication and cooperative efforts to manage and protect cultural resources in these three adjacent districts. Additionally, college level courses related to cultural resources are offered to BLM through UNR and other institutions.

New Issues

- Potential additional recognition/designation of the area is a two edged sword. Without additional funding and attention the increased public use could lead to accelerated loss of the cultural resources through vandalism and inadvertent disturbance.
- The Native American influences are beginning to be felt in the area of cultural resources and will play an increasingly influential role.
- The trend is toward an increase in the identification of National Register Eligible sites and Districts, with a concomitant increase in protection concerns. Additional National Register listings, or eligible status, of cultural resource sites and districts will further complicate other management concerns within the study area.
- Work load and loss of the resource base are two primary concerns for the Cultural Resources program. Additional law enforcement personnel and temporary technicians will be are needed.
- The Stewardship NCA proposal includes establishment of an interpretive center within the study area. It would provide exciting new opportunities for the cultural program and would change the present structure of the cultural program.

Future Management

The two districts are committed to intensive efforts to inventory and evaluate the resources in this area. Concurrent efforts will be made to interpret and protect selected sites.

Native American consultation will continue to be streamlined and refined to provide all parties the necessary information to be sensitive to and understand the resource, it's meaning and it's value.

The BLM initiative, "Adventures in the Past" will provide direction for public interpretation and site enhancement on a national level.

Interpretive planning for cultural resources must be drafted.

Paleontology

Existing Information

Outstanding paleontological resources are found in the study area. Plant and animal life spans the gamut from ancient sequoia to three toed horses and camels.

In the High Rock portion near Massacre Lake is a bed of animal fossils about 24 million years old. This was the first well documented fossil bed of that age in the northern Great Basin. It is the oldest and first known site in North America to contain mastodon fossils. There are numerous sites with fossilized plants, including ferns, redwoods, and maples throughout the area.

In the Black Rock portion, the Ryepatch National Register District, directly adjacent to the eastern arm of the PNCA, contains camels, small horses, mammoth, and bison dating 20,000 to 30,000 years ago.

Primary Issues in Past Land Use Planning

- Excavations of petrified wood by private individuals destroying significant sites.

Summary of Ongoing Management Actions

Several locations with large petrified logs are protected with fences and cages to discourage further illegal collection.

The Winnemucca District has an active program for scientific excavation and investigation.

Renewed academic interest in this resource has recently surfaced and a steady stream of graduate degrees will result in more information on the resource.

New Issues

- The paleontological resources of the study areas has not been inventoried sufficiently. The extent of the resource requiring protection or other management is unknown.
- The potential for megafauna kill sites (Human/Pleistocene large animals interaction) makes paleontological sites potentially important to cultural resources.
- Renewed scientific interest in this resource causes increased public interest for "old things" (artifacts). This puts additional pressure on archaeological sites from collection and excavation by looters.
- Processing research permits for the professional community will increase the workload for staff, including the State Office. Regulations for paleontology have yet to be finalized. This causes problems when trying to prevent degradation of the resource. Notification to interested parties that permits are necessary to perform work on public lands is inadequate.

- Additional locations of petrified flora and fauna may need protective devices. Protection measures will require additional funding and maintenance. The possible closure or protection of certain resources may be unpopular with some segments of the public.

- Curation of material will become a problem if and when the accumulation of material exceeds the curiosity level that institutions can currently accommodate. All material remains the property of the U.S. Government.

Future Management

Northwestern Nevada has recently been "discovered" by the scientific community, within the PNCA in particular. The future for paleontological survey and identification of the resource is still somewhat unknown, but appears to be considerable.

Paleontological resources will be considered in any interpretive program. Materials and information for an interpretive program will be to planned in the near future.

Additional protective devices will be engineered and placed over fragile resources. This will assist in the protection of key sites and facilitate public education opportunities.

Wildlife

Existing Information

The study area contains a complex mosaic of topography and vegetation which supports a significant population of wildlife species. Shallow soils on the upland benches support low sagebrush/grass communities that are important for sagegrouse and pronghorn antelope. Deeper soils on the ridges and in the bottom of the valleys support two separate types of big sagebrush/bunch grass communities that are important to mule deer. They also support the prey base for a significant population of golden eagles, hawks, owls, and prairie falcons. Junipers cover the ridgetops at the northern end of the study area and provide escape cover for mule deer and habitat for small birds and mammals. Small stands of aspen provide fawning grounds for mule deer and nesting sites for bird species more commonly found in the timbered areas. Large and small rim rocks in canyons and along major faults provide cliff and rock slopes habitats and are the primary nesting sites for birds of prey, swallows, and swifts. They also provide denning sites for mountain lions and bobcats. The rimrocks could support significant populations of bighorn sheep. In addition, these rimrocks provide yearlong homes for many species of furbearers and small mammals. Small seeps and springs provide key wildlife water and meadow habitat of green lush vegetation during the hot, dry summer months. The narrow canyons provide meadow and streamside habitats. Wildlife use riparian habitats extensively, including migrant bird species in the spring and fall months. Small ephemeral lakes provide seasonal habitat for resident and migrant waterfowl and shorebirds. Doves and quail inhabit the mountain brush habitats.

The habitat sites and wildlife values found within the study area are not unusual within the Great Basin. What is unusual is the complex mix of the various habitat types within a relatively small area. Small patches of big and low sagebrush intermix with juniper woodlands, small meadows, streamside zones, wetlands, reservoirs, and ephemeral lakes. The diverse vegetation communities create a high level of biodiversity, that is higher than normal.

The northeast part of the study area is in a high precipitation zone; the most important wildlife resources in the Sonoma/Gerlach Resource Area occur here. The Mahogany Creek Research Natural Area within the Mahogany Creek watershed has been fenced to eliminate

livestock and wild horse conflicts with Lahontan cutthroat trout (LCT) habitat. The vegetation in the exclosures have improved to excellent condition. The LCT spawn and live in the creeks of the Mahogany Creek watershed.

The corridor of the immigrant trail from the Black Rock Desert southeast toward the Rye Patch Reservoir is an important area for wildlife. Bald Eagle can be seen during winter in the vicinity of the Rye Patch Reservoir. Swainson's hawk are found in the vicinity of the Humboldt River Valley. The Humboldt River Valley and the Rye Patch Reservoir contribute habitat for migrating waterfowl and shorebirds.

Unusual soils found within the study area support populations of rare plants. These species are all found on barren landscapes. The sites that they occur on are uncommon. Crosby's buckwheat, Schoolcraft's cryptantha, and Tiehm's milk vetch occur near the head of High Rock Canyon on lake sediments, in the Butcher Flat area, and north of Mud Meadow Reservoir. The only known populations of Schoolcraft's cryptantha and Tiehm's milk vetch are within the study area. Crosby's buckwheat also occurs in several other locations near High Rock Canyon. Grimy ivesia occurs at two locations in Yellow Rock Canyon. Basalt cinquefoil is found near hot springs in Soldier Meadows. A cactus, *Opuntia pulchella*, is protected by the "Cacti and Yucca Law". This cactus has been found on the lower elevations of the Black Rock Range. *Astragalus pterocarpus*, a milkvetch, *Caulanthus barvebyi*, a wild cabbage, and *Phacelia glaberima*, a phacelia, are found in the vicinity of Rabbithole Springs. A smooth stickleaf *Mentzelia mollis*, which is rare, has been found in the vicinity of the west slopes of the Black Rock Range.

The study area historically supported excellent populations of California bighorn sheep. The sheep were common in the rocky areas and ranged over all the upper elevation areas until about 50 years ago. A combination of factors including competition with livestock, disease and shooting resulted in their disappearance. The Calico Range and the Black Rock Range are proposed for reintroduction of bighorn sheep with in the next two years. The High Rock/Little High Rock area is excellent bighorn habitat. The Massacre Rim now supports a small population of bighorn that have recently moved into the area from the Sheldon National Wildlife Refuge.

There are two Areas of Critical Environmental Concern (ACEC)s within the study area. The High Rock ACEC covers about 24,000 acres, encompassing about 15 miles of the Applegate-Lassen trail in High Rock Canyon. The objectives for the ACEC includes protection of wildlife habitat. The Desert Dace ACEC covers about 300 acres including numerous hot springs that create small warm streams inhabited by the Soldier Meadows Desert Dace. This species of fish is the only found at this location. The desert dace is federally listed as a threatened species, and many of the springs it inhabits are on private land adjacent to the ACEC.

Primary Issues in Past Land Use Planning

- Wildlife habitats had been degraded by unregulated livestock grazing.
- Unoccupied bighorn habitat exists in High Rock, the Massacre Rim, the Black Rock Range, and the Calico Range.
- Changes in vegetation communities due to grazing and fire suppression were altering the carrying capacity for wildlife populations.
- Visitor use in High Rock might disturb nesting raptors.

●The Lahontan Cutthroat Trout and the Desert Dace are federally listed as threatened species. Special management actions are needed to recover these species.

Summary of Ongoing Management Actions

The major goals and actions for the wildlife program within the study area are:

1. *Provide habitat for reasonable numbers of mule deer, bighorn sheep, and pronghorn antelope.* Implementation of proper grazing management is the primary tool to ensure adequate habitat for ungulates, including mule deer, bighorn sheep and pronghorn antelope. Grazing management actions include resting and/or deferring defined areas from grazing use on a scheduled basis. Establishing light utilization standards on key browse sites for deer allows existing plants to achieve good vigor and seed production for the establishment of new plants. Periodic livestock can be used as a tool to improve forage quality for wildlife and reduce competition between grasses and brush species.
2. *Improve habitat conditions on key wildlife areas, including aspen stands, riparian areas, wetlands, wet and dry meadows, mahogany stands and mountain browse sites.* Grazing management and maintenance of proper wildhorse populations are the primary tools to improve wildlife habitats. Fencing provides additional livestock/horse controls in areas where animals concentrate. Small enclosures have been completed on meadows, riparian areas, and aspen stands. Scheduled livestock use has been eliminated in High Rock Canyon to rehabilitate riparian corridors. Light livestock utilization is imposed on mahogany stands and mountain browse sites. Monitoring studies assess the effectiveness of our management actions.
3. *Protect key wildlife sites, including sagegrouse strutting grounds, raptor nest territories, and bighorn sheep lambing areas, from surface disturbance and human disturbance during the breeding season.* Guidelines are established for actions occurring within two miles of sagegrouse strutting grounds. The guidelines restrict the kinds of surface disturbances that may occur and provide seasonal restriction for permitted actions. High Rock Canyon is closed during late winter/early spring to reduce disturbance on nesting eagles, falcons, hawks and owls. Gates and signs have been installed to implement the closure.
4. *Allocate areas in High Rock, Massacre Rim, the Black Rock range and the Calico range for bighorn sheep reintroduction.* Bighorn sheep were reintroduced into the Calico Range in the past and a second release is planned. Reintroduction plans for the Black Rock Range and High Rock have been prepared in coordination with the Nevada Department of Wildlife (NDOW), with a Black Rock Range reintroduction planned for 1992. The High Rock Area is not currently scheduled for reintroduction in the next few years. The Massacre Rim currently has a small group of bighorn that have moved into the area from other populations on the Coleman Rim in Oregon and the Sheldon National Wildlife Refuge.
5. *Manage Desert dace habitat as an ACEC and work for the recovery of the species.* The ACEC designation is complete and an HMP has been prepared. Negotiations are continuing for the acquisition of private lands that are a significant portion of the Desert dace Habitat.
6. *Manage Coleman Creek, Donnelly Creek, Mahogany Creek, Slumgullion Creek, Snow Creek, and Summer Camp Creek for the Lahontan cutthroat trout and work for the recovery of the species.* Mahogany Creek has been fenced as a riparian enclosure. Plans are developed to fence additional habitat to control of livestock and wild horse impacts. The

Black Rock HMP is in preparation and will specify management actions for Lahontan cutthroat trout as well as a wide range of other species in the Black Rock Range.

7. *Manage the FWS candidate species so that their listing does not occur.* Inventories have been initiated for candidate plant species, and their distribution is generally well known. Concentrations of several species have been proposed for ACEC designation.

8. *Introduce ruffed grouse to appropriate aspen woodlots.* This action will take place after the Black Rock HMP is accepted, the habitat is satisfactory, and a supply of ruffed grouse becomes available.

New Issues

- Present wildlife management is focused within relatively small areas based upon grazing allotments. Increased emphasis on regional wildlife populations will require wildlife planning on a broader scale.
- Increasing interest among biologists and the general public, in non-game species will require consideration of biological diversity in BLM management plans.
- Bighorn sheep reintroduction in High Rock Canyon cannot be completed until resolution of potential conflicts with livestock are eliminated.
- Listed and Candidate species management needs to receive increased emphasis to allow for delisting. Delisting cannot occur without increased management emphasis on designated species.
- Demand for hunting and fishing opportunities on public lands will increase.
- Public and professional concern about the management of wildlife habitats on public rangelands associated with livestock, wild horses, and human uses will require use of integrated resource management planning.

Future Management

Wildlife and wildlife habitats on public land within the study area will play an increasing role in the formulation of future management actions. The BLM's emphasis on Wildlife 2000, Riparian-Wetlands Initiative for the 1990s, a Strategy for Future Waterfowl Habitat Management on Public Lands, Animal Inn, Watchable Wildlife, Recreational Fisheries Program, additional listings and candidates for listing under the Endangered Species Act, recognition of the importance of wetland and riparian habitats, livestock management, wild horse populations, and biodiversity will receive increasing attention.

Future management will ultimately depend on funding levels, personnel ceilings, and a proactive approach to wildlife habitats and populations. Future management will depend also on completion of management actions initiated in the past and expansion of the wildlife program in the future. Specific needs include: landscape goals for large areas and desired plant community descriptions to guide future activity planning and modification. Existing HMPs need to be expanded to include non-game species, and habitats previously omitted and expanded in scope to become integrated resource plans. The Cowhead/Massacre MFP needs to be amended to resolve the issue of potential conflicts including disease transmission with domestic sheep. This amendment is scheduled for 1992.

Special status species need to have more attention in the development, evaluation and

revision of activity plans. The recreation and wildlife programs will work with NDOW and the US Fish and Wildlife Service regarding management of hunting, trapping, and fishing on public lands. Riparian and wetland inventories need to be completed and implementation of protection and enhancement projects initiated. Monitoring of wildlife habitats within grazing allotments needs to be consistently funded and the results of that monitoring used in changes to grazing management actions.

Public education through printed materials, on the ground interpretation, and visitor contacts needs to be planned and implemented in an interdisciplinary basis.

Riparian/Wetland

Existing Information

Riparian/wetland communities occupy less than one percent of the study area, but are extremely important for almost all activities that occur within the area. This is because riparian areas furnish water and forage to wildlife, livestock, and wild horses, influence the hydrologic properties of runoff and water storage, and are desired recreation use areas. Many of these sites are on private lands, which increases the relative value of sites on public land even more important. They are discussed in additional detail in the wildlife narrative section.

Primary Issues in Past Land Use Planning

In past planning effort riparian/wetlands issues usually were handled as part of the wildlife program, as habitat for waterfowl, sport fisheries sites, and as water sources for wildlife.

Summary of Ongoing Management Actions

1. *Manage riparian zones to achieve good condition (60% of potential) on 75% of the riparian areas by 1997, as provided by the BLM's Riparian-Wetland Initiative for the 1990's.* Grazing management systems have resulted in improvement on approximately one third of the sites on the High Rock portion of the study area. On the Black Rock portion of the study area most of the riparian zones need better management action to address the objectives. Enclosures have been constructed on several sites. Scheduled grazing has been eliminated on over 25 miles of riparian corridor in High Rock Canyon. Little High Rock Canyon is not being grazed as the result of a long term agreement with the livestock permittee. Willows have been planted in High Rock Canyon. Monitoring studies have been established to document progress.

2. *Complete survey and design, construction and monitoring of riparian stabilization and rehabilitation projects.* A number of riparian projects have been completed, including fencing and gully restoration. The most significant action is the exclusion of livestock from High Rock and Little High Rock canyons. About 10 enclosures have been constructed to protect key meadow/riparian sites.

New Issues

● Riparian communities continue to produce less than their potential for wildlife, livestock, and recreational uses. There is increased public emphasis on healthy and productive riparian/wetlands areas. Recent and forthcoming BLM policy changes will require reassessment and redirection of present riparian and habitat plans.

Future Management

The Washington Office of BLM directed state directors to prepare State riparian strategic

plans. The BLM's Fish and Wildlife 2000 Policy Initiative includes the goal of protecting and restoring riparian-wetland areas to benefit wildlife and fisheries. In 1990, the BLM issued a report titled "The Range of Our Vision" which described a rangeland management objective for riparian communities to achieve good conditions on 75 percent of BLM riparian areas by 1997. A BLM Riparian-Wetlands Initiative for the 90's will be published and made public in 1992 which will increase attention on implementation of the riparian-wetlands program. In 1993, the number one program priority for the soil, air and water program specialist will be implementation of the National Riparian-Wetlands Initiatives for the 90's and State Riparian Strategies. The result of this policy priority will be increased interdisciplinary coordination, monitoring and assessment to determine if specific resource management objectives are being achieved.

Watershed

Existing Information

The High Rock portion of the study area falls within two major watersheds, High Rock/Hog Mountain and Massacre Lakes/Long Valley. Of the two major watersheds, four sub-watersheds have been identified that will encompass the study area. The four sub-watershed areas are High Rock Canyon, Massacre Lake, Long Valley and Cottonwood Creek. Much of the watersheds comprise mid elevation Great Basin mountain terrains with canyons, buttes, rims, and upland benches of moderate to steep terrain.

The watersheds contain several ephemeral and a few perennial springs scattered throughout the area. Most springs have been excavated to form pit reservoirs for livestock use. Water flow during the spring runoff period is high, causing stream channel erosion in all major drainages. After the spring runoff, most drainages dry up or drop to very low flow levels.

The watersheds are characterized by low to moderate watershed cover (vegetation less than 30 percent cover) along with soils of moderate to slow infiltration capacities. The greatest amount of runoff occurs during late winter and spring as a result of rapid snow melt and spring storms. Sheet and rill erosion occur within most watersheds with soil deposition limited. Rills are generally less than one inch deep with a density estimate of light to moderate. Gullies and washes are more moderately scattered throughout the area, with at least 40 percent of the gully sites having active soil erosion. These drainages contain vertical cuts averaging from two to five feet in depth with some gullies as deep as ten feet. The actively eroding channels, along with the overland flow, contribute a moderate to high sediment yield during the spring runoff period. This active gully and sheet erosion, contribute to riparian degradation, loss of vegetation production and the lowering of the water table in the gully and channel areas.

Watershed conditions related to erosion, sediment yield and water quantity are presently unsatisfactory on many areas. The watersheds have potential for improved conditions by reducing and slowing peak flows.

Primary Issues in Past Land Use Planning

- Private ownership of water rights requires coordination and agreement with entities outside the BLM.

- Water quality on the public lands is being degraded by activities associated with unregulated grazing, road construction, and mineral development.

- Erosion due to accelerated runoff causes soil loss, lowered plant vigor, lowered water

tables, and high sediment yield. Site productivity is lowered, affecting multiple uses of the public land.

- Stabilization and rehabilitation of riparian areas is needed.

Summary of Ongoing Management Actions

The major goals and actions for the watershed program within the study area are:

- 1. Improve watershed conditions in the High Rock Watershed.** A management plan has been prepared for the watershed and includes projects and standards for other management actions. This plan is intended to be a working document and will continue to be modified as additional potential retention and rock check dam sites are identified.
- 2. Monitor and modify gully stabilization projects to achieve objectives.** Watersheds are complex systems. Projects must be evaluated on a regular basis to prevent structure failures. Proven techniques can be applied to other projects.
- 3. Continue to file for water rights as necessary to support other resource programs.** Water rights for storage, recreation and multiple uses are required by state laws. Resource management plans call for varying types of water development. The BLM, individually and jointly with other agencies, groups, and individuals files for water rights as appropriate in support of specific management programs.

New Issues

- BLM's riparian condition goals will have to be addressed within the study area.
- Watershed and riparian management is based on inadequate soils and ecological site information.

Future Management

Watershed management planning will be the vehicle for integrating all resources into a cooperative/interdisciplinary consideration of succession and the water and mineral cycles in developing objectives for resource management. Prioritizing key riparian areas for stabilization and rehabilitation need to be completed in the near future. Improved watershed conditions, including reduced peak flows, channel and overland erosion, and improved infiltration will be the primary objective of watershed management.

Establishment of instream flow gauging stations and raingages as required by state law will be required if instream flow water rights are acquired in High Rock and Little High Rock Canyon. Completion of the Water Source Inventory data base to provide support to other resources in securing water rights for beneficial uses.

The Northern Washoe Soil Survey needs to receive priority for funding, so that accurate soils and vegetation data are available as management tools.

Visual Resource

Existing Information

Bureau policy states that the visual resource must be considered throughout the land use planning process. A multi-step process results in the assignment of visual resource classes to all portions of the planning area. There are four visual management classes, with Classes I and II being the most valued, Class III representing a moderate value, and Class IV being of least value. Class I is assigned to all special areas where the current management situation requires maintaining a natural environment essentially unaltered by man. Minor visual modification is permitted in Class II areas but the predominant natural features of the landscape cannot be changed. Class III permits partial change of the existing landscape which may attract attention but should not dominate the view of the casual observer. Class IV areas allow for activities which could result in major modification of the existing landscape.

Visual resources within the study area have been assigned into two management classes based upon inventories completed in the late 1970s. The area around High Rock canyon, High Rock Lake, and the Black Rock playa has been assigned to VRM Class II. The remainder of the study area has been assigned to Class IV.

Primary Issues in Past Land Use Planning

- Large surface disturbances could result in visual scars that could be seen from long distances and dominate the land scape for many years.

Summary of Ongoing Management Actions

Visual Resource management has received very little attention since the classifications were completed 15 years ago. The Sonoma/Gerlach MFP contains one decision regarding protection of visual degradation. Neither of the High Rock portion MFP's contain any specific decisions. However, BLM Manual standards apply to all projects.

New Issues

- The visual quality ratings, sensitivity ratings and distance zone ratings in the present VRM Classification are out of date and there are inconsistencies between the three MFPs. The VRM Class II in the High Rock area needs to be upgraded to Class I to reflect the ACEC designation.

- Some proponents of the study area propose that the viewshed from the historic trails be managed to prevent any disturbances visible from the trails.

Future Management

The visual classification system should be revised based upon present Visual Resource manual guidelines. This includes a reevaluation of the Scenic Quality Rating Units and an updated visual sensitivity analysis. Determination of Rating Unit boundaries will be assisted by utilization of GIS technology to generate viewshed maps.

Visual resource guidance for future surface disturbing activities needs to be formulated for the entire study area. This guidance would have to be site specific and based upon the visual resource inventory and the type of expected disturbances.

Wilderness

Existing Information

The study area contains or borders on 11 Wilderness Study Areas (WSAs) covering about 670,000 acres. WSAs are public land blocks larger than 5,000 acres, natural in character, and containing outstanding opportunities for solitude and/or primitive and unconfined recreation. They were designated as WSAs about 10 years ago and will retain that status until Congress releases them from further consideration or designates them as wilderness areas.

The study process, which included completion of two Environmental Impact Statements (EIS), examined uses of the lands under wilderness management versus non-wilderness uses. BLM recommended portions of five WSAs within the study area for wilderness designation by Congress. The recommended wilderness covers about 91,750 acres. The BLM recommendations were made using an extensive public input process.

The wilderness recommendations for each WSA are summarized below. Until Congress acts upon the recommendations, BLM is required to maintain the wilderness characteristics on all the land within the WSA boundary.

Surprise Resource Area

Little High Rock Canyon

CA-020-913

17,183 acres recommended for wilderness designation

33,768 acres recommended for uses other than wilderness

The recommended wilderness includes Little High Rock and McConnell canyons and the adjacent uplands and benches. The canyons have outstanding scenic, wildlife, and cultural/historic values.

Yellow Rock Canyon

CA-020-913A

0 acres recommended for wilderness designation

12,468 acres recommended for uses other than wilderness

BLM did not recommend any of this WSA for wilderness designation due to the small size of the area, lack of distinctive features and possible conflicts with mineral development.

High Rock Canyon

CA-020-913B

12,000 acres recommended for wilderness designation

24,758 acres recommended for uses other than wilderness

The recommendation includes the western face of High Rock Canyon, lower Yellow Rock Canyon, Mahogany Canyon and a narrow section of the adjacent uplands. This area includes the outstanding scenic, wildlife and cultural/historic values associated with High Rock Canyon.

East Fork High Rock Canyon

CA-020-914

29,102 acres recommended for wilderness designation

23,537 acres recommended for uses other than wilderness

The recommendation would provide wilderness designation to the East Fork of High Rock Canyon and the surrounding uplands. This portion of the WSA contains regionally significant scenic, wildlife, cultural and historic values.

Massacre Rim

CA-020-1013

22,465 acres recommended for wilderness designation

78,825 acres recommended for uses other than wilderness

The recommended wilderness is the Bitner Table, the eastern quarter of the WSA. This portion of the WSA represents the open tablelands and benches of the northern Great Basin. The wildlife values are the most significant feature of the area.

Sonoma-Gerlach Resource Area

Calico Mountain

NV-020-019

0 acres recommended for wilderness designation.

67,647 acres recommended for uses other than wilderness.

High Rock Lake

NV-020-007

11,000 acres recommended for wilderness designation.

47,902 acres recommended for uses other than wilderness.

The recommended portion is north of Box Canyon, including Fly Canyon, and the Potholes, and rugged and colorful rimrock cliffs breaking up a large sloping plateau. These areas were recommended because of their distinct geology and scenic quality.

North Black Rock Range

NV-020-622

0 acres recommended

30,791 acres recommended for uses other than wilderness, of which about 80 percent lie within the study area.

Pahute Peak (South Black Rock)

NV-020-621

0 acres recommended for wilderness designation.

57,529 acres recommended for uses other than wilderness of which about one half lie within the study area.

Black Rock Desert

NV-020-620

219,300 acres recommended for wilderness designation.

100,294 acres recommended for uses other than wilderness.

The recommended area would protect a natural landscape which consists of an essentially flat valley floor/playa ecosystem with an intermittent river flowing through it. This is probably the largest undisturbed example of such an ecosystem in the United States.

Selenite Mountains

NV-020-200

0 acres recommended for wilderness

32,041 acres recommended for uses other than wilderness

Primary Issues in Past Land Use Planning

- Impacts of potential wilderness designation on other multiple uses.
- Impacts on wilderness values in areas not designated as wilderness.
- Maintenance of existing wilderness values until Congress makes the wilderness decisions.

Summary of Ongoing Management Actions

Management of ongoing uses within the WSA is according to BLM Interim Management Policy (IMP). WSAs are monitored on a monthly basis during the field season. Proposed activities are evaluated to insure they do not compromise wilderness values.

Posted signs mark the WSA boundaries in many key locations, with instructions to stay on existing roads and trails.

Monitoring of WSAs in the Black Rock portion currently involves aerial surveys of all WSA's on a monthly basis from May through September. The High Rock portion is monitored using a combination of aerial overflights and ground surveillance that is done by various specialists as they carry out other tasks.

All activities within WSAs must meet the IMP non-impairment standard for wilderness. Activity proposals are carefully weighed against non-impairment standards before they are approved. In general, activities that protect natural values and do not impair wilderness suitability are permitted. Activities judged impairing to wilderness values must be modified to meet the standard or they will not be allowed. Within the study area, both districts have evaluated proposed minerals exploration projects, wild horse gatherings, reservoir construction and commercial recreational uses.

New Issues

- WSA overflights provide good coverage of large disturbances activities, however smaller impairments to WSA values such as range improvements, or off-road vehicle use may not be seen.
- Increased public use of the lands in and around WSAs increases the risk of adverse impacts on wilderness resources.
- Recreation actions to meet visitor needs and enhance the recreational experience in High Rock Canyon have been proposed. The boundaries of two WSA's extend to the edge of the jeep trail in the canyon bottom. As long as the canyon bottom remains in the WSA designation, any recreation use or project must be subject to WSA Interim management Policy review.

Future Management

The Sonoma-Gerlach resource area has received funding for a wilderness/recreation technician who will divide time between patrolling the WSAs on the Sonoma/Gerlach Resource Area, provide visitor contact, and collect data about visitor use for the entire Black Rock-High Rock area.

Additional signing and maintenance of existing signs along the WSA boundaries need to be completed.

When Congress makes a decision on wilderness designation, wilderness management plans will be prepared. The planning process will involve the public. The plan will be an interdisciplinary activity plan.

Wild Horses and Burros

Existing Information

There are 11 wild horse herd management areas (HMAs) in the study area.

On the High Rock portion, six HMAs are located completely within the study area. These include the High Rock, Wall Canyon, Nut Mountain, Bitner, Massacre Lakes/Sagehen, and Board Coral HMAs. About one quarter of the Fox-Hog HMA is within the study area. The individual herd sizes vary up to 100 animals. The Appropriate Management Levels (AML)s for these areas are a minimum of 170 and a maximum of 265 head. The total area for these seven HMAs is 390,727 acres, with 298,753 acres managed for horses in the study area. The 1991 population estimates are:

High Rock HMA (110 horses)
 Wall Canyon HMA (34 horses)
 Nut Mountain HMA (48 horses)
 Bitner HMA (23 horses)
 Massacre Lakes HMA (18 horses)
 Board Coral HMA (10 horses)
 Fox-Hog HMA (40 horses [study area only])

{ On the Black Rock portion, there are four HMAs within the study area, and one near the proposed border, with approximately 2230 head of horses and 24 burros. The total area for these 5 HMAs is 390,727 acres, with 298,753 acres in the study area. The 1991 population estimates are:

Kamma Mountains HMA (10 horses),
 Black Rock Range-West HMA, (478 horses),
 Warm Springs Canyon HMA (648 horses, 24 burros),
 Calico Mountains HMA (1093 horses)

Primary Issues in Past Land Use Planning

- Horses have a negative impact on range habitats because of a lack of control over increasing populations.
- Horses removed from the range are increasingly difficult to move through the adoption program within a reasonable period of time if at all.
- Horses and burros are illegally killed or harassed on public lands.

Summary of Ongoing Management Actions

The major goals and actions for the wild horse program within the study area are:

1. *Monitor wild horse and burro herd areas and populations on regular basis.*

2. Protect and manage wild free roaming horses and burros as components of the public land in a manner to achieve ecological balance with other uses.

Most of the horses within the study area are in herds which do not have AMLs so that gathering excess horses cannot be done. All the HMAs in the High Rock portion and the Kamma Mountains HMA in the Black Rock portion have approved management plans. The minimum and maximum number of animals for each area is specified in each plan. This number was established in order to put wild horse numbers in an ecological balance with other resources while assuring viable populations of wild horses within the study area. Gathering of each herd in the High Rock portion occurs every third or fourth year. At the present time, horses cannot be gathered in the Black Rock portion. This is leading to high horse populations in some areas.

The herds in the High Rock portion are managed under a selective herd management concept that was developed through an experiment proposed by the Modoc/Washoe Experimental Stewardship Committee. Each HMA plan designates the criteria by which horses are selected. In the next cycle of gathering, only excess horses four years and younger will be removed from the herds, with the exception of a few young horses maintained to replace the death loss in the herd.

3. Provide adequate habitat to sustain the numbers of horses established for each herd area.

During the completion of the land use plans for the Surprise Resource Area, forage allocations were made for each herd management area. Forage was allocated for the horses that would be using the HMA. Additional information on HMAPs are presented in Appendix 2.

The Sonoma-Gerlach land use plan established wild horse and burro numbers using the July 1, 1982 population in each HMA as a starting point for monitoring. After the fifth year of monitoring, adjustments to wild horse and burro numbers, wildlife, and livestock were to be made on a proportionate basis to meet habitat objectives. The AMLs established by this plan are not valid as a result of the June 7, 1989 IBLA decisions (IBLA 88-591, 88-638, 88-648, 88-679) Additional information is presented in Appendix 1.

New Issues

- Uncontrolled horse movement occurs across the district boundary. The boundary fence bisects the natural range of some of the herds, and is difficult to maintain. Part of the problem is fence maintenance and the other is the natural range of some of the herds is bisected by the District boundary fence.

- The Black Rock portion lacks a data base to support the current maximum and minimum herd numbers. Four of the HMAs in the Black Rock portion have Appropriate Management Levels (AMLs) that have been disputed and are being reestablished. Horses cannot be gathered until the AMLs are established.

- Some herd areas should be evaluated to determine if current numbers could be changed and still maintain an ecological balance.

- Special designations such as wilderness or ACEC could lead to some restrictions on the development of water sources or other projects needed for managing wild horses and burros.

This is not true

Future Management

In the High Rock portion, the implementation of the selective management approach, if successful, could have a significant impact on wild horse management throughout the Bureau. By maintaining an active wild horse management program, there will be increased opportunities to refine and improve on structured herd management as additional experience is gained. Other options for managing wild horses may be considered and studied in the future as a result of this current effort. Improved management techniques of all resources under a coordinated effort may allow an increase of horse numbers in some herd management areas.

On the Winnemucca side, future steps for population management are not as clear. Reestablishment of Appropriate Management Levels (AML) within the study area is the first step. Once AMLs are set, the population of wild horses and burros will be reduced to or below these levels. During removals some effort will be made to leave some animals near the immigrant trail for public viewing. Interpretive signs may be placed along the trail at strategic locations to inform/educate the public about the management of wild horses on public lands, the laws relating to management of wild horses and burros, and management of the habitat in the area to provide forage for wild horses and burros, wildlife, and livestock.

Minerals

Existing Information

The study area is within the Lake section of the northern Great Basin. Geologically, the High Rock area is a highly faulted plateau interrupted by volcanic vents and calderas. A widespread layer of recent volcanic flows obscure older north-south trending mountain ranges. During the recent geologic past, large lakes filled the basins. The Cottonwood caldera, Massacre Lakes, the bottom end of High Rock Canyon and the floor of Long Valley contain large areas of lake sediments. Old beach terraces are found on the foothills surrounding the lake basins.

The recent volcanic flows, combined with millennia of erosion have scoured deep canyons in the High Rock/Little High Rock area. Large scale faulting resulted in the formation of long, narrow rims. The Massacre Rim, which rises 1000 feet from the floor of Long Valley, is the best example of faulting in the proposed NCA. The tough volcanic caprock that covers the softer and older rocks, caused the formation of many miles of colorful rimrock within the area. These are best seen in High Rock, Little High Rock, Hanging Rock and Wildcat Gorge. Painted Point, facing into Long Valley, is a colorful monument that was noted and painted by the emigrants on the Applegate/Lassen Trail.

The southwestern portion of the proposed NCA is dominated by the eastern wall of the Cottonwood Caldera. A large volcanic eruption formed the Caldera. The resulting basin filled with water, overflowed to the east, and finally eroded into Little High Rock Canyon.

The Black Rock Playa is a downfaulted block situated between two uplifted blocks along north trending faults. The uplifted blocks are the Calico Mountains on the west and the Black Rock Range on the east. The mountains are composed of sedimentary, intrusive, and volcanic rocks. The valley is filled with unconsolidated Quaternary sediments including alluvial, dune, and playa deposits.

Locatable Minerals

On the High Rock portion, there are five blocks of active mining claims on about 9,340 acres. Claimants are primarily interested in disseminated gold deposits. There are no mines

within the area, and there are currently no exploration activities. About half of the study area has moderate potential for the occurrence of locatable minerals. The remainder of the High Rock portion has low potential for the occurrence of locatable minerals.

Within the Black Rock portion there are about 850 lode claims covering about 17,000 acres and about 70 placer claims covering about 11,200 acres. The claims are heavily concentrated in the southeast trail corridor passing through the Kamma Mountains and Antelope Range, with some in the Calico and Black Rock ranges. In 1991, there were about 28 active mining notices, 22 in the southeast trail corridor and six scattered over the remainder of the area. Mining notices involve mining actions of less than 5 acres disturbance and most are associated with exploration activities.

One major mining operation is located just southeast of the study area, but is visible from a portion of the trail corridor. This is the Hycroft Mine, a major gold and silver operation, using open pit cyanide heap leach technology.

There are several active opal mines within the Black Rock portion of the study area, on the east side of the Calico Mountains. In one case, a claim holder allows visitors to dig for opals for \$5.00/day, and allows them to camp on his claims. He has also sold parts of his claims to several others who dig opals on claims during vacations. There is fairly visible evidence of past prospecting throughout much of the study area, especially in the Black Rock and Calico ranges including roads, trenching for assessment work, and abandoned mining shacks.

Leasable Minerals

There are no mineral leases in the High Rock portion of the study area. Leasable minerals include oil and gas, geothermal, sodium, and potassium.

The High Rock portion of the study area has very low potential for the occurrence of oil and gas because of widespread geothermal heating.

There are no known active hot springs in the High Rock portion. There are geothermal systems active on the Black Rock portion. There is additional evidence of ancient geothermal activity in localized areas throughout the study area. On the High Rock portion, there is no recent exploration activity, but the presence of nearby active and ancient geothermal systems indicates a low to moderate potential for geothermal resources.

The Black Rock playa is an area with excellent potential for geothermal development. The area is noted for its high heat flow and numerous thermal springs and wells. Five Known Geothermal Resource Areas (KGRA) are located within the study area and encompass about 56,300 acres. There are currently three geothermal leases in the Gerlach, Gerlach Northeast, and Fly Ranch KGRAs, totalling about 5,740 acres. The remainder of the study area is considered by the USGS as prospectively valuable for Geothermal Resources. While insufficient exploration has occurred to determine if reservoir temperatures are high enough for electric power generation, the resource is presently attractive for food processing, space heating, and greenhouses.

The Black Rock playa is considered Prospectively Valuable by the U.S. Geological Survey (USGS) for oil and gas on the basis of the thick sedimentary rock cover. No discoveries and only occasional leasing interest have occurred in the area. There are currently two oil and gas leases totalling about 10,370 acres.

Saleable Minerals

Saleable minerals within the study area include sand, gravel and decorative flat rock. In the High Rock portion, Washoe County has five free use permits for sand and gravel on about 10 acres.

Primary Issues in Past Land Use Planning

- What areas should be open/closed to locatable mineral entry?
- There has been periodic interest by companies seeking to explore and develop the geothermal potential within the study area. What areas should be leased for geothermal, oil and gas and sodium/potassium production and what stipulations are necessary to protect sensitive resources?

Summary of Ongoing Management Actions

The entire High Rock portion of the study area is open to the Mining Law of 1872. Those portions outside of the WSAs are open to mineral leasing. Two areas (High Rock ACEC and Massacre Lakes archaeological district) were identified for withdrawal in the Cowhead/Massacre MFP. The High Rock ACEC withdrawal is currently being processed and could be finalized in 1994.

The archaeological district north of Massacre Lake is proposed for withdrawal, but action has not been initiated.

Approximately 12,310 acres of public land have been withdrawn from mineral entry in the Mahogany Creek Research Natural Area.

The Black Rock portion of the study area has several MFP decisions that affect mineral leasing. For geothermal and oil and gas leases, stipulations for no surface occupancy apply to visible portions of the trail from Rye Patch reservoir north to the Union Pacific tracks. From this point to Black Rock point along the trail, the surface occupancy restriction applies 1 mile on either side of the trail. From Black Rock Point north to the mouth of High Rock Canyon, the restriction applies 1 mile to the west of the Applegate/Lassen trail, and to the crest of the Black Rock mountains to the east. The viewshed looking east from the mouth of High Rock Canyon also has the surface occupancy restriction. The Playa of the Black Rock Desert is closed to leasing of sodium and potassium.

Mineral exploration and development proposals are handled as they are submitted by applicants. The processing includes evaluation of resource concerns, coordination with other permitting agencies and compliance with regulatory and legal mandates. This amounts to a significant workload.

New Issues

- The Coalition has proposed that the entire viewshed from the historic trail be withdrawn from mineral entry. The Stewardship committee has endorsed the BLM attempt for the mineral withdrawal in High Rock Canyon. Leasing has not been allowed in the Double Hot springs and Soldier Meadows KGRAs because of significant environmental conflicts and cultural resource values.
- There is increasing public interest and concern about impacts of minerals activities on public land.

Future Management

Changes to existing withdrawal proposals would have to go through the withdrawal process, if not included in legislation.

The definition of undue and unnecessary degradation needs to be evaluated for those portions of the study area not proposed for mineral withdrawal. There may be locations within the study area that need special consideration when considering minerals proposals. Factors which would warrant changes to the definition of undue and necessary degradation are candidate species under the Endangered Species Act, National Register quality archaeological sites, visual resource considerations, or a combination of resource concerns. Special stipulations to mineral leases may need to be developed for similar reasons.

Minerals proposals for locatable, leasable and saleable materials will continue to be processed as they are submitted.

Livestock Grazing

Existing Information

The High rock portion of the study area contains portions of 13 livestock grazing allotments. Of these 13 allotments, seven are completely within the study area. Twenty two grazing permittees use these allotments. The other six allotments range from 90 percent to ten percent of the allotment acres being included in the study area. The study area contains approximately 31,600 AUMs of livestock forage. There are about 4,500 cattle and 2,000 sheep that graze this area sometime between April 1 to September 30.

Grazing management within the High Rock portion was evaluated in two grazing environmental impact statements (EIS)s. The south one-third is covered by the Home Camp Grazing EIS and the northern two-thirds is covered by the Cowhead-Massacre EIS. Individual grazing decisions were issued for each allotment following the completion of each EIS. Those decisions established carrying capacity, season of use, grazing system and utilization limits. The Modoc/Washoe Experimental Stewardship Committee was involved in the development of the grazing system for each allotment with the exception of the Bare Allotment. The AMP for this allotment was in place and working prior to the formation of the Stewardship Committee. The Committee used multi-interest Technical Review Teams (TRTs) to tour each allotment to make management recommendations that were specific for the resource conditions of that allotment. Grazing management recommendations generally consisted of dividing the allotments into two or more pastures. Grazing treatments ranged from providing a growing season deferment to a complete year's rest from grazing. Several improvement structures were needed to implement each grazing system. They consisted of fences, wells, reservoirs, lakebed pits and spring developments. Land treatment projects have been completed to provide spring forage on areas which previously had little to no grass understory. Sagebrush cover was reduced and some sites seeded to crested wheatgrass or native plant species. Sagebrush cover was reduced to help release native grass species on a few areas with better range condition.

There are six livestock grazing allotments involving 12 permittees within the Black Rock portion of the study area. One allotment Soldier Meadows, has a major portion within the boundary, while the other five allotments have only small portions of the total allotment within the study area. The Soldier Meadows allotment covers the area north of Black Rock Point between the Calicos and the Black Rock range. The season of use is January through May with 1500 cattle. The other allotments are used during the fall, winter and spring periods.

Grazing management in the Black Rock portion was evaluated by the Sonoma/Gerlach Grazing EIS. Since completion of the EIS, carrying capacity, season of use, grazing systems, and objectives have been established on five allotments by BLM/permittee agreements. During this process, two allotments were combined to improve management. Another allotment had grazing privileges reduced due to violations of grazing regulations. A Coordinated Resource Management Plan has been completed on two allotments used primarily for winter sheep grazing.

Primary Issues in Past Land Use Planning

- Many bottomland and foothill areas have been degraded by past season long livestock use. Range degradation means one or more of the following conditions have taken place: the composition of plants has changed to less productive species, plant density has decreased, reproductive ability of grasses and shrubs has been damaged, soil has been displaced or compacted due to erosion or hoof action.
- Riparian areas have been degraded by past livestock grazing practices. Current livestock grazing use has not allowed for the recovery of many of these areas.
- Mid to late summer grazing is competing with big game for forage on key browse species within some habitat areas.
- Domestic sheep grazing is in conflict with proposed bighorn sheep reintroduction in High Rock Canyon and the Massacre Rim.

Summary of Ongoing Management Actions

The major goals and actions for the range program within the study area are:

1. *Develop systematic livestock management plans on allotments to improve the range vegetative resource to achieve a mid-successional ecological condition on most range sites.* Implementation of systematic grazing management systems is the primary means of achieving improvement in range condition. Each of the allotments within the study area, with the exception of the Massacre Mountain and Majuba allotments, have approved allotment management plans. Horse Lake and Board Corral are the only two allotments that do not have any portion of the AMP implemented. All the other allotments range from partial to full implementation of the grazing system. Allotment management implementation is summarized in Appendix 2.
2. *Allocate forage among both consumptive and non-consumptive resources.* Forage was allocated as part of the MFP process. As forage conditions change new allocations will be made to wildlife, wild horses and livestock based on needs, response to management, policy, etc. Grazing decisions allocating livestock forage have been issued for all of the allotments within the High Rock portion. Permittee agreements have been completed for all allotments in the Black Rock portion, except the Majuba allotment. Evaluations are scheduled in 1992 for the Soldier Meadows, Leadville, Buffalo Hills, Blue Wing, and Seven Troughs allotments to set carrying capacity for livestock, wild horses, and wildlife. Any additional changes to these allocations will be based on monitoring results or changes in land use plan decisions. Monitoring is a very important part of the overall grazing program. Baseline monitoring studies have been established on all allotments with the exception of Board Corral, Horse Lake, and Majuba allotments. Generally, the monitoring data indicates stable to upward trends to the vegetation resources. The success of all grazing management actions will be analyzed through periodic allotment evaluations. Currently, Massacre Lakes, Sagehen, Soldier Meadows, Leadville, Buffalo Hills, Blue Wing, and Seven Troughs are the

only allotments that have undergone an evaluation. The evaluations indicated that the grazing systems are generally moving toward meeting the goals for the area. Specific problem areas were identified for changes in management actions.

3. *Terminate livestock grazing east of High Rock Canyon.* High Rock Canyon and the bench area east of the Canyon have been excluded from all livestock grazing. There are provisions to graze the Canyon on a prescriptive basis if such grazing would be a benefit to other resource values. Recently the carrying capacity of the Massacre Mountain Allotment was reduced based on the loss of grazing use within the Canyon and the area to the east.

4. *Establish moderate use on grasses and give special management consideration to key mountain brush sites.* Grazing decisions and permittee agreements for each allotment established moderate use (40 to 60 percent) as the upper limit for major use areas on the native range. Light use was established as the upper limit for critical mountain brush types in the High Rock portion. Utilization mapping along with some utilization transects have been completed for at least three to five years for those allotments within the study area, except the Majuba allotment. Utilization studies indicate that moderate use is only exceeded on a small percentage of the area (mostly around water sources and riparian zones) and light use on bitterbrush is being maintained.

5. *Treat approximately 8,000 acres suitable for brush control and seed to crested wheatgrass for spring and summer forage.* Eleven land treatment projects totalling 40,000 acres exist in the study area. Plowing, chaining and aerial herbicide spraying to kill sagebrush are the methods that have been used to reduce brush cover prior to seeding. Crested wheatgrass was the primary species seeded although other grass and clovers have been seeded with limited success. The primary objective for these land treatments was to provide additional spring forage on sites which previously had little to no grass understory. Development of forage through artificial land treatments has provided forage for spring use while grazing use has been delayed on native range. Two of these projects consisted of the removal of brush cover in order to release native grasses. Spraying herbicides and burning were the practices used. Release of native grass species has been very successful on range sites that are in better condition. An additional 4,000 acres within the study area have been identified as having potential for future land treatment and seeding activities. The use of fire to alter present stands of native vegetation has many opportunities throughout the study area.

New Issues

- Establishing a monitoring program that is cost and time effective and provides the information necessary to evaluate grazing management activities needs to be completed.
- Allotment evaluations need to be streamlined to be completed at closer intervals and provide current analytical data on the condition of each allotment.
- Grazing systems must become more intensified to meet management objectives of riparian and wetland habitats.
- Grazing management practices will continually have to be altered or modified in order to meet the needs of other resource values.

Future Management

The framework for the grazing management program has been put in place, however, there will be increasing pressures to improve conditions on public lands. The existing grazing

MOD
MID 50%
WHEN ACT BRUSH
DECREASE IN
ROOT MASS--
STUNT THE
PLANT

systems will require regular review to ensure that they meet new expectations. Experience within the Resource Area has demonstrated that a number of management actions will achieve the Land Use Plan objectives, but as the plan objectives change grazing systems must also change. Most allotments have enough grazing management taking place to at least maintain present conditions. Over the next ten years, refinements to current grazing management will result in significant improvements to the range resource and help make livestock grazing more compatible with other resources found on the public lands. Although additional range improvements are needed, a large percent of needed facilities are completed. Future successes in the next ten years will come from applying the science of range management rather than spending large amounts of money on management structures.

The Modoc/Washoe ESP has proposed that the Massacre Mountain allotment be developed into a northern Great Basin grazing research and education center. Acquisition of the existing permits would be necessary to accomplish this goal. Negotiations are proceeding with one permittee and American Land Conservancy to acquire lands and grazing permits.

The conflict between domestic and bighorn sheep use in the High Rock Canyon area needs to be addressed through the planning process.

Lands

Existing Information

The study area encompasses about 1.1 million acres, of which over one million acres are public lands. The remainder is almost exclusively private lands blocked up on agricultural areas and springs.

Land ownership in the Black Rock portion is predominately public land with small inholdings of private land. The one exception would be the large block of private land at Soldier Meadows.

In the High Rock portion there have been several significant realty actions which have increased BLM's ability to manage the resources. The most important was the High Rock land exchange in 1976. The BLM acquired the private lands in High Rock Canyon in exchange for lands outside the study area. The mineral rights to the same lands were exchanged in 1990. This exchange has complemented the NCA proposal in the High Rock area. In the 1980's the BLM acquired riparian areas and other upland sites on the Massacre Bench and along the Applegate/Lassen Trail in a separate exchange.

There are only a few other realty actions which have occurred in the High Rock portion of the study area. These include road, powerline and fence easements. A 1,000 KV powerline of Los Angeles Water and Power traverses the northwestern portion of the study area. The Bureau of Reclamation has a reserved right-of-way east of the existing powerline but a second line has not been constructed. Harney County Electric Cooperative has indicated interest in a 230 KV powerline which would traverse the study area near the Applegate/Lassen Trail. No application has been received.

The Black Rock portion contains nine rights-of-way for reservoirs, telephone cables, powerlines, a communication site, the Union Pacific railroad, and an irrigation ditch.

Near Rye Patch Reservoir approximately 800 acres of the Bureau of Reclamation withdrawal is included within the study area, also a very small parcel of Bureau of Reclamation land.

The Summit Lake Indian Reservation is located within the northeast portion of the study area, however this in no way implies that the reservation will be included within the final NCA proposal.

Approximately 12,310 acres of public land encompassing the Mahogany Creek area, have been segregated under the Classification and Multiple Use Act. The lands remain open to the Recreation and Public Purposes Act and the mineral leasing and material sale laws. They are segregated from all other forms of disposal, including the general mining laws.

Primary Issues in Past Land Use Planning

- The BLM was interested in acquiring lands that would enhance management opportunities.
- Private landowners are interested in blocking up their holdings into a single unit.
- Public agencies and individuals require easements across public lands for roads, powerline, water pipelines and fences.

Summary of Ongoing Management Actions

1. *Private lands with special resource values will be acquired through exchange or sale with willing private parties.* There are ongoing negotiations between the American Land Conservancy, BLM and the Bunyard Ranch on purchase/exchange proposal for lands (about 4200 acres) in the High Rock and Massacre Lakes watersheds. There are several other proposals for land exchanges of smaller size in the High Rock and Little High Rock areas.

2. There are ongoing negotiations with the owner of the Soldier Meadow Ranch to acquire certain parcels of the ranch and to acquire a conservation easement. The areas identified for acquisition include parcels of existing and potential Lahontan cutthroat trout habitat and desert dace habitat. The conservation easement would preserve the natural character of private portions of the emigrant trail and buffer zone as well as the historic character of the ranch headquarters.

3. *Lands with unique values will be withdrawn from actions under the land laws.*

New Issues

- The Sonoma/Gerlach MFP does not preclude the disposal of public land in the study area and it needs to be determined if disposal of public land is consistent with the management goals of the study area. Disposal is limited primarily to extension of existing agricultural operations.
- NCA proposals currently being developed call for additional areas to be withdrawn from actions under the land laws.
- Certain types of activities by agencies and individuals within granted easements and right-of-ways may be detrimental to protection of the setting for the historic trail. The Black Rock portion also could be subject to linear rights-of-way applications, such as those for electric transmission lines. The land use plan does not allow the development of surface utilities on the playa north of the Western Pacific RR (Union Pacific) tracks. However, it does not address the rest of the study area. Although it does not appear that the area would be subject to utilities development, the possibility remains.

Future Management

Future land and realty actions within the study area could be significantly affected by the final outcome of the NCA proposals or future land use plan revisions.

Fire Management

Existing Information

Fire is a natural part of all the study area ecosystems except for the Black Rock Playa. The prehistoric frequency of fire occurrence is unknown. Based upon the present vegetation communities, present fire occurrence and fire ecology research, it can be concluded that fires occurred on a 15 to 100 year frequency within specific vegetative communities. Cultural studies with the Paiute tribe have also shown that the Native Americans also used fire as a tool for both hunting and favoring certain food plants. This regular burning favored grasses and other herbaceous species over woody vegetation.

The advent of regular livestock grazing in the last half of the 19th century reduced the grasses and led to a decrease in fire occurrence. Continued grazing allowed sagebrush to become established as the dominant species in the area. Lack of fire also allowed for juniper, bitterbrush and mahogany to expand their ranges. When the woody species came to dominate the area, lightning fires either promptly went out due to a lack of fine fuels to carry the fire (and were never detected), or if conditions were extreme, fire burned extremely hot and covered very large areas. These large destructive fires resulted in the development of fire suppression efforts by the BLM. The BLM's fire organization has now evolved to the point that even small fires are detected and suppressed. During the past 15 years the largest fire within the study area has been approximately five acres. Most fires are lightning caused and involve one or two juniper trees and a total size of less than one acre.

A reexamination of fire suppression policies and the role of fire in land management has occurred during the last 20 years. The fire suppression program has evolved into a management organization supporting the use of fire as a management tool as well as suppressing wildfires.

Primary Issues in Past Land Use Planning

- Large wildfires destroy resources including wildlife habitat and livestock forage.
- Private property must be protected from wildfire loss.
- Fire, when appropriately used can be a cost effective tool to change vegetation.

Summary of Ongoing Management Actions

The major goals and actions for the fire management program within the study area are:

1. *Suppression of all fires during the summer months will occur.* Wildfires during the summer months are often highly destructive. The BLM has responsibilities to protect life and property (both public and private). Allowing large wildfires to burn without suppression is not acceptable to the public.
2. *Fire will be used as a tool to increase livestock forage and improve wildlife habitat where it can be demonstrated that burning is the best tool.* Prescribed burning has been used as a tool in the fall and spring months to reduce fuel loading, enhance wildlife habitat and increase livestock forage. Fire can be a cost effective tool and usually less controversial than other techniques for vegetation removal.

New Issues

- Fire suppression costs for single tree fires need to be reduced to levels appropriate to the values at risk.
- The likelihood of large fires, particularly on mule deer summer ranges is increasing due primarily to the successes of grazing management (increased grass production).

Future Management

Fire suppression will continue to be the most significant part of the fire management program within the study area, but increasingly, fire will be used as a resource management tool. Modern fire management plans will be required, that identify changes in suppression tactics where resource risks from fire are low and where fires are usually restricted to a few trees. The fire management plans should also identify areas that hazard reduction through fire lines or prescribed burning could be used to limit fire size in deer summer ranges.

PUBLIC USE AND VISITOR SERVICES

Recreation

Existing Information

There are many different recreation uses on the study area. High Rock Canyon and the playa of the Black Rock Desert are the areas which draw the most use. The two areas provide very different landscapes and resources for recreation. The playa of the Black Rock Desert is ringed with hot springs. The most popular ones are Black Rock Springs, Double Hot Springs, Trego Springs, and several springs at Soldier Meadows. Some of the Soldier Meadows springs are administered by the BLM as the desert dace ACEC. During the late summer and fall, all the mountainous area and surrounding foothills are heavily used by both big game and upland game hunters. There is some waterfowl hunting as well in the Soldier Meadows area.

There are no comprehensive statistics available for visitor use of the study area, but some spot counts have been done. High Rock Canyon has had over 200 visitors on holiday weekends, mostly for 4-wheel driving, sightseeing, and historical appreciation. The playa of the Black Rock Desert is a popular spot for group activities, including landsailing, model rocketry, and cultural events. Over the summer of 1991, more than 1000 people participated in these events on the playa. The Black Rock and Calico mountains have supported about 2000 hunter days of use per year recently for deer and antelope alone.

Between five and ten Special Recreation Permits (SRP)s each year are issued for commercial or competitive recreation activities within the study area, including horse endurance rides, photography expeditions, model rocketry launches, and outfitting. The owner of the Soldier Meadows Ranch at the north end of the study area is developing his operation into a bed and breakfast/dude ranch, and runs cattle gathering, cattle drives and horse packing trips based on his property at Soldier Meadows, and other ranches nearby in California. Most of these activities take place on the adjoining public lands of the study area.

At the upper entrance to High Rock Canyon, the BLM maintains a well-equipped cabin at Steven's Camp which is open to public use, and serves as an important warming shelter for those who become stuck in High Rock Canyon.

Primary Issues in Past Land Use Planning

During the preparation of the MFP's recreation was not considered a significant program and there were no major issues addressed. Hunting was the predominant recreational use of the study area. Other uses included sightseeing, rockhounding and Off Highway Vehicle (OHV) use. The types of use and the low use levels created little demand for recreational facilities and intensive recreational management.

Summary of Ongoing Management Actions

1. *Manage Special Recreation Management Areas (SMRA) to provide high quality recreational opportunities.*

High Rock Canyon and the Black Rock Desert have been designated as SRMA's. Bureau Policy requires that Recreation Area Management Plans (RAMP) be written for SRMA's that specify policy, objectives, and planned actions in a comprehensive and systematic manner. The RAMP process includes analysis of existing use, evaluation of recreation resource values and recreation experience opportunities, a facilities analysis, an economic effects analysis, and a visitation projection analysis. The RAMP's have not been started and

the meaning of the SRMA designation relative to previous Bureau planning decisions has not been defined.

2. Issue Special Recreation Use Permits for organized recreational events.

SRP applications are evaluated and issued as they are requested. Permits have been granted for dude/cattle drives, wildlife outfitting, endurance horse events, and rocketry meets. Analyzing impacts to WSAs and complying with a decision that prohibits any off-road vehicle events on the playa which permanently affect its scenic qualities are two of the major evaluation factors.

3. Provide information on the area to visitors.

Both BLM districts work together on aerial and ground patrols on holiday weekends, for visitor contact, and protection of cultural resources. Cultural resources and recreation personnel mostly participate, with occasional participation of law enforcement personnel.

Both districts have developed brochures to describe High Rock Canyon and the Black Rock Desert and provide limited user information. Maps are available at either the BLM office in Winnemucca or Cedarville.

New Issues

- More frequent large scale events are being proposed on the playa of the Black Rock Desert, potentially impacting solitude. Also, with the deterioration of the surface of the Bonneville Salt Flats, the playa of the Black Rock desert may become more important as a site for speed trials.
- Lack of a BLM presence in the study area, and increased visitor use in all activities, are straining our ability to protect natural resources in the area.
- National designation of the area could result in a significant increase in actual and desired visitor use levels. Present management activities do not deal with this contingency.
- BLM recreation policy has significantly changed since preparation of the MFP's. Recreation 2000 policy places a new emphasis on visitor satisfaction, enhancement of the recreational experience, and tourism development partnerships. The BLM offices involved have just begun to respond to these changes.
- Visitors lack information about hazards of traveling in area. Gerlach and Cedarville are the last towns before one enters the study area, and some the furthest ends of the study area are 60 miles from either place. High Rock Canyon and the Black Rock Desert Playa, are usually unpassable to vehicles for 6 months of the year. The operators of the Soldier Meadows Ranch have complained that travelers have frequently come to their ranch and demanded assistance, in one instance at gunpoint. There are few others living within the study area. Several of the hot springs are too hot for bathing, and Double Hot Springs has a long legacy of injury and death associated with it.
- There is little information available about the how many visitors use the study area, whether use is increasing or decreasing, which areas are most used, or what types of services are needed or appropriate.

Future Management

Recreation is clearly a program with a small past and a much larger future. There is increased interest in the area, and a general feeling that use is increasing. The success of a

high quality recreation program on public lands within the study area will require a comprehensive look at: existing management capabilities, Recreation 2000 program guidance, public demands for the area, and ability of other programs and resources to adjust and tolerate increased visitor use. This planning will need to involve all BLM programs and the public to ensure that recreation will serve the public and not destroy the resources upon which it is based.

Short term action will be aimed at providing safety information for visitors to the area, and collecting information about visitor use. The information collected will be used either in developing a RAMP for the entire area, or individual RAMPS for both the High Rock and Black Rock SRMAs. The next section will detail immediate actions which will be jointly implemented by the Susanville and Winnemucca Districts. Funding will be sought for this from outside partners to match with BLM funding, services, or materials.

Visitor Services and Safety

BLM presence

For the summer of 1992, a seasonal recreation/wilderness technician will be assigned to the Black Rock/High Rock study area for the purposes of visitor contact and information collection. It may be possible to house this person in a BLM trailer in Gerlach which may also serve as a contact station for the summer season. The assistance of volunteers will also be solicited for the same purposes. Beginning in the Spring of 1992, a ranger from the Susanville District will patrol the Surprise Resource area on a regular basis beginning in the Spring of 1992. The Winnemucca District is also hiring a ranger who is expected to begin work this spring and should be able to assist with these tasks as well. All work will be undertaken jointly by the Winnemucca and Susanville districts.

The seasonal employee will begin work May 15, and continue until September 15. Their responsibilities will include:

- Obtaining visitor information with the BLM-OMB approved visitor survey questionnaire throughout the study area.

- Counting the numbers of people seen in the area, and recording where they are and when.

- Patrolling the perimeters of all the WSAs surrounding the NCA study area, and recording previously unrecorded impairments.

- Maintaining signs and information boards, and installing WSA boundary markers.

- Providing information and assistance to visitors, and reporting violations to law enforcement personnel.

- The seasonal employee will also coordinate the work of the volunteers in the area.

Between these personnel, and the permanent employees from the Sonoma-Gerlach and Surprise Resource Areas, the goal will be to have at least one BLM person patrolling the NCA study area every day from May 15 to September 15, with areas of visitor concentration visited at least once every 3 days.

Brochure

A brochure will be developed explaining the safety hazards of traveling in the area, including a map with hazardous areas shown. This brochure will use a simple, one color format to minimize cost. The brochure will be distributed through gas stations and restaurants in the following towns:

Gerlach
Cedarville
Denio/Denio Junction

Signing

Given the lack of a comprehensive recreation management plan for the area, signing will be limited to access points to the area, and providing information about travel hazards. The access points to the area which will be signed are:

Both playa access points north of Gerlach
Playa access at Trego
Playa access road north of Humboldt-Pershing county line
Junction of Rt. 8A and road to Stevens' Camp
High Rock Canyon access road at Steven's Camp

Information boards

These will provide more comprehensive information about the area, and be located near Cedarville and Gerlach. These boards will include brochure dispensers, a 1:100,000 scale map, and interpretive information about the resources of the area. They will be located in areas such as gas station or restaurant parking lots which can be easily monitored by local cooperators.

Emergency Services

Two Washoe County Sheriff's Deputies stationed in Gerlach, and the Gerlach volunteer fire department and rescue squad respond to many of the emergencies in the NCA study area, including Humboldt and Pershing Counties. They are dispatched either by the Truckee Meadows Fire District, the Washoe County Sheriff's Department, or through direct contact in Gerlach. There are loose agreements with both Humboldt and Pershing Counties to cover the Black Rock Desert area north and east of Gerlach.

Hazardous Materials

BLM procedure for hazardous materials problems on public lands is to notify the BLM hazardous materials coordinator in the BLM state office, who will notify the state Environmental Protection Agency. If it's apparent that immediate risks to health and safety are involved, the BLM will send law enforcement personnel to the site, to prevent public access, and local emergency services officials would be notified. In most cases, situations like this would probably involve an initial response by local emergency services people, with later notification of the BLM.

Transportation

Certain roads within the study area are maintained by the BLM and the various counties. BLM policy is to develop and maintain roads which provide access to BLM personnel for

resource management purposes. Other uses are considered incidental, unless planning shows the need for program-specific planning and funding are for specific projects. About half the mileage in the study area is maintained by the county and half is maintained by the BLM. Currently, resource area personnel identify which roads are in need of maintenance from year-to-year, and this, combined with the experience of the BLM operations staff, dictates which roads will be maintained and improved.

The Winnemucca District is currently beginning a transportation plan which will involve evaluating which roads should be kept in the district road system, and which should be either turned over to the counties or left unmaintained. The Susanville District, as part of its High Rock Canyon ACEC plan, has prescribed that the road through High Rock Canyon be kept in as primitive state as possible, as a 4-wheel drive road.

SUMMARY OF INTERDISTRICT MANAGEMENT OPPORTUNITIES

1. Develop visitor information system.
2. Patrol study area on a regular basis.
3. Collect data on visitor use.
4. Provide information to all groups interested in the NCA proposal.
5. Develop an interdistrict horse management agreement to coordinate gathers, inventory, and other topics of mutual concern.
6. Develop a joint grazing system for the Wall Canyon and Soldier Meadows allotments.
7. Continue to implement the Tri-State agreement to pool and share archaeological expertise and program resources.

Appendix 1:

Summary of Land Use Plan Decisions and Implementation

DECISION

IMPLEMENTATION

Cowhead/Massacre:**Planning Area Wide:**

CM002: Allow livestock turnout dates on those allotments designated for intensive livestock management as follows:

- a. After a grazing system has been implemented, turnout may occur 4/15 or later if the grazing system provides adequate residual forage to support such early turnout. If the grazing system does not provide residual forage, turnout will be based on allotment specific range readiness of the major ecological sites which normally occurs between 4/15 and 5/15.
- b. Livestock turnout may occur anytime after 4/15 on native range identified as seeding areas.
- c. Livestock turnout may occur anytime after 4/1 on existing seedings.

CM003: Ensure that moderate use (40-60%) is the upper limit for livestock use for major use areas on the native range.

CM004: On specific areas in Subunits 2 and 3 such as critical mountain brush types, light use on mountain bitterbrush will be the upper limit for livestock use.

CM005: Fence meadows and aspen stands which contain significant wildlife values such as sage grouse, and provide water outside the fences for livestock, wildlife, and wild horses. Allow prescribed grazing on these areas to maintain vegetative vigor and diversity. Provide at least one growing season of rest every two years.

CM006: Do not allow land uses which would impair the qualities which qualify significant cultural resources for the National Register of Historic Places.

CM008: Before initiating major ground disturbing activities, consult the local Native American community to prevent disturbance or destruction of places holding traditional heritage values (including, but not limited to, burial grounds, sacred places, and ceremonial activity sites).

This decision implemented through the individual grazing decisions issued from 1982 through 1983 and in 1991. These decisions established specific seasons of use. The decision is also implemented through development of AMPs for each allotment. More information is provided for each AMP in Appendix 2.

All AMPs include a moderate use restriction. Yearly utilization mapping is conducted to measure success.

Within PNCA study area, bitterbrush is being monitored on the key areas. Studies indicate that the light use limitation is generally not exceeded.

Seven meadows have been fenced. The High Rock grazing enclosure protects an additional 20 + miles of riparian and aspen habitats. The Massacre Lake archaeological enclosure protects several miles of riparian habitat. Two additional meadows on the Massacre Bench are proposed to be fenced in the future.

All Environmental Assessments contain sufficient cultural resource data to insure a reasoned decision concerning any possible impacts to cultural resources.

In addition to case-by-case consultation, an MOU has been negotiated with the Fort Bidwell Indian Community Council to provide overall guidance, consultation and information through a single contact.

- CM009:** Encourage mineral^o4 exploration and development under appropriate laws on all public lands, except those withdrawn through specific decisions for each subunit.
- CM010:** Encourage materials free use permits and material sales for aggregates (within Subunits 2 through 4) to meet public demand. Provide aggregate material to support BLM, state, county, and city projects.
- CM011:** Encourage free collection of petrified wood and decorative stone, lying on the surface within Subunits 2 through 4, up to allowable limits.
- CM012:** Conduct sales [of petrified wood and decorative stone] when subsurface collection involving surface disturbance is required to extract the material.
- CM013:** Establish powerline right-of-way corridors on the east side of Surprise Valley, along the existing 750KV transmission line and along the Forty-Nine Pass road.
- CM014:** Allow miscellaneous rights-of-way within Subunits 2 through 4, consistent with environmental concerns, as needs are identified by local government, citizen groups, and individuals.
- CM015:** Encourage land tenure adjustments, where these actions accrue multiple use benefits to the public.
- CM015:** Utilize fire as a range betterment tool.

Subunit 1 High Rock:

- HR001:** Adjust the northwest boundary of Subunit 1 to run southeast from Steven's Camp along the west rim of High Rock Canyon to the north rim of Yellow Rock Canyon to the Home Camp Allotment boundary fence.
- HR002:** Combine the Little High Rock and the Massacre Mountain Allotments into one allotment, hereafter referred to as the Massacre Mountain Allotment.
- HR003:** Allocate forage among both consumptive and non-consumptive resources. As additional forage becomes available, allocations will only be made to wildlife and non-consumptive uses.
- HR004:** Allow for a change in class of livestock from sheep to cattle in the entire subunit.

Limited exploration activities have occurred at several locations. There have been no Mining Plans submitted.

There are five Washoe County Road Department free use materials sites.

No formal action has been taken to encourage free use. New Bureau policy normally requires payment of mineral materials.

No sales have been conducted due to a lack of interest.

Designated 1983.

No applications have been received.

One surface and one subsurface exchange have been completed. One additional exchange is currently in evaluation/negotiation stages.

The Little Basin burn in 1988 included about 800 acres of sagebrush and juniper. The Wildcat riparian burn in 1988 included about 55 acres. Burns are planned in High Rock Canyon, Little Basin and Long Valley in the future.

Completed 1983.

Completed 1991.

Completed 1991. Proposed by amendment 1992.

Has not been requested by the sheep operator.

HR005: Allow livestock to graze west of High Rock Canyon and north of Little High Rock Canyon and designate this area for intensive livestock grazing management.

Completed 1983. Proposed for amendment 1992.

HR006: Further cancellation of livestock will not occur to provide buffer zones to prevent disease transmission.

Proposed for amendment 1992.

HR007: Provide habitat in the High Rock Canyon complex and east to the Winnemucca District Boundary for the reintroduction of bighorn sheep.

Habitat is ungrazed, but bighorn will not be reintroduced until conflicts with domestic sheep resolved. Proposed for amendment 1992.

HR008: Manage all ecological sites within Subunit 1 to achieve site potential.

High Rock Habitat Management Plan (HMP) completed in 1984. See Appendix 2 for specific actions.

HR009: Establish the High Rock Herd Management Area (HMA) and manage for a population of 70-100 wild horses, as long as monitoring shows that horses are not causing significant impacts on cultural resources with national Historic Register qualities.

Completed 1983. HMAP written in 1985 and revised in 1989. Horses gathered in 1981, 1985, 1986, 1988, and reduced to management levels of 70-100.

HR010: If wildhorses do cause significant impacts on these sites, then remedial management action (i.e. herd reduction, removal, or relocation through fencing, etc.) will be taken to protect the particular sites that are being degraded.

High Rock HMP and High Rock CRMP propose fencing of meadows.

HR011: Do not allow bulldozers or other mechanized surface vehicles for fire control unless there is significant risk to human life, wildlife habitat, or livestock.

Wilderness Fire Management Plan completed 1985. See Appendix 2 for specific actions.

HR012: Allow vehicular traffic in high Rock Canyon and on routes designated. Close all other routes of travel.

Partially completed. Conlan Camp Road closed 1989.

HR013: Prohibit vehicular travel through High Rock Canyon during the courtship and incubation period of raptors (Feb 15 to March 31) and during or immediately following periods of wet weather. Encourage travel on improved county roads during these periods.

Completed 198?. Gates and signing installed by volunteers.

HR014: Initiate a mineral withdrawal for the entire subunit to protect it from future mineral development.

Mineral withdrawal proceeding. Completion date unknown.

HR015: Obtain private mineral rights in High Rock Canyon, whenever possible.

Completed 1990.

HR016: Do not allow construction of any major utility or transportation facility within Subunit 1.

Completed 1983.

HR017: Acquire all private lands within Subunit 1.

Negotiations with private landowners ongoing.

Subunit 2 Massacre/Nut:

MN001: Designate the following allotments for intensive livestock grazing management.

Massacre Lakes
 Bitner
 Nut Mountain
 Wall Canyon
 Sagehen
 Massacre Mountain

Completed 1983. See Appendix 2 for specific actions in Bitner, Nut Mountain, Wall Canyon, Massacre Lakes, and Board Corral AMPs. Massacre Mountain AMP scheduled for 199?.

MN002: Divide the Nut Mountain Allotment into the Bitner and Nut Mountain Allotments. Authorize Don Coops to graze cattle in the Bitner Allotment and John Weber to graze cattle in the Nut Mtn. Allotment.

Completed 1982. Rangeline agreement signed by permittees and boundary fence constructed.

MN003: Allocate forage among both consumptive and non-consumptive resources. As additional forage becomes available, increase allocations will be made to wildlife, wild horses, and livestock based on needs, response to management, policy, etc.

Completed 1982 through 1983 for Massacre Lakes, Bitner, Nut Mountain, Wall Canyon and Sagehen. Completed 1991 for Massacre Mountain.

MN004: Manage the ecological sites for mid-successional vegetative conditions (50-75% of ecological climax).

MN005: Establish moderate use on grasses as the upper limits for livestock use in Subunit 2.

Implemented through Bitner, Board Corral, Nut Mountain, Massacre Lakes, and Wall Canyon AMPs. See Appendix 2 for specific actions. Completed 1983. Implemented through appropriate AMPs.

MN006: Give special management consideration to key mountain brush fields in Area 2E. Include rest periods and utilization limits to improve and maintain this important wildlife habitat type in satisfactory condition. Provide at least two growing seasons of rest every three years and limit livestock use to light utilization on designated areas.

Implemented through Nut Mountain and Wall Canyon AMPs. Monitoring confirms light utilization.

MN007: Ensure that sufficient browse is available to support reasonable numbers of deer (675).

Monitoring in Wall Canyon, Board Corral, Nut Mountain and Massacre Mountain allotments indicates browse availability. NDOW population estimates indicate numbers exceeded.

MN008: Provide habitat in satisfactory condition in Subunit 2 to support reasonable numbers of antelope (450).

Implemented through Bitner, Board Corral, Nut Mountain, Massacre Lakes, and Wall Canyon AMPs. See Appendix 2 for specific actions.

MN009: Exclude factors from Area 2D (archaeological reserve zone) which may destroy the extremely high archaeological values within this area.

???? acres fenced in 198?. Weekend patrols initiated 1991.

MN010: Acquire private lands near Massacre Lakes and in Hanging Rock Canyon, whenever possible.

?? acres near Massacre Lakes acquired in land exchange 198?. American Land Conservancy, Bunyard and BLM working on sale/exchange proposal for lands in Massacre Lakes and High Rock watersheds.

MN011: Enact preservation/stabilization measures to preserve the cultural resource values of the Lassen-Applegate Trail, the 12 known sites within the subunit with National Register qualities, and any future sites which are determined to possess NRHP qualities.

MN012: Initiate a mineral withdrawal for Area 2D.

MN013: Treat approximately 6,500 acres suitable for brush control and seeding to be utilized for spring and summer livestock forage.

MN014: Establish Board Corral, Massacre Lakes/Sagehen, Bitner, Nut Mountain, and Wall Canyon Wild Horse Herd Management Areas. Remove all wildhorses from the Board Corral HMA and Area 2D. Maintain a total population of 70 to 130 horses in the other HMAs.

MN015: Leave Subunit 2 open to ORV travel.

Subunit 3 Long Valley/Sand Creek:

LS001: Designate the following allotments for intensive livestock grazing management:

- a. Long Valley
- b. Little Basin
- c. Calcutta
- d. Horse Lake

LS002: Allocate forage among both consumptive and nonconsumptive resources. As additional forage becomes available, increased allocations will be made to wildlife, wild horses, and livestock based on needs, response to management, policy, etc.

LS003: Manage the majority of the native range in the Long Valley and North Larkspur allotments to meet the physiological needs of Great Basin wildrye.

LS004: Manage the Horse Lake, Little Basin, Calcutta, and Sand Creek Allotments to reach 50-75 percent of site potential. Provide at least one growing season of rest every two years on native range.

LS008: Provide habitat in satisfactory condition to support reasonable numbers of antelope as follows:
Area 3B: 60

Research for chemical preservatives continues.

Not initiated, High Rock mineral withdrawal is higher priority.

4224 acres were treated and seeded in 1982 in the Nut Mountain allotment.

Completed 1983. Board Corral HMAP was not developed since the decision is for zero horses. The other HMAPs were prepared in 1985 and revised in 1989. Horses were removed from Board Corral and Area 2D in 1984. Horses gathered in 1984, 1985, 1988. Total populations have been maintained within the 75 to 130 horse standard.

Designated open 1987.

Completed 1981. See Appendix 2 for specific actions.

Completed 1981.

Implemented through Long Valley AMP. See Appendix 2 for specific actions.

Implemented through Little Basin, Calcutta, and Horse Lake AMPs. See Appendix 2 for specific actions.

Implemented through Little Basin, Long Valley, Calcutta, and Horse Lake AMPs. See Appendix 2 for specific actions.

LS009: Treat approximately 21,000 acres suitable for brush control and seeding. Provide leave areas along the Lassen-Applegate Trail and around archaeological sites judged to meet National Register quality.

5671 acres in the Little Basin and Long Valley allotments treated 1983. 3160 acres treated in Long Valley in 1990. 3915 acres have been identified for seeding in the future in the Long Valley allotment. Leave areas included in all projects.

Tuledad/Home Camp: Communication:

CO001: Develop Mahogany Mountain by installing a small repeater site powered by solar panels.

Not completed. Site is in Wilderness Study Area.

Cultural Resources:

CR001: Initiate contracts to gather cultural resource data.

Inadequate funding has precluded implementation.

CR002: Try signing one site to test response and vandalism.

Signs at Area 2D shot 5 times within six months of installation.

Lands:

LA001: Change planning unit boundary to include the High Rock Canyon with the Massacre Planning Unit.

Completed 1976.

Recreation:

RE004: Restrict vehicle use to existing roads and trails.

OHV designation completed 1987.

RE007: Fence or cage important petrified wood areas.

Sites near Denio Camp and Woodruff Reservoir fenced 1977.

Range Management:

RM001: Initiate systematic livestock management plans on the following allotments:

- a. Bare
- b. Denio
- e. Home Camp

Bare AMP implemented 1974, revised 1982. Denio AMP implemented 1987. Home Camp AMP implemented 1981. See Appendix 2 for details.

RM006: Implement monitoring system capable of providing reliable data to assess achievement of management objectives.

Tuledad/Home Camp monitoring plan completed 1987. Monitoring data has been collected. Data used in evaluations on Bare allotment. Evaluation planned for Home Camp allotment 1992.

RM007: Stocking rates on implemented AMP's will be adjusted, if needed, after one complete grazing cycle.

Stocking on Bare allotment adjusted downward to 13,260 AUMs in 1980.

RM009: Forage increases will first be allocated to meet wildlife, and other multiple use objectives as specified in these land use decisions. Subsequent forage increases will be allocated to livestock.

No additional forage has been identified.

RM010: Initial stocking rates in allotments will not exceed 14,968 AUMs in the Bare allotment, 9751 AUMs in the Home Camp allotment, and 1833 AUMs in the Denio allotment.

Completed 1979. Stocking rates for Bare allotment reduced to 13,260 AUMs in 1980. Stocking rates for Home Camp allotment adjusted slightly due to changes in allotment boundary.

Wildhorses:

WH001: Manage and protect a viable, self sustaining horse population.

Implemented through Fox/Hog HMAP 1984 and revised HMAP in 1989.

WH002: Protect and maintain 50-75 horses for the Fox-Hog Mountain Herd Management Area.

Implemented through Fox/Hog HMAP 1984 and revised HMAP in 1989.

WH004: Consider horse use areas when fencing.

Guideline adopted 1976.

WH005: Conduct routine inventories.

Inventories conducted prior to gathering operations.

Wildlife:

WL004: Artificial nesting areas and improved shoreline vegetation should be provided to improve waterfowl production.

Not completed. Site within PNCA study area is within Wilderness Study Area.

WL009: Management systems should be designed to improve riparian vegetation on streams throughout the unit. Fence streams where management is unable to improve riparian habitat.

Home Camp and Bare AMPs have improved some riparian areas. Exclosures have been constructed in all three allotments to protect additional sites. Little High Rock Canyon has been rested from livestock use for six years.

WL010: Maximize vegetative cover according to site potential.

Implemented through Bare, Home Camp, and Denio AMPs. See Appendix 2 for additional information.

WL011: Prohibit all vegetation manipulation within 2 miles of sagegrouse strutting areas and within 100 yards on any meadow or stream.

Guideline adopted 1976.

WL012: Decide upon treatment of meadows on a site by site basis. Fence where necessary.

Meadows have been fenced in all three allotments.

Watershed:

WS001: Implement livestock management plans that restore vegetation to site potential.

Implemented through Bare, Home Camp, and Denio AMPs. See Appendix 2 for additional information.

WS002: Select species of plant that will include all other species growth requirements and then manage to achieve site potential.

Completed. Key species identified in each AMP.

WS005: Improve upper watershed and meadow healing through proper management before expending large sums of money for structures.

Implemented through Bare, Home Camp, and Denio AMPs. See Appendix 2 for additional information.

WL006: Issue Special Land Use Plans with stipulations to minimize the disturbances for erosion control.

Guideline adopted 1976. No SLUPs have been issued.

SONOMA/GERLACH RESOURCE AREA: Black Rock Portion of PNCA Study Area

Decision

Implementation

Cultural Resources:

CR 1.6, CR 1.8: Evaluate the following sites to determine if they have any historic or cultural values. Take measures to protect them if they do:

Peter Ting Sr. Site

Summit Twin Spring Blinds

Cr-NV-02-167

Cr-NV-02-170

Cr-NV-02-171

Cr-NV-02-172

Cr-NV-02-173

Cr-NV-02-174

Cr-NV-02-183 Little Smokey Rockshelter

Cr-NV-02-185 Smokey Creek Cave

Cr-NV-02-1365 Dahlem Shelter

CR 1.10: Post positive protective signs at: Cr-NV-02-02 Silent Snake Springs, Cr-NV-02-236 Harden City, and any other sites as they are identified.

CR 1.15: Insure that a cultural resources survey is completed prior to any activity which will result in new surface disturbance or transfer of land from public ownership. Exceptions are those not required by policy or regulation, eg. 3809 mining notices.

CR 1.19: Encourage mining and other interests to work with the Bureau to mitigate possible adverse environmental impacts to cultural resources.

Wildlife:

WL 1.1: Manage range conditions to allow existing big game populations to reach reasonable numbers where possible. Monitor condition and trend of key wildlife areas to insure habitat is available. Bighorn sheep will not be reintroduced on active preference sheep allotments unless all conflicts can be resolved.

WL 1.5a: Designates 307.22 acre parcel as desert dace ACEC.

1. Tristate Agreement to facilitate management and protection of cultural resources.

2. Applegate-Lassen National Register Corridor. The same route described as being protected in the minerals section is protected from surface occupancy.

3. Summit Twin Springs. An enclosure has been erected around the site to protect it from erosion damage due to horses and cattle.

1. Fox Mountain HMP - this HMP addresses the upland terrestrial habitats on the Calico Mountains. It deals with mainly with pronghorn antelope, mule deer, and bighorn sheep. Also addressed is the high priority potential LCT habitat at Donnelly Creek.

2. Desert Dace HMP - this plan addresses the threatened desert dace and the immediate bordering habitat. Completed.

3. Black Rock HMP - a comprehensive plan to include all wildlife, fisheries, riparian, wetland, and terrestrial habitats. This HMP will be completed in 1991.

4. Selenite-Seven Troughs HMP -a comprehensive plan to be completed in 1991.

WL 1.7: In allotments designed for grazing system development the forage needs of wildlife will be estimated within the pastures where the wildlife use occurs and will be taken into consideration in the AMP development.

WL 1.9: In the design, implementation, or revision of grazing management systems, plans for horse management areas or horse use areas, consider aspen and mahogany as "critical" management species.

Specific management objectives will be designed for these critical species and these objectives will be used in the activity plans developed on an area.

WL 1.10: Management objectives of activity plans (AMPs, HMAs, HMPs, etc.) will include specific objectives pertaining to improving and maintaining desired riparian areas and meadow habitats.

In the development of activity plans, meadows and riparian areas will be considered as "critical" areas.

WL 1.11: Protect sage grouse strutting grounds and give proper consideration to other sage grouse habitat by accepting as guidance Nevada Department of Wildlife's Guidelines for Vegetal Control Programs in Sage Grouse Habitat in Nevada. Nevada Department of Wildlife must be given a minimum of two years notice of any proposed large-scale vegetal manipulations in order that they might inventory the area for sage grouse use, and thus provide appropriate input.

In addition, sage grouse strutting grounds and associated use areas must be given similar consideration and protection in the planning and permitting of other types of projects and uses (fences, pipelines, roads, gravel pits, rock gathering, powerline rights-of-way, land exchanges, mining, mineral leasing, etc.)

WL 1.12: Preserve broadleaf woodland habitat in the entire resource area by:

1. Limiting firewood and post cutting to pinyon and juniper;
 2. Responding quickly in fire situations where non-coniferous woodlands are involved.
- Exceptions are where harvesting or fire has been identified as a management tool.

WL 1.13: Provide water for wildlife at existing water sources.

WL 1.16: Retain in public ownership all public lands containing valuable wildlife habitat, unless it is determined that such lands, because of location or other characteristics is difficult and uneconomical to manage as part of the public lands or there is a higher and better use.

WL 1.17: Acquire by exchange or other means those private lands intermingled with public lands that contain high resource values within the Lahontan Cutthroat Trout Natural Area.

WL 1.24: Limit off-road vehicle use during lambing seasons (February 1 to May 31) in bighorn sheep use areas as reintroductions are made.

WL 1.25: Limit new trail or road construction on potential bighorn sheep range to minimize access. Potential bighorn sheep ranges include the following:

Calico Range
Black Rock Range

Existing road or trails may be closed or use limited if it is determined that they interfere with the normal life processes of the bighorn sheep.

WL 1.26: Through a coordinated planning approach in the development of activity plans (AMPs, HMPs, HMAs, etc.) ensure that waterfowl habitats are adequately addressed and where appropriate provide for improved waterfowl habitat conditions.

WL 1.27: Maintain and improve habitat for sensitive, protected, threatened, and endangered species. Those presently listed are identified below:

Endangered:

American Peregrin Falcon

Threatened:

Lahontan Cutthroat Trout

Sensitive:

Spotted Bat, California Bighorn Sheep

Protected:

All raptors

WLA 1.3: Through a coordinated planning approach develop a Habitat Management Plan (HMP) for each stream in the resource area.

WLA 1.4: Through coordinated planning process, ensure that fish habitat factors (bank stability, percent shading, siltation of pools and spawning gravels) are included as objectives of AMPs that contain fishable streams.

WLA 1.6: Whenever practicable all reservoirs constructed on public land that have fisheries potential will be fenced with the water piped to a tank for livestock use. Any new irrigation reservoirs on public land will have a minimum pool requirement established.

WLA 1.8: Encourage mining and other interests to work with the Bureau to mitigate possible adverse environmental impacts.

WLA 1.9: Investigate Nevada water rights records for each stream capable of supporting a sport fishery. Apply to the State of Nevada for the right to all unappropriated stream waters in the resource area. Apply for the rights to appropriated stream waters which are eligible for reappropriation through nonuse of existing rights. Protect the appropriation of any water from public streams containing sport fish.

WLA 1.11: Fire lines will not be constructed by heavy equipment on riparian stream zones and fire retardant will not be applied to water.

WLA 1.12: BLM roads on resource area streams be waterbarred or relocated to prevent erosion.

WLA 1.13: Apply no herbicides or pesticides directly over the Sonoma-Gerlach Resource Area's streams, lakes, or reservoirs.

Recreation:

Objective R 1: Provide as many recreation opportunities as possible without undue degradation to the Sonoma-Gerlach Resource Area.

I. Land Use Plan Decisions

R 1.4: Acquire or provide sufficient water for to support the uses of the public lands for wild horses, wildlife, aquatic habitat, livestock, and recreation.

R 1.6: Complete Recreation Management Plans for the Black Rock Desert.

R 1.7: Evaluate line shacks, miner's cabins and other isolated historical structures to determine which should be left intact and which should be destroyed.

R 1.9: Establish an interpretive program concerning these sites if warranted. Maintain fire protection for those areas that have significant values. The following sites are located in the PNCA:

George W. Lund Petrified Forest
Rabbithole Mining Town and District
Sulphur
Box Canyon Opal Claim Area

R 1.11: The Sonoma-Gerlach Resource Area is open to ORV use with the following exceptions:

George Lund Petrified Forest
160 ac. - T. 38 N., R. 23 E.
Sec. 21, SE1/4

Allow no organized or competitive off road vehicular use that would Allow no organized or competitive off-road vehicular use that would permanently detract from its natural character as determined by the authorized officer. Competitive events that are temporary in nature and in which permanent disruption of the natural character of the playa can be mitigated will be allowed.

Limit off-road vehicle use during the lambing seasons (February 1 to May 31) in bighorn sheep use areas as reintroduction are made.

Existing roads and trails in a hazardous condition may be closed temporarily or permanently on a case-by-case basis.

Permanent closures will be coordinated with county government.

Objective R 2: Ensure access to recreation areas for the public. A policy of the Bureau is to promote public access to public lands as part of the outdoor area of the United States and cooperate with other federal agencies, state and local governments, and private organizations in establishing and maintaining access. (BLM Manual 8351.2)

R 2.1: Retain public lands in identified recreation areas of Class A and B quality with the exception of those lands immediately adjacent to Rye Patch Reservoir. (see attached map) Class A and B quality areas are the better recreation sites in the resource area. Disposal of these public lands could lead to a loss of recreation opportunities. Private landowners could restrict access or even destroy the recreation resource.

R 2.3: The Nevada Division of Parks and several volunteer organizations have advocated the concept of a National Desert Trail that would run from the Mexican border to the Canadian border.

Cooperate in the establishment of the National Trail through the district. This cooperation will primarily be in the form of:

1. Helping locate the trail on the ground and on maps;
2. Helping publicize and protect the trail;
3. Retaining the public land on which the trail is located or insuring easements for public access prior to disposal of public parcels.

Visual Resources:

V 3.1: Allow no action to degrade the visual resources as shown on the attached map. (See visual resource description above).

Minerals:

M 5.5: For oil and gas, and geothermal leases, no surface occupancy will be allowed on the Applegate-Lassen trail from Rye Patch reservoir north to the Western Pacific railroad tracks, then within one mile to either side of the Applegate-Lassen trail from the Western Pacific tracks north to Black Rock Point, then to the East the boundary follows the crest of the Black Rock Range. The desert dace ACEC is also protected from surface occupancy.

M 6.1: States there will be not leasing of sodium and potassium on the playa of the Black Rock Desert.

Range:

RM 1.1: Grazing will be managed in the Sonoma-Gerlach R.A. with multiple uses fully considered. This decision establishes the base herbivore grazing level by grazing allotment. Initially stocking levels will remain at current levels except where agreements are reached with the livestock operator.

Active Preference

Buffalo Hills - 11,920 AUMs

Calico (now combined into Buffalo Hills) - 2,584

Leadville - 2,567

Soldier Meadows - 16,070

Blue Wing - 24,160

Seven Troughs - 9,163

Majuba - 1,100

Soldier Meadows

-Allotment Management Plan - 1975

-Carrying Capacity Set by EA - 1978

-Court Order Grazing Schedule - 1982

-Allotment Evaluation and Grazing Schedule with a 25% reduction - 1988

-Draft Allotment Management and -Evaluation in progress - 1991

Leadville

-Allotment Management Plan - 1969

-Allotment Evaluation and Grazing -Schedule change with temporary reduction -1988

-Draft Allotment Evaluation in progress - 1991

Calico

-Allotment Management Plan and combined with the Buffalo Hills -Allotment and all suspended AUMs activated - 1984

-Allotment Evaluation and Grazing Schedule -1988

-Draft Allotment Evaluation in progress - 1991

Buffalo Hills

-Reduction of 11,112 AUMs through administrative procedures - 1980

-Allotment Management Plan and combined with the Calico Allotment and all suspended AUMs activated - 1984

-Allotment Evaluation and Grazing Schedule -1988

-Draft Allotment Evaluation in progress - 1991

Blue Wing

-CRMP - 1984

-Allotment Management Plan - 1986

-Allotment Evaluation and Grazing Schedule -1988

-Draft Allotment Evaluation in progress - 1991

Seven Troughs

-CRMP - 1984

-Allotment Management Plan - 1986

-Allotment Evaluation and Grazing Schedule -1988

-Draft Allotment Evaluation in -progress - 1991

Majuba

-Reduced 25% of the AUMs through administrative procedures - 1987

RM 1.2: Review and update the the Leadville Allotment grazing management system.

RM 1.3: Establish periods-of-use for each allotment and base management on the physiological requirements of key species in accordance with the attached list. Make season-of-use data available to CRMP groups so that they can use this information in the development of plans using the CRMP process.

Buffalo Hills 6-1 to 2-28

Calico 6-1 to 2-28

Leadville 5-1 to 11-30

Soldier Meadows 6-1 to 2-28

Blue Wing 6-1 to 2-28

Seven Troughs 6-1 to 2-28

Majuba 6-1 to 2-28

(*most of these dates have changed as a result of the implementation of grazing systems)

RM 1.5: 1. Allow for conversion from cattle to sheep on all allotments within the resource area except on those allotments or portions of allotments where conflicts with existing bighorn sheep cannot be mitigated.

2. Allow for conversion from sheep to cattle on a case-by-case basis.

RM 1.6: Control economic insect infestations on public lands when proper range management procedures are ineffective, impractical or unfeasible.

RM 1.7: Acquire sufficient water on public lands through permit, adjudication, or purchase processes.

RM 2: Increase existing allocatable livestock forage by artificial methods from 140,583 AUMs identified as suitable for livestock to 229,129 AUMs within 5-7 years.

Wild Horses and Burros:

WH/B 1.1: Establish WH/B by herd use area using the July 1, 1982 numbers as a starting point for monitoring purposes except where there is adequate and supportable resource data, or the numbers are established by court order.

Remove WH/B from checkerboard lands where cooperative agreements have not been signed. Within the PNCA this only affects the Antelope Range herd area covering the SE tail of the PNCA boundary to Rye Patch reservoir.

Blue Wing/Seven Troughs Herd Area Management Plan

WH/B 1.7: Acquire or provide sufficient water on public lands to support wild horses, wildlife, aquatic habitat, livestock, and recreation.

WH/B (Range Management decision 1.1, action item 6 for Livestock, WH/B and wildlife): After fifth year adjustments to livestock numbers, wild horses, wildlife, and livestock will be adjusted proportionately. Action item 7 states that if livestock numbers are adjusted, changes will be made based on reliable vegetation monitoring studies, consultation and coordination, baseline inventory, or a combination of these.

Lands:

L 3.3: Make lands available for agricultural disposal provided:

1. Disposal is in the national interest.
2. Soils are determined to be suitable.
3. Water is available.
4. The disposal is compatible with local government plans and is coordinated with local government entities to insure that necessary services and appurtenances such as roads, schools, etc., are possible and practical.

First priority will be given to those lands which will result in expansion of existing agricultural units or areas.

L 4.1: Designate right-of way corridors along existing transportation and utility facilities with a specified width of 1.5 miles on each side of the existing transportation/utility facility. Exceptions to this width requirement will be made on a case by case basis following a multiple use analysis of a specific proposal.

In the vicinity of the Black Rock Desert Playa from Sulphur to Gerlach, transportation or utility facilities will be located within a designated corridor bounded one-quarter mile north and two and three-quarter miles south of the Western Pacific Railroad. Only underground utility facilities will be located north of the Western Pacific Railroad.

The separation of rights-of-way within the designated corridors will be limited to the minimum spacing required by technology, topography, reliability, visual impacts, etc.

All new powerline rights-of-way grants within raptor areas will contain raptor protection stipulations as means of mitigation.

Future rights-of-way corridors will be evaluated on a case by case basis, but should be as consistent as possible with the Western States corridor study. No utility facilities will be allowed to cross the playa of the

Black Rock Desert, other than the corridor previously mentioned.

L 4.2: Provide for communication sites on public land by using existing sites when frequencies are compatible.

Develop new communication sites only when environmental or technical problems on an existing site are incompatible with new applications.

New sites will be in compliance with Interim Management Policy and Guidelines in all WSAs.

New site development and road construction will be permitted only when no feasible alternative can be used on the following mountain ranges:

- Fox Range
- Buffalo Hills
- Granite Range
- Calico Range
- Black Rock Range
- Selenite Range
- Sonoma Range
- Tobin Range
- East Range
- Stillwater Range
- Humboldt Range
- West Humboldt Range

And further that no new communication sites disrupt the integrity of setting of the Buffalo Hills portion of the Applegate-Lassen Emigrant Trail.

Appendix 2:

Summary of Accomplishments on Implementation of Activity Plans

High Rock Habitat Management Plan, 1984

PLAN ACTION

IMPLEMENTATION

- | | |
|---|--|
| 1. Reintroduce California Bighorn Sheep into Pole and/or Little High Rock Canyon when domestic/bighorn sheep disease problems are eliminated. | Land Use Plan amendment planned for 1992 to solve the domestic/bighorn disease conflict. |
| 2. Evaluate High Rock area for peregrine falcon introduction in 1989, after initiation of grazing restrictions. | Habitat and prey base inventory proposed in 1992 budget. |
| 3. Construct fence along west side of High Rock Canyon to keep livestock from the canyons. | Survey and design, project clearances, and EA completion scheduled for 1992. Construction scheduled 1993. |
| 4. Construct two big game guzzlers on the uplands east of Pole Canyon. | Implementation date to be determined. |
| 5. Construct two reservoirs on the benches east of Pole Canyon for use by antelope and wild horses. | Implementation date to be determined. |
| 6. Protect key wet meadow sites to improve meadow habitats while providing livestock and wild horse water. | Nine meadows near Steven's Camp fenced in 1977 and 1983. Five additional projects planned with implementation date to be determined. |
| 7. Plant cuttings of willow, wild rose, and buffalo berry into riparian zones. | Approximately 1000 willow cuttings planted in 1987. |
| 8. Plant suckers as aspen into Pole and Little High Rock canyons. | Volunteer project to plant additional cuttings planned for 1992. |
| 9. Burn small blocks of Great Basin wildrye on the floodplains within the canyons. | Volunteer project to plant tubling trees planned for 1992. |
| 10. Evaluate upland big sagebrush swale sites east of Pole Canyon for burning to increase wildlife forage quality. | Site clearances for cultural resources and rare plants and EA to be completed in 1992. Project scheduled for fall of 1992. |
| 11. Hand cut and burn mature aspen trees in very small patches in upper High Rock Canyon. | Implementation date to be determined. |
| 12. Implement habitat monitoring program to evaluate effectiveness of management actions. | Implementation date to be determined. |
| | Baseline studies completed 1987. |

High Rock Cultural Resources Management Plan, 1983

PLAN ACTION

1. Design and construct (5) wooden signs for placement at all points of vehicle access. Signs will present low-key information on the importance and fragile nature of cultural resources, with reference to legal protection. Costs are to be shared by recreation and wildlife as appropriate
2. Install cultural resource protective signs (S-53) along the perimeter of the Sub Unit and at strategic locations within the Sub Unit.
3. Establish a rotational patrol route to cover at a minimum 25 driven miles in the Sub Unit and 15 hiking miles. A minimum commitment of 1.5 days per week is necessary throughout the peak visitation season. Patrol/surveillance activities can be carried out by various personnel, including law enforcement or visitor services specialists, cultural resource staff, or trained seasonals and volunteers.
4. Develop and initiate an active program of intense monitoring and inventory in the High Rock Sub Unit 1. Accumulation of hard data is required to substantiate existing condition and to develop trend data necessary for successful management of National Register quality resources.
5. Locate and/or develop chemical preservatives for application to axle grease inscriptions along the Lassen/Applegate Trail. The axle grease "graffitti" ranks as one of the more sensitive historical site types, subject to the vagaries of nature and the indiscretions of visitors to the public lands. Chemical applications of various compounds such as methyl-methacryllate have been successful in other locations, although primarily applied to petroglyphs.
6. Fence archaeological site AR04-02-906 (Pappy's Corral) to protect the values which make it part of a proposed National Register District. The site surrounds a spring; cultural deposits which appear to exceed 50 centimeters of depth are found in a loose, black soil matrix. Heavy livestock use is causing site attrition through the impacts of trampling and trampling induced erosion. If fencing does not halt the active erosion, site will be tested and then, if warranted, professionally excavated. Fencing will eliminate trampling impacts, and water for livestock and wildlife will be provided as available.

IMPLEMENTATION

Completed S&D 1990

Ongoing

Begun 1990, implemented 1991

No funding for such activities, CMA with UNR initiated testing program in 1991.

No progress to date (1991). Concerns exist that application of chemicals such as methyl-methacryllate may cause the peeling of the graffiti from the rock surface.

Tested in 1985. Site does have depth to over one meter. No progress on fencing due to funding.

7. Limited archaeological testing is recommended at site AR04-02-592 (40.23.21.02) in order to assess National Register eligibility. The open site has a subsurface midden, and has been subjected to various impacts with illicit collection, heavy livestock use and camping foremost among them. Limited testing (perhaps four excavation units taken to sterile, sub-cultural levels) will reveal site depth, integrity, and research potential. Future measures at the site cannot be predicted without test results, but will be incorporated in the plan during the appropriate, yearly plan evaluation/revision.

1985 tested, needs more work and funding to provide test results.

8. Fund for a temporary summer GS-7/9 archaeologist for the Surprise Resource Area. This archaeologist will spend part of his time implementing the CRMP and undertaking additional studies as required. When possible the position will be filled by a graduate level archaeologist who has a research interest in the western Great Basin and who is presently enrolled in a Graduate School Program.

Partially implemented in 1991, total workload precludes dedication of this individual to High Rock.

9. Extensive professional salvage excavation for Little High Rock #2 (in FY' 84). This site has been recently vandalized and is rapidly loosing its integrity due to on going erosion and other factors.

Site lost- sometime between 1983 to 1985.

10. Intensively record the existing conditions of key sites in High Rock Sub Unit. Includes National Register properties, historic structures, and historic inscriptions. The information will provide baseline data for monitoring and will also provide a record of the resource should protection measures fail.

No funding, no time, no progress.

11. Inventory key public use and livestock use lands for cultural resources, with the intent of locating additional properties eligible for inclusion on the National Register of Historic Places which may be receiving unacceptable impacts.

Livestock have been excluded from the canyon, but little progress toward these ends has been made.

12. Nominate three districts and one eligible site to the National Register of Historic Places. In future years, program additional nominations as appropriate.

No time, money or data

13. Acquire 440 acres of private surface and mineral estate through exchange. The acreage in question lies in Pole Canyon and in the mouth of Little High Rock Canyon. Acquisition will bring significant cultural resources into the public domain; help to prevent development of those lands; and provide for uniform resources management. Costs to be shared with wildlife and recreation.

Ongoing negotiations with landowner, and ???

14. Acquire through exchange subsurface private mineral estate on approximately 4,040 acres of public land. This action will allow more complete control of key surface lands in the Sub Unit. The majority of these lands lie in canyon bottoms, co-located with major archaeological and historical properties of National Register significance. Share cost with recreation, wildlife.

Acquired mineral estate, 1989.

15. Withdraw all public lands in High Rock Canyon from non-discretionary entry under the mining laws, and from non-discretionary disposal or entry under land law. Ideally, the withdrawal would encompass lands and mineral estate as identified in 13. and 14. above. Withdrawal will serve to prevent exploration and development of lands with key resource values. Current regulations (43 CFR Parts 3802 and 3809) do not allow sufficient management control. While withdrawal of all lands would benefit cultural resources, withdrawal in the canyonlands is critical.

Working on withdrawal.

16. Implement vehicle use designations by a) publishing in Federal Register and b) by placing appropriate signs, etcetera, to effect closures.

Accomplished, 1988

17. Should a formal trails system be developed in the Sub Unit, design should be coordinated with cultural resources staff members to avoid critical resources. If cultural resources cannot be adequately protected, discourage implementation of the trails plan.

Accomplished, 1990 See Desert Trail

18. Prohibit use of High Rock Canyon Road by tracked vehicles or similar heavy equipment, in order to protect the Lassen/Applegate Trail and other cultural resources. Road maintenance, if planned, should occur only after coordination with cultural resources staff.

See Fire, etc.

19. Initiate procedures to designate lands in the Sub Unit canyons as an ACEC.

Accomplished, 1984

North Massacre Lake Basin Cultural Resources Management Plan, 1985

PLAN ACTION	IMPLEMENTATION
1. Public Land Law and Mining Law withdrawal for archaeological reserve zone - Area 2D.	Not funded.
2. Complete the archaeological exclusion fence at the northern shore of Massacre Lake in order to limit grazing access to this unique system of prehistoric lakeshore occupation sites with enormous research potential.	Completed, 198?
3. Establish interpretive signs at eachj of the major entryways of the archaeological exclusion fence which <u>generally</u> signal the federal government's protective concerns for nearby archaeological resources.	S&D completed 1991
4. Conduct additional survey of the nowthwest and northeastern lake shores (at Massacre Lake) where very sensitive values have been reported but never documented.	Random surveys done by Melinda Leach (1983&1984). UNR will begin in 1992.
5. Establish an intensive monitoring program at several spring sites (eg. Post Spring, Indian Spring, Biebe Spring, Sagehen Spring) and at two of the large lakeshore dune sites in order to assess the degree of erosion, livestock, wildlife impacts and dune shifting.	Begun in 1990.
6. Defer or freeze spring development projects on Massacre Bench where they are proposed near vulnerable archaeological deposits, and/or fence those spring sites which are suffering on-going degradation by cattle trampling (Biebe Spring, Post and Indian Springs, Sagehen Springs, etc.).	S&D 1991
7. Set up interpretive signs at the enormous petroglyph site with midden deposit on Massacre Bench.	S&D 1991
8.. Program funding for a temporary (three months) GS-7/9 Archaeologist with research interests in the northwestern Great Basin to conduct additional survey of the Massacre Lakes margins, the minor drainages of Massacre Bench, Bitner Table and all spring sites in the northern Massacre Lake Basin (so that informed conclusions can be drawn regarding thos cultural resources which may be eligible for inclusion on the National Register of Historic Places and so that more timely and effective management decisions can be made for these areas).	Implemented through CMA with UNR 1990.
9. Program funding for a 3-5 month volunteer who is a graduate student conducting research in or near the study area, to aid in the technical support of scholarly projects involving the study area's data base.	Not implemented
10. Submit portions of the study area to regular patrol (in particular the Massacre Lakeshores and dunes and the northern canyons which feed the Lakes (Raven's Gorge and Evans Camp).	Implemented 1990

11. Authorize limited test excavations to determine general research and National Register potential at Biebe Springs, Massacre Lake Dunes sites, Post Springs, Indian Springs, Raven's Gorge Shelter, Raven's Bench and Sagehen Spring complex.

CMA with UNR 1992.

12. Record and photograph the Massacre Bench Petroglyph site, and record all the other petroglyph sites on the Bench.

Not formally implemented by the BLM, but Ritter and company are working on this project.

13. Fence Biebe Springs and the house rings at 44.21.04.01, and halt all development at these very significant sites.

S&D 1991

14. Maintain fence at Massacre Lake Cave.

Inside of Archaeological Exclosure, but still needs to be done to discourage people from illicit digging.

15. Allocate funds for the obsidian Hydration dating of 10 sites for determination of research potential (Raven's Bench Lind Coulee site, Post and Indian Springs, Massacre Lake Dunes sites (2), Biebe Spring, Sagehen Spring complex, etc.).

Begun by Melinda Leach in 1984, need to get results and do more.

16. Wherever the opportunity exists, parcels of private land in archaeologically sensitive areas should be acquired through land exchanges. In particular, those lands on the shores and inland margins of the Massacre Lakes system and around springs would, if acquired in such exchanges, bring considerable resources under the protective power of the federal government.

Initiated 198?

17. Document condition and trend at dunes and spring deposits.

Funding and time requirements have resulted in sporadic efforts.

18. Nominate two districts to the National Register of Historic Places.

See 17. above.

Wilderness Fire Management Plan, 1985

PLAN ACTION

1. Track type vehicles such as dozers will not be allowed within WSA boundaries except in situations that threaten life and private property. Dozer use in any other circumstance must be approved by the Area Manager. Dispatch has adjusted fire attack plans to not use dozers. Dozers used in 1990 in one WSA to protect private property, after Area Manager approval.
2. Engine use will be restricted to existing roads and ways unless life and private property are threatened.
3. Permitted fire suppression techniques are: burnout/backfiring, retardant from air tankers, helicopter w/ bucket, chain saws, handlines, hotspotting, and cold trailing.
4. When fires occur in WSA's, an Escaped Fire Analysis procedure will be used to determine the appropriate fire suppression activities.

IMPLEMENTATION

All area engines have WSA maps. Crews instructed to not travel offroad.

These techniques are the standard fire suppression actions within the WSA's.

Long Valley Allotment Management Plan, 1983

PLAN ACTION

1. Implement an interim grazing system using rest/deferred grazing on four pastures. Final system will be rest rotation grazing on five pastures.
2. Use mapping and actual use records along with periodic range inspections will be used as a tool to determine how well the grazing system is working (short term monitoring).
3. Trend study plots will be placed in selected key areas within major vegetative types within each pasture of the allotment (long term monitoring).
4. Develop the following projects to implement grazing management.
 - a) Reservoirs
 - b) wells
 - c) springs
 - d) lone spring seeding
 - e) fence
5. An intensive evaluation of the grazing system will be made using all available data on the allotment. Evaluation will be summarized in RPS Update and report made available to other parties as requested.

IMPLEMENTATION

Interim grazing system implemented in 1984. Final grazing system scheduled for implementation in 1993.

Actual use records are collected on an annual basis starting from 1983. A use map has been developed annually since 1980.

Three trend plots were established in 1983. Photo plots were established in the land treatment areas.

The following projects have been completed.

- a) 4 reservoirs completed in 1984
- b) 2 wells completed in 1984
- c) 1 spring completed 1984
- d) Lone spring seeding and protection fence completed 1990.
- e) 2 fences completed in 1984 and 1983.

Evaluation date to be determined.

Sagehen Allotment Management Plan, 1983

PLAN ACTION

1. Implement an interim grazing system using light use every year. Final system will allow for a growing season rest.
2. Use mapping and actual use records along with periodic range inspections will be used as a tool to determine how well the grazing system is working (short term monitoring).
3. Trend study plots will be placed in selected key areas within major vegetative types within each pasture of the allotment (long term monitoring).
4. Develop the following projects to implement grazing management.
 - a) Reservoirs - 3 ea
 - b) springs - 2 ea
5. An intensive evaluation of the grazing system will be made using all available data on the allotment. Evaluation will be summarized in RPS Update and report made available to other parties as requested.

IMPLEMENTATION

Interim grazing system implemented in 1984. Final grazing system scheduled for implementation in 1993.

Actual use records are collected on an annual basis starting from 1983. 3 use maps have been developed between 1984 through 1990.

One trend plot was established in 1984.

The following projects have been completed.

- a) 2 reservoirs completed in 1987, 1 reservoir to be determined
- b) 2 springs to be determined.

Final evaluation to be completed in 1992, draft evaluation report sent to all interested parties for comment..

Massacre Lakes Allotment Management Plan, 1966

PLAN ACTION

1. Implement a five pasture rest rotation grazing system.
2. Use mapping and actual use records along with periodic range inspections will be used as a tool to determine how well the grazing system is working (short term monitoring).
3. Trend study plots will be placed in selected key areas within major vegetative types within each pasture of the allotment (long term monitoring).
4. Develop the following projects to implement grazing management.
 - a) Reservoirs - 6 ea
 - b) springs - 2 ea
5. An intensive evaluation of the grazing system will be made using all available data on the allotment. Evaluation will be summarized in RPS Update and report made available to other parties as requested.

IMPLEMENTATION

Grazing system was implemented in 1966, revised in 1972 and revised in 1982.

Actual use records are collected on an annual basis starting from 1982. A use map has been developed annually since 1981.

Ten trend plots were established in 1978. Three photo plots were established in 1983 on riparian areas.

The following projects have been completed.

- a) 6 reservoirs completed in 1986
- b) 2 springs completed in 1986. fence around spring meadow areas will be completed in 1992.

Final evaluation to be completed in 1992, draft evaluation report sent to all interested parties for comment.

Board Corral Allotment Management Plan, 1983

PLAN ACTION

1. Implement an interim grazing system until all possibilities of working out a coordinated plan with the Fish and Wildlife Service are explored.
2. Use mapping and actual use records along with periodic range inspections will be used as a tool to determine how well the grazing system is working (short term monitoring).
3. Trend study plots will be placed in selected key areas within major vegetative types within each pasture of the allotment (long term monitoring).
4. Develop the following projects to implement grazing management.
 - a) Reservoirs - 3 ea
 - b) springs - 2 ea
 - c) fence - 1 ea
 - d) seeding - Board Corral
5. An intensive evaluation of the grazing system will be made using all available data on the allotment. Evaluation will be summarized in RPS Update and report made available to other parties as requested.

IMPLEMENTATION

Interim system not implemented at this time. Coordinated plan with USF&S is not a possible solution. Development of alternate plan will be scheduled in the future.

Actual use records are collected on an annual basis starting from 1982. 4 use maps have been developed between 1987 through 1991.

Two trend plots were established in 1987.

The following projects have been completed.

- a) reservoirs to be determined.
- b) springs to be determined.
- c) fence to be determined.
- d) seeding to be determined.

Evaluation to be determined.

Bitner Allotment Management Plan, 1983

PLAN ACTION

1. Implement a coordinated grazing plan with the Fish & Wildlife Service. Deferred grazing will be utilized as the main grazing treatment.
2. Use mapping and actual use records along with periodic range inspections will be used as a tool to determine how well the grazing system is working (short term monitoring).
3. Trend study plots will be placed in selected key areas within major vegetative types within the allotment (long term monitoring).
4. Develop the following projects to implement grazing management.
 - a) Division fence, consider wild horse needs.
 - b) springs - 2 ea
 - c) reservoirs - 5 ea
 - d) well - 1 ea
5. An intensive evaluation of the grazing system will be made using all available data on the allotment. Evaluation will be summarized in RPS Update and report made available to other parties as requested.

IMPLEMENTATION

Grazing system was implemented in 1984. System will go through a major revision in 1992.

Actual use records are collected on an annual basis starting from 1983. A use map has been developed annually since 1983.

Two trend plots were established in 1985.

The following projects have been completed.

- a) Division fence completed in 1982 with two wild horse gates installed in fence.
- b) 1 spring completed in 1984.
- c) 4 reservoirs completed in 1987.
- d) well completed in 1984.

Evaluation to be determined.

Nut Mountain Allotment Management Plan, 1983

PLAN ACTION

1. Implement a rest and deferred rotation grazing system using five pastures.
2. Use mapping and actual use records along with periodic range inspections will be used as a tool to determine how well the grazing system is working (short term monitoring).
3. Trend study plots will be placed in selected key areas within major vegetative types within the allotment (long term monitoring).
4. Develop the following projects to implement grazing management.
 - a) Division fence (massacre field, hanging rock).
 - b) reservoirs - 10 ea
 - c) wells - 4 ea
5. An intensive evaluation of the grazing system

IMPLEMENTATION

Interim grazing system was implemented in 1984. Final grazing system to be implemented at a latter date when additional projects are completed.

Actual use records are collected on an annual basis starting from 1983. A use map has been developed annually since 1985.

Four trend plots were established in 1983. Four bitterbrush transect established and three photo points established in land treatment areas.

The following projects have been completed.

- a) Massacre field fence completed 1985, hanging rock fence S&D scheduled 1992.
- b) 8 reservoirs completed 1985.
- c) 2 wells completed 1988, 1 completed 1984, 1 to be determined.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
SUSANVILLE DISTRICT OFFICE
705 Hall Street
Susanville, California 96130

4333
(NV-266) or
(CA-020)

March 20, 1992

Dear Reader:

Enclosed for your review and comment is a draft copy of the Bureau of Land Management's Interdistrict Management Summary for the Black Rock Desert and High Rock Canyon. This document summarizes the current management direction of the Susanville and Winnemucca Districts in the Black Rock/High Rock region. It also highlights accomplishments of our existing resource management programs, and identifies some new actions we will be taking to provide visitors with improved safety and travel information. This document does not change any past management decisions, but it does outline some new activities we are planning to provide increased visitor assistance in the region.

The Black Rock/High Rock Interim Management Plan Steering Committee, made up of members from various interest groups, has provided valuable guidance in the development of this document. On their recommendation, we added a section on Public Use and Visitor Services, and identified some steps the BLM can take to provide for safe enjoyment of the Black Rock/High Rock area.

We would like your comments within 30 days. They can be sent to either the Susanville or Winnemucca Districts, which cooperated on preparation of the Management Summary. The addresses are:

Bureau of Land Management
705 East Fourth Street
Winnemucca, NV 89445

or

Bureau of Land Management
P. O. Box 460
Cedarville, CA 96104

Thank you in advance for taking the time to help us with management of the Black Rock Desert and High Rock Canyon areas. If you need more information, please contact Jeff McCusker, Outdoor Recreation Planner, Sonoma Gerlach Resource Area, (702) 623-1568; or Roger Farschon, Wildlife Biologist in the Surprise Resource Area, (916) 279-6101.

Sincerely,

Ron Wenker
Winnemucca District Manager

Herrick E. Hanks
Susanville District Manager

Enclosure:
Draft Interdistrict Management Summary