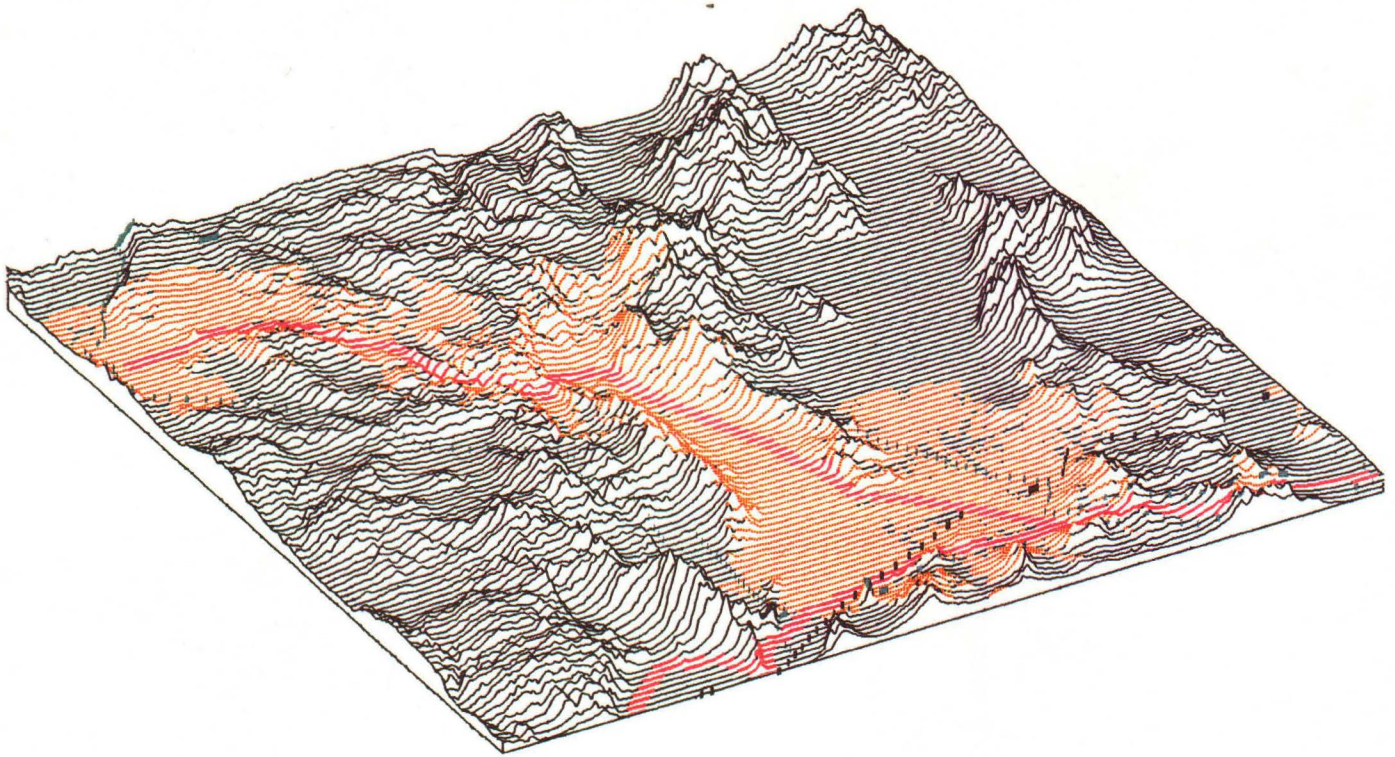


3-93

# BLACK ROCK HIGH ROCK

## INTERDISTRICT MANAGEMENT SUMMARY



WINNEMUCCA DISTRICT - NEVADA  
SUSANVILLE DISTRICT - CALIFORNIA



USDI BUREAU OF LAND MANAGEMENT

MARCH 1993

**BLACK ROCK/HIGH ROCK  
Interdistrict Management Summary**

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*Prepared Jointly by the  
Sonoma-Gerlach Resource Area, Winnemucca District BLM Nevada  
Surprise Resource Area, Susanville District BLM California*

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# EXECUTIVE SUMMARY

## What is the Purpose and Need for this Document?

- \* Consolidate in one document current management policy, resource issues, 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.
- \* This document responds to State BLM Directors' request for a management summary for the High Rock/Black Rock management study area.

## Background

- \* The idea for a special designation for the High Rock/Black Rock areas dates back to the 1960's. In the 1970's the National Park Service evaluated the area for inclusion into their system, but found that it did not contain National park qualities.
- \* On July 16, 1990, the BLM received a proposal from the Black Rock/High Rock Emigrant Trail Coalition to create a NCA on 1,132,000 of BLM public lands administered by the Susanville District (High Rock Canyon 466,240 acres) and the Winnemucca District (Black Rock Desert 665,860 acres) in northwestern Nevada.
- \* The Modoc/Washoe Experimental Stewardship Steering Committee submitted a separate legislative proposal for only the High Rock portion of the management area to Nevada's Senators.

## Current Management Plans and Objectives

- \* **Summary of Management Objectives.** An underlying theme for the Bureau's management of the Black Rock/High Rock area is to administer the programs and resources to maintain the integrity of the emigrant trails and other resources, while allowing for other uses that do not impair the trails.
- \* **Sonoma-Gerlach Management Framework Plan (MFP) completed in 1982.** It covers the Black Rock portion of the management area. The MFP provides for multiple use management while complying with pertinent laws regarding the protection of cultural resources and wildlife. Bureau management emphasis and workload focuses on ecological monitoring of range resources, and minerals management.
- \* **Cowhead/Massacre MFP completed in 1981 and amended in 1983.** The High Rock Sub-Unit emphasizes the preservation of 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). The Massacre/Nut Sub-Unit encompasses the upper High Rock watershed and Massacre Lakes watershed. Emphasis is on wildlife habitat, protection of significant archaeological sites and livestock grazing. The Long Valley/Sand Creek Sub-Unit takes in the western edge of the management area. The management emphasis is on livestock production.
- \* **Toledad/Home Camp Management Framework Plan 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, wild horses, and livestock forage.

## The Document

- \* **Organization.** The interdistrict management summary document contains a section on resource values and land management, with information organized by resource under 5 headings: Existing Information, Primary Issues in Past Land Use Planning, Summary of Ongoing Management Actions, and New Issues. The final section of the narrative contains a list of some opportunities for interdistrict cooperation in management of the area. Two appendices provide tables summarizing land use plan decisions and implementation, and implementation of activity plans.
- \* **Consultation and Coordination.** A steering committee of members from representative interest groups reviewed a draft and provided comments and direction on organization of the document. Over 100 copies of the draft were sent out to interested parties for public comments.
- \* **Use of BLM Geographic Information System (GIS).** The maps produced for this document represent the first extensive use of GIS for a project in the Nevada BLM. Analytical capabilities of the system were used to model two critical subjects for the study area: landscape seen and not seen from various points along the Applegate-Lassen Emigrant Trail, and maps showing the density of mining claims within the management study area. Much of the base information for all the maps in the document was derived from United States Geologic Survey automated digital data.
- \* **Key Issues and Management Actions.** Resource specialists in both resource areas identified 45 ongoing management actions and 37 new issues related to the NCA proposal. Also it discusses changes in public demand, changes in BLM policy, and evaluation of existing land use plans.
- \* **Key issues arising from NCA proposal:**

The Black Rock/High Rock Coalition has proposed that the entire viewshed from the historic trail be withdrawn from mineral entry. The Stewardship committee has endorsed the BLM's attempt for the mineral withdrawal in High Rock Canyon.

Increased visitor use is creating a demand for the BLM to provide for services such as visitor safety and information. This problem is compounded by sporadic funding for seasonal positions. Collecting visitor use data, and BLM presence in the area will be inconsistent without steady funding.

### Interdistrict Management Opportunities:

1. Develop visitor information system.
2. Patrol management 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.

## 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) (see map 1 page 8). 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 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 areas and serve as a pragmatic means to conserve public lands with natural and cultural resources of national interest.

The area covered by this Management Summary is larger than either of the current NCA proposals. In this document, the term *management area* will be used to describe that area. The term *High Rock portion* refers to that portion of the management area in the Surprise Resource Area, Susanville District and the term *Black Rock portion* refers to the portion of the management area in the Sonoma-Gerlach Resource Area, Winnemucca District.

## BACKGROUND

The concept of a special designation for the Black Rock and High Rock areas 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 the area did not contain National Park qualities.

A proposal was received on July 16, 1990 from the High Rock/Black Rock Emigrant Trail Coalition (The Coalition) to create an 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 represent: 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 submitted a separate legislative proposal for the High Rock portion of the management area to Nevada's Senators. The Stewardship Committee is a 23 member group of agencies and interest groups. They were Congressionally designated to promote stewardship of public lands 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	Vya Resource Conservation District
Washoe County Agricultural Stabilization and Conservation Service	Bureau of Land Management, Susanville
Tuledad/Home Camp Livestock Permittees	Modoc Cattlemen's Association
California Department of Fish and Game	Nevada Department of Wildlife
University of California Cooperative Extension	Modoc County Agricultural Stabilization and Conservation Service
Surprise Valley Resource Conservation District	Modoc County Supervisors
Warner Mountain Livestock Permittees	USDA-Soil Conservation Service
	California Sportsmen (Mule Deer Foundation)
	Timber Industry
	California Environmental Groups (Audubon Society)
	University of Nevada, Reno Cooperative Extension

USDI-Fish and Wildlife Service  
Cowhead/Massacre Livestock  
Permittees  
Modoc National Forest

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 (see map 2, page 9). The Lassen/Applegate Trail, Nobles Trail and Capt. John C. Fremont's California Trail pass through this area. Many traces of the overland emigrant trails can be seen, including wagon wheel ruts and carvings and paintings on the rocks. The US military also left unique traces in this area such as Camp McGarry, Camp Black and major transportation routes linking the gold fields of the late 1800's. Representative relics of the homestead era occur along the trail corridor and throughout the management area. The area allows public access and visitation to modern western American enterprises including mining, ranching, and rural outdoor recreation.

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

## CONSULTATION AND COORDINATION

Although this document is a summary of past, present, and future management issues, comments and guidance were sought from many groups. A steering committee was formed with representatives from both the Coalition (Black Rock portion), and the Stewardship Committee (High Rock portion). This committee met several times to help develop the outline for the plan, and to provide comments on the first draft. They also formed a visitor safety subcommittee which provided recommendations on interim steps which could be taken to provide for visitor safety.

The draft summary was sent out to all members of the stewardship committee, the Black Rock Coalition, and any other known interested parties. The comment period was extended several times as more people requested copies. The mailing list expanded from approximately 60 names, to just over 100. A copy of the final document will be sent to all names on the list.

## GENERAL LOCATION AND SETTING

The management area is located in portions of Washoe, Humboldt and Pershing counties in northwestern Nevada (Map 1, page 8). The management 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 management area are Gerlach, Nevada (population 430) located at the south end of the playa of the Black Rock desert, and Cedarville, California (population 800), on the High Rock Canyon portion. Residents of these towns are primarily employed in mining, agriculture, the Union Pacific railroad, government, or local businesses. There are about 14 people who actually live within the management area, all in the Black Rock portion, split between occupations in mining and ranching.

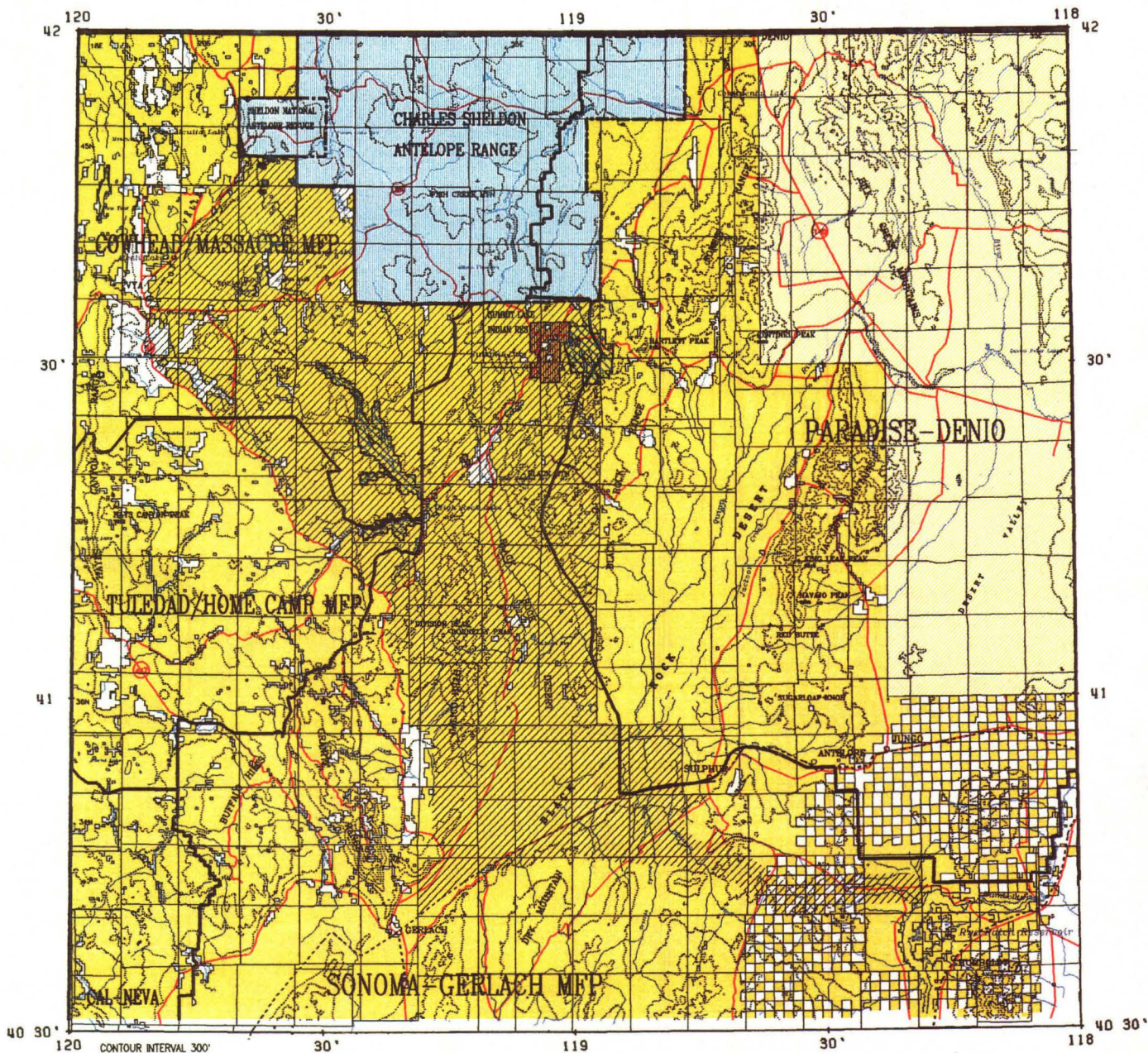
The Black Rock portion of the management area is dominated by the playa remnants of ancient Lake Lahontan. The playa is one of the largest, flattest places on earth, over 25 miles long, with a silt base. The valley fill is as much as 10,000 feet thick and so flat that the curvature of the earth is evident. 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 significant raptor and potential bighorn sheep habitat and an array of prehistoric and historic human occupation sites.

## CURRENT MANAGEMENT OBJECTIVES



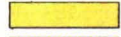

The Bureau's goal for the management area is to administer the programs and resources while maintaining the integrity of the emigrant trails and other resources, and allowing for other uses that do not impair the trails. Federal lands are managed in accordance with the Federal Land Policy and Management Act, the Public Lands Improvement Act, the National Historic Preservation Act, the Endangered Species Act, the Taylor Grazing Act, the Water Quality Act, and other applicable federal and state laws.



MAP 1



**LAND USE PLANS AND SPECIAL AREA BOUNDARIES**

-  BLACK ROCK - HIGH ROCK MANAGEMENT AREA
-  ACEC AND NATURAL AREA
-  PUBLIC LAND
-  LAND STATUS NOT DIGITIZED



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The management area is covered by portions of three MFPs (See map 1, page 8). The three MFPs were completed by the early 1980s. They are:

### **Sonoma-Gerlach Management Framework Plan**

The Sonoma-Gerlach MFP was completed in 1982, and covers the Black Rock portion of the management area. The MFP provides for multiple use management while complying with pertinent laws regarding protection of cultural resources and wildlife. Bureau management emphasis and workload since the MFP was approved, have focused 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, 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 horses or burrows were found 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; any increase would be proportionally allocated between wildlife, wildhorses, and livestock. 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 which allows 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.
- Make public lands and federally owned locatable and saleable minerals available for exploration and development.

### **Cowhead/Massacre Management Framework Plan**

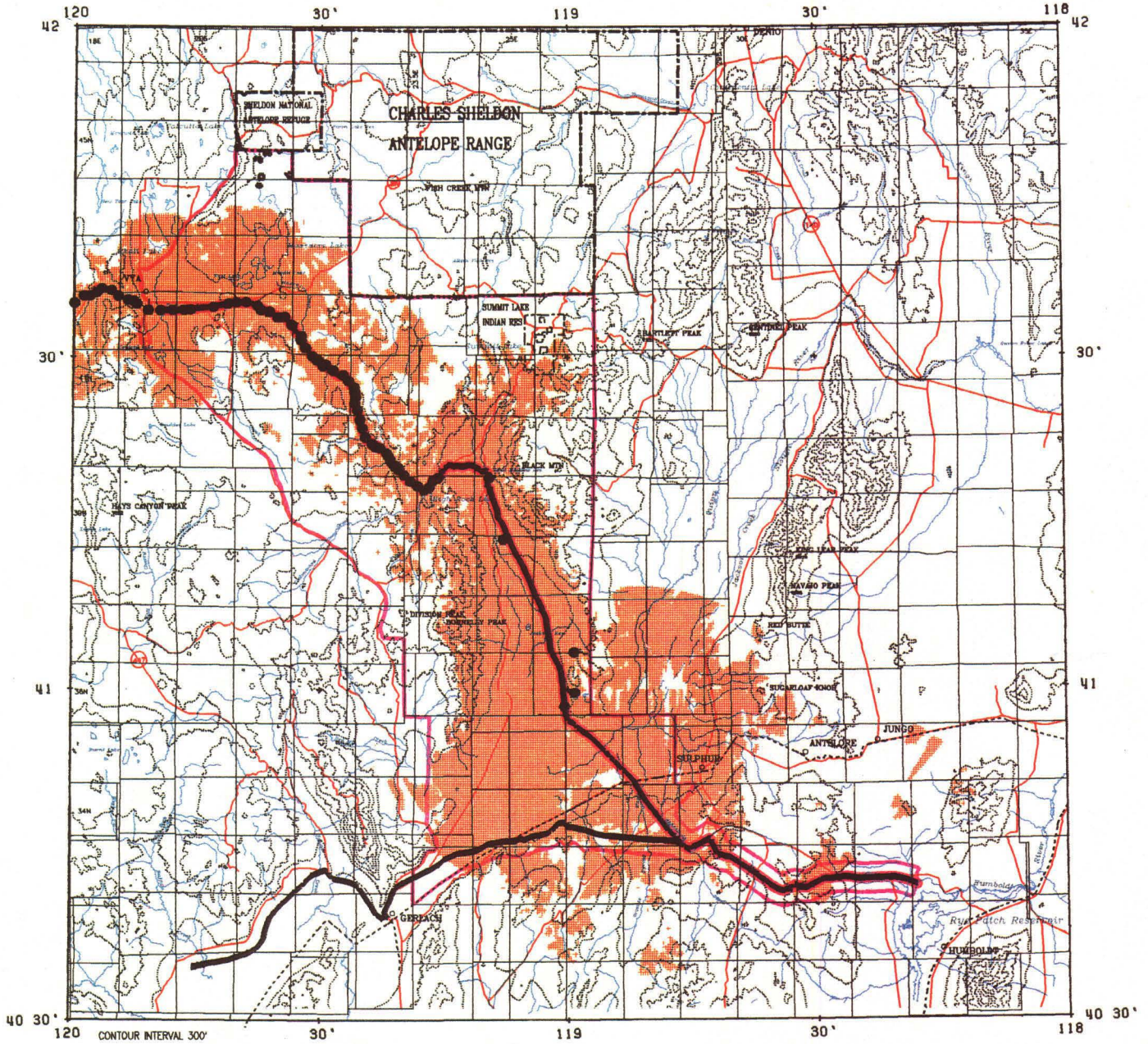
The Cowhead/Massacre MFP was completed in 1981 and amended in 1983. The plan covers the majority of the High Rock portion. The MFP is subdivided into Sub-Units.

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).

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.

MAP 2



**VIEWSHED**



○ OBSERVATION POINTS  
Visible Areas  
TRAIL CORRIDOR (.5 MILES EACH SIDE OF CENTERLINE)



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- 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 management area. The management emphasis is on livestock production.

Management goals are:

- Improve range condition to "good" 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, wild horses, and livestock forage.

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 management actions 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 plans have been completed within the management 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 28 activity plans have been prepared within the management 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. For example, 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 management 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 organizations including the California Association of 4-Wheel Drive Clubs, the Desert Trails Association, Trails West, and 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 management 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. 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 management area was recognized in the 1940's. Professional and amateur interest preceded the Bureau's commitment to protect and study the resource by several decades. The BLM began their Cultural Resource program in the mid-1970's, building on this base.

The record indicates that human occupation has existed in the management area for at least 10,000 years. Over 2,000 archaeological sites have been identified with widely varying degrees of complexity, size, location, and densities (See map 3, page 15). They include: rock shelters and caves as well as dune and lakeshore occupation sites with buried deposits, temporary camps, 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 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 (mammoth and bison) have been found in or near other parts of the management area, in proximity to artifacts which may be associated with early occupation of the area. This resource not only represents a rich and extensive data base for archaeologists, it is potentially a data base for resource managers, providing 10,000 years of information. Perhaps more importantly, it can provide Native Americans with links to their heritage, that have been lost.

Historic events within the management area have helped to mold and change the course of American history on a national scale. 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. 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. The trail 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. Camp McGarry (present day Soldier Meadows) is one in this area. Camp Black, probably located at present day Massacre Ranch, monitored the freight roads transecting the management area.

The management area also includes several other significant historic sites including the mining town of Hardin City which dates to 1866. Also in the 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 ranching operations wanting to control the water. Their traces remain as stone houses and fences scattered throughout the management 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 management 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

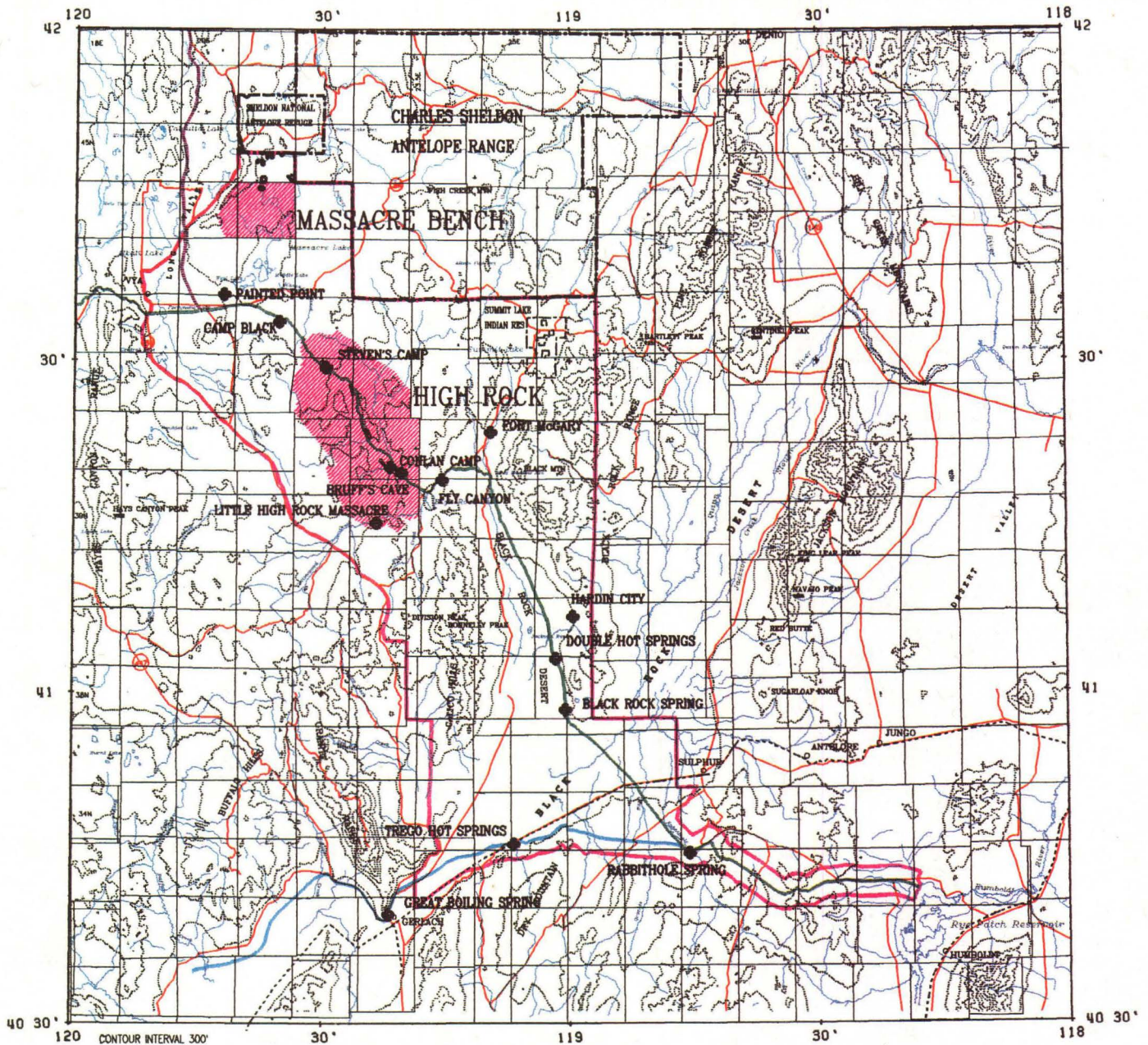
The major goals and actions for the cultural resource program within the management area are:

- *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 have been written for portions of the management area. Through the plans, selected sites and areas have received additional protection and attention. Cooperation with other management plans has resulted in further benefits and cost sharing.
- *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 management area are being pursued.
- *Utilization of the resource base for management purposes.* Archaeological sites are important not only because they are non-renewable, but also because the information provides us with a window back into time about the potential of the environment and how it has changed over recent history. This data base of over 13,000 years should not be ignored in the formulation of management efforts.
- *Provide research opportunities for scholars.* Three doctoral theses have been produced from the rich archaeological resource base within the management area and many more await additional research. Currently, a cooperative agreement with the University of Nevada, Reno provides site evaluations and graduate degrees for students.
- *Provide for the education and enjoyment of the public.* The archaeological resources provide a tremendous interpretive opportunity. The Applegate/Lassen Trail is one of the more visible and easily interpreted historic resources.
- *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

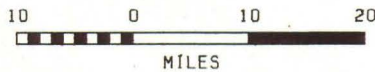
- Potential additional recognition/designation of the area is a two edged sword. Without additional funding and attention the increased public use could lead to accelerated loss of the cultural resources through vandalism and inadvertent disturbance.
- The Native American concerns are beginning to be 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 management area due to increased demand for specialist's time and expertise. The entire process is time and money consuming, which forces projects to budget additional time and funds. The process also requires considerably more coordination between agency staff, private interests, and the State Historic Preservation Officer.

MAP 3



**CULTURAL RESOURCES**

-  CULTURAL POINTS OF INTEREST
-  CULTURAL RESOURCE MANAGEMENT AREAS
-  FREMONT'S TRAIL
-  NOBLE'S TRAIL
-  APPELGATE-LASSEN TRAIL



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- 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 needed.
- The Stewardship NCA proposal includes establishment of an interpretive center within the management area. It would provide exciting new opportunities for the cultural program and would change the cultural program from an inventory mode into an active educational/interpretive program.

### Future Management

The two districts are committed to intensive efforts to inventory and evaluate the resources in this area as funding allows. 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.

Planning for future interpretation and education needs for cultural resources needs to be initiated.

## Paleontology

### Existing Information

Outstanding paleontological resources are found in the management area. Fossilized plant and animal life includes ancient sequoia, ferns, three toed horses, pigs, 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 camels, small horses, mammoth, and bison dating 20,000 to 30,000 years ago have been excavated.

### Primary Issues in Past Land Use Planning

- Paleontology was not a major issue in past planning efforts.

### 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.
- Academic interest in this resource has recently surfaced and new studies could result in more information on the resource.

### New Issues

- The paleontological resources of the management area have not been inventoried sufficiently. The extent of the resources requiring protection or other management is unknown.
- The potential for Pleistocene megafauna hunting sites (by humans 10,000 years ago) makes paleontological sites potentially important to cultural resources.
- Scientific interest in this resource causes increased public interest for "old things" (artifacts). This puts additional pressure on archaeological sites from collection and digging by looters.
- Processing research permits for the professional community would increase the Bureau's workload. Regulations for paleontology have yet to be finalized. This potentially 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.
- Storage of collected fossils could become a problem if and when the accumulation of material exceeds the level that institutions can currently accommodate.

### Future Management

- Paleontological resources will need to be considered in any interpretive program. Materials and information for an interpretive program need to be planned in the near future.
- Additional protective devices will need to be engineered and placed over fragile resources. This would assist in the protection of key sites and facilitate public education opportunities.

## Wildlife

### Existing Information

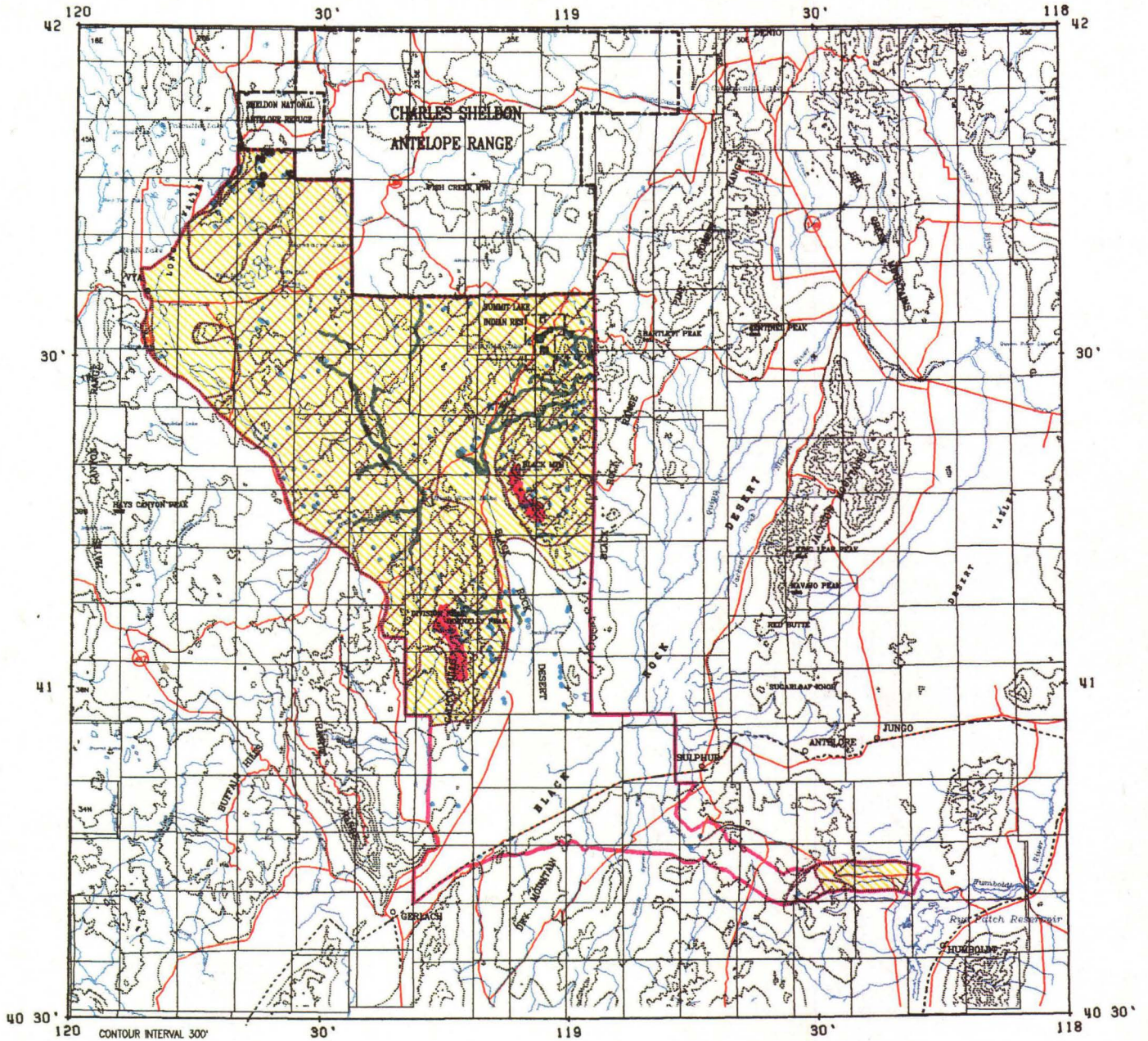
The management area contains a complex mosaic of topography and vegetation which supports significant populations of wildlife (see map 4 page 18 ). The habitat sites and wildlife values found within the management area are not unusual within the Great Basin. What is unusual is the mosaic of the various habitat types within a relatively small area. Small patches of big and low sagebrush intermix with juniper woodlands, small meadows, riparian zones, wetlands, reservoirs, and ephemeral lakes. The diverse vegetation communities allow maintenance of a high level of biodiversity.

Shallow soils on the upland benches support low sagebrush/grass communities that are important for sage grouse and pronghorn antelope. Deeper, productive soils on the mountains support diverse communities of brush and bunch grasses that are important to mule deer. Big sagebrush/bunch grass communities support the small birds and mammals preyed upon by golden eagles, hawks, owls, and prairie falcons.






Junipers cover the ridgetops at the northern end of the management area and provide escape cover for mule deer and habitat for small birds and mammals. Small stands of aspen at higher elevations provide fawning grounds for mule deer and nesting sites for bird species more commonly found in timbered areas elsewhere. Large and small rim rocks in canyons and along mountain ranges provide cliff and rock slope habitats and are the primary nesting sites for birds of prey, swallows, and swifts. They also provide denning sites for mountain lions and bobcats. In addition, rimrocks provide yearlong homes for many species of furbearers and small mammals.

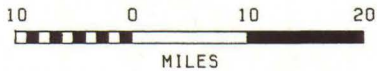
Small seeps and springs provide key wildlife water and meadow habitat of lush green vegetation during the hot, dry summer months. The narrow canyons provide meadow and streamside riparian habitats. Fish are found in a few of the stream and spring areas. The Lahontan Cutthroat Natural Area within the Mahogany Creek watershed provides habitat for the Lahontan cutthroat trout. The vegetation and stream habitat in the area has been improved to excellent condition by specialized management with the enclosure. The Desert Dace ACEC covers about 300 acres and includes numerous hot springs that create small warm streams inhabited by the Soldier Meadows Desert Dace. This species of fish is only found at this location. The desert dace is federally listed as a threatened species. Wildlife use riparian habitats extensively, including migrant bird species in the spring and fall months. Small shallow lakes provide seasonal habitat for resident and migrant waterfowl and shorebirds.

Unusual soils found within the management area support populations of rare plants. These species are all found in landscapes with little competing vegetation. 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 near Soldier Meadows. The only known populations of Schoolcraft's cryptantha and Tiehm's milk vetch are within the management 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. *Astragalus pterocarpus*, a milkvetch, *Caulanthus barvebyi*, a wild cabbage, and *Phacelia glaberima* are found in the vicinity of Rabbithole Springs. A smooth stickleaf *Mentzelia mollis* has been found in the vicinity of the west slopes of the Black Rock Range.



### WILDLIFE AND RIPARIAN HABITAT

-  SPRINGS
-  RIPARIAN AREA
-  BIGHORN POPULATIONS
-  ANTELOPE HABITAT
-  DEER HABITAT



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The management area historically supported California bighorn sheep. The sheep were common in the rocky areas and apparently ranged over all the mountain ranges prior to the European settlement in the area. A combination of factors including loss of habitat, disease and shooting resulted in their disappearance. Bighorn sheep were reintroduced into the Calico and Black Rock ranges in 1989 and 1992 respectively. The High Rock/Little High Rock area is identified bighorn habitat. The Massacre Rim occasionally supports a few bighorn that move into the area from the Sheldon National Wildlife Refuge.

#### Primary Issues in Past Land Use Planning

- Conditions of key wildlife habitat including meadows, streams, aspen groves, and brush stands were less than their potential.
- Unoccupied California bighorn sheep habitat existed in High Rock, the Massacre Rim, the Black Rock Range, and the Calico Range.
- Appropriate populations levels for mule deer and pronghorn antelope needed to be established.
- 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 would be needed to recover these species.

#### Summary of Ongoing Management Actions

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

- *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 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 provides deer with the necessary browse while allowing existing plants to achieve good vigor and seed production for the establishment of new plants. Periodically livestock can be used as a tool to improve forage quality for wildlife and reduce competition between grasses and brush species.
- *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 exclosures 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 required on key mountain browse sites. Monitoring studies assess the effectiveness of management actions.
- *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 restrict disturbances occurring within two miles of sagegrouse strutting grounds. 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. Off-Highway Vehciel use is limited from February 1 through May 31 in bighorn sheep use areas as reintroductions are made.
- *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 in planned. Sheep were reintroduce in the Black Rock Range in 1992. Reintroduction plans for High Rock have been prepared in coordination with the Nevada Department of Wildlife (NDOW). The High Rock Area is not currently scheduled for reintroduction in the next few years.
- *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. Acquisition of private lands by BLM that are a significant portion of the Desert dace Habitat was completed in 1992.
- *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 exclosure. Plans have been developed to fence additional habitat. 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.

- *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 management under ACEC designation.

### 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.
- Species listed or considered candidates for listing by the Fish and Wildlife Service under the Endangered Species Act are requiring an increasing amount of time by BLM specialists in range, wildlife and watershed. Management actions under recovery plans for listed species or other management plans for candidate species will continue to be a big workload.
- Demand for hunting and fishing opportunities on public lands is increasing.
- Public and professional concern about the management of wildlife habitats on public rangelands will require use of integrated, interdisciplinary planning with extensive public involvement.

### Future Management

Wildlife and wildlife habitats on public land will play an increasing role in the formulation of future management actions. The BLM's emphasis on Wildlife 2000, the Riparian-Wetlands Initiative for the 1990s, a Strategy for Future Waterfowl Habitat Management on Public Lands, Animal Inn, Watchable Wildlife, the Recreational Fisheries Program, agency and public policy will direct increasing attention on wildlife issues.

#### Specific needs include:

- Landscape goals for large areas and desired plant community descriptions to guide future activity plans.
- Existing Habitat Management Plans need to be modified using an interdisciplinary, public involvement process to include more species and habitats.
- Public coordination that would facilitate the reintroduction of bighorn sheep into unoccupied habitat needs to be completed.
- Rare species need to have more management attention to prevent additional listing by the Fish and Wildlife Service as threatened or endangered.
- The recreation and wildlife programs need to work with the Nevada Department of Wildlife 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 habitat needs to be consistently funded and the results of monitoring used in changes to management actions.
- Public education through printed materials, on the ground interpretation, and visitor contacts needs to be planned and implemented in an integrated, interdisciplinary format.

## **Watershed/Riparian/Wetlands**

### Existing Information

The High Rock portion of the management area falls within two major watersheds, High Rock Lake and Long Valley. The Black Rock portion is within the Black Rock Desert watershed.

The watersheds contain several ephemeral and perennial springs scattered throughout the area. 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 (see map 4, page 18).

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. 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 contributes 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 through improved land management practices.

Riparian/wetland communities occupy less than one percent of the management 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.

#### Primary Issues in Past Land Use Planning

- Water quality on the public lands was being degraded by surface disturbing activities associated with a variety of human uses.
- Erosion causes soil loss, lowered plant vigor, lowered water tables, and high sediment yield. Site productivity was lowered, affecting multiple uses of the public land.
- Stabilization and rehabilitation of riparian areas was needed.

#### Summary of Ongoing Management Actions

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

- *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.
- *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.
- *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.
- *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 management area. On the Black Rock portion of the management area most of the riparian zones need revised management actions to address the objectives. Exclosures 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, and monitoring studies have been established to document progress.

#### New Issues

- BLM's riparian condition goals will have to be addressed within the management 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. Improved watershed conditions, including reduced peak flows, channel and overland erosion, and improved infiltration will be the primary objective of watershed management.
- Prioritizing key riparian areas for rehabilitation needs to be completed in the near future.
- Establishment of instream flow gauging stations and rain gauges as required by state law will be required if instream water rights are acquired on public lands.
- 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 Resources

#### 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 (see map 5, page 23)

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 management 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 management area has been assigned to Class IV.

#### Primary Issues in Past Land Use Planning

Visual resources were not an issue in previous land use planning, however visibility of developments from the trail was considered at various points.

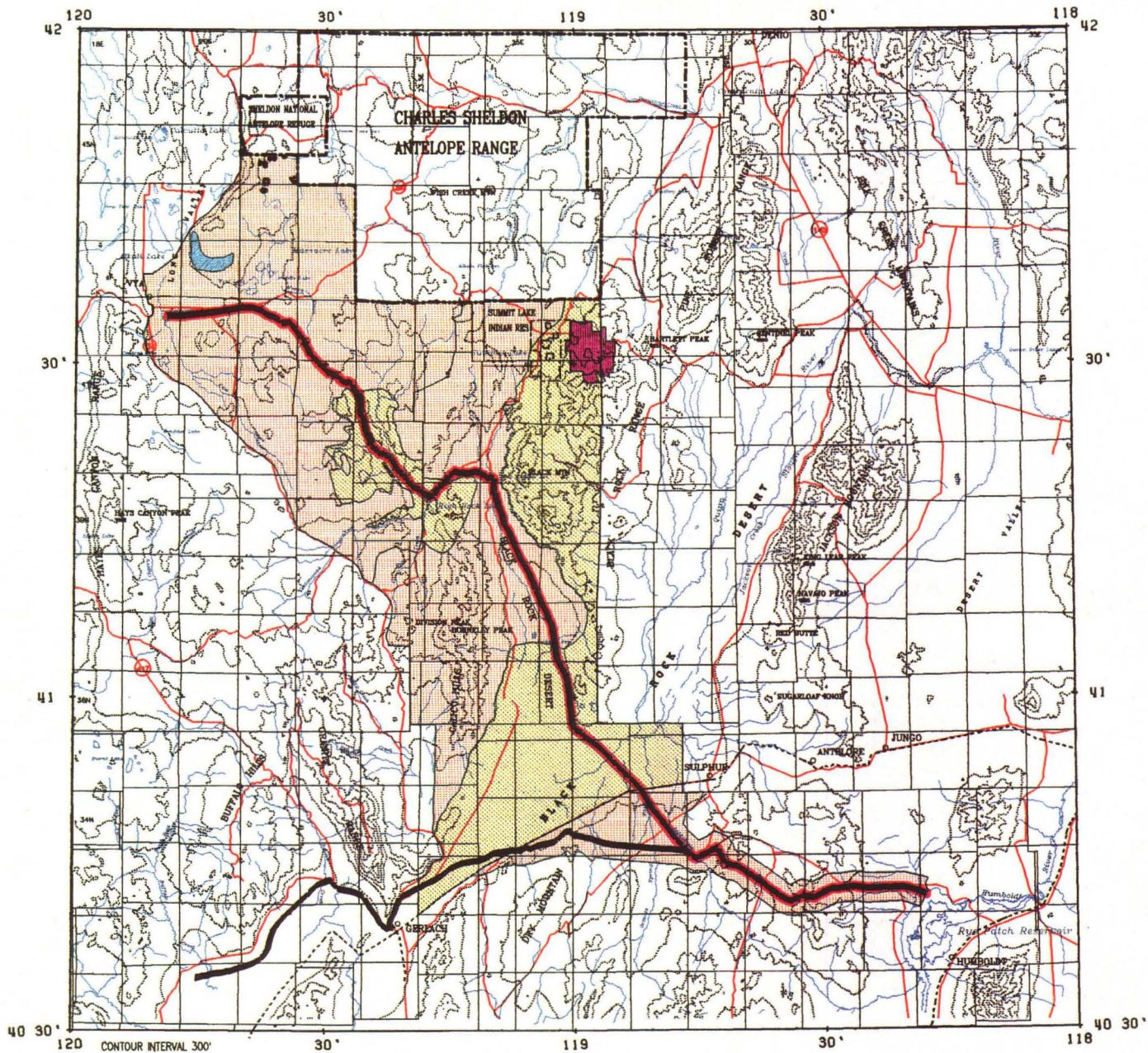
#### Summary of Ongoing Management Actions

The Sonoma-Gerlach MFP contains several decisions regarding protection of visual resources. 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 re-evaluated following the ACEC designation.
- Some proponents of the NCA propose that the viewshed from the historic trails be managed to prevent any disturbances visible from the trails.

MAP 5



**VISUAL RESOURCE MANAGEMENT**

-  CLASS I
-  CLASS II
-  CLASS III
-  CLASS IV



TRAIL CORRIDOR (.5 MILES EACH SIDE OF CENTERLINE)



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## 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 management 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 management area contains or borders 10 Wilderness Study Areas (WSAs) covering about 757,780 acres (see map 6, page 26). 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 management area for wilderness designation by Congress. The recommended wilderness covers about 311,050 acres either in or adjoining the management area. Of this 311,050 acre total, 219,300 acres is the Black Rock Desert recommendation. 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 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 management 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 management 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 one of the largest undisturbed examples of such an ecosystem in the United States.

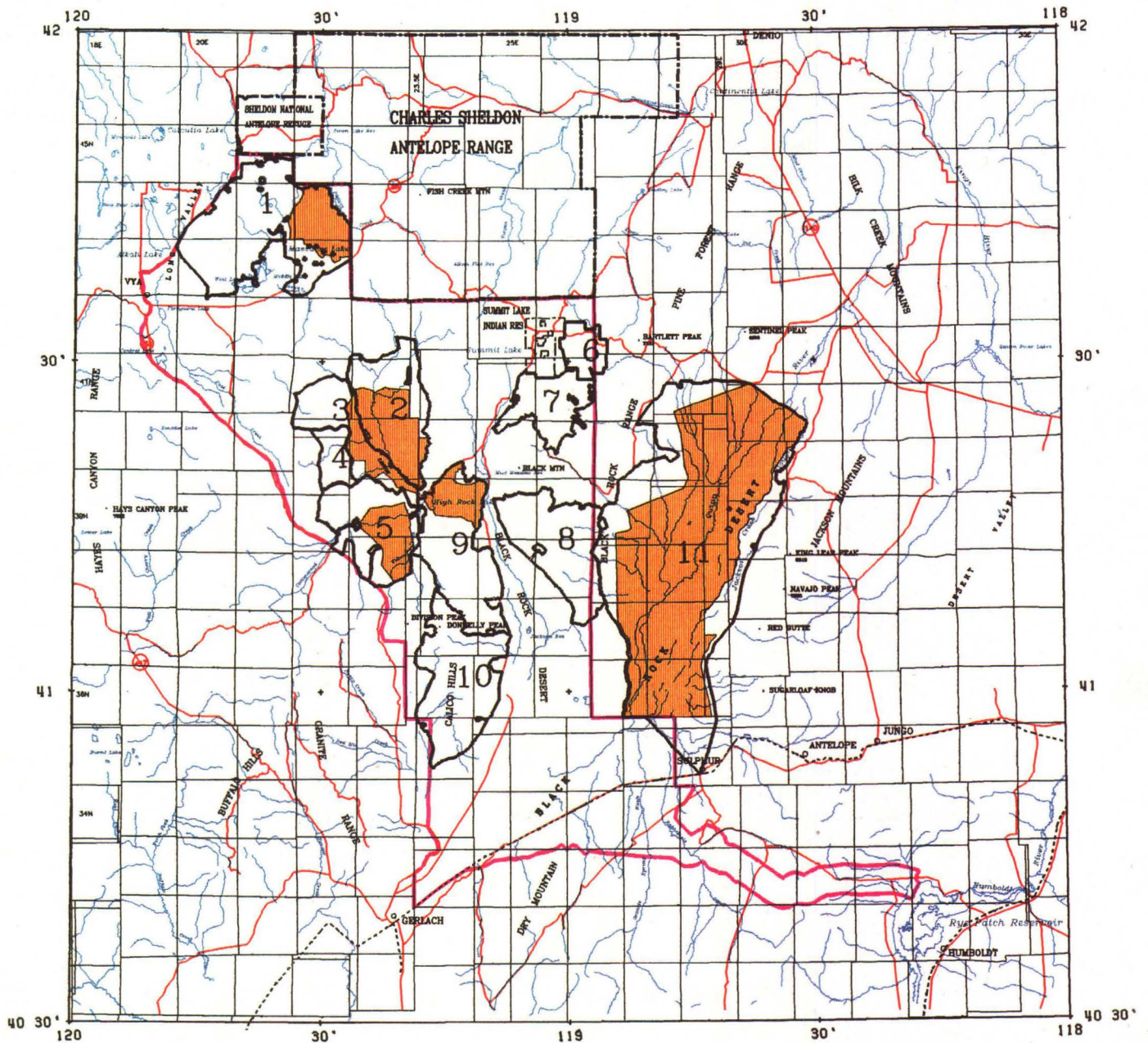
Primary Issues in Past Land Use Planning

- Impacts of potential wilderness designation on other multiple uses.
- Maintenance of existing wilderness values until Congress makes the wilderness decisions.

Summary of Ongoing Management Actions

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

MAP 6



**WILDERNESS STUDY AREAS**



RECOMMENDED FOR WILDERNESS DESIGNATION

- |                              |                          |
|------------------------------|--------------------------|
| 1 MASSACRE RIM               | 7 NORTH BLACK ROCK RANGE |
| 2 EAST FORK HIGH ROCK CANYON | 8 PAHUTE PEAK            |
| 3 HIGH ROCK CANYON           | 9 HIGH ROCK LAKE         |
| 4 YELLOW ROCK CANYON         | 10 CALICO MOUNTAINS      |
| 5 LITTLE HIGH ROCK CANYON    | 11 BLACK ROCK DESERT     |
| 6 LAHONTON                   |                          |



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- 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 Interim Management Policy 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 management area, both districts have evaluated proposed minerals exploration projects, wild horse gatherings, reservoir construction and commercial recreational uses.

#### New Issues

- 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

- Whenever funding allows, the Sonoma-Gerlach resource area will have a wilderness/recreation technician who will divide time between patrolling the WSAs on the Sonoma-Gerlach Resource Area, visitor contact, and collecting 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.
- Both the Surprise Resource Area and the Sonoma-Gerlach Resource Area have begun volunteer programs with the Toiyabe Chapter of the Sierra Club to have WSA boundaries patrolled and place signs along boundaries, and document disturbances within WSAs.
- When Congress makes a decision on wilderness designation, interdisciplinary wilderness management plans will be prepared using a public involvement process.

### **Wild Horses and Burros**

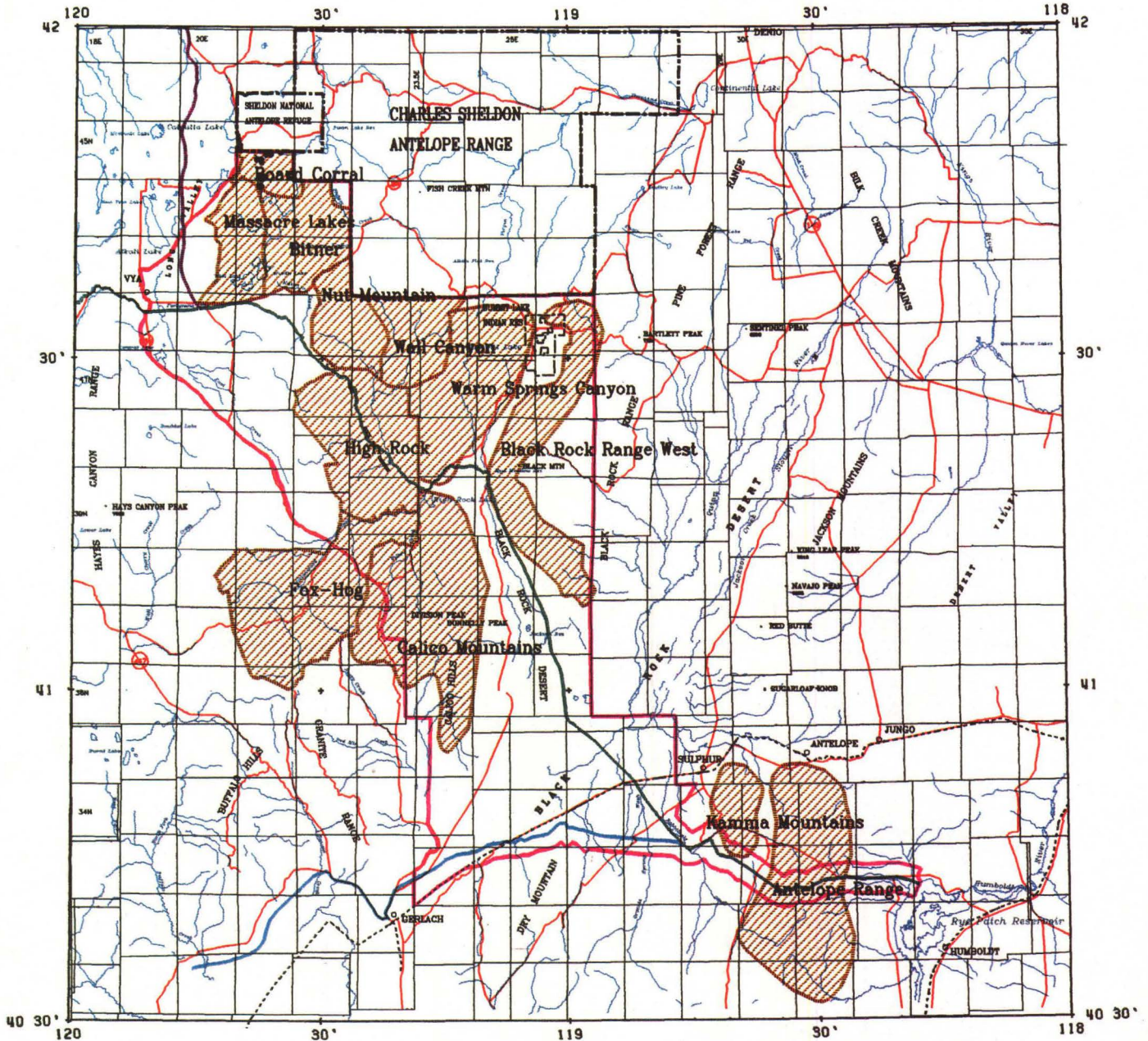
#### Existing Information

There are 10 wild horse herd management areas in the management area.




On the High Rock portion, six herd management areas are located completely within the management area. These include the High Rock, Wall Canyon, Nut Mountain, Bitner, Massacre Lakes/Sagehen, and Board Corral areas (See map 7, page 28). About one quarter of the Fox-Hog HMA is within the management area. The Appropriate Management Levels for these areas are a minimum of 170 and a maximum of 265 head. The total area for these seven horse herds is 181,437 acres.

The 1992 population estimates are:

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



### HORSE MANAGEMENT AREAS

-  FREMONT'S TRAIL
-  NOBLE'S TRAIL
-  APPLGATE-LASSEN TRAIL



On the Black Rock portion, there are four herds affected by the management area with approximately 2230 head of horses and 24 burros. The total area for these four herds is 390,727 acres in the management area. The 1992 population estimates are:

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

#### Primary Issues in Past Land Use Planning

- Forage allocations to horses.
- Impacts from horses to cultural resources, water sources and riparian areas, and private lands
- Impacts of additional fencing on horses and burros.
- The need for management plans for horse herds that establish use areas, population ranges, project developments, and restrictions due to other resource concerns.

#### Summary of Ongoing Management Actions

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

- *Monitor wild horse and burro herd areas and populations on a regular basis.*
- *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 management area are in herds which do not have Appropriate Management Levels (AML) so that gathering excess horses cannot be done. All the herds in the High Rock portion and the Kamma Mountains herd in the Black Rock portion have approved management plans. The minimum and maximum number of animals for each area is specified in each plan. 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 by the Modoc/Washoe Experimental Stewardship Program. Each herd 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 herd.

- *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 horses. Additional information on Herd Management Area Plans 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 herd 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. Interior Board of Land Appeals Decisions have invalidated those population numbers. Additional information is presented in Appendix 1.

#### New Issues

- Uncontrolled horse movement occurs across the district boundary, however the amount of this movement has not been determined. The District boundary fence bisects the natural range of some of the herds, and is difficult to maintain.
- New 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.
- There is a potential for increased disturbance by visitors of wild horses and burros with increasing visitor use.

## 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 Black Rock portion, management of Wild Horses and Burros will be in accordance with the Strategic Plan for Management of Wild Horses and Burros on Public Lands, issued in March, 1992. Setting Appropriate Management Levels within the management area is the first step, with a goal of reaching the Appropriate Management Level within 6 years through a selective removal process. Once the AML is achieved, the population of wild horses and burros will be maintained at these levels. An effort will be made to leave animals in the vicinity of the emigrant trails for public viewing. Interpretive signs may be placed 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.

## **Minerals**

### Existing Information

The management 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 management area. 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 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 (see map 8, page 32). There are no mines within the area, and there are currently no exploration activities. About half of the High Rock portion 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 (see map 8, page 32). 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 management 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 small opal mines within the Black Rock portion of the management area, on the east side of the Calico Mountains. There is fairly visible evidence of past prospecting throughout much of the

management 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 management area. Leasable minerals include oil and gas, geothermal, sodium, and potassium.

The High Rock portion of the management area has very low potential for the occurrence of oil and gas.

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 management 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. There are several areas identified as Prospectively Valuable by the BLM totaling 188,896 acres within the management study area. Near Gerlach, but outside the study area, there is one area currently classified as a Known Geothermal Resource Area (KGRA) covering 9618 acres, which has been competitively leased for geothermal development. There are several areas which have been noncompetitively leased as well (see map 9, page 33) totaling 22,566 acres. 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 management area include sand, gravel and decorative flat rock. In the High Rock portion, Washoe County Road Department has five free use permits for sand and gravel on about 10 acres.

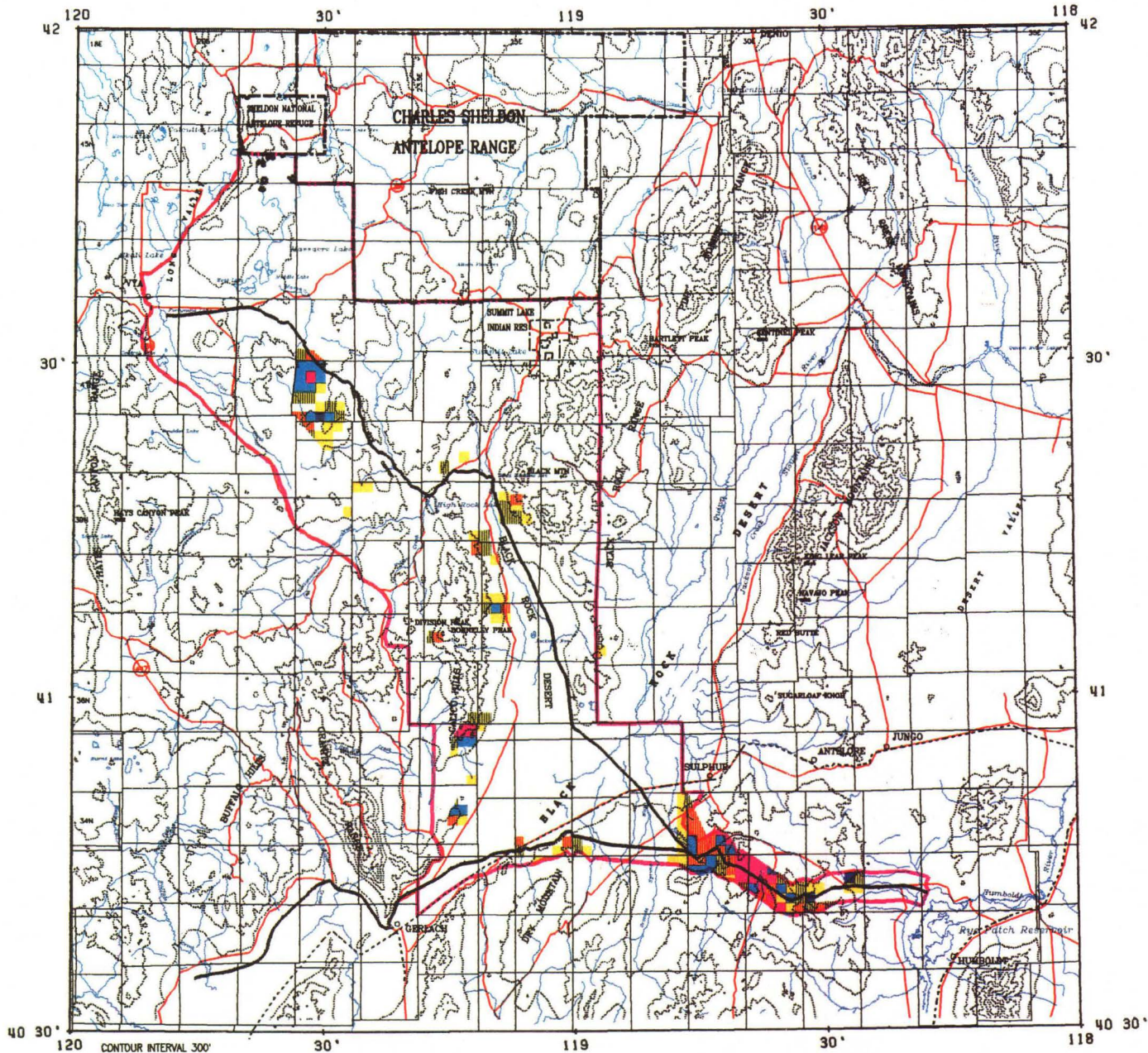
### Primary Issues in Past Land Use Planning

- 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 management 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

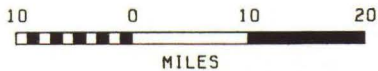
- The entire High Rock portion of the management area is open to the Mining Law of 1872. Those portions outside of the WSAs are open to mineral leasing. Two areas (High Rock ACEC and Massacre Lakes archaeological district) were identified for withdrawal in the Cowhead/Massacre MFP. The High Rock ACEC withdrawal is currently being processed and could be finalized in 1994.
- The archaeological district north of Massacre Lake is proposed for withdrawal.
- Approximately 12,310 acres of public land have been withdrawn from mineral entry in the Lahontan Cutthroat Trout Natural Area.
- Several Black Rock portion MFP decisions affect mineral leasing. Stipulations for no surface occupancy on geothermal and oil and gas leases apply to visible remnants of the Applegate/Lassen trail from Rye Patch reservoir north to the Union Pacific tracks. From the tracks 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.



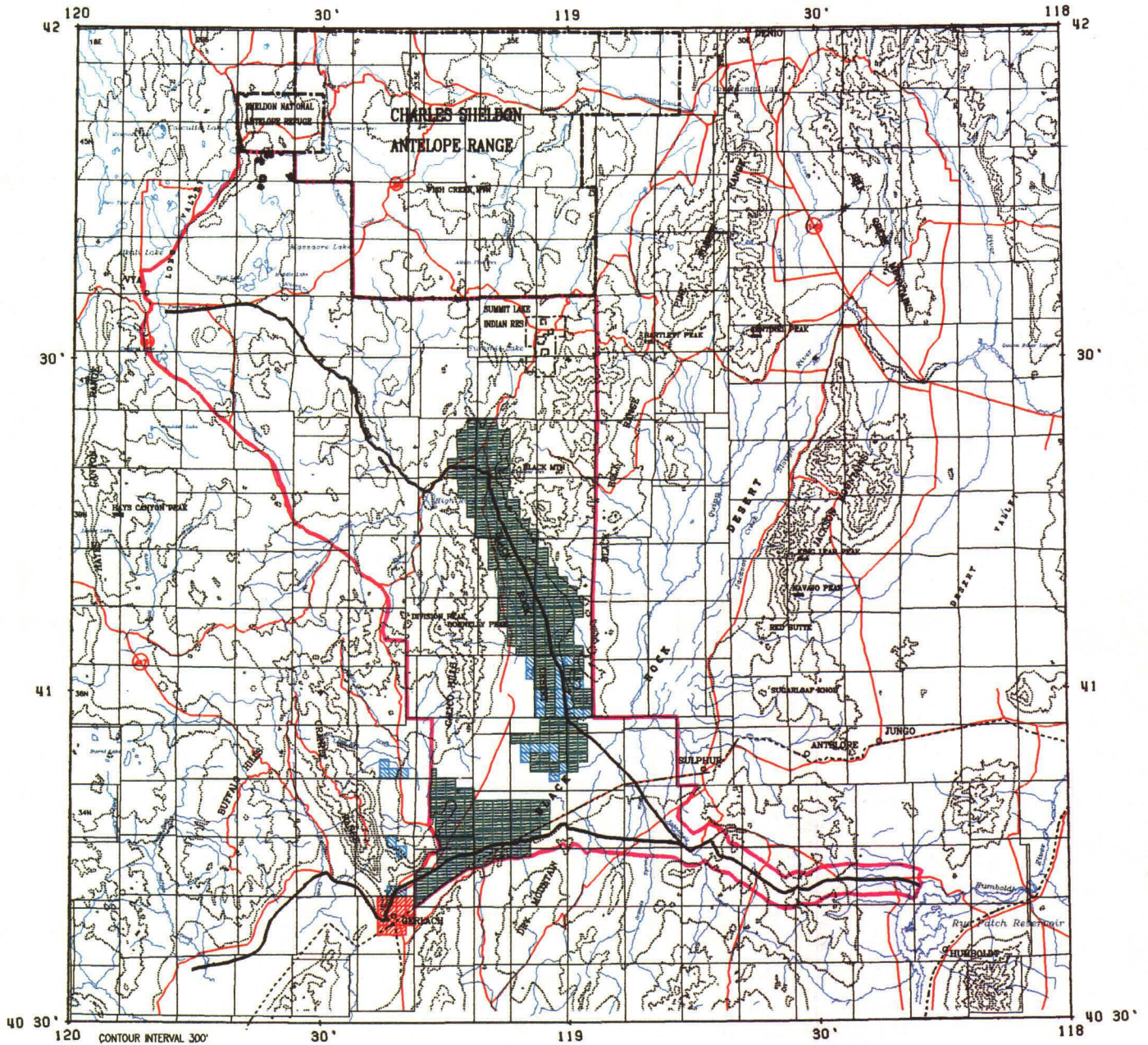


**MINING CLAIM COUNT FOR SEPTEMBER 1992**





- GREATER THAN 40 CLAIMS PER SECTION
- 21 TO 40 CLAIMS PER SECTION
- 11 TO 20 CLAIMS PER SECTION
- 6 TO 10 CLAIMS PER SECTION
- 1 TO 5 CLAIMS PER SECTION
- Applegate and Lassen Trails



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### GEOTHERMAL MANAGEMENT

-  NONCOMPETITIVE LEASE
-  KGRA COMPETITIVE LEASED
-  PROSPECTIVELY VALUABLE
-  Applegate and Lassen Trails



- 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.
- There is increasing public interest and concern about impacts of minerals activities on public land.

#### Future Management

- Any changes to lands withdrawn from mineral entry would have to go through an Land Use Planning process unless it were included in legislation.
- Proposals for locatable, leasable and saleable mineral materials will continue to be processed as they are submitted. All applications are evaluated, modified and acted upon based upon the applicants proposal, environmental sensitivity of the site, and applicable local, state and federal requirements.

### **Livestock Grazing**

#### Existing Information

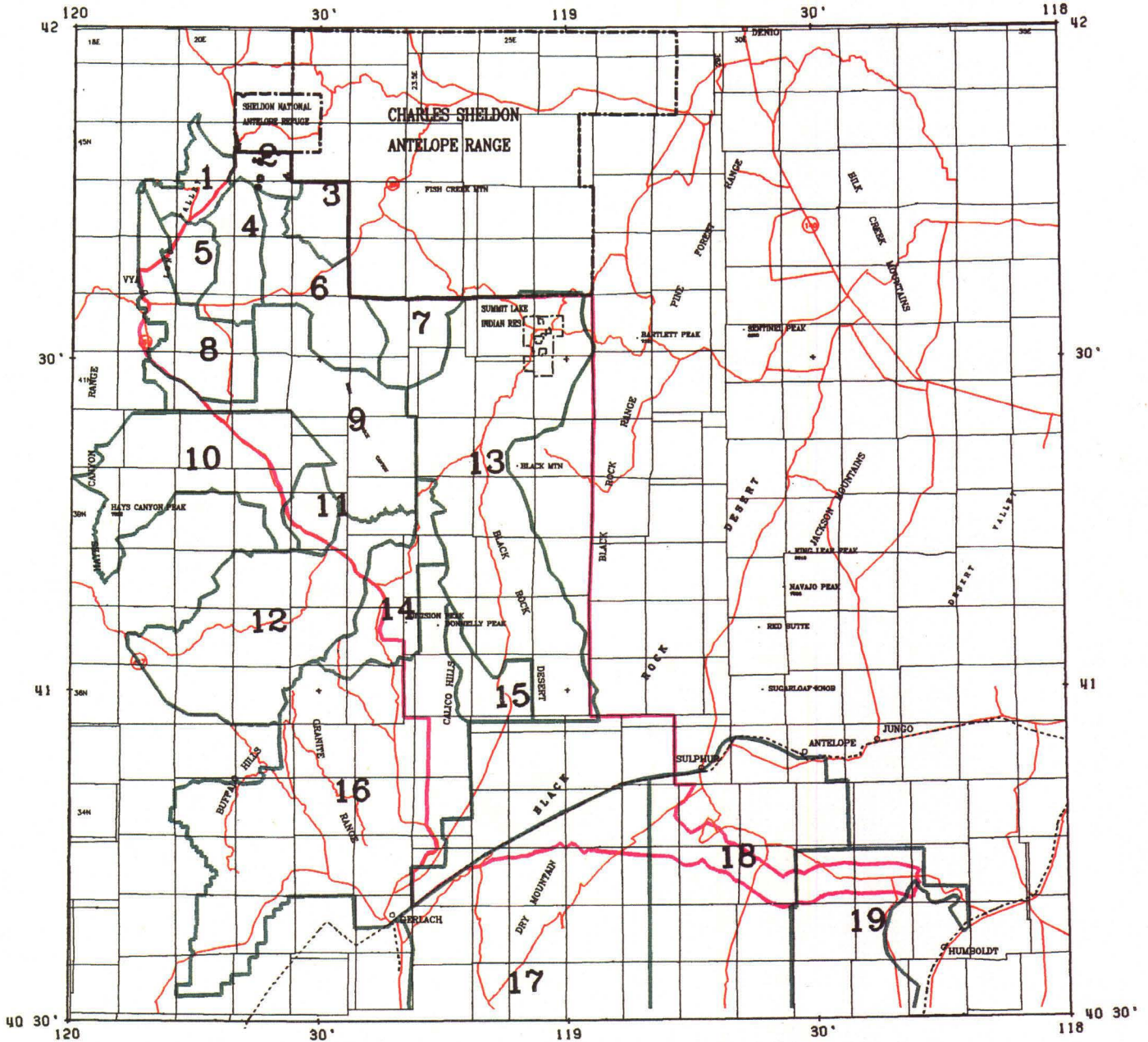
The High Rock portion of the management area contains portions of 13 livestock grazing allotments (see map 10, page 36). Of these 13 allotments, seven are completely within the management area, and are used by twenty two grazing permittees. The other six allotments range from 90 percent to ten percent of the allotment acres being included in the management area. The management 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. The Modoc/Washoe Experimental Stewardship Committee was involved in the development of a 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 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 or no grass understory. Sagebrush cover was reduced and some sites seeded to crested wheatgrass or native plant species. There are six livestock grazing allotments involving 12 permittees within the Black Rock portion of the management area. The Soldier Meadows allotment has a major portion within the boundary, while the other five allotments have only small portions of the total allotment within the management area.

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

- What areas were appropriate for livestock grazing and what areas should not be grazed.
- What vegetation conditions were desirable to achieve and maintain on grazed lands.

MAP 10



GRAZING ALLOTMENTS

- 1 HORSE LAKE
- 2 BOARD CORRAL
- 3 BITNER
- 4 MASSACRE LAKE
- 5 LITTLE BASIN
- 6 NUT MOUNTAIN
- 7 WALL CANYON

- 8 LONG VALLEY
- 9 MASSACRE MOUNTAIN
- 10 HOME CAMP
- 11 DENIO
- 12 BARE
- 13 SOLDIER MEADOWS
- 14 LEADVILLE

- 15 CALICO
- 16 BUFFALO HILLS
- 17 BLUE WING
- 18 SEVEN TROUGHS
- 19 MAJUBA



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- What constraints including type of livestock, season of use, stock rates, utilization limits, and grazing systems were appropriate in areas to be grazed.
- What additional support needs including fencing, water developments, and vegetation treatments were needed to support grazing systems.

### Summary of Ongoing Management Actions

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

- *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, or maintaining, the desired range condition. Each of the allotments within the management area, with the exception of the Massacre Mountain and Majuba allotments, have approved allotment management plans. Implementation on the Horse Lake and Board Corral allotments has not begun. The other allotments range from partial to full implementation of the grazing system. Allotment management plan implementation is summarized in Appendix 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 can be made to wildlife, wild horses and livestock. 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 amendment to land use plan decisions.
- *Monitor changes in vegetation conditions and evaluate progress toward meeting land use objectives.* Baseline monitoring studies have been established on all allotments except Board Corral, Horse Lake, and Majuba allotments. Generally, the monitoring data indicates stable to upward trends in vegetation resources. The success of grazing management actions are analyzed through periodic allotment evaluations. Currently, Massacre Lakes, Sagehen, Soldier Meadows, Leadville, Buffalo Hills, Blue Wing, and Seven Troughs have been evaluated. The evaluations indicated that the grazing systems generally are moving toward achieving management goals, with specific problem areas being identified.
- *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.
- *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 years, except on 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.
- *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 management area. Plowing, chaining and aerial herbicide spraying were used to reduce brush cover prior to seeding. Crested wheatgrass was the primary species seeded, although other grasses 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 or no grass understory. Herbicides and burning were used on two projects to remove brush and decrease competition on native grasses. Release of native grass species has been very successful on range sites with a grass understory. An additional 4,000 acres have been identified for future land treatment and seeding.

## New Issues

- The monitoring methods and allotment evaluations need to be streamlined allowing more to be accomplished and provide current analytical data on the condition of each allotment.
- Grazing systems need to include management objectives for riparian and wetland habitats.

## Future Management

- Existing Allotment Management Plans will require revision based upon monitoring data, evaluation of the objectives, and interdisciplinary planning. The revised plans need to be expanded in scope to include all appropriate resource values and land uses. The revision process must include all affected interests in an open, integrated public process. The revised management plans must then be implemented.
- Riparian objectives need to be improved in management plans. Actions required to meet those objectives need to be accomplished.
- Monitoring of existing and revised management plans needs to be completed using simple techniques which can be understood by the affected public interests.
- Evaluation of existing allotment management plans needs to occur in a scheduled, timely manner. This would allow measurement of the progress of management actions and provide information on how management of grazed areas can be improved.

## Lands/Realty

### Existing Information

The management 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. In the High Rock portion there have been several land exchanges that have added high value resources to federal ownership as well as facilitated management of private lands. The most important was the High Rock surface exchange in 1976. The BLM acquired the private lands in High Rock Canyon in exchange for lands outside the management area. The mineral rights to the same lands were exchanged in 1990. This exchange placed major portions of the Applegate/Lassen trail corridor and significant riparian areas under federal ownership. 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. These include road, powerline and fence easements. A 1,000 KV powerline owned by Los Angeles Water and Power traverses the northwestern portion of the management area. The Bureau of Reclamation has a reserved right-of-way east of the existing powerline but a second line has not been constructed.

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 management area. There is also a very small parcel of Bureau of Reclamation land.

The Summit Lake Indian Reservation is located within the northeast portion of the management area. These lands are managed by the Summit Lake tribe in conjunction with the Bureau of Indian Affairs.

Approximately 12,310 acres of public land encompassing the Lahontan Cutthroat Trout Natural Area have been partially withdrawn from mineral entry and disposal under land laws.

### Primary Issues in Past Land Use Planning

- The BLM was interested in acquiring lands with high resource values.
- Public lands with value for private agricultural use should be considered for transfer to private ownership.

- Public agencies and individuals require easements across public lands for roads, powerline, water pipelines and fences.

### Summary of Ongoing Management Actions

- *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 of about 4200 acres in the High Rock and Massacre Lakes watersheds. The American Land Conservancy has acquired 160 acres of private land in East Fork of High Rock Canyon and is working on a sale/exchange proposal with BLM. There are several other proposals for land exchanges in the High Rock and Little High Rock areas.

BLM recently acquired additional acreage and a conservation easement on private lands for Desert Dace and Lahontan Cutthroat trout habitat near Soldier Meadows. This acquisition involved the private landowner, BLM, and The Nature Conservancy. The conservation easement would preserve the natural character of private portions of the emigrant trail and a buffer zone as well as the historic character of the ranch headquarters.

- *Lands with unique values will be withdrawn from actions under the land laws.* A mineral withdrawal has been initiated for the High Rock ACEC. A second withdrawal has been proposed for the high value archaeological complex on the Massacre Bench.

### New Issues

- NCA proposals currently being developed call for additional areas to be withdrawn from Desert Land Entry or large surface disturbing rights-of-way.

### Future Management

- Future land and realty actions within the management area will continue to be handled in conformance with the land use plans on a case by case basis.

## **Fire Management**

### Existing Information

Fire is a natural part of all the management area ecosystems except for the Black Rock Playa. 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. Ethnographic studies of the Paiute tribe have also shown that the Native Americans 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 largest fire within the management area has been approximately five acres during the last five years. Most fires are lightning caused and involve one or two juniper trees and a total size of less than one acre. The area has limited potential for large fires due to the generally sparse vegetation.

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

- 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 are primarily based upon national policy or occur as a result of projects initiate by other programs. The major actions occurring within the management area are:

- *All fires during the summer months will be suppressed.* 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.

Allowing large wildfires to burn without suppression is not acceptable to the public.

- *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 which has increased grass production.

#### Future Management

- Fire suppression will continue to be the most significant part of the fire management program within the management area, but increasingly, fire will be used as a resource management tool.
- Fire management plans that identify changes in suppression tactics where resource risks from fire are low and where fires are usually restricted to a few trees need to be developed and implemented.
- Fire management plans should identify areas where 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 management area. The plays of the Black Rock Desert and Soldier Meadows appear to be receiving the most use. The two areas provide very different landscapes and resources for recreation. The play of the Black Rock Desert is ringed with hot springs, some of which are on private land. The most popular ones are Black Rock Springs, Double Hot Springs, Trego Springs, and several springs at Soldier Meadows. 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 management 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 play 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 management 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 management 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 management 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 shelter year round.

#### Primary Issues in Past Land Use Planning

During the preparation of the Sonoma-Gerlach MFP, recreation was not considered a significant program. However, important decisions were made to designate the Black Rock Desert as a Special Recreation Management Area (SRMA), and to restrict permits to events which wouldn't permanently affect the playa (See Appendix A for a summary). On the High Rock portion, High Rock Canyon was also designated a Special Recreation Management Area. Hunting and sightseeing were considered the predominant recreational uses of the 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

- *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 (RAMPs) 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.
- *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. On the Black Rock portion, analyzing impacts to WSAs and complying with MFP decision R 1.11 (See appendix 1) that prohibits any off-road vehicle events on the playa which permanently affect it's scenic qualities are two of the major evaluation factors.
- *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 BLM offices in Winnemucca or Cedarville.

#### New Issues

- More frequent applications for large scale events are being received for the playa of the Black Rock Desert, potentially impacting solitude and visibility. 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 management area, and increased visitor use in all activities, are straining our ability to protect natural resources in the area.
- BLM recreation policy has changed significantly 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 begun to respond to these changes.
- Visitors lack information about hazards of traveling within the area. Gerlach and Cedarville are the last towns before one enters the management area, and the farthest ends of the management area are 60 miles from either place. High Rock Canyon and the Black Rock Desert Playa are usually inaccessible to vehicles for 6 months of the year. The operators of the Soldier Meadows Ranch have complained that travelers frequently come to the ranch and demand assistance, in one instance at gunpoint. There are very few other people living within the management 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 hard data available about how many visitors use the management area, which areas are most used, and 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 management 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.

### Visitor Services and Safety

#### BLM presence

- Over the summer of 1992, a seasonal recreation/wilderness technician was assigned to the Black Rock/High Rock management area for visitor contact and information collection. Beginning in the Spring of 1992, rangers from the Susanville and Winnemucca Districts began patrolling the management area on a regular basis. All work will be coordinated by the Winnemucca and Susanville districts.

A seasonal employee will work in the study area as funding becomes available. The seasonal's responsibilities include:

Obtaining visitor information with the BLM-OMB approved visitor survey questionnaire throughout the management area.  
Counting the numbers of people seen in the area, and recording where they are and when.

Patrolling the perimeters of all the WSAs and identifying 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 coordinate the work of the volunteers in the area.

Among these personnel, and the permanent employees from the Sonoma-Gerlach and Surprise Resource Areas, the goal in areas of visitor concentration will be a patrol at least every three days from May 15 to September 15.

### Brochure

A safety brochure has been developed describing the safety hazards of traveling in the area, including a map showing hazardous areas. The brochure was completed in September of 1992, and is being distributed through gas stations and restaurants in Gerlach, Cedarville, and Denio/Denio Junction.

### Signing

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

Information boards 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. The BLM is currently looking for cooperators and suitable sites for these boards.

### 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 management 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 informal agreements between Washoe, Humboldt and Pershing Counties to cover the Black Rock Desert area north and east of Gerlach.

### Transportation

Certain roads within the management 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 for certain projects. About half the mileage in the management 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 turned over to the counties or left unmaintained. The Susanville District, as part of it's 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 management 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.

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## **SUMMARY OF INTERDISTRICT MANAGEMENT OPPORTUNITIES**

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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.

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. A few areas exceed this restriction and management changes are being implemented.

Within the management area, bitterbrush is being monitored on the key areas. Studies indicate that the light use limitation generally is 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.

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).

CM009: Encourage mineral<sup>o</sup>4 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.

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.

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 for 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 on the Bitner Table and in High Rock. 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.



### **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.

Completed 1983.

**HR002:** Combine the Little High Rock and the Massacre Mountain Allotments into one allotment, hereafter referred to as the Massacre Mountain Allotment.

Completed 1991.

**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.

Completed 1991. Being evaluated for amendment.

**HR004:** Allow for a change in class of livestock from sheep to cattle in the entire subunit.

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.

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

No livestock cancellations have occurred.

**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 all potential disease sources are minimized.

**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 wild horses do cause significant impacts on these sites, then remedial management action i.e. herd reduction, removal, or relocation through fencing will be taken to protect the particular sites that are being degraded.

High Rock HMP and High Rock CRMP propose fencing of meadows. Regular gathering of horses have minimized problems except on a few small 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.

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 1992. 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
- Board Corral

Completed 1983. See Appendix 2 for specific actions in Bitner, Nut Mountain, Wall Canyon, Massacre Lakes, Sagehen, and Board Corral AMPs. Massacre Mountain AMP scheduled for 1994.

**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, increased 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).

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

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

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 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. Populations exceed 675 animals.

**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.

1700 acres fenced in 1983. Weekend patrols initiated 1991.

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

2100 acres near Massacre Lakes acquired in land exchange 1982. American Land Conservancy, Bunyard, Modoc Washoe ESP, 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.

The National Register sites in High Rock and near Massacre Lakes have been excluded from regular livestock use. Additional protective fencing is proposed for three springs on the Massacre Bench. Research for chemical preservatives continues.

**MN012:** Initiate a mineral withdrawal for Area 2D.

Not initiated. High Rock mineral withdrawal is higher priority.

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

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

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

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.

**MN015:** Leave Subunit 2 open to OHV travel.

Designated open 1984.

### **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

Completed 1981. See Appendix 2 for specific actions.

**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.

Completed 1981.

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

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

**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.

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

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

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 additional acres identified for seeding 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, precludes development of vehicular access.

### **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 installed but vandalism significant.

### **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 1984.

**RE007:** Fence or cage important petrified wood areas.

Sites near Denio Camp and Woodruff Reservoir fenced 1976.

### **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 1981. Monitoring data has been collected. Data

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

**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.

**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.

### **Wild horses:**

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

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

**WH004:** Consider horse use areas when fencing.

**WH005:** Conduct routine inventories.

### **Wildlife:**

**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.

**WL010:** Maximize vegetative cover according to site potential.

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

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

### **Watershed:**

used in evaluations on Bare allotment. Evaluation planned for Home Camp allotment 1992.

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

No additional forage has been identified.

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.

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

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

Guideline adopted 1976.

Inventories conducted prior to gathering operations.

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 with significant improvement in riparian vegetation.

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

Guideline adopted 1976.

Meadows have been fenced in all three allotments.

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

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, (pg 25) 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.

Not yet implemented due to time and funding constraints.

Cultural resources inventory is currently done for all surface disturbing activities we authorize.

Not many opportunities in management area. Some coordination is being done with opal miners to lessen visual impacts of their trailers on integrity of historic trail setting. Peter Ting site avoided by Sierra Pacific power line for Hycroft. S-G personnel have worked with operators in the Applegate-Lassen trail corridor to lessen impacts to resource.

Implemented in grazing allotment evaluations and HMPs. Mgt decisions or agreements made on all I and M allotments in FY 88. Management levels may not be yet achieved, but the direction is set.



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

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

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.

Implemented in grazing allotment evaluations and reevaluations.

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. Implemented in grazing allotment evaluations.

Implemented in grazing allotment evaluations and reevaluations.

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.

Implemented in HMPs and grazing allotment evaluations and reevaluations.

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.

Implemented as an ongoing process.

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:

Implemented as an ongoing process.

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.

Not being implemented due to lack of funds and personnel.

WL 1.16: Retain in public ownership all public lands containing valuable wildlife habitat, unless it is

Implemented as an ongoing process.

determined that such lands, because of location or other characteristics are 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.

Acquisition is currently being completed for Mahogany and Summer Camp creeks.

Not implemented due to lack of funds and personnel.

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
- desert dace

Category 1:

- basalt cinquefoil

Category 2:

- Tiehm's milk-vetch
- Schoolcraft's cat's-eye
- Crosby's buckwheat
- grimy ivesia
- smooth stickleaf
- snowy plover

Sensitive:

- spotted bat, California bighorn sheep, numerous plants

Protected:

- All raptors
- All cactus

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.

Most of both of these ranges have limited OHV designations through WSA status.

Not implemented because the water and constructed reservoirs are private property: High Rock Lake is a natural intermittent lake and will be addressed in the Black Rock HMP.

Implementation is an ongoing process.

Implementation is being accomplished through comprehensive HMP's addressing terrestrial, aquatic, and sensitive species.

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.

Black Rock HMP - a comprehensive plan to include all wildlife, fisheries, riparian, wetland, and terrestrial habitats. This HMP will be completed in 1993.

Selenite-Seven Troughs HMP -a comprehensive plan to be completed in 1993.

**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.

No large reservoirs have been developed.

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

Implemented as necessary.

**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.

Not implemented due to lack of funds and manpower.

**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.

Instructions have been issued to fire management personnel.

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

Not implemented due to a lack of funds, manpower.

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

Implemented.

### **Recreation:**

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

Implemented as opportunities and resources permit.

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

Data gathering has begun, however writing plan will take place after status of NCA proposal has been determined. See chapter on Public Use/Visitor Services which outlines some interim steps to provide for visitor services.

**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.

Not implemented due to lack of funding and manpower.

R 1.9: Establish an interpretive program concerning line shacks and camps and isolated structures if warranted. Maintain fire protection for those areas that have significant values. The following sites are located in the management study area:

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 OHV 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 permanently detract from the natural character of area 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 of the Black Rock Desert 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.

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. Class A and B quality areas are the better recreation sites in the resource area.

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;

Not implemented due to lack of funding and manpower.

OHV closure is monitored regularly.

OHV limitations on playa of the Black Rock Desert are being enforced in permitting process.

Other OHV limitations have not been implemented due to lack of funds and manpower.

Implemented as an ongoing process.

District staff will cooperate as requested-no action taken recently in management study area.

3. Retaining the public land on which the trail is located or insuring easements for public access prior to disposal.

### Visual Resources:

V 3.1: Allow no action to degrade visual resources as classified in visual resource inventory.

Implemented on an ongoing basis.

### Minerals:

M 5.5: For oil and gas, and geothermal leases, no surface occupancy will be allowed on visible remnants of the Applegate-Lassen trail from Rye Patch reservoir north to the Western Pacific railroad tracks. The width of the corridor will be 1 mile to either side of the Applegate-Lassen trail from the Sonoma-Gerlach Resource ARea boundary at the Western Pacific railroad tracks north to Black Rock Point. From Black Rock Point to the district boundary the corridor will to the east follow the crest of the Black Rock Range, and to the west extend for 1 mile from the trail. The desert dace ACEC is also protected from surface occupancy.

Implemented on an ongoing basis as need arises.

M 6.1: No leasing will be permitted of sodium and potassium on the playa of the Black Rock Desert.

Implemented.

### 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 reduced to 12,053 in 1988

Blue Wing - 24,160

Seven Troughs - 9,163

Majuba - 1,100

#### 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 reevaluation in progress - 1992

#### 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 reevaluation in progress - 1992

#### Leadville

-Allotment Management Plan - 1969

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

-Draft Allotment reevaluation in progress - 1993

**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 -reevaluation in progress - 1993

**Blue Wing**

- CRMP - 1984
- Allotment Management Plan - 1986
- Allotment Evaluation and Grazing Schedule -1988
- Draft Allotment reevaluation in progress - 1993

**Seven Troughs**

- CRMP - 1984
- Allotment Management Plan - 1986
- Allotment Evaluation and Grazing Schedule -1988
- Draft allotment reevaluation in -progress - 1993

**Majuba**

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

**RM 1.2:** Review and update 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

**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.

Currently undergoing review in allotment reevaluation.

These periods are being adjusted through current allotment reevaluations. Seasons shown have changed as grazing systems have been implemented.

Implemented as needed.

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

Implemented as needed.

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

Implemented as opportunities and resources permit.

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 from date of this plan.

Not implemented due to drought, lack of funds and manpower constraints.

### Wild Horses and Burros:

WH/B 1.1: Establish WH/B Appropriate Management Level (AML) 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. (IBLA decision 88-591 June 7, 1989 found that numbers must be established by resource monitoring data, not the number of horses inhabiting an area as of July 1, 1982).

Blue Wing/Seven Troughs Herd Area Management Plan 3/4/87.

Implemented.

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

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

Implemented as opportunities and resources permit.

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.

Decision is currently being implemented through allotment reevaluations.

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.

Implemented as an ongoing process.



## 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.

Implemented when opportunity is presented. (Soldier Meadows land exchange is an example.)

Implemented as an ongoing process.

Implemented as an ongoing process.

Implemented as an ongoing process.

Implemented as an ongoing process.

Implemented as an ongoing process.

Implemented as an ongoing process.

Implemented as an ongoing process.

## 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. Plantcuttings fo willow, wild rose, and buffalo berry into riparian zones.	Approximately 1000 willow cuttings planted in 1987. Volunter project to plant additional cuttings planned for 1992.
8. Plant suckers as aspen into Pole and Little High Rock canyons.	Volunter project to plant tubling trees planned for 1992.
9. Burn small blocks of Great Basin wildrye on the floodplains within the canyons.	Site clearances for cultural resources and rare plants and EA to be completed in 1992. Project scheduled for fall of 1992.
10. Evaluate upland big sagebrush swale sites east of Pole Canyon for burning to increase wildlife forage quality.	Implementation date to be determined.
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 evaluated effectiveness of management actions.	Baseline studies completed 1987.

High Rock Cultural Resources Management  
Plan, 1983

**PLAN ACTION**

**IMPLEMENTATION**

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

Completed S&D 1990

2. Install cultural resource protective signs (S-53) along the perimeter of the Sub Unit and at strategic locations within the Sub Unit.

Ongoing

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.

Begun 1990, implemented 1991

4. Develop and initiate an active program of intense monitoring and inventory in the High Rock Sub Unit I. Accumulation of hard data is required to substantiate existing condition and to develop trend data necessary for successful management of National Register quality resources.

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

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.

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

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.

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 losing 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 withdrawl.

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 generally 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 management area, to aid in the technical support of scholarly projects involving the management area's data base.  | Not implemented   |
| 10. Submit portions of the management 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 Enclosure, 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

### IMPLEMENTATION

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.

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.

## Calcutta Allotment Management Plan, 1982

### PLAN ACTION

1. Implement a final grazing system using a rest rotation grazing system two 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 (long term monitoring).
4. Develop the following projects to implement grazing management:
  - a) springs -2 each
  - b) reservoirs 3 each
5. An intensive evaluation of the grazing system will be made using all available data. Evaluation will be summarized in the RPS update with additional reports made available to other parties as requested.

### IMPLEMENTATION

Final grazing system implemented in 1982.

Actual use records are collected on an annual basis starting 1983. Seven use maps developed 1983 through 1990.

Two reservoirs were completed in 1985.

Evaluation date not determined.

Horse Lake Allotment Management Plan, 1983

**PLAN ACTION**

**IMPLEMENTATION**

1. Implement an interim grazing system which will be determined annually. A final system will be a rest/deferred grazing system using four pastures.

Interim grazing use determined annually since 1983. Final sytem not implemented.

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).

Actual use records are collected on an annual basis (from 1983). Use mapping was done in 1985.

3. Trend study plots will be placed in selected key areas within major vegetative types within each pasture (long term monitoring).

Not established.

4. Develop the following projects to implement grazing management:

Three reservoirs were completed in 1985.

- a) reservoirs    6 each
- b) fences        11 miles
- c) seeding       1,000 acres

5. An intensive evaluation of the grazing system will be made using all available data. Evaluation will be summarized in the RPS update with additionaly reports made available to to other parties as requested.

Not currently scheduled.

## 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**

**IMPLEMENTATION**

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 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.
6. Divide Nut Mountain into two separate allotments.
7. Consider a cooperative effort in rehabilitating public and private springs, meadows and gullies.
8. Fence Area 2D for archaeological exclusion.

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.

Evaluation to be determined.

Completed be range line agreement in 1981.

Action to be determined.

Fence completed in 1985.



## Wall Canyon Allotment Management Plan, 1982

### PLAN ACTION

1. Implement a coordinated grazing plan with the Fish and Wildlife Service. Alternating spring and fall grazing treatments will be utilized on the BLM.
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) reservoirs - 7 ea
  - b) wells - 3 ea
  - c) springs - 2 ea
  - d) Butcher Flat seeding (2000 ac)
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.
6. Explore feasibility of rehabilitating gullies in this allotment.

### IMPLEMENTATION

Grazing system was implemented in 1983. Grazing system is scheduled for 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.

Four trend plots were established in 1983 with second reading of plots to be determined. Two bitterbrush transect established in 1984.

The following projects have been completed.

- a) 7 reservoirs completed in 1985.
- b) 2 wells completed in 1984.
- c) 2 springs completed in 1982.
- d) Butcher Flat seeding to be determined in the future.

Evaluation to be determined.

Phase 1 of Wildcat rehab project completed in 1989.

## Little Basin Allotment Management Plan, 1983

### PLAN ACTION

1. Implement a rest and deferred rotation grazing system using five pastures, in the interim implement a deferred 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 in each pasture within the allotment (long term monitoring).
4. Develop the following projects to implement grazing management.
  - a) reservoirs - 5 ea
  - b) wells - 2 ea
  - c) Little Basin spray and seed.
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.
6. Treat approximately 1,500 acres of upland area to release native grasses.

### IMPLEMENTATION

Interim grazing system implemented in 1984. Final grazing system to be implemented in 1993.

Actual use records are collected on an annual basis starting from 1983. A use map has been developed annually since 1982.

Four trend plots were established in 1984 with additional photo plots in the land treatment areas.

The following projects have been completed.

- a) reservoirs construction to be determined.
- b) 2 wells completed in 1983.
- c) spray and seed with protection fences completed in 1983.

Evaluation to be determined.

800 acre burn with protection fence completed in 1988.

## Home Camp Allotment Management Plan, 1983

### PLAN ACTION

### IMPLEMENTATION

1. Implement a interim deferred rotation grazing system. Implement a final grazing system using a rest and deferred grazing system.

Interim grazing system implemented in 1983. Final grazing system implementation to be determined.

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).

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

3. Trend study plots will be placed in selected key areas within major vegetative types in each pasture within the allotment (long term monitoring).

8 trend plots were established in 1983 with additional photo plots in the land treatment areas, riparian zones and aspen stands.

4. Develop the following projects to implement grazing management.

The following projects have been completed.

- a) reservoirs - 14 ea
- b) spring and pipeline development - 3 ea
- c) pasture fence - 3 ea

- a) reservoir construction completed as follows: 12 in 1982, 5 in 1980, 3 in 1989.
- b) 3 pipelines completed in 1982.
- c) pasture fences completed in 1982 and 1985, 1 fence to be determined.

5. A yearly evaluation will be prepared and distributed to all interested parties.

Annual report developed each year since 1984.

## Denio Allotment Management Plan, 1987

### PLAN ACTION

1. Implement a interim system using deferred grazing on the upper pasture. Implement a final grazing system using rest and deferred rotation grazing.
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 in each pasture within the allotment (long term monitoring).
4. Develop the following projects to implement grazing management.
  - a) reservoirs - 7 ea
  - b) spring development - 1 c) pasture fence - 1 ea
  - d) burn - 1,000 acres
5. An intensive evaluation of the grazing system will be make 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 1982. Final grazing system implementation to be determined.

Actual use records are collected on an annual basis starting from 1982. A use map has been developed each year between 1983 through 1989.

1 trend plot was established in 1983, additional trend plots to be determined.

The following projects have been completed.

- a) 5 reservoirs completed in 1982, 1 in 1990 and 1 to be determined.
- b) 1 spring completed in 1982.
- c) pasture fence to be determined.
- d) burn to be determined.

Evaluation to be determined.

## Bare Allotment Management Plan, 1974

### PLAN ACTION

1. Implement a 7 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 in each pasture within the allotment (long term monitoring).
4. 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

Gazing system implemented in 1974, revised in 1982.

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

No trend plots were established within the boundaries of the .

Evaluation completed in 1987. Copies sent to all interested parties.

## Fox-Hog Horse Area Management Plan, 1984

### PLAN ACTION

1. Horses will be gathered when numbers of adult horses reach or exceed 75 head.
2. Selection of horse herd will be done based upon criteria established for this herd. Once selection is made, future gathers will primarily remove only animals four years of age or younger.
3. Monitor herd population, general health, and condition of animals when herds are gathered.

### IMPLEMENTATION

Horses were gathered in 1985 and 1989.

Base herd was not selected since this herd is the control herd for the Modoc/Washoe Wild Horse Herd Experiment.

Monitoring of horses occurred when horses were gathered. Plan revised in 1989. Vegetation monitoring will occur within the HMAP area as outlined for the Bare AMP. Monitoring of horses and vegetation will be used to verify or adjust herd numbers.

Bitner Horse Area Management Plan, 1985

**PLAN ACTION**

1. Horses will be gathered when numbers of adult horses reach or exceed 25 head.
2. Selection of horse herd will be done based upon criteria established for this herd. Once selection is made, future gathers will primarily remove only animals four years of age or younger.
3. Monitor herd population, general health, and condition of animals when herds are gathered.

**IMPLEMENTATION**

Horses were gathered in 1985 and 1988.

Base herd was selected in 1988.

Monitoring of horses occurred when horses were gathered. Plan revised in 1989. Vegetation monitoring will occur within the HMAP area as outlined for the Bitner AMP. Monitoring of horses and vegetation will be used to verify or adjust herd numbers.

High Rock Horse Area Management Plan, 1985

**PLAN ACTION**

1. Horses will be gathered when numbers of adult horses reach or exceed 100 head.
2. Selection of horse herd will be done based upon criteria established for this herd. Once selection is made, future gathers will primarily remove only animals four years of age or younger.
3. Monitor herd population, general health, and condition of animals when herds are gathered.

**IMPLEMENTATION**

Horses were gathered in 1986, 1988, and 1990.

Base herd was selected in 1988.

Monitoring of horses occurred when horses were gathered. Plan revised in 1989. Vegetation monitoring will occur within the HMAP area as outlined in the uncompleted Massacre Mountain AMP. Monitoring of horses and vegetation will be used to verify or adjust herd numbers.



Massacre Lakes Horse Area Management Plan, 1985

**PLAN ACTION**

1. Horses will be gathered when numbers of adult horses reach or exceed 20 head.
2. Selection of horse herd will be done based upon criteria established for this herd. Once selection is made, future gathers will primarily remove only animals four years of age or younger.
3. Monitor herd population, general health, and condition of animals when herds are gathered.

**IMPLEMENTATION**

Horses were gathered in 1985 and 1988.

Base herd was selected in 1988.

Monitoring of horses occurred when horses were gathered. Plan revised in 1989. Vegetation monitoring will occur within the HMAP area as outlined in the Massacre Lakes AMP. Monitoring of horses and vegetation will be used to verify or adjust herd numbers.

## Nut Mountain Horse Area Management Plan, 1985

### PLAN ACTION

1. Horses will be gathered when numbers of adult horses reach or exceed 55 head.
2. Selection of horse herd will be done based upon criteria established for this herd. Once selection is made, future gathers will primarily remove only animals four years of age or younger.
3. Monitor herd population, general health, and condition of animals when herds are gathered.

### IMPLEMENTATION

Horses were gathered in 1985 and 1988.

Base herd was selected in 1988.

Monitoring of horses occurred when horses were gathered. Plan revised in 1989. Vegetation monitoring will occur within the HMAP area as outlined in the Nut Mountain AMP. Monitoring of horses and vegetation will be used to verify or adjust herd numbers.

Wall Canyon Horse Area Management Plan, 1985

**PLAN ACTION**

1. Horses will be gathered when numbers of adult horses reach or exceed 25 head.
2. Selection of horse herd will be done based upon criteria established for this herd. Once selection is made, future gathers will primarily remove only animals four years of age or younger.
3. Monitor herd population, general health, and condition of animals when herds are gathered.

**IMPLEMENTATION**

Horses were gathered in 1985 and 1988.

Base herd was selected in 1988.

Monitoring of horses occurred when horses were gathered. Plan revised in 1989. Vegetation monitoring will occur within the HMAP area as outlined in the Wall Canyon AMP. Monitoring of horses and vegetation will be used to verify or adjust herd numbers.

Fox Mountain Habitat Management Plan, 1989

**PLAN ACTION**

**IMPLEMENTATION**

**Aquatic Habitat:**

**Fence Donnelly Creek**

No manpower or money for implementation.

**Antelope/Mule Deer Habitat**

Remove wild horses in Calico Mountains to Appropriate Management Level by 1990.

Gathers will be done when Buffalo Hills Allotment reevaluation has been approved in 1993.

**Big Horn Sheep**

Introduce bighorn sheep into Calico Mountains in 1989.

Release plan written and 11 bighorns released in 1989.

**Sagegrouse**

NDOW will provide locations of active Strutting grounds and Brood areas, and BLM will analyze condition of these areas and maintain sagebrush canopy at 30% where sagebrush does not exceed 3 feet in height.

No analysis of critical sagegrouse habitat has been done.

**Chukar**

BLM/NDOW will locate an additional 30 guzzler sites by 1991.

No guzzler siting has been done since 1987.

**Riparian Areas**

Maintain the two existing meadow exclosures in the Calico allotment.

These are checked and repaired every third year.

Fence the meadow/spring complex at the head of Donnelly Creek in 1992.

Project design work has not yet begun on this exclosure.

Monitor key species in wet meadows and riparian areas as part of use pattern mapping.

Meadows are monitored as an integral part of the appropriate allotment monitoring plan for annual use pattern mapping.

Soldier Meadow Desert Dace Habitat  
Management Plan, 1984

**PLAN ACTION**

Determine biological needs and the current population status of the desert dace.

Transfer desert dace from existing populations to springs on public land in the habitat area found to be suitable for them. A bioassay will be performed for each spring prior to introduction of the dace.

Designate public land surrounding spring 4 (307.22 acres) as an Area of Critical Environmental Concern.

Designate additional sites as ACECs upon successful establishment of dace at these sites.

Install Stevens A-71 recorder and V-notch weir on spring No. 4 and read on a monthly basis.

Acquire private land within the desert dace habitat area.

Withdraw ACEC from mineral entry if dace is listed as threatened or endangered.

**IMPLEMENTATION**

Species was listed as threatened by Fish and Wildlife Service in 1986.

Not implemented because of funding.

Designated in 1982

No additional ACECs have been designated because of manpower and funding constraints.

This was done for a period, then discontinued because of funding and manpower constraints.

This has been done as part of the Soldier Meadows land exchange.

Formal mineral withdrawal not done, however ACEC designation means that Plan of Operation is automatically needed for any mineral development activity.

Mahogany Creek Habitat Management Plan,  
1974

**PLAN ACTION**

**IMPLEMENTATION**

Lower two rock waterfalls in Mahogany Creek Gorge to allow fish passage to the upper stream project.

Completed 9/10/73.

Fish-way on summer camp creek at eight foot waterfall.

Completed 12/7/73.

Gabion on four foot high head-cut of stream channel 500 feet upstream on Mahogany Creek.

Completed 7/16/74.

Install a culvert, bridge, or gabion rock matt at Mahogany Creek Road crossing, subject to private land easement or acquisition.

Not completed due to lack of funding, and time.

Construct study enclosure.

Project completed 7/17/74.

Sagebrush control and grass reseeding to prevent gully erosion.

Not accomplished due to time and funding constraints.

Direct seedings on severely eroded sites such as road cuts or badly gullied areas.

Not accomplished due to time and funding constraints.

Remove trash and old fences from watershed.

Not accomplished due to time and funding constraints.

Thin aspen stands along certain stretches to release understory vegetation and groundcover.

Not accomplished due to time and funding constraints.

If use justifies it, establish outdoor laboratory with trails and signs to explain LCT life history, and other uses of watershed.

Not accomplished due to time and funding constraints.

Remove debris in both Mahogany and Summer Creeks where it may obstruct upstream fish travel.

Not accomplished due to time and funding constraints.

Construct class I pools over five miles of Mahogany and Summer Camp Creek, if it's determined that they won't lead to larger fish preying on fry, and possibly retarding growth.

Not accomplished due to time and funding constraints.

Waterbar all roads in watershed, after acquiring land or easements.

Not accomplished due to time and funding constraints.

Provide brush piles, vines, legumes, and other food or cover requirements for California quail and raccoon habitat.

Not accomplished due to time and funding constraints.

Install a culvert, bridge, or a gabion rock matt at all road crossings.

Not accomplished due to time and funding constraints.

## APPENDIX 3:

### GLOSSARY OF ABBREVIATIONS

AML	Appropriate Management Level (Wild Horses)
AMP	Allotment Management Plan
ACEC	Area of Critical Environmental Concern
BLM	Bureau of Land Management
CMA	Cooperative Management Agreement
CRMP	Cultural Resource Management Plan or Coordinated Resource Management Plan (for Livestock, Wildhorses, and Wildlife forage allocations).
EIS	Environmental Impact Statement
FMP	Fire Management Plan
FY	Fiscal Year
HMA	Herd Management Area
HMAP	Herd Management Area Plan
HMP	Habitat Management Plan
LAC	Limits of Acceptable Change
MFP	Management Framework Plan
MOU	Memorandum of Understanding
NDOW	Nevada Department of Fish and Wildlife
NRHP	National Register of Historic Places
NCA	National Conservation Area
OHV	Off Highway Vehicle
PNCA	Proposed National Conservation Area
RIPS	Rangeland Improvement Project System
SLUP	Special Land Use Permit
SRP	Special Recreation Permit
UNR	University of Nevada, Reno
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WSA	Wilderness Study Area