

**Environmental Assessment
Constantia North and Constantia South Grazing Allotments
EA-NV-030-06-019
May 2006**

U.S. Department of the Interior
Bureau of Land Management
Carson City Field Office
5665 Morgan Mill Road
Carson City, NV 89701

I. INTRODUCTION/PURPOSE AND NEED

A. Introduction..... 4
B. Purpose and Need..... 4
C. Land Use Plan Conformance Statement..... 5

II. PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action – Cattle Grazing with Modified Management..... 5
B. No Action – Continue Cattle Grazing Under Existing Terms and Conditions..... 6
C. No Livestock Grazing Alternative.....6

III. AFFECTED ENVIRONMENT

A. Scoping and Issue Identification..... 6
B. Proposed Action..... 7
 1. General Setting..... 7
 2. Critical Elements of the Human Environment..... 7
 3. Resources Present But Not Affected (other than critical elements)..... 8
 4. Resources Present and Brought Forward for Analysis..... 9
C. No Action and No Grazing Alternatives..... 12

IV. ENVIRONMENTAL CONSEQUENCES

A. Proposed Action Cattle Grazing with Modified Management..... 12
 Range..... 12
 Vegetation..... 12
 Soils..... 13
 Wildlife/BLM Sensitive Species..... 13
B. No Action – Continue Cattle Grazing Under Existing Terms and Conditions..... 13
 Range..... 13
 Vegetation..... 14
 Soils..... 14
 Wildlife/BLM Sensitive Species..... 14
C. No Livestock Grazing Alternative..... 14
 Range..... 14
 Vegetation..... 14
 Soils..... 15
 Wildlife/BLM Sensitive Species..... 15
D. Cumulative Impacts..... 15
E. Monitoring..... 16

V. CONSULTATION AND COORDINATION

A. List of Preparers..... 16
B. Persons, Groups and/or Agencies Consulted 16

VI. APPENDICES AND/OR ATTACHMENTS

Appendix 1 -- Description of Monitoring Data..... 17
Appendix 2 -- Precipitation Data..... 18
Appendix 3 -- Riparian Assessments..... 19
Appendix 4 -- Actual Use Data..... 20
Appendix 5 -- Use Pattern Mapping Data..... 21
Appendix 6 -- Frequency Data..... 23
Appendix 7 -- Photo Trend Plot Data..... 24
Appendix 8 -- Standards and Guidelines..... 25

I. INTRODUCTION/PURPOSE AND NEED

A. Introduction

The Constantia North and Constantia South Grazing Allotments are located approximately thirty miles north of Reno, NV along Highway 395. Both allotments are within the Jurisdictional Boundary of the Carson City Field Office (CCFO) of the Bureau of Land Management (BLM). The grazing allotments are located in both Washoe County Nevada and Lassen County California and encompass approximately 25,556 acres (Map 1). There are BLM managed lands, private lands controlled by the base property owners and other private lands within these allotments. The BLM is currently considering the renewal of the term livestock grazing permits for these allotments.

This environmental assessment (EA) analyzes the environmental impacts associated with each of the livestock management alternatives currently being considered for the Constantia North and Constantia South Allotments. Management options presently under consideration include: 1) authorizing cattle grazing and modifying management; 2) authorizing cattle grazing and continuing with current management; and 3) not authorizing livestock grazing within the allotments at this time.

B. Purpose and Need

The proposed action is to authorize the issuance of Term Grazing Permits for the Constantia North and Constantia South Allotments consistent with the attainment of site specific objectives found in the Carson City Field Office (CCFO) Consolidated Resource Management Plan (CRMP), and implement livestock grazing practices that will ensure compliance with the approved Standards for Rangeland Health & Guidelines for Grazing Management (S&Gs), Sierra Front Northwestern Great Basin Area. Management of grazing will come through the issuance of grazing permits which will provide the parameters and guidelines for management of the range resources on the allotments. Proper management will result in improved range condition throughout the area.

These actions are needed at this time because:

- 1) The condition of natural resources on the allotments was evaluated in 2004 and grazing management needs to be updated at this time through fully processed grazing permits.
- 2) The BLM Managed Lands within the allotments were identified as available for livestock grazing in the CCFO CRMP, and continued livestock grazing is consistent with the goals, objectives, standards and guidelines identified in the CRMP.
- 3) Where consistent with other multiple use goals and objectives, there is a congressional intent to allow grazing on BLM Managed Lands. This is evidenced by the Taylor Grazing Act of 1934 (as amended), the Federal Land Policy and Management Act of 1975, the Public Rangelands Improvement Act of 1978, and the approved Standards and Guidelines of 2003, as well as various other federal laws and regulations.

C. **Land Use Plan Conformance Statement**

The proposed action and alternatives described in this document are in conformance with the Carson City Field Office-CRMP desired outcomes. For livestock grazing, these are found on page LSG-1 and are as follows:

1. Maintain or improve the condition of the public rangelands to enhance productivity for all rangeland and watershed values.
2. Initially, manage livestock use at existing levels.
3. Provide adequate, high quality forage for livestock by improving rangeland condition.
4. Improve overall range administration.

The Land Use Plan identified the lands within the Constantia North and Constantia South Allotments available for livestock grazing.

The following activity plan(s) apply to the geographic area of the proposed action and alternatives: Lassen/Washoe Habitat Management Plan (Revised 1988)

Additional Guidance: Standards and Guidelines (S&Gs) for Nevada's Sierra Front-Northwestern Great Basin Area (2003); Riparian – Wetland Initiative (1991).

II. **PROPOSED ACTION AND ALTERNATIVES**

A. **Proposed Action**

Constantia North

Issue a term grazing permit which would authorize 150 cattle to graze in the Constantia North Allotment from June 15th until September 15th for a total of 460 AUMs. BLM managed lands would provide 409 AUMs. The percent public land is 42% in California (33 AUMs) and 99% in Nevada (376 AUMs). A deferred grazing schedule would be implemented under this alternative. During odd numbered years livestock would graze west of Highway 395 from 6/15-6/30 and east of the Highway from 7/1-9/15. In even numbered years livestock would graze east of Highway 395 from 6/15-8/31 and west of the highway from 9/1-9/15. The purpose of the deferred grazing schedule is to ensure that the same portion of the allotment is not grazed at the same time each year.

Designate ten areas within the allotment as water haul areas.

Constantia South

Issue a term grazing permit which would authorize 206 cattle to graze in the Constantia South Allotment from April 15th to August 31st for a total of 941 AUMs annually. BLM managed lands would provide 650 AUMs. The percent public land for the allotment is 69%. A deferred grazing schedule would be implemented under this alternative. During even numbered years livestock would graze west of Highway 395. In odd numbered years livestock would graze east of Highway 395. The purpose of the deferred grazing schedule is to ensure that the same portion of the allotment is not grazed at the same time

each year. The Allotment Management Plan (AMP) dated 1998 would remain in effect with the exception of the portions of the plan that are modified by the Proposed Action.

Designate ten areas within the allotment as water haul areas.

B. No Action Alternative

Constantia North

Issue a term grazing permit which would authorize 108 cattle to graze in the Constantia North Allotment from May 1st until October 31st for a total of 654 AUMs. BLM managed lands would provide 605 AUMs.

Constantia South

Issue a term grazing permit which would authorize 142 cattle to graze in the Constantia South Allotment from April 1st to June 30th and August 15th to November 30th for a total of 929 AUMs annually. BLM managed lands would provide 641 AUMs. Grazing would be in accordance with the grazing system described in the Allotment Management Plan dated 1998.

C. No Grazing Alternative

Constantia North & South

Under the no grazing alternative, the BLM would not renew the term grazing permits for the Constantia North and South Allotments. No livestock would be authorized on BLM managed lands within the Allotments at this time.

III. AFFECTED ENVIRONMENT

A. SCOPING AND ISSUE IDENTIFICATION

On November 9, 2005, a scoping letter was sent to the interested public to identify those individuals and organizations interested in specific actions on specific Allotments under the jurisdiction of the CCFO. The purpose of this scoping letter was to gather information and determine who would be further interested in participating in actions pertinent to specific Allotments.

Standard operating procedures direct the BLM to supply the State Clearinghouse with a copy of this document for distribution amongst State Agencies. In addition, copies will be sent to the following entities:

Western Watersheds Project
Permittees of Record, Constantia North and Constantia South Allotments

Internal Scoping Also Identified the Following List of Groups to be Notified:

Norman Harry, Chair, Pyramid Lake Paiute Tribe
A. Brian Wallace, Chair, Washoe Tribe of Nevada & California
Harold Dixon, Chair, Wadatkuta Band of the Northern Paiute of the Honey Lake Valley

Stacy Dixon, Chair, Susanville Indian Rancheria
Ron Morales, Chair, Honey Lake Maidu
Jessica Jim, Chair, Pit River Tribe of California

B. PROPOSED ACTION

1. General Setting

The Constantia North and Constantia South Allotments are located approximately 30 miles north of Reno, Nevada along Highway 395. The grazing allotments straddle Highway 395 and are located in both Nevada and California. The Constantia North allotment includes portions of Fort Sage Mountain, Dry Valley, Long Valley and Seven Lakes Mountain. Constantia South includes portions of Long Valley and the Petersen Mountains. Elevations within the allotments range from approximately 4,600 feet in Long Valley to 6,200 feet in the Fort Sage Mountains and 7,000 feet along the spine of the Petersen Mountains. Major plant communities are low sagebrush (*Artemisia arbuscula*), Wyoming Sagebrush (*A. tridentata wyomingensis*), Basin Big Sagebrush (*A. tridentata tridentata*), and Juniper (*Juniperus osteosperma*) woodland.

2. Critical Elements of the Human Environment

The following critical elements are not present or would not be affected by the Proposed Action, or the Alternatives: Air Quality, Areas of Critical Environmental Concern, Environmental Justice, Prime or Unique Farmlands, Floodplains, Hazardous Materials, Migratory Birds, Native American Religious Concerns, Paleontology, Threatened or Endangered Animal Species, Threatened or Endangered Plant Species, Wild and Scenic Rivers, Wilderness.

For those critical elements that are present but were not brought forward for analysis, opting for either the proposed action or alternatives would not affect these resources. Explanations as to why are as follows.

Cultural Resources

All projects with the potential to affect cultural resources are required to have a Class III cultural resource inventory conducted over the project area. Determinations of cultural resource eligibility and project effects will be made through consultation with the Nevada and California State Historic Preservation Offices. Any National Register eligible or listed properties within the project area will be either avoided or mitigated to a “No Adverse Effect” project determination pursuant to Section 106 of the National Historic Preservation Act.

Invasive/Nonnative Species

There are known locations of Scotch thistle (*Onopordum acanthium*) in Dry Valley (Constantia North Allotment) and south of Red Rock Creek (Constantia South Allotment). Musk Thistle (*Carduus Nutans*) and Perennial Pepperweed (*Lepidium latifolium*) are also present along Red Rock Creek. During the course of the field

work required to gather information for the Standards and Guidelines Assessment, no new sightings of noxious weeds were observed, and a population of Russian Knapweed (*Centaurea repens*) was successfully treated and removed.

Irrespective of livestock being or not being present within the allotment, the potential for the spread of noxious weeds would remain. Means by which this would occur are transport by wildlife, wind, and off road vehicles, as examples. However, under existing livestock and weed management the existing weed populations have not been expanding and some populations have decreased. This situation is not anticipated to change under any of the alternatives.

Water Quality

No class or designated waters are located within the grazing allotments. Therefore, only the descriptive water quality standards pertaining to all surface waters in Nevada and California apply to water resources on the allotments.

Water quality was not tested, but during the rangeland health evaluation and riparian assessments it appeared that significant impacts to water quality from livestock grazing were unlikely. There were no visual signs, odors, or other indications that water quality was being impaired by livestock grazing. This would not change under any of the alternatives.

Wetlands/Riparian

The riparian areas on these allotments that are located on public land include: 1) seeps and springs in the Fort Sage and Seven Lakes Mountains (Constantia North allotment); as well as 2) Red Rock Creek, two small portions of Long Valley Creek and seeps and springs in the Petersen Mountains (Constantia South allotment). The few riparian areas found on public land on the allotments have either been developed, protected, or are not very accessible to livestock and are in good condition. Based on the information from the riparian assessments in 2004, Standard #2 (Riparian/Wetlands) is being met for the riparian areas within the allotments. Because the standards and guidelines for riparian health are being met under current livestock management, and the majority of these areas are not accessible to livestock, the present riparian conditions are not anticipated to change under any of the alternatives.

3. Resources Present but not Affected (other than critical elements)

Bureau specialists have further determined that the following resources, although present in the project area, are not affected by the proposed action, or alternatives: Wild Horses. Opting for the proposed action, no action or no grazing alternative would not affect these resources. Explanations as to why are as follows.

Wild Horses

The northern tip of the Constantia North Allotment is within the Fort Sage Herd Area (HA). The HA is located on the Fort Sage Mountain and goes into the Susanville District on the California side of the mountain. The Susanville District has the lead responsibility for the Fort Sage horse herd. The Appropriate Management Level (AML) for wild horses within the Constantia North portion of the HA is 28 horses (336 AUMs). The AML for wild horses would not change under the proposed action or alternatives, nor would wild horses be impacted.

4. Resources Present and Brought Forward for Analysis

Range

The last permitted livestock use in the Constantia North Allotment was 108 cattle from May 1st till October 31st, for a total of 654 AUMs. BLM managed lands provided 605 AUMs. The pasture located west of highway 395 is small and contains both BLM managed and private base property lands. The pasture located east of highway 395 is much larger and provides the majority of the forage within the allotment. Large portions of Fort Sage and Seven Lakes Mountains are managed by the BLM whereas Dry Valley, which is the center of the pasture is private unfenced land with several owners.

In the past, when running full livestock numbers, the following issues associated with livestock grazing arose: 1) Much of the livestock use has occurred in Dry Valley on private land. Insufficient amounts of livestock water on adjacent BLM managed land contributed to these livestock distribution problems.; 2) Isolated overuse of bitterbrush occurred along Long Valley and in the foothills south of Dry Valley; and 3) Season long use on perennial grasses during the growing season resulted in overgrazing of key grass species near Long Valley Creek. Due to fluctuations in the livestock operation, actual livestock numbers in recent years have been less than the numbers of livestock indicated on the last grazing permit. Actual use records (Appendix 4) indicate that between 2001 and 2005, livestock use varied between no use and 135 AUMs from BLM managed land. The issues associated with full livestock numbers have not been noticeable in recent years at lower stocking levels.

Currently 142 cattle graze in the Constantia South Allotment from April 1st to June 30th and August 15th to November 30th for a total of 929 AUMs annually. BLM managed lands provide 641 AUMs. A deferred, rest, rotation grazing system was recommended for implementation in 1998 and described in an Allotment Management Plan (AMP). However, actual use data indicates the plan as described in the AMP was never fully implemented. Use has fluctuated between 154 and 562 AUMs from BLM managed lands annually and use has alternated every other year between the areas west and east of highway 395. Management changes were recommended in the AMP to address the following issues: 1) The need to limit use of bitterbrush by livestock to ensure the availability of browse for deer populations.;

and 2) the need for a deferred grazing schedule to ensure a continued upward vegetative trend. Although the AMP was not fully implemented, use of bitterbrush by livestock was reduced and upward vegetative trends have continued under the current management.

Vegetation

Vegetation communities range from low sagebrush (*Artemisia arbuscula*), Wyoming sagebrush (*A. tridentata wyomingensis*), to Basin Big Sagebrush (*A. tridentata tridentata*) with a mix of bitterbrush (*Purshia tridentata*), desert peach (*Prunus andersonii*) and other associated shrubs. These areas have a good understory of perennial grasses. Grasses include Bluebunch wheatgrass (*Agropyron spicatum*), needlegrass species (*Stipa spp.*), Basin Wildrye (*Elymus cinereus*), Indian ricegrass (*Oryzopsis hymenoides*), squirreltail (*Sitanion hystrix*) and bluegrass species (*Poa spp.*).

Juniper (*Juniperus osteosperma*) woodland covers a portion of the allotments. Understory species are lacking in areas due to the high density of trees. Jeffrey pine (*Pinus jeffreyi*) is found in the western portions of the allotments along the base of the sierras and in isolated locations in the Seven Lakes and Peterson Mountains. Mountain Mahogany (*Cercocarpus ledifolius*) is found at high elevations in the Petersons.

Plant communities are generally healthy and a mosaic of plant communities is still present on the landscape. There is a good representation of life forms and numbers of species in the area. Within the plant communities there is a good diversity of plant height, size, and distribution. In addition the number of wood stalks, seed stalks and seed production are adequate for stand maintenance. The standards for plant habitat have been met (Appendix 8).

Frequency data indicated that the percentages for both perennial shrub and grass species in the Constantia North Allotment are low or decreased between 1997 and 2003. The percentage of sagebrush decreased slightly but the change was not statistically significant at the 95% confidence interval. The frequency of both bluegrass and needlegrass were below ten percent and the frequency of squirreltail dropped by 26% at the sample area (Appendix 6).

In contrast, frequency data for the Constantia South Allotment indicates the percentages of bluegrass, squirreltail and sagebrush increased between 1993 and 2003 (Appendix 6).

The photo plots indicate the trends within plant communities in both the Constantia North and South Allotments have been upward (Appendix 7). Cover of perennial plants have increased in the plots through time.

Soils

The Allotments have a variety of soil types present. Soil descriptions for lands within the allotments can be found in the Lassen and Central Washoe County Soil

Surveys, published by the Soil Conservation Service (SCS). The SCS is now the Natural Resource Conservation Service (NRCS).

At all of the photo trend plots (Appendix 7) soils have been stable since the plots were established. There has been little evidence of soil movement such as rills, pedestalling, or soil deposition. Stable soils are a management goal because the loss of soil can degrade a site's ability to provide an adequate seedbed and slow water infiltration rates.

Consistent with management goals, vegetative litter has been accumulating and a fair amount of litter has remained in place. Litter is the raw material for onsite nutrient cycling and also helps moderate the soil micro climate. The amount of litter present is also a factor in increasing a site's ability to resist soil erosion. The litter helps dissipate energy from raindrops and overland water flows.

The standards for soils and the guidelines for livestock grazing are being met within these allotments (Appendix 8).

Wildlife/BLM Sensitive Species

The Constantia Allotment contains winter range for the Lassen-Washoe Interstate Deer Herd, and also has some resident mule deer. Wildlife habitat looks good on the allotment, with adequate forage, hiding and thermal cover for all species. Bitterbrush, which is a critical species for big game, is in very good condition, with recruitment occurring. Habitat for bird species and small mammals is also in good condition.

Wildlife movement is somewhat restricted on the allotment by the presence of Highway 395, and ancillary roads. Recreational use is also on the increase in this area.

The western sage grouse (*Centrocercus urophasianus*) is a Nevada BLM sensitive species that occurs on the allotment only rarely. Although the extreme southeast portion of the Constantia South allotment is included in a NDOW Sage Grouse PMU, the bird is not known to occupy this area on a regular basis. There are no known leks or nesting areas on the allotment. The only known use by the birds is infrequently during the winter months.

Mountain quail (*Oreortyx pictus*) are also a BLM sensitive species and occur on the allotment year round. A mosaic of plant communities suitable for mountain quail is present on the allotment. Habitat areas within the allotment are adequate to support viable populations of these birds. Encroachment by juniper on areas of sagebrush and mountain brush communities is occurring, which can impact some areas of habitat for mountain quail, making it less suitable.

No other special status species are known to occur on these allotments.

C. No Action and No Livestock Grazing Alternatives

The description of the affected environment for these alternatives would be the same as that for the proposed action.

IV. ENVIRONMENTAL CONSEQUENCES**A. Proposed Action Cattle Grazing with Modified Management****Range**

Under the proposed action the livestock grazing season of use in the Constantia North allotment would be shortened by three months. The amount of forage harvested by livestock on BLM managed lands would be decreased by a 196 AUMs and a deferred grazing schedule would be implemented. The purpose of changing the grazing season is to remove early spring and late fall grazing when access to BLM managed lands at higher elevations is restricted due to weather. Shortening the grazing season and authorizing the use of ten water haul sites would encourage livestock use on BLM managed lands rather than adjacent unfenced private lands.

Under the proposed action the livestock grazing season of use in the Constantia South allotment would be consolidated into a single continuous season. Permitted livestock use would increase by nine AUMs due to the changes in the season of use. A simplified deferred grazing schedule which more accurately reflects actual use would be implemented and the use of ten water haul sites would also be authorized to improve livestock distribution.

Vegetation

In the Constantia North allotment, the shortened grazing season, the reduced number of permitted AUMs and the deferred grazing schedule would promote the vigor of perennial grasses and shrubs. By starting livestock grazing a month and a half later in the spring, perennial grasses would have a chance to break dormancy and recharge root reserves before the livestock grazing begins. Removing livestock grazing a month and a half earlier in the fall also reduces grazing pressure on perennial shrub species, especially bitterbrush. Under the proposed action, it is anticipated that the isolated overutilization of some perennial grass and shrub species as described in this EA would no longer occur due to changes in the grazing season, the number of AUMs harvested, and the use of water haul sites to improve livestock distribution. The frequency of key perennial plant species is expected to increase and the upward trend in plant communities is expected to continue.

In the Constantia South allotment, the consolidated grazing season is expected to reduce livestock use on shrub species and increase use on grass species. Cattle typically tend to use shrub species in the fall/winter and grasses in the spring/summer. However, even with the shift in livestock diet, the upward trend in perennial plant communities and increasing frequency of key perennial plant species is expected to continue. The change in the season of use, and the authorization of the use of water haul sites, is expected to reduce isolated overutilization of bitterbrush. The modified deferred grazing schedule closely reflects recent actual use within the allotment and is expected to promote plant community health.

The proposed water haul locations would result in the disturbance of approximately two and a half acres of upland vegetation within each allotment. Cattle tend to congregate around water sources and this results in the trampling of vegetation near the water source. The careful placement of water haul sites would redistribute livestock use, and any localized increase in use of these small areas would be more than offset by the improvement brought about by improved distribution.

Soils

Under the proposed action livestock use in the Constantia North allotment would be reduced and redistributed. The proposed grazing system in the Constantia South Allotment is similar to the grazing use that has occurred during the past eight years. Observations made at photo and frequency plot locations indicated soils within both allotments are stable (Appendix 6-7). The standards for soils and the guidelines for livestock grazing are being met under the current grazing systems. Thus, there are no changes to soils anticipated under either of the proposed livestock grazing systems.

Depending upon the time of year and the type of soil, soil compaction can occur in areas where livestock congregate such as around water sources. Under the proposed action soil compaction may increase slightly in very limited areas due to concentrations of cattle near the proposed water haul sites. Soil compaction is expected to increase at the water haul locations, but decrease at other locations within the allotments especially near existing water sources.

Wildlife/BLM Sensitive Species

The proposed action should improve habitat conditions throughout the allotments. Either shortening or modifying the grazing seasons as proposed, along with an increased number of water haul sites, will reduce forage use overall, and will better distribute the utilization that is present. Both perennial grasses and shrub species will continue to reproduce and grow, and cover for various wildlife species will improve.

Particularly on Constantia North, the amount of forage removed will be reduced and the season of use will be changed to eliminate early and late season grazing. This will reduce the amount of use on mountain brush species, which will provide for even better growth and plant health in this community.

B. No Action Alternative - Issue Term Grazing Permits with the Same Terms and Conditions

Range

Assuming 108 cattle are permitted in the Constantia North allotment from May 1st till October 31st, under the no action alternative livestock congregation on unfenced private lands in Dry Valley is expected to continue when the allotment is fully stocked.

Assuming 142 cattle graze in the Constantia South Allotment from April 1st to June 30th and August 15th to November 30th and the deferred, rest rotation grazing system described in the 1998 AMP is fully implemented, isolated areas of livestock overuse of perennial plant species

would not occur. However, the system described in the AMP is complex and labor intensive and is unlikely to be fully implemented.

Vegetation

In the Constantia North allotment when grazing at fully licensed livestock numbers it is anticipated that isolated overuse of bitterbrush and perennial grasses is expected to occur. Under these circumstances decreased key perennial plant vigor and frequency is anticipated within areas of overuse if overuse is consistently repeated season after season.

In the Constantia South Allotment if the AMP were fully implemented the use of bitterbrush by livestock would be reduced and upward vegetative trends would continue.

Soils

Depending upon the time of year and the type of soil, soil compaction can occur in areas where livestock congregate such as around water sources. Under the no action alternative soil compaction around existing water sources would remain the same in both allotments. Soil compaction by livestock is typically limited to areas where animals congregate.

Wildlife/BLM Sensitive Species

The no action alternative would continue livestock grazing at the current levels and under the current management systems. Wildlife habitat is adequate on the allotments at this time, and would continue to be so. However, continuing with the current management would not allow for the improvement in habitat that is anticipated under the proposed alternative. Grazing would continue earlier and later in the season than proposed, which would slow down the improvement in the mountain brush community. Basically, wildlife habitat conditions would continue the same as they are now, which is not bad, but not as good as they could be.

C. No Livestock Grazing Alternative

Range

Under the no grazing alternative no livestock would be authorized in the Constantia North or South Allotments at this time.

Under this alternative, there would be no livestock grazing on the allotment and no permittee presence in the area. Any existing range improvements such as water developments or fences would no longer be maintained, and would fall into disrepair. Auxiliary water sources used by wildlife in the area would no longer function, and the lack of good fences could result in trespass livestock coming into the area from surrounding lands. There would be no new water haul locations designated or utilized.

Vegetation

Under the no grazing alternative, vegetation would not be impacted by livestock grazing. The amount of above ground biomass would continue to increase. However, without disturbance the trend of plant communities becoming dominated by woody species would be expected to continue along with the upward trends. Forage species on some areas of the allotment would

reach an over mature stage of growth and the vigor of the plants would suffer. Some species of bunch grasses would become decadent with dead crown centers.

Soils

Under the no grazing alternative no soil disturbance or compaction would occur due to livestock. Under the no grazing alternative no water haul locations would be added and there would be no impacts to soils.

Wildlife/BLM Sensitive Species

With no livestock grazing on the allotment, conditions for wildlife would continue to improve. The actual rate of improvement might be a bit faster than that under the proposed alternative, although in reality, with the current condition of the habitat, and the limited amount of improvement possible, the difference would likely be small. The bunch grasses would continue to mature and reproduce, providing good ground cover for wildlife. The condition of the bitterbrush community and related species would continue to be good.

If livestock are removed however, maintenance of range improvements in the area will likely cease. Water developments that tend to help wildlife as well as livestock would become defunct. Fences would not be maintained, and trespass livestock from surrounding public and private lands could become a problem. There would not be as much of a presence on the allotment, either by the permittee, or BLM personnel. BLM range personnel spend more time in the area than other program people, and they would simply not have the time or resources to spend much time or effort on an unstocked allotment.

D. Cumulative Impacts

All resource values have been evaluated for cumulative impacts for past, present, or reasonably foreseeable future actions. It has been determined that cumulative impacts would be negligible as a result of the proposed action.

The issuance of the term grazing permits for the Constantia North and Constantia South Allotments is a specific action, and would cause no known cumulative impact to the environment when considered in combination with any known or anticipated actions on these or adjacent lands in the past, present or reasonably foreseeable future. Any effects of the grazing levels proposed would be limited to the project areas. Grazing at or below moderate utilization levels has not been shown to be injurious to plant or animal species in the area. The effects of grazing, along with associated activities in the management of these allotments such as the maintenance or use of range improvements, would be limited to the immediate area of the allotment. They would not combine with any known or reasonably foreseeable activities on these or adjacent lands to produce any detrimental cumulative impacts in the area.

E. Monitoring

Monitoring would continue as it has before for the Allotments. This includes the reading frequency studies, performing use pattern mapping, gathering utilization data at key areas, monitoring riparian areas, etc., where applicable and as resources allow.

V. CONSULTATION AND COORDINATION

A. List of Preparers

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Walt Devaurs	Wildlife/Threatened, Endangered, Sensitive Species
Susan McCabe	Archaeologist
James DeLaureal	Soil Scientist/Noxious Weeds
Jim Schroeder	Lead Hydrologist
Terry Knight	Lead Recreation/Wilderness Specialist
Terri Knutson	Environmental Coordinator
Jim Gianola	Lead Wild Horse Specialist

B. Persons, Groups and/or Agencies Consulted

Western Watersheds Project
Norman Harry, Chair, Pyramid Lake Paiute Tribe
A. Brian Wallace, Chair, Washoe Tribe of Nevada & California
Harold Dixon, Chair, Wadatkuta Band of the Northern Paiute of the Honey Lake Valley
Stacy Dixon, Chair, Susanville Indian Rancheria
Ron Morales, Chair, Honey Lake Maidu
Jessica Jim, Chair, Pit River Tribe of California
Nevada State Clearing House/State Agencies
Permittees of Record, Constantia North and Constantia South Allotments

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Appendix 8 - Standards for Rangeland Health and Guidelines for Grazing Management

Appendix 1 - Description of Monitoring Data

Monitoring is used to quantify effects of management and environmental variation at a location through time. Short term monitoring can be used to describe items such as how ecological processes are functioning and the nature of livestock grazing. Preliminary evaluations of soil stability, hydrologic function, and the integrity of the biologic community are described with observations of weather, soil and vegetation. The nature of livestock grazing is described using actual livestock use records and observations of the amount of plant production utilized by livestock. Monitoring can also be long term. Monitoring techniques such as frequency transects, and photo trend plots are utilized to monitor the long term trend. Trend is a determination of the direction of change in the current plant community and associated soils in relation to management goals. Monitoring data for the Constantia North and Constantia South Allotments includes weather data from the Doyle, CA station (Appendix 2), riparian assessments (Appendix 3), actual use records (Appendix 4), use pattern mapping (Appendix 5), frequency transects (Appendix 6), photo plots (Appendix 7), and standards and guidelines (Appendix 8).

Plant species that are selected for monitoring are called key species. Some of the factors that are considered when selecting key species include selecting species that are abundant, species that are important to wildlife, species that are critical to the attainment of specific management goals, and species that are palatable to livestock, wildlife and wild horses. Herbivores graze selectively, and can under certain grazing conditions suppress favored species of plants and bolster competitors that are less desirable.

Appendix 2 - Precipitation Data

The annual precipitation shown in Figure 1 is from Doyle, California (Station Doyle 4 SSE) which is the closest weather station with consistent and reliable data. The 48-year mean precipitation for the Doyle 4 SSE, CA Recording Station (4,390 feet above sea level) is 16.9 inches. The elevation of the Doyle 4 SSE weather station is close to the lowest portion of the allotments and the station is located 10 miles north of the allotments. Although the total amount of precipitation received in the allotments would not match the amount of precipitation received at the weather station, data from the weather station is presented to document cyclic patterns in annual precipitation amounts. The precipitation data is useful in relating wet and dry precipitation cycles to actual use and utilization data. The precipitation data is also useful in determining what time of year precipitation was received. Annual precipitation for the Doyle 4 SSE Recording Station is presented in Figure 1. The average monthly precipitation is shown in Figure 2. Elevations within the Constantia North and Constantia South Allotment range from approximately 4,360 feet along Long Valley to 7,100 foot on a peak within the Petersen Mountain Range. The heaviest amounts of precipitation occur during the winter months in the form of snow.

Appendix 2 - Precipitation Data - Constantia North and Constantia South Allotments

Figure 1 - Annual Precipitation

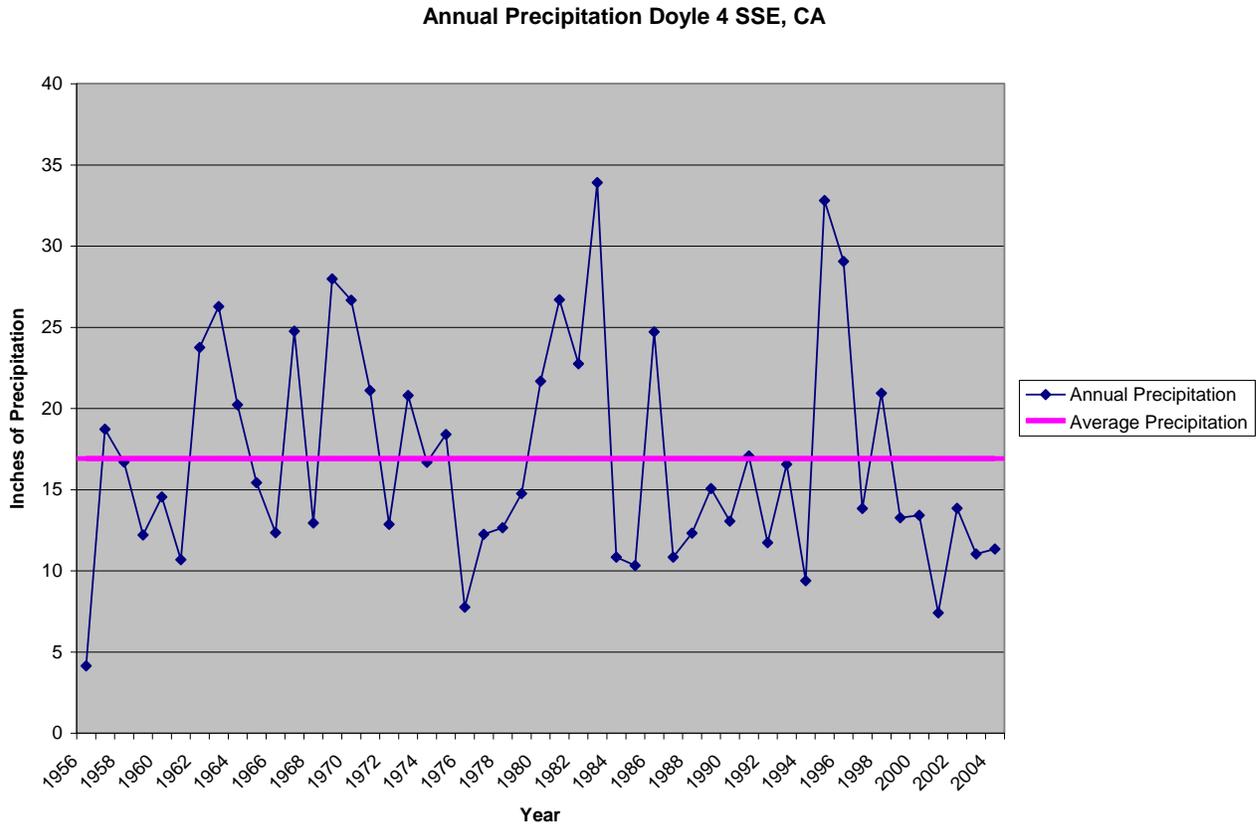
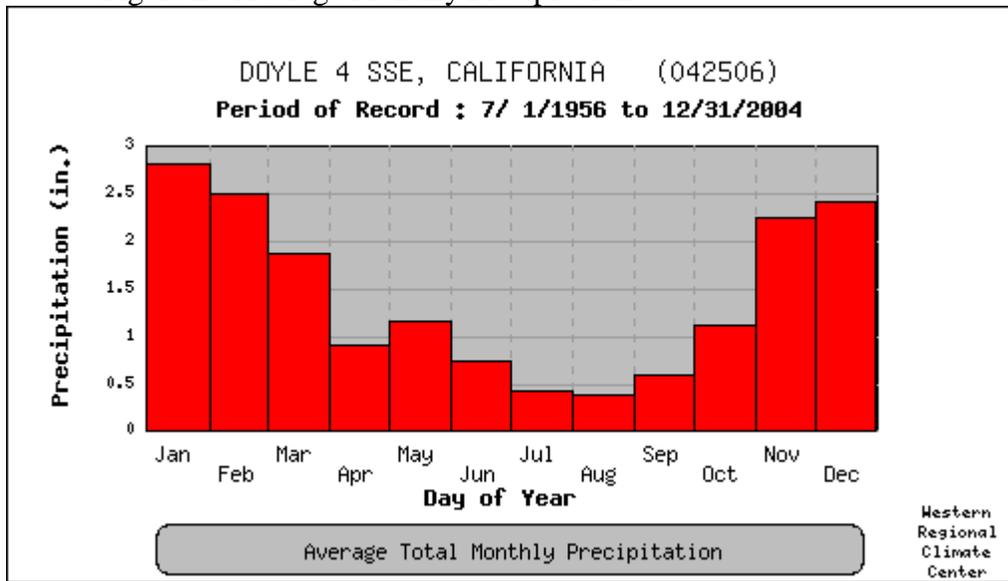


Figure 2 - Average Monthly Precipitation



Appendix 3 - Riparian Assessments Constantia North and Constantia South Allotments

Based on the information from the riparian assessments completed in 2004, Standard #2 (Riparian/Wetlands) is being met for the riparian areas within the allotments. The riparian areas that are located on public land are Red Rock Creek, two small portions of Long Valley Creek and several small springs. Red Rock Creek parallels the boundary between Constantia North and Constantia South. There is an existing exclosure on a portion of Red Rock Creek that was built to protect riparian habitat in the 1990's. Red Rock creek was rated at Proper Functioning Condition in 1994 and functional at Risk with an upward trend in 2004. The creek was rated at risk due to the presence of weeds in the watershed and because the creek is confined by the Red Rock Road and receives heavy sediment loads. The two small portions of Long Valley Creek that are found on public land are fenced within private pastures. The condition of these portions of Long Valley Creek (40 acres) has been improving due to changes in the overall watershed management. The springs found on public land within the allotment have either been developed, protected or are not very accessible to livestock and are in good condition. All of the springs assessed in 2004 were rated in proper functioning condition.

The methods used for the assessments are described in A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas (Technical Reference 1737-15) and Lentic Areas (Technical Reference 1737-16). Standards listed in the Riparian Wetland Initiative for the 1990's were utilized for the 1994 classification of areas as riparian habitat.

Assessment Results 2004	Trend	Area Assessed Lentic	Area Assessed Lotic
Proper Functioning Condition	---	2.7 Acres	--
Functional at Risk	Up	--	1.50 Miles
Functional at Risk	Down	--	--
Functional at Risk	Not Apparent	--	--

Appendix 4 - Actual Use Data for livestock – Constantia North and Constantia South Allotments**Constantia North (Permitted Use 605 Animal Unit Months (AUMs) BLM)**

Public Land CA 42% NV 99%

Grazing Year	Period of Use	Livestock Number and Type	Animal Unit Months (AUMs) from BLM Managed Lands
2005	No Use	No Use	No Use
2004	06/05/04-07/01/04	45 Cattle	40*
2003	06/01/03-06/30/03	30 Cattle	12
2002	06/01/02-07/10/02	95 Cattle	135
2001	06/01/01-06/28/01	100 Cattle	91
2000	05/01/00-10/31/00	108 Cattle	605*
1999	05/01/99-10/31/99	108 Cattle	605*
1998	05/01/98-10/31/98	108 Cattle	605*
1997	05/01/97-10/31/97	108 Cattle	605*
1996	05/01/96-10/31/96	108 Cattle	605*
1995	05/01/95-10/31/95	108 Cattle	605*

*No actual use data was received for these years. The data was obtained from billed use for those years.

Constantia South (Permitted Use 641 AUMs BLM)

Public Land 69%

Grazing Year	Period of Use	Livestock Numbers and Type	Animal Unit Months (AUMs) from BLM Managed Lands
2005	04/02/05-07/12/05	156 Cattle	342
2004	04/03/04-06/28/04	156 Cattle	194
2003	04/04/03-08/28/03	126 Cattle	416
2002	04/13/02-06/29/02	145 Cattle	251
2001	04/12/01-05/28/01	154 Cattle	154
2000	04/16/00-12/06/00	154 Cattle	562
1999	05/27/99-12/01/99	235 Cattle	475
1998	04/01/98-11/30/98	151 Cattle	642
1997	11/0/97-12/13/97	278 Cattle	135
1996	12/12/95-02/28/96	477 Cattle	387
1995	11/22/94-03/05/95	353 Cattle	554

Appendix 5 - Use Pattern Mapping Data Constantia North and Constantia South Allotments (Page 1 of 2)

The following observations are taken from use pattern mapping data that was collected between 1995 and 2002.

Constantia North Allotment (East 395 Pasture) - Summer/Fall Use 1994

Use in the upland areas of the pasture was in the slight to light category. Some moderate use of bitterbrush (*Purshia tridentata*) occurred in the upland areas. The areas around the private land in Dry Valley were in the moderate category, with use on bitterbrush being in the heavy category. There were no areas of severe use.

Constantia North Allotment (East 395 Pasture) - Summer/Fall Use 1995

Use in the East 395 pasture was in the slight to light category throughout most of the pasture with the exception of some moderate use on bitterbrush in those same areas. There was an area of moderate to heavy use on the far west side of the pasture, mostly on bitterbrush. There was also an area of heavy use along an area adjacent to Dry Valley where water must have been present.

Constantia North Allotment (East 395 Pasture) - Summer Use 1997

Use in this pasture was in the slight to light category in the uplands and in the moderate category in the lower elevations. Use was heavy on bitterbrush in the lower elevations and use was heavy directly adjacent to watering areas.

Constantia North Allotment (East 395 Pasture) - Summer Use 1998

Use in this pasture was in the slight to light category in the uplands and in the moderate category in the lower elevations. Use on bitterbrush in the lower elevations was in the heavy category and areas directly adjacent to water were in the moderate to heavy category.

Constantia North Allotment (West 395 Pasture) – Summer/Fall Use 1999

Use in this pasture was in the light to moderate category throughout the pasture.

Constantia North Allotment (East 395 Pasture) – Summer Use 2001

Use in the southern part of this pasture was in the moderate to heavy category, especially around water. Use on bitterbrush was in the heavy category. Use on the uplands was in the slight to light category.

Constantia South Allotment (West & East 395 Pastures) - Winter Use 1994-95

The use in the south end of the West 395 pasture (previously pasture 4) was in the slight to light category in the northern part of the pasture and in the western one third of the pasture. There was also slight use on a part of the eastern portion of the pasture. The rest of the pasture was in the moderate to heavy category of use. Crested wheat and Thurber's needlegrass (*Stipa thurberiana*) were the most heavily utilized in these areas. The use in the East 395 pasture was in the slight to light category in the upland areas and in the moderate to heavy category in the lower elevations and around watering areas. Use was heaviest on Thurber's needlegrass.

Appendix 5 - Use Pattern Mapping Data Constantia North and Constantia South Allotments (Page 2 of 2)

Constantia South Allotment (West & East 395 Pastures) – Winter Use 1995-96

The use at the south end of the West 395 pasture (previously pasture 4) was in the slight category except for a small area of light use in the far northern part of the pasture. The use in the East 395 pasture was in the slight to light category except for areas directly adjacent to watering sites, which were in the moderate to heavy category.

Constantia Allotments – Summer and Winter Use 1996-97

No use pattern maps were done on any of the pastures for this time period.

Constantia South Allotment (West 395 Pasture) - Summer Use 1997

Use in the southern portion of the West 395 pasture (previously pasture 4) was in the slight to light category. Use was in the moderate category directly adjacent to water within this pasture.

Constantia South Allotment (West and East 395 Pastures) – Summer/Fall Use 1999

Use in the northern portion of the West 395 pasture (previously pasture 3) was mostly in the slight to light category of use except for being in the moderate to heavy range where water occurred on the pasture. These areas are mostly in the southern part of the pasture. Use in the East 395 pasture was in the slight to light category except in the crested wheat seeding, which was in the moderate category.

Constantia South Allotment (West and East 395 Pastures) – Spring/Summer/Fall Use 2000

Use in the southern portion of the West 395 pasture (previously pasture 4) was in the slight to light category throughout the pasture. Use in the East 395 pasture was mostly in the slight to light use except in the seeding area and by water, where use was in the moderate category.

Appendix 6 - Key Area Frequency Data Constantia North and Constantia South Allotments

Information on frequency data has been collected on the Constantia Allotments at different key areas throughout the allotments. There are two range key areas with frequency studies on the allotments. One of the key areas was established in 1982 and one was established in 1997. There are also five wildlife key areas with frequency data on the allotments as well. Two of these sites were established in 1972, one was established in 1979 and two were established in 1982. The wildlife key areas have not had frequency studies done on them since 1993. They will not be used in this evaluation.

A total of 200 presence or absence frames are read per location. All values were compared to the Baseline Data collected in the first year of establishment of the studies. Bolded values indicate a significant difference at (P>0.05). ND indicates no data was collected.

Range frequency data are as follows:

Key Area C002: A 40-inch frame size was used for all perennial plant species. This key area has 20 transects with 10 quadrats per transect. This key area is located in **Constantia South**.

Key Area C002:	POSE	STTH2	SIHY	ARTRW
08/07/87	34%	7.5%*	17.5%	1.5%*
06/30/93	15.5%	7.5%*	57%	4.0%*
08/14/03	25%	10%	67%	26.5%

Key Area C003: A 40-inch frame size was used for all perennial plant species. This key area has 20 transects with 10 quadrats per transect. This key area is located in **Constantia North**.

Key Area C003:	POSE	STTH2	SIHY	PUTR	ARTRW
06/10/97	0%*	0.5%*	64.5%	6.5%*	34.5%
08/13/03	7.5%*	1%*	38%	2.5%*	27%

* As identified on page 29 of the Nevada Rangeland Monitoring Handbook (September of 1984), as a rule of thumb, it is expected that all frequency percentages for important species should fall between 10 and 90 percent or, if possible, between 20 and 80 percent. This will provide the greatest possible chance of detecting an important trend for a species when the plot is read again. It has been shown that when initial frequency percentages are relatively high, say between 60 and 80 percent, smaller vegetation changes can be measured with statistical significance.

Appendix 7 - Photo Trend Plots Constantia North and Constantia South Allotments

Three photo trend plots were established in the Constantia Allotments, one in Constantia North and two in Constantia South. These plots were established in August of 1975. These studies were read in 1975, 1979, 1993 and 2003.

Plot One is located east of highway 395 in the southern portion of the pasture (Constantia South). When the plot was first established, the area was in early seral condition. The species within the area were bottlebrush squirreltail, crested wheatgrass, Indian ricegrass, Thurber's needlegrass, bluebunch wheatgrass, cheatgrass, lupine, green rabbitbrush, smooth horsebrush, and Wyoming big sagebrush. This area burned before the study was put in place. The plot did not change much between the first study in 1975 and the next study in 1979. When the study was reread in 1993, there was quite a bit of change. The green rabbitbrush decreased and Wyoming sagebrush increased in the area. The cheatgrass and bottlebrush squirreltail had both decreased. The Thurber's needlegrass and crested wheatgrass both increased in the area. The area improved even more between 1993 and 2003, when the study was read again. Wyoming sagebrush increased quite a bit in the area. The grasses were vigorous, though there were some with dead centers, indicating a lack of grazing for several years. The area has good litter cover and there is no sign of any erosion taking place. Overall, the site is in an upward trend.

Plot Two is located east of highway 395 in the northern portion of the pasture (Constantia South). When the plot was first established, the area was in early seral condition. The species within the area were bottlebrush squirreltail, Thurber's needlegrass, bluegrass, Great Basin wildrye, cheatgrass, tapertip hawksbeard, antelope bitterbrush, Wyoming big sagebrush, green rabbitbrush, desert peach, and juniper. There was not much change between the first study in 1975 and the next study in 1979. This area burned in 1985. In 1993, the species present were Thurber's needlegrass, bottlebrush squirreltail, bluegrass, cheatgrass, tapertip hawksbeard, green rabbitbrush, Wyoming big sagebrush and juniper. When the study was completed again in 2003 the species present were bluegrass, Thurber's needlegrass, tapertip hawksbeard, Astragalus, Wyoming big sagebrush, juniper and some desert peach. The area has good litter cover. There is some erosion in the form of grasses that have pedestalling occurring. Overall the site is in an upward trend.

Plot Three is located east of highway 395 in the central portion of the pasture (Constantia North). When the plot was first established, the area was in early seral condition. The species within the area were Thurber's needlegrass, bottlebrush squirreltail, bluegrass, cheatgrass, bitterbrush, Wyoming big sagebrush, green rabbitbrush, gray rabbitbrush, smooth horsebrush, desert peach and juniper. There was not much change between the first study in 1975 and the next study in 1979. In 1993 and 2003, the same species were present as in 1979. There were more grass plants in the area and there were quite a few more shrubs in the area. There were no signs of erosion. Overall the site is in an upward trend.

Appendix 8 - Standards and Guidelines for Nevada's Sierra Front-Northwestern Great Basin Area (Page 1 of 1).

Interdisciplinary teams made up of various resource specialists completed an S & G Assessment for the Constantia North and Constantia South Allotments in 2004. The Assessment considered impacts on a wide variety of resources, and the relationship of grazing as to meeting or making progress towards meeting the S&G's described below. The analysis determined that the standards for rangeland health are being met and conforming with guidelines for livestock grazing management.

Standards for Rangeland Health

Soils: Soil processes will be appropriate to soil types, climate and land form as indicated by: 1) Surface litter is appropriate to the potential of the site; 2) Soil crusting formation in shrub interspaces, and soil compaction are minimal or not in evidence, allowing for appropriate infiltration of water; 3) Hydrologic cycle, nutrient cycle and energy flow are adequate for the vegetative communities; 4) Plant communities are diverse and vigorous and there is evidence of recruitment; and 5) Basal and canopy cover (vegetative) is appropriate for site potential.

Riparian/Wetlands: Riparian/wetland systems are in proper functioning condition as indicated by: 1) Sinuosity, width/depth ratio and gradient are adequate to dissipate stream flow without excessive erosion or deposition; 2) Riparian vegetation is adequate to dissipate high flow energy and protect banks from excessive erosion; and 3) Plant species diversity is appropriate to riparian-wetland systems.

Water Quality: Water quality criteria in Nevada and California State Law shall be achieved or maintained as indicated by: 1) Chemical constituents do not exceed the water quality standards; 2) Physical constituents do not exceed the water quality standards; 3) Biological constituents do not exceed the water quality standards; and 4) The water quality of all water bodies, including ground water located on or influenced by BLM lands will meet or exceed the applicable Nevada or California water quality standards. Water quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and anti-degradation requirements as set forth under State law, and as found in Section 303(c) of the Clean Water Act.

Plant and Animal Habitat: Populations and communities of native plant species and habitats for native animal species are healthy, productive and diverse as indicated by: 1) Good representation of life forms and numbers of species; 2) Good diversity of height, size, and distribution of plants; 3) Number of wood stalks, seed stalks, and seed production adequate for stand maintenance; and 4) Vegetative mosaic, vegetative corridors for wildlife, and minimal habitat fragmentation.

Special Species Habitat: Habitat conditions meet the life cycle requirements of special status species as indicated by: 1) Habitat areas are large enough to support viable populations of special status species; 2) Special status plant and animal numbers and ages appear to ensure stable populations; 3) Good diversity of height, size, and distribution of plants; 4) Number of wood stalks, seed stalks, and seed production adequate for stand maintenance; and 5) Vegetative mosaic, vegetative corridors for wildlife, and minimal habitat fragmentation.

