

**U.S. Department of the Interior
Bureau of Land Management**

**Environmental Assessment
DOI-BLM-NV-L010-2010-0008-EA
March 2010**

**Term Grazing Permit 2704506 Renewal on the Silverado (00623)
Grazing Allotment**

Location: White Pine County, Nevada

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Bureau of Land Management
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1.0 Introduction: Need for Action

This document identifies issues, analyzes alternatives, and discloses the potential environmental impacts associated with the proposed term grazing permit 2704506 renewal on the Silverado (00623) Allotment. The project area is situated approximately 10 to 15 miles southeast of Eureka, Nevada and is entirely within White Pine County, Nevada (see Figure 1, Appendix I). The Silverado Allotment borders Eureka County, Nevada to the west.

1.0.1 Background

Current livestock management practices were carried forward in the Livestock Grazing Permit Renewal Environmental Assessment dated November 29, 2000 (NV-010-01-018).

1.1 Introduction of the Proposed Action.

The Bureau of Land Management (BLM), Egan Field Office proposes to issue and fully process the term grazing permit 2704506 to authorize grazing on the Silverado Allotment. Changes to the existing permit are recommended to achieve the Standards and Guidelines for Nevada's Northeastern Great Basin Area as established by the Nevada Northeastern Great Basin Resource Advisory Council (RAC), approved 1997.

Monitoring data were reviewed and an assessment of the rangeland health for the Silverado Allotment was completed in 2010 during the term permit renewal process through a Standards Determination Document (SDD; see Appendix II).

The allotment is meeting Standard 1—Upland Sites; Standard 2—Riparian and Wetland Sites—is not applicable to this project; The allotment is not meeting or making significant progress towards Standard 3—Habitat—however livestock grazing is not a significant contributing factor to this non-attainment. The causal factor is most likely due to altered natural disturbance regimes, past historic overgrazing, and/or variable precipitation.

Definitions per the BLM Manual H-4180-1 – Rangeland Health Standards (1/19/01):

Significant Progress: Movement toward meeting standards and conforming to guidelines that is acceptable in terms of rate and magnitude. Acceptable levels of rate and magnitude must be realistic in terms of the capability of the resource, but must also be as expeditious and effective as practical.

Significant Factor: Principal causal factor in the failure to achieve the land health standard(s) and conform with the guidelines. A significant factor would typically be a use that, if modified, would enable an area to achieve or make significant progress toward achieving the land health standard(s). To be a significant factor, a use may be one of several causal factors contributing to less-than-healthy conditions; it need not be the sole causal factor inhibiting progress towards the standards.

1.2 Need for the Proposed Action.

The need for the proposal is to provide for legitimate multiple uses of the public lands by renewing this term grazing permit with new terms and conditions for grazing use that conform to guidelines and achieve standards for Nevada's Northeastern Great Basin Area in accordance with all applicable laws, regulations, and policies and in accordance with Title 43 CFR 4130.2(a)

which states, “Grazing permits or leases authorize use on the public lands and other BLM-administered lands that are designated in land use plans as available for livestock grazing.”

1.3 Objectives for the Proposed Action.

1.3.1. To renew the grazing term permit and authorize grazing in accordance with applicable laws, regulations, and land use plans (LUP) on approximately 6,284 acres of public land.

1.3.2. To improve vegetative health and growth conditions on the allotment and continue to meet or make progress towards achieving the Standards and Guidelines for rangeland health as approved and published by Nevada’s Northeastern Great Basin RAC.

1.4 Relationship to Planning

The proposed action is in conformance with the Ely District Record of Decision and Approved Resource Management Plan signed August 20, 2008, which states, “Manage livestock grazing on public lands to provide for a level of livestock grazing consistent with multiple use, sustained yield, and watershed function and health.” In addition, “To allow livestock grazing to occur in a manner and at levels consistent with multiple use, sustained yield, and the standards for rangeland health (p 85-86).”

Management Action LG-1 states, “Make approximately 11,246,900 acres and 545,267 animal unit months available for livestock grazing on a long-term basis.”

Management Action LG-5 states, “Maintain the current grazing preference, season-of-use, and kind of livestock until the allotments that have not been evaluated for meeting or making progress toward meeting the standards or are in conformance with the policies are evaluated. Depending on the results of the standards assessment, maintain or modify grazing preference, seasons-of-use, kind of livestock and grazing management practices to achieve the standards for rangeland health. Changes, such as improved livestock management, new range improvement projects, and changes in the amount and kinds of forage permanently available for livestock use, can lead to changes in preference, authorized season-of-use, or kind of livestock. Ensure changes continue to meet the RMP goals and objectives, including the standards for rangeland health.”

1.4.1 Relationship to Other Plans

The proposed action is consistent with the following Federal, State, and local plans to the maximum extent possible.

- White Pine County Portion (Lincoln/White Pine Planning Area) Sage-Grouse Conservation Plan (2004)
- State Protocol Agreement between the Bureau of Land Management, Nevada and the Nevada Historic Preservation Office (1999)
- Northeastern Great Basin Resource Advisory Council (RAC) Standards and Guidelines (2006)
- Migratory Bird Treaty Act (1918 as amended) and Executive Order 13186 (1/11/01)

1.4.2 Tiering

This document is tiered to the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007).

1.5 Scoping and Public Involvement and Issues

The term grazing permit 2704506 renewal proposal was internally scoped by the Egan Field Office ID Team/Resource Specialists on December 7, 2009 to identify any relevant issues.

A letter notifying the permittee of the term permit renewal was sent on December 14, 2009.

This project proposal was posted on the Ely District Grazing Permit Renewal website on January 6, 2010. A letter notifying interested public of this term permit renewal was sent on December 22, 2009.

The Silverado Allotment SDD (see Appendix II) will be posted to the Ely District Grazing Permit Renewal website for a thirty-day external review/public comment period with this environmental assessment (EA). Hard copies may also be sent to interested publics.

The following potential issues were identified through scoping:

- sage-grouse habitat (summer, winter, nesting, and breeding),
- migratory birds,
- noxious and invasive species distribution, and
- crucial mule deer winter range.

2.0 Alternatives Including the Proposed Action

2.1 Proposed Action

The BLM proposes to **issue and fully process a new term grazing permit 2704506** and authorize grazing on the Silverado Allotment (Figure 1, Appendix I).

The season of use is being delayed approximately 15 days in order for the use of this allotment to better fit into the overall grazing operation of the permittee. Allowable use levels will be established and specific recommendations regarding livestock supplements will be added to this permit.

2.1.1 Proposed Term Permit

The renewal of the term grazing permits will be for a period of up to 10 years. If base property is transferred during this ten year period with no changes to the terms and conditions the new term permit would be issued for the remaining term of this term permit.

The **proposed term permit 2704506** (Table 1) and terms and conditions are as follows:

Table 1—Proposed Term Grazing Permit for 2704506

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Silverado 00623	115 Cattle	12/01 to 02/28	100	Active	340
*% Public Land is the percent of public land for billing purposes. **AUMs may differ from Active Permitted Use due to a rounding difference with the number of livestock and the period of use.					
Allotment AUMs Summary					
Allotment Name	ACTIVE AUMS	SUSPENDED AUMS	GRAZING PERMITTED USE		
Silverado	338	0	338		

Terms and Conditions

1. The placement of mineral or salt supplements will be a minimum distance of ½ mile from known water sources, riparian areas, winterfat bottoms, sensitive sites, populations of special status species, and cultural resource sites. Mineral and salt supplements will also be one mile from sage-grouse leks.
2. Maximum utilization levels on the Silverado Allotment will be established as follows:
 - Perennial native grasses: 50% of the current year’s growth
 - Perennial shrubs and half-shrubs: 50% of the current annual production.
 - Livestock will be moved to another authorized pasture or removed from the allotment before utilization objectives are met or no later than 5 days after meeting the utilization objectives. Any deviation in livestock movement will require authorization from the authorized officer.
3. Use in the Silverado Allotment will be in accordance with the Northeastern Great Basin Area Standards and Guidelines.

Additional Stipulations Common to All Grazing Allotments:

1. Livestock numbers identified in the Term Grazing Permit are a function of seasons of use and permitted use. Deviations from those livestock numbers and seasons of use may be authorized on an annual basis where such deviations would not prevent attainment of the multiple-use objectives for the allotment.
2. Deviations from specified grazing use dates will be allowed when consistent with multiple-use objectives. Such deviations will require an application and written authorization from the authorized officer prior to grazing use.
3. The authorized officer is requiring that an actual use report (form 4130-5) be submitted within 15 days after completing your annual grazing use.
4. Grazing use will be in accordance with the Standards and Guidelines for Grazing Administration. The Standards and Guidelines have been developed by the respective Resource Advisory Council and approved by the Secretary of the Interior on February 12,

1997. Grazing use will also be in accordance with 43 CFR Subpart 4180 - Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration.

5. If future monitoring data indicates that Standards and Guidelines for Grazing Administration are not being met, the permit will be reissued subject to revised terms and conditions.
6. Pursuant to 43 CFR 10.4 (G) the holder of this authorization must notify the authorized officer by telephone, with written confirmation, immediately upon discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined at 43 CFR 10.2). Further, pursuant to 43 CFR 10.4 (C) and (D), you must stop activities in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the authorized officer.
7. The permittee must notify the authorized officer by telephone, with written confirmation, immediately upon discovery of any hazardous or solid wastes as defined in 40 CFR Part 261.
8. The permittee is responsible for all maintenance of assigned range improvements including wildlife escape ramps for both permanent and temporary water troughs.
9. When necessary, control or restrict the timing of livestock movement to minimize the transport of livestock-borne noxious weed seeds, roots, or rhizomes between weed-infested and weed-free areas.

2.1.3 Invasive, Non-Native Species and Noxious Weeds

A Weed Risk Assessment was completed for this project. The measures listed in the Weed Risk Assessment will be followed when grazing occurs on the allotment to minimize the spread of weeds.

2.1.4 Monitoring

The Ely District Approved Resource Management Plan (August 2008) identifies monitoring to include, “Monitoring to assess rangeland health standards will include records of actual livestock use, measurements of forage utilization, ecological site inventory data, cover data, soil mapping, and allotment evaluations or rangeland health assessments. Conditions and trends of resources affected by livestock grazing will be monitored to support periodic analysis/evaluation, site-specific adjustments of livestock management actions, and term permit renewals. Monitoring will determine when grazing will be authorized in burned areas, and will contribute to the selection of prescribed burn treatments or other types of treatments based on attainment of resource objectives” (pg. 88).

2.2 No Action Alternative

The No Action Alternative represents the status quo – this permit would be renewed without the proposed delay in season of use, the establishment of allowable use levels, or the specific recommendations regarding livestock supplements.

2.2.1 Current Permit

Table 2—Summary of the Current Grazing Permit for 2704506

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Silverado 00623	113 Cattle	11/15 to 02/13	100	Active	338
*% Public Land is the percent of public land for billing purposes. **AUMs may differ from Active Permitted Use due to a rounding difference with the number of livestock and the period of use.					
Allotment AUMs Summary					
Allotment Name	ACTIVE AUMS	SUSPENDED AUMS	GRAZING PERMITTED USE		
Silverado	338	0	338		

2.3 Alternatives Considered but Eliminated from Further Analysis

The Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November, 2007) analyzes five alternatives of livestock grazing (p.4.16-1 to 4.16-15.), including a no-grazing alternative (D). No further analysis is necessary in this document.

- The Proposed RMP
- Alternative A, The Continuation of Current Existing (No Action alternative)
- Alternative B, the maintenance and restoration of healthy ecological systems
- Alternative C, commodity production
- Alternative D, conservation alternative (no-grazing alternative)

3.0 Affected Environment and Environmental Effects

3.1 Allotment Information

The Silverado Allotment encompasses approximately 6,284 public lands acres. This grazing permit area occurs entirely within White Pine County, Nevada and is adjacent to Eureka County, Nevada. The area is situated approximately 10 to 15 miles south east of Eureka, Nevada. While the grazing area is in the Ely BLM District, it is bordered by the Battle Mountain BLM District. The allotment is situated at the south end of the Diamond Mountain Range and stretches into Newark Valley being generally centered around Silverado Mountain. The majority of the allotment is within the Newark Watershed with a small portion extending into the North Little Smoky Valley Watershed.

The Silverado Allotment is dominated by Inter-Mountain Basins Big Sagebrush Shrubland, Great Basin Xeric Mixed Sagebrush Shrubland, and Great Basin Pinyon-Juniper Woodland with Inter-Mountain Basins Mixed Salt Desert Scrub, Inter-Mountain Basins Montane Sagebrush Steppe, and Inter-Mountain Basins Greasewood Flat. These include Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), pinyon-juniper (*Pinus monophylla* - *Juniperus*

osteosperma), winterfat (*Krascheninnikovia lanata*), shadscale (*Atriplex confertifolia*), black sagebrush (*Artemisia nova*), black greasewood (*Sarcobatus vermiculatus*), and mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) plant communities. This allotment also has small areas of rock outcrops.

3.2 Resources/Concerns Considered for Analysis

Proposed Action

The following items have been evaluated for the potential for significant impacts to occur, either directly, indirectly, or cumulatively, due to implementation of the proposed action.

Consideration of some of these items is to ensure compliance with laws, statutes or Executive Orders that impose certain requirements upon all Federal actions. Other items are relevant to the management of public lands in general and to the Ely BLM in particular.

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Air Quality	No	Air quality in the affected area is generally good except for occasional dust storms. The proposed action could contribute to ambient dust due to trailing however the impact would be temporary and would not approach a level that would exceed air quality standards.
Cultural Resources	No	Presently, less than 1 percent of the allotment has been inventoried to Class III standards and unknown cultural resources may still be present. There are three known potentially eligible sites. All eligible historic resources will be monitored for impacts. Mitigation and treatment will be applied as concerns are identified. The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing and associated actions on cultural resources on page 4.9-5.
Forest Health	No	No Forest Health concerns occur in or adjacent to the project area.
Rangeland Standards and Health	No	Beneficial impacts to rangeland standards and health are consistent with the need and objectives for the proposed action. An assessment and evaluation of livestock grazing managements achievement of the standards and conformance to the guidelines was completed in conjunction with this project (SDD, Appendix II). The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing on pages 4.16-3 through 4.16-8.
Migratory Birds	No	Good grazing management practices and progress towards the RAC standards will aid in the desired habitat condition for migratory bird species of concern. The potential for the proposed action to affect migratory birds is discountable due to the low density of livestock within the area and winter season of use.
Native American Religious Concerns and other concerns	No	Tribal Coordination Letters were sent out January 8, 2010 for this project notifying the tribes of a 30-day comment period. No concerns were identified therefore no impacts would occur.

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
FWS Listed or proposed for listing Threatened or Endangered Species or critical habitat.*	No	Threatened, Endangered, or Proposed species are not known to be present in the project area.
Wastes, Hazardous or Solid	No	No hazardous or solid wastes exist in the project area, nor would any be introduced by the proposed action.
Water Quality, Drinking/Ground	No	The proposed action would not affect the water quality of drinking or groundwater sources in the project area. None of the surface water in the project area is used as human drinking water. The proposed action would not affect groundwater water quality nor affect how groundwater is used in the project area. The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing and associated actions on water resources on page 4.3-5.
Wilderness	No	No wilderness or wilderness study areas are located within or adjacent to the project area.
Environmental Justice	No	No environmental justice issues are present at or near the project area. No minority or low income populations would be unduly affected by the proposed action
Floodplains	No	No floodplains have been identified by HUD or FEMA within the allotment. The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing and associated actions on water resources (including floodplains) on page 4.3-5.
Watershed Management	No	The proposed action would have no affect on watershed health or function. Further, the proposed action would not affect the physical, biological, or chemical ecological processes necessary to achieve State of Nevada water quality standards and sustain appropriate uses. The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing and associated actions on watershed resources on page 4.19-5.
Wetlands/Riparian Zones	No	No riparian or wetland areas are known to exist on public land within the project area. The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing and associated actions on vegetative resources (including riparian areas) on page 4.5-9.
Noxious and Invasive Weed Management	No	The design features of the proposed action will help prevent the spread of noxious and non-native, invasive weeds. No additional analysis is needed. The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing and associated actions on noxious and invasive weed management on page 4.21-4.

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Special Status Plant Species, other than those listed or proposed by the FWS as Threatened or Endangered	No	No Special Status Plant species are known to occur within the project area.
Wild Horses	No	The project area is not within a wild horse herd management area (HMA) or herd area (HA). Horses from the Diamond and Diamond Hills South HMAs occasionally use this area.
Soil Resources	No	<p>The proposed action is expected to display effects to soil resources as follows: potential for compaction along trails and near watering sites, and scarification of surface soil along trails used by livestock. The probable extent of soil compaction or displacement attributable to the proposed action would be minimal and localized in nature and wholly a function of intensity and duration of use by livestock.</p> <p>Minimal impacts to localized physical soil characteristics would not alter the infiltration or percolation rates of the soils in the project areas. As such, impacts to the soil resources resulting from the proposed action would not affect the physical, chemical, or biological processes on or within the soil horizons.</p> <p>The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing and associated actions on soil resources on page 4.4-4.</p>
Prime and Unique Farmlands	No	There are approximately 42 acres of potentially prime and unique farmlands within the project area. The proposed action would not alter the soil characteristics which allowed the approximately 42 acres to be classified as potentially prime or unique,
Special Designations other than Designated Wilderness	No	No Special Designations occur within the project area.
VRM (Visual Resource Management)	No	The proposed action is consistent with the VRM classification 3 for the area therefore no impacts to visual resources would occur.
Special Status Animal Species, other than those listed or proposed by the FWS as Threatened or Endangered	Yes	<p>The project area contains summer, nesting, and winter habitat for greater sage-grouse (<i>Centrocercus urophasianus</i>). There are three sage-grouse leks within three miles of the allotment. Sage-grouse habitat was analyzed in the SDD (Appendix II). Analyzed in Section 3.2.1.</p> <p>There are two known prairie falcon (<i>Falco mexicanus</i>) nesting locations within the project area. These sites were last checked in 1976 and 1978. Prairie falcons generally nest on cliff faces therefore livestock grazing should have minimal effect on prairie falcon nesting.</p> <p>The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing and associated actions on special status species on pages 4.7-28 through 4.7-30.</p>

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Fish and Wildlife	No	<p>Mule deer, pronghorn, and unoccupied Rocky Mountain bighorn sheep habitat occur within the allotment.</p> <p>Crucial mule deer winter range and a migration corridor occur within the project area. Mule deer tend to prefer to browse while cattle prefer to graze. Therefore there is only a small potential for conflict.</p> <p>The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing and associated actions on fish and wildlife resources on pages 4.6-10 through 4.6-11.</p>
Grazing Uses	No	<p>The proposed action will continue to meet the RMP goals and objectives, including progress toward meeting the standards for rangeland health. The proposed action is consistent with the need for the action; no further analysis is necessary.</p> <p>The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing on pages 4.16-3 through 4.16-8.</p>
Land Uses	No	<p>There would be no modifications to land use authorizations through the proposed action. No impacts would occur to access and land uses.</p>
Recreation Uses	No	<p>The nature of grazing does not conflict with recreation resources and values.</p>
Paleontological Resources	No	<p>The only paleontological resources identified within the allotment are the El Dorado Fossil Beds. Current fencing does not allow livestock grazing access the area that contains the fossil beds, therefore there is no impact to the resources.</p>
Mineral Resources	No	<p>There would be no impacts to minerals resources through the proposed action.</p>
Vegetative Resources	No	<p>The proposed action is expected to have an effect on vegetative resources as follows: grazing of grasses and winterfat, occasional trampling of vegetation as livestock move through it. The impacts to vegetation by grazing or trampling based on the proposed action would allow the plant to continue photosynthesis processes and initiate regrowth and reproduction.</p> <p>The no action alternative would have similar impacts, except that by not having a utilization level established, plants may be heavier grazed with recovery of the plant taking longer and delaying reproduction.</p> <p>The Ely RMP/EIS analyzed and disclosed general effects of livestock grazing and associated actions on vegetative resources on page 4.5-9. No further analysis is needed.</p>
Wild and Scenic Rivers	No	<p>No Wild and Scenic Rivers occur within or adjacent to the project area.</p>

*Consultation required unless a “not present” or “no effect” finding is made

No Action Alternative

Effects to all resources would be similar to those described under the proposed action. However, the no action alternative does not establish a maximum utilization level which provides beneficial effects to vegetation and sage-grouse habitat.

3.2.1 Special Status Animal Species, Greater Sage-Grouse

Affected Environment

The Greater Sage-Grouse is a high-profile Sensitive Species currently considered to be warranted for listing as Threatened or Endangered but for whom listing is precluded by other species of higher priority (USDI 2010). It has been identified as an “umbrella” species by the Ely District BLM, and chosen to represent the habitat needs of the sagebrush (*Artemisia* spp.) obligate or sagebrush/woodland dependent guild (BLM 2007; p. 4.7-10). Under the sage-grouse guidelines set forth by Connelly et al. (2000), the herbaceous (grass and forb) component should comprise at least 15 percent cover and sagebrush should comprise 15-25 percent cover.

There are 3 sage-grouse leks within a three mile buffer of the project area (SDD Figure 4, Appendix II). The status of these leks is unknown. Large portions of the Silverado Allotment are located within summer, nesting, and winter sage-grouse habitat.

Sage-grouse often nest in suitable habitat within three miles of a lek site. The sage-grouse breeding and nesting period is generally considered to be approximately March 15 through May 31. The brood-rearing period is generally considered to be June 1 through October 31. The wintering period is generally considered to be November 1 through March 14. The Silverado Allotment is part of the Diamond sage-grouse Population Management Unit (PMU).

Environmental Effects

Proposed Action

Sagebrush habitats were evaluated against the Connelly Guidelines in the SDD (Appendix II). The Silverado Allotment is not meeting these cover guidelines, however when compared to the expected cover for these ecological sites, it is unlikely that these areas would be able to meet these guidelines. Furthermore, these sites are in the mid-late phase of the herbaceous state recommended for wildlife habitat in sagebrush plant communities set forth in the Ely District ROD/RMP (page 30).

The requirement to remove cattle after 50 percent utilization of the current year’s growth will help to ensure that sufficient residual grasses and forbs are left for nesting habitat.

On the Silverado Allotment, grazing occurs entirely within the winter period. Winter livestock grazing allows for complete growing season rest from grazing which is also beneficial in providing perennial grass cover and forage for sage-grouse habitat.

No Action Alternative

Impacts to sage-grouse would be similar to those described under the proposed action. However the no action alternative does not establish a maximum utilization level.

4.0 Cumulative Effects

According to the 1994 BLM publication, (attached to WO-IB-94-310) Guidelines for Assessing and Documenting Cumulative Impacts, “the cumulative analysis can be focused on those issues and resource values identified by management, the public and others during scoping that are of major importance.”

Additionally, the guidance provided in The National BLM NEPA Handbook H-1790-1 (2008), for analyzing cumulative effects issues states, “determine which of the issues identified for analysis may involve a cumulative effect with other past, present, or reasonably foreseeable future actions. If the proposed action and alternatives would have no direct or indirect effects on a resource, you do not need a cumulative effects analysis on that resource” (p.57). Also, a comprehensive cumulative impacts analysis can be found on pages 4.28-1 through 4.36-1 of the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007).

This cumulative effects analysis will be focused on the special status species, sage-grouse. The Cumulative Effects Study Area (CESA) is defined as the Silverado Allotment boundary. Privately owned land occurs within the allotment boundaries.

4.1 Past Activities

Livestock grazing has a long history in the region dating back to the late 1800’s. Throughout its history, livestock grazing has been characterized by localized areas of intense use. Hunting, trapping, wildlife viewing, and other activities occur on the Silverado Allotment year round. OHV use may occur on the roads and two-tracks on the allotment. Range improvements have occurred on the allotment to improve grazing management and include fencing and stockwater developments. Historic mining activity has occurred on the Silverado Allotment.

4.2 Present Activities

The Silverado Allotment is currently being grazed by livestock. Hunting, trapping, wildlife viewing, and other activities occur on the allotment year round. OHV use may occur on the roads and two-tracks on the allotment. Maintenance of range improvements is ongoing. The Newark Watershed Assessment Process was recently initiated and will include the Silverado Allotment.

4.3 Reasonably Foreseeable Future Actions (RFFA)

Hunting, trapping, wildlife viewing, and other activities will probably occur on the Silverado Allotment year round. OHV use could occur on the roads and two-tracks on the allotment. Maintenance of range improvements is ongoing. New range improvement projects are considered on an annual basis and analyzed on a site specific basis.

4.4 Cumulative Effects Summary

The proposed action, in combination with any RFFAs, is expected to have minimal effect on greater sage-grouse habitat within the CESA. As the proposed action works to progress towards the vegetative communities outlined in the sage-grouse guidelines (Connelly et al. 2000), the Ely ROD/RMP (2008), and the RAC Standards and Guidelines, it will also benefit greater sage-grouse populations within the CESA.

5.0 Proposed Mitigation and Monitoring

5.1 Proposed Mitigation

Outlined design features incorporated into the proposed action are sufficient. No additional mitigation is proposed based on the analysis of environmental consequences.

5.2 Proposed Monitoring

Appropriate monitoring has been included as part of the Proposed Action. No additional monitoring is proposed as a result of the impact analysis.

6.0 List of Preparers - BLM Field Office Resource Specialists

Amanda Anderson	Rangeland Resources/Project Lead
Gina Jones	Ecologist/Planning and Environmental Coordinator
Mindy Seal	Noxious and Invasive, Non-native Species
Marian Lichtler	Wildlife, Special Status Species, Migratory Birds
Lisa Gilbert	Cultural Resources
Mark D'Aversa	Soil, Water, Wetlands and Riparian, Floodplains
Chris Mayer	Supervisory Rangeland Management Specialist

6.1 Tribes, Individuals, Organizations, or Agencies Consulted (in addition to permittee)

Nevada Department of Wildlife
Duckwater Shoshone Tribe
Ely Shoshone Tribe
Confederated Tribes of the Goshute Indian Reservation
Paiute Indian Tribe of Utah
Indian Peaks Band
Shivwits Band of Paiutes
Cedar City Band of Paiutes
Skull Valley Band of Goshute Indians
Las Vegas Paiute Tribe
Battle Mountain Band Council
Te-Moak Tribe of the Western Shoshone Indians of Nevada
Wells Band Council
South Fork Band Council
Elko Band Council
Kaibab Band of Paiutes Indians
Moapa Band of Paiutes
Yomba Shoshone Tribe

Public Notice of Availability

On December 22, 2009, letters were sent to interested persons and organizations informing them of this term grazing permit renewal. On January 6, 2010, this grazing permit renewal summary was posted on the BLM Ely District Website is located at: <http://www.blm.gov/nv>

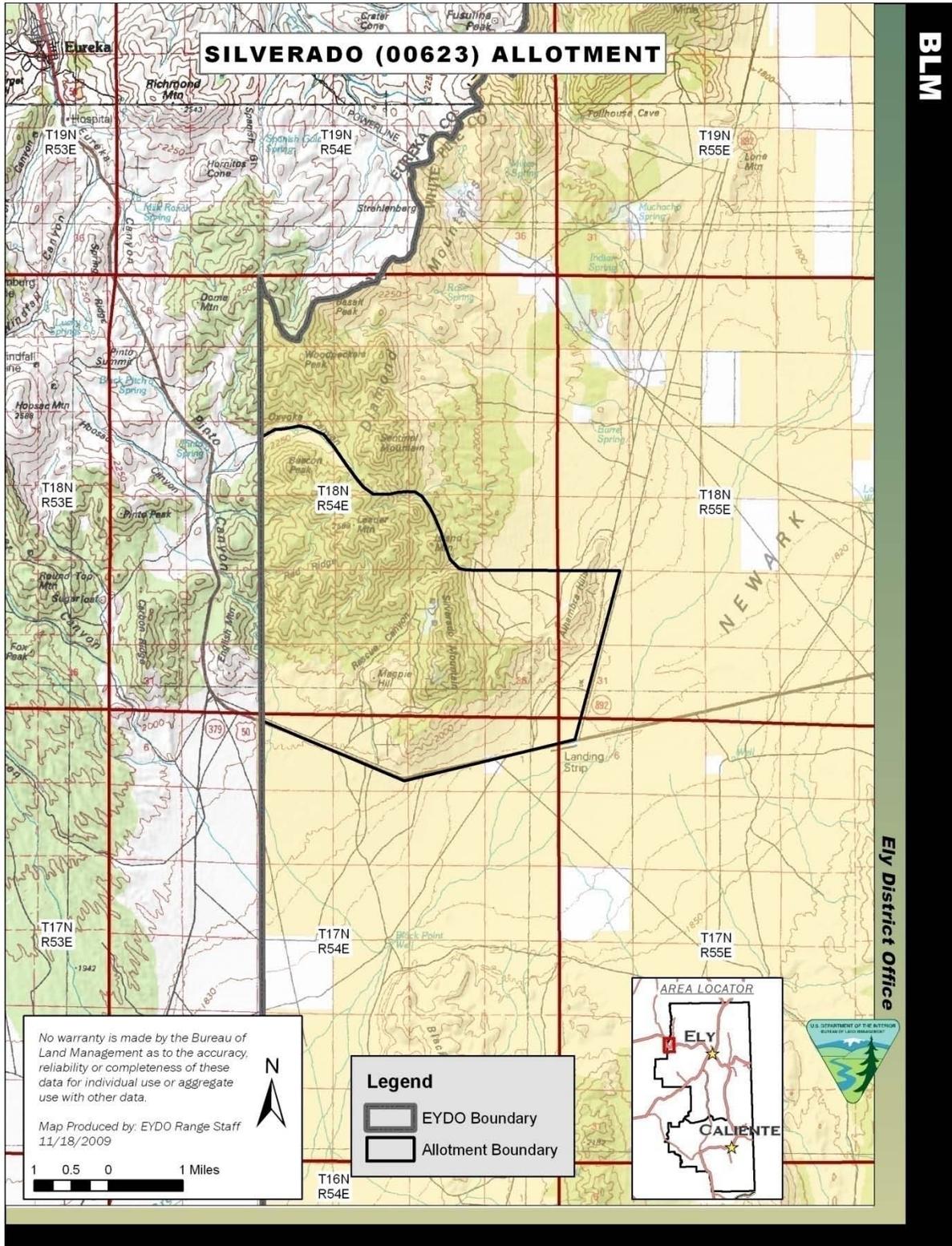
An external review period of this preliminary EA will be issued.

References

- Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. *Wildlife Society Bulletin* 28:967-985.
- Lincoln/White Pine County sage-grouse conservation plan. 2004. White Pine County portion (Lincoln/White Pine planning area) sage-grouse conservation plan. Sage-grouse Technical Review Team.
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- USDOI. 2008. Ely District Record of Decision and Approved Resource Management Plan. U.S. Department of the Interior, Bureau of Land Management. BLM/NV/EL/PL-GI08/25+1793.
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APPENDIX I

Figure 1. Project Area Map



APPENDIX II
STANDARDS DETERMINATION DOCUMENT
Silverado (00623) Grazing Allotment

INTRODUCTION

The Standards and Guidelines for Nevada's Northeastern Great Basin Area were developed by the Northeastern Great Basin Area Resource Advisory Council (RAC) and approved in 1997. Standards and guidelines are likened to objectives for healthy watersheds, healthy native plant communities, and healthy rangelands. Standards are expressions of physical and biological conditions required for sustaining rangelands for multiple uses. Guidelines point to management actions related to livestock grazing for achieving the standards.

This Standards Determination Document evaluates and assesses livestock grazing management achievement of the Standards and conformance with the Guidelines for the Nevada's Northeastern Great Basin Area for the Silverado Allotment in the Ely BLM District. This document does not evaluate or assess achievement of the Wild Horse and Burro or the Off Highway Vehicle Standards or conformance to their respective Guidelines.

The Silverado Allotment encompasses approximately 6,284 public lands acres. This grazing permit area occurs entirely within White Pine County, Nevada and is adjacent to Eureka County, Nevada. The area is situated approximately 10 to 15 miles south east of Eureka, Nevada. While the grazing area is in the Ely BLM District, it is bordered by the Battle Mountain BLM District. The allotment is situated at the south end of the Diamond Mountain Range and stretches into Newark Valley being generally centered around Silverado Mountain. The majority of the allotment is within the Newark Watershed with a small portion extending into the North Little Smoky Valley Watershed.

The Silverado Allotment is dominated by Inter-Mountain Basins Big Sagebrush Shrubland, Great Basin Xeric Mixed Sagebrush Shrubland, and Great Basin Pinyon-Juniper Woodland with Inter-Mountain Basins Mixed Salt Desert Scrub, Inter-Mountain Basins Montane Sagebrush Steppe, and Inter-Mountain Basins Greasewood Flat. These include Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), pinyon-juniper (*Pinus monophylla* - *Juniperus osteosperma*), winterfat (*Krascheninnikovia lanata*), shadscale (*Atriplex confertifolia*), black sagebrush (*Artemisia nova*), black greasewood (*Sarcobatus vermiculatus*), and mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) plant communities. This allotment also has small areas of rock outcrops.

Monitoring data on this allotment has been collected at key areas which have been established throughout the past 30 years. A summary of monitoring data for the Silverado Allotment is located in Appendix I.

The current term grazing permit for authorization 2704506 is issued for the period 12/01/2000 to 11/30/2010 and is summarized in Table 1.

Table 1—Summary of the Current Grazing Permit for 2704506

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Silverado 00623	113 Cattle	11/15 to 02/13	100	Active	338
*% Public Land is the percent of public land for billing purposes. **AUMs may differ from Active Permitted Use due to a rounding difference with the number of livestock and the period of use.					
Allotment AUMs Summary					
Allotment Name	ACTIVE AUMS	SUSPENDED AUMS	GRAZING PERMITTED USE		
Silverado	338	0	338		

Current livestock management practices were carried forward in the Livestock Grazing Permit Renewal Environmental Assessment dated November 29, 2000 (NV-010-01-018).

While the Silverado Allotment is not within a Wild Horse Herd Management Area (HMA), wild horses from the Diamond and Diamond Hills South HMAs occasionally use this area.

Large portions of this allotment are located within summer, nesting, and winter sage grouse habitat. Mule deer, pronghorn, and Rocky Mountain bighorn sheep habitat occurs within the allotment, including critical winter range for mule deer and unoccupied bighorn sheep range. Migratory birds also use this area.

PART 1. STANDARD ACHIEVEMENT REVIEW

Standard 1. Upland Sites

Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate and land form.

As indicated by:

- Indicators are canopy and ground cover, including litter, live vegetation and rock, appropriate to potential of the site.

Determination:

X Achieving the Standard

- Not Achieving the Standard, but making significant progress towards achieving
- Not Achieving the Standard, and not making significant progress toward standard

Guidelines Conformance:

X In conformance with the Guidelines

- Not in conformance with the Guidelines

Conclusion:

Within the Silverado Allotment, monitoring data, photo documentation, and professional observations show that the allotment is meeting the Upland Sites Standard. Vegetative ground cover meets or exceeded the expected cover on all sites. Additionally, soils are also protected by rocks and litter. Measured ground cover is summarized in Table 4.1 (Appendix I). Also see Figure 5, Appendix II.

Key area SV-1 occurs on a Heist-Wintermute soil association (356; NRCS 1998) with a Silty 8-10" P.Z. ecological site (028BY013NV). These soils typically have slow to moderately rapid permeability. The approximate vegetative ground cover (basal and crown) for this ecological site is 10-20 percent. Monitoring data indicate that this key area has a vegetative cover of 28 percent with a litter cover of 5 percent.

Key area SV-2 occurs on an Automal-Wintermute soil association (373; NRCS 1998). These soils typically have a slow permeability. This key area occurs on an inclusion with no ecological site associated with it. Monitoring data indicate that this key area has a vegetative cover of 15 percent with a rock cover of 34 percent and a litter cover of 12 percent. This is believed to be adequate ground cover for this site.

Key area SV-3 occur on a Palino very gravelly loam soil (282; NRCS 1998) with a Shallow Calcareous Loam 8-10" P.Z. ecological site (028BY011NV). This soil typically has a moderate permeability. The approximate vegetative ground cover (basal and crown) for this ecological site is 15-20 percent. Monitoring data indicate that this key area has a vegetative cover of 47 percent with a rock cover of 20 percent and a litter cover of 3 percent.

Maintaining adequate ground cover at all upland sites indicates that the Silverado Allotment is able to dissipate energies from overland flow events thus preventing accelerated erosion and allowing for proper infiltration and permeability. Therefore, the Silverado Allotment is achieving the Upland Sites Standards.

Standard 2. Riparian and Wetland Sites

Riparian and wetland areas exhibit a properly functioning condition and achieve state water quality criteria.

Determination:

X Not Applicable

- Achieving the Standard
- Not Achieving the Standard, but making significant progress towards
- Not Achieving the Standard, and not making significant progress toward standard

Conclusion:

No riparian or wetland areas are known to occur on the Silverado Allotment. It is unknown if the public spring source on the allotment is supporting a riparian area. This spring is not accessible during this winter grazing period therefore the Riparian and Wetland Sites Standard was not considered in this analysis.

Standard 3. Habitat:

Habitats exhibit a healthy, productive, and diverse population of native and/or desirable plant species, appropriate to the site characteristics, to provide suitable feed, water, cover and living space for animal species and maintain ecological processes. Habitat conditions meet the life cycle requirements of threatened and endangered species.

As indicated by:

- Vegetation composition (relative abundance of species);
- Vegetation structure (life forms, cover, height, or age class);
- Vegetation distribution (patchiness, corridors);
- Vegetation productivity; and
- Vegetation nutritional value.

Determination:

Achieving the Standard

Not Achieving the Standard, but making significant progress towards

X Not Achieving the Standard, and not making significant progress toward standard

Causal Factors:

Livestock are a contributing factor to not achieving the standard.

X Livestock are not a contributing factor to not achieving the standard

X Failure to meet the standard is related to other issues or conditions

Guidelines Conformance:

X In conformance with the Guidelines

Not in conformance with the Guidelines

Conclusion:

Rangeland monitoring data (Appendix I) and professional observations indicate that vegetation distribution and productivity on the Silverado Allotment are consistent with the Rangeland Ecological Site Descriptions (ESD). However, vegetative structure and composition differs from the ESD, generally with percent composition by weight showing shrubs are higher than what is expected while grasses are lower when compared to the historic climax plant community (HCPC) in the ESD.

Key area SV-1 occurs on a Silty 8-10" P.Z. (028BY020NV) ecological site. The expected vegetative composition by weight for this ecological site is 30 percent grasses, 5 percent forbs, and 65 percent shrubs. Composition by weight measured at SV-1 in 2009 was a trace amount of grasses, a trace amount of forbs, and 100 percent shrubs. Total annual production expected for this ecological site is 700 pounds per acre on a favorable year, 500 pounds per acre on a normal year, and 350 pounds per acre on an unfavorable year. The annual total production was measured at 775 pounds per acre in 2009. Similarity index for this key area was calculated to be 52 percent.

Key area SV-2 occurs on a sand dropseed inclusion with no associated ecological description. Composition by weight measured in 2009 was 71 percent grasses, 1 percent forbs, and 28 percent shrubs. The total annual production was measured at 577 pounds per acre in 2009.

Key area SV-3 occurs on a Shallow Calcareous Loam 8-10" P.Z. (028BY011NV) ecological site. The expected vegetative composition by weight for this ecological site is 50 percent grasses, 5 percent forbs, and 45 percent shrubs. Composition by weight measured at SV-3 in 2009 was 6 percent grasses, 0 percent forbs, and 94 percent shrubs. Total annual production expected for this ecological site is 600 pounds per acre on a favorable year, 450 pounds per acre on a normal year, and 250 pounds per acre on an unfavorable year. The total annual production was measured at 475 pounds per acre in 2009. Similarity index for this key area was calculated to be 41 percent.

This key area analysis indicates that SV-1 and SV-3 are transitioning towards a shrub dominate state, different from the historic climax plant community (HCPC) described in the respective ecological site descriptions. As this transition occurs, these plant communities may no longer be accurately represented by the HCPC. Currently, these key areas are supporting the major vegetative species of the HCPC, however they are occurring at a differing proportion. This transition is not likely due to current livestock grazing management because grazing occurs entirely within the winter period and stocking levels have been appropriate as indicated by measured utilization levels of slight to moderate across the allotment (Table 3.1, Appendix I). This transition is most likely due to altered natural disturbance regimes, past historic overgrazing, and/or variable precipitation.

The variety of plant communities present across the allotment are indicative of proper vegetation distribution for the size and location of the Silverado Allotment. This allotment reaches from the Newark Valley bottom through the foothills and to the top of the Diamond Range. The varying elevations and rolling topography of the land area facilitate this distribution.

Special Status Species

The **Greater Sage-Grouse** is a high-profile Sensitive Species currently considered to be warranted for listing as Threatened or Endangered but for whom listing is precluded by other species of higher priority (USDI 2010). It has been identified as an "umbrella" species by the Ely District BLM, and chosen to represent the habitat needs of the sagebrush (*Artemisia* spp.) obligate or sagebrush/woodland dependent guild (BLM 2007; p. 4.7-10). Under the sage-grouse guidelines set forth by Connelly et al. (2000), the herbaceous (grass and forb) component should comprise at least 15 percent cover and sagebrush should comprise 15-25 percent cover. The Silverado Allotment is part of the Diamond sage-grouse Population Management Unit (PMU).

One key area in the Silverado Allotment is within current or potential sage-grouse habitat. Key area SV-3 is in a black sagebrush plant community. The herbaceous cover of this site is 11 percent and the sagebrush cover is 43 percent. SV-3 is not meeting the Connelly Guidelines. However, the total vegetative cover expected for SV-3 is 15-20 percent according to the ecological site description (ESD) for this site. Based on this ESD, SV-3 is not likely to meet the Connelly Guidelines.

Site specific evaluation of sage-grouse habitat guidelines should be tempered with consideration of site potentials described in the rangeland ESDs. According to Connelly, et al. (2000):

“There is much variability among sagebrush-dominated habitats (Tisdale and Hironaka 1981, Hironaka et al. 1983), and some Wyoming sagebrush and low sagebrush breeding habitats may not support 25% herbaceous cover. In these areas, total herbaceous cover should be >15%...In all of these cases, local biologists and range ecologists should develop height and cover requirements that are reasonable and ecologically defensible.”

The Ely District Approved Resource Management Plan, developed by local specialists, states in reference to sagebrush plant communities, “Sagebrush in the mid-late phase of the herbaceous state is desired for wildlife habitat.” Although the key area SV-3 does not meet the herbaceous understory requirements set forth within the Connelly Guidelines, this site is in the mid phase of the herbaceous state.

There are 3 sage-grouse leks within a three mile buffer of the project area (Figure 4, Appendix II). The status of these leks is unknown. Large portions of the Silverado Allotment are located within summer, nesting, and winter sage grouse habitat.

Sage-grouse often nest in suitable habitat within three miles of a lek site. The sage-grouse breeding and nesting period is generally considered to be approximately March 15 through May 31. The brood-rearing period is generally considered to be June 1 through October 31. The wintering period is generally considered to be November 1 through March 14.

There are two known **prairie falcon** (*Falco mexicanus*) nesting locations within the project area. These sites were last checked in 1976 and 1978. Prairie falcons generally nest on cliff faces. Livestock grazing should have minimal effect on prairie falcon nesting.

Vegetative distribution and productivity are as expected across the Silverado Allotment. However, vegetative structure and composition is trending toward shrub dominance. This shrub dominance indicates that the Silverado Allotment is not achieving the Habitat Standard. There is also no evidence that the area is progressing towards meeting this standard.

PART 2. ARE LIVESTOCK A CONTRIBUTING FACTOR TO NOT MEETING THE STANDARDS? SUMMARY REVIEW:

According to the Standards and Guidelines for Nevada’s Northeastern Great Basin Area, it must be determined if livestock grazing is a significant factor in the non-attainment of the Standards and Guidelines (BLM 1997).

Livestock use over the past ten years on the Silverado Allotment has been near permitted levels (Table 2.1, Appendix I). Grazing occurs entirely within the winter period and stocking levels have been appropriate as indicated by measured utilization levels of slight to moderate across the allotment (Table 3.1, Appendix I).

Standard #1: Upland Sites

The Upland Sites Standard is being achieved on the Silverado Allotment.

Standard #2: Riparian and Wetland Sites

The Riparian and Wetland Sites Standard is not applicable to the Silverado Allotment.

Standard #3: Habitat

The Habitat Standard is not being achieved on the Silverado Allotment due to high shrub composition. Slight to moderate utilization levels, reduced livestock numbers, and winter grazing indicate that current livestock grazing is not a significant factor in the non-attainment of this standard. Most likely this is due to altered natural disturbance regimes, past historic overgrazing, and/or variable precipitation.

PART 3. GUIDELINE CONFORMANCE REVIEW AND SUMMARY

Grazing is in conformance with all applicable Guidelines as provided in the Nevada's Northeastern Great Basin Standards and Guidelines on the Silverado Allotment.

PART 4. MANAGEMENT PRACTICES TO CONFORM WITH GUIDELINES AND ACHIEVE STANDARDS

Recommendations:

1. Continue rangeland monitoring of the Silverado Allotment for livestock in compliance with proper allowable use levels and vegetative condition.
2. Land treatments may be appropriate to prevent portions of the Silverado Allotment from completing the transition into an altered, shrub-dominate state.
3. On the Silverado Allotment, it is recommended to permit 115 cattle from 12/01 to 02/28 for a total of 340 AUMs. This is about a 15-day shift in the season of use from the current permit. These dates allow the use of this allotment to fit better into the overall grazing operation of the permittee.
4. The placement of mineral or salt supplements will be a minimum distance of ½ mile from known water sources, riparian areas, winterfat bottoms, sensitive sites, populations of special status species, and cultural resource sites. Mineral and salt supplements will also be one mile from sage grouse leks. Use of nutritional supplements (not forage) is encouraged to improve the ability of livestock to utilize forage and to improve livestock distribution across the allotment
5. Maximum utilization levels on the Silverado Allotment will be established as follows:
 - Perennial native grasses: 50% current year's growth
 - Perennial shrubs and half-shrubs: 50% use on current annual production.
 - Livestock will be moved to another authorized pasture or removed from the allotment before utilization objectives are met or no later than 5 days after meeting the

utilization objectives. Any deviation in livestock movement will require authorization from the authorized officer.

6. Use in the Silverado Allotment will be in accordance with the Northeastern Great Basin Area Standards and Guidelines.
7. Consider development of reliable stock water to improve livestock distribution across the Silverado Allotment. Currently there is only one water source and cattle distribute somewhat by using snow.

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APPENDIX I—DATA SUMMARY

1. Key Areas and Ecological Sites

A key area is a relatively small portion of a pasture or allotment selected because of its location, use, or grazing value as a monitoring point for grazing use. It is assumed that key areas, if properly selected, will reflect the current grazing management over the pasture or allotment as a whole (NRCS 1997). Key areas represent range conditions, trends, seasonal degrees of use, and resource production and values. Table 1.1 depicts key areas and their location within the Silverado Allotment as well as the ecological site associated with the key area and soil mapping unit of each site (Figure 2, Appendix II). These key areas occur within the Soil Survey of Western White Pine County Area, Nevada.

An ecological site is a distinctive kind of land with specific physical characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation (NRCS 1997). Ecological Site Descriptions (ESD) are used for inventory, evaluation, and management of native vegetation communities. The ecological site of a key area is determined based on several factors including soils, topography, and plant community.

Table 1.1—Summary of Key Areas

Key Area	Location	Ecological Site	Dominant Species of HCPC	Soil Mapping Unit
SV-1	T18N R54E S36 SE1/4 SE1/4	Silty 8-10" P.Z. (028BXY013NV)	winterfat and Indian ricegrass	356—Heist- Wintermute association
SV-2	T18N R54E S36 SE1/4 SW1/4	inclusion	sand dropseed	373—Automal- Wintermute association
SV-3	T17N R54E S4 NE1/4 NE1/4	Shallow Calcareous Loam 8-10" P.Z. (028BY011NV)	black sagebrush, Indian ricegrass, & needleandthread	282—Palinor very gravelly loam

2. Licensed Livestock Use

Over the grazing seasons from 2000 to 2009, livestock permitted use on the Silverado Allotment was 338 AUMs. Table 2.1 summarizes the licensed use data for this time period. This allotment is grazed by a single permittee.

Table 2.1—Licensed Used Data

Grazing Year	Licensed Use (AUMs)	% Licensed Use of Permitted Use
2000	340	101%
2001	300	89%
2002	289	86%
2003	270	80%
2004	303	90%
2005	262	78%
2006	387	114%
2007	305	90%
2008	187	55%
2009	345	102%

3. Utilization

Utilization is the estimation of the proportion of annual production consumed or destroyed by animals (Swanson 2006). The general utilization objective for all allotments in the Ely BLM District according to the Ely District Record of Decision and Approved Resource Management Plan (ROD/RMP – August, 2008) is to “Manage livestock grazing on public lands to provide for a level of livestock grazing consistent with multiple use, sustained yield, and watershed function and health” (Ely RMP, p. 85). The Nevada Rangeland Monitoring Handbook gives guidelines to determine the proper use levels by plant category (grasses, forbs, and shrubs) and by grazing season (spring, summer, fall, winter, yearlong). Proper use levels for all allotments are also implied by the Standards and Guidelines for Rangeland Health and Grazing Administration (February 1997).

Key forage plant utilization method was used to collect utilization data at key areas on the Silverado Allotment (Table 3.1). Utilization for all herbivores has been slight to moderate across the allotment.

Table 3.1—Utilization Data Summary for the Silverado Allotment

Grazing Year	Key Area/ Study Site	Vegetation Species	Utilization	Total
2003	SV-2	shadscale	moderate	42%
2003	SV-2	sand dropseed	moderate	42%
2008	SV-1	winterfat	moderate	53%
2008	SV-1	Indian ricegrass	moderate	56%
2008	SV-2	sand dropseed	moderate	54%
2008	SV-3	Indian ricegrass	slight	17%

4. Line-Point Intercept Cover Studies

Line-point intercept is a rapid, accurate method for quantifying soil cover, including vegetation, litter, rocks and biotic crusts. These measurements are related to wind and water erosion, water infiltration and the ability of the site to resist and recover from degradation (Herrick et al 2005). The results from this cover study are compared to the appropriate cover for each ecological site as indicated by the Natural Resources Conservation Service (NRCS) Rangeland Ecological Site Descriptions (ESD). Results are also compared to general known healthy rangelands.

Line-point intercept cover studies were conducted in 2009 at three key areas on the Silverado Allotment and data is summarized in Table 4.1 and 4.2.

Table 4.1—Silverado Allotment Ground Cover 2009

Key Area	Bare Ground	Ground Cover			ESD Veg. Cover
		Rock	Litter	Veg.	
SV-1	67%	0%	5%	28%	10-20 %
SV-2	39%	34%	12%	15%	
SV-3	30%	20%	3%	47%	15-20%

Table 4.2—Silverado Allotment Vegetative Cover by species (including understory)

Key Area	Vegetative species	% Cover
SV-1	winterfat	25%
	bud sagebrush	1%
	four-wing saltbush	3%
SV-2	sand dropseed	15%
SV-3	black sagbrush	43%
	Indian ricegrass	5%
	needleandthread	4%
	squirreltail	1%
	bluegrass	1%

5. Similarity Index and Ecological Condition

A similarity index is the percentage of a specific vegetation state plant community that is presently on the site (NRCS 1997). Similarity index is usually computed in reference to the historic climax plant community (HCPC) and is an expression of how similar the existing plant community is to HCPC. Also note that HCPC is not always the most desirable plant community to manage for.

Similarity index is calculated as a percent composition by air dry weight. The site is inventoried to determine the current percent composition by weight on an air dry basis. These numbers are then compared to the percent composition by weight on an air dry basis of the HCPC in the Rangeland Ecological Site Description for the site. To calculate the similarity index, current composition cannot exceed that of HCPC. This yields percent allowable. The sum of all allowable percentages equals the similarity index.

Table 5.1 summarizes data used to calculate similarity index for the Silverado Allotment.

Table 5.1—Total Annual Yield and Composition of Silverado Allotment Key Areas

Key Area: SV-1 Ecological Site: Silty 8-10" P.Z. (028BY013NV) Potential vegetative composition*: 30% grasses, 5% forbs, and 65% shrubs Total Annual Production (air dry lb/ac)*: 700 (Favorable), 500 (Normal), 350 (Unfavorable Year)				
Date: 7/2/2003				
Plant Common Name	Current Production (air dry lb/ac)	Current % Composition by Weight (air dry)	HCPC % Composition by Weight (air dry)*	% Allowable
winterfat	205	86%	40-50%	50%
sickle saltbush	15	6%	2%	2%
Indian ricegrass	17	7%	15-25%	7%
Total Production:	237		Similarity Index:	59%
Date: 6/24/2009				
Plant Common Name	Current Production (air dry lb/ac)	Current % Composition by Weight (air dry)	HCPC % Composition by Weight (air dry)*	% Allowable
winterfat	761	98%	40-50%	50%
four-wing saltbush	13	2%	2-5%	2%
mustard	1	trace	1%	---
Indian ricegrass	1	trace	15-25%	---
Total Production:	775		Similarity Index:	52%
Key Area: SV-2 Site: Sand Dropseed Inclusion				
Date: 7/2/2003				
Plant Common Name	Current Production (air dry lb/ac)	Current % Composition by Weight (air dry)		
shadscale	50	12%		
black sagebrush	12	3%		
globemallow	8	2%		
sand dropseed	139	33%		
cheatgrass	195	46%		
bluegrass	19	5%		
Total Production:	423			
Date: 06/24/2009				
Plant Common Name	Current Production (air dry lb/ac)	Current % Composition by Weight (air dry)		
four-wing saltbush	164	28%		
globemallow	3	1%		
annual forb	1	trace		
sand dropseed	409	71%		
Total Production:	577			

Table 5.1—Total Annual Yield and Composition of Silverado Allotment Key Areas

Key Area: SV-3				
Ecological Site: Shallow Calcareous Loam 8-10" P.Z. (028BY011NV)				
Potential vegetative composition*: 50% grasses, 5% forbs, and 45% shrubs				
Total Annual Production (air dry lb/ac)*: 600 (Favorable), 450 (Normal), 250 (Unfavorable Year)				
Date: 06/24/2009	Current Production (air dry lb/ac)	Current % Composition by Weight (air dry)	HCPC % Composition by Weight (air dry)*	
Plant Common Name				% Allowable
black sagebrush	448	94%	25-35%	35%
needleandthread	14	3%	5-15%	3%
squirreltail	5	1%	2-5%	1%
bluegrass	5	1%	2-8%	1%
Indian ricegrass	3	1%	20-35%	1%
Total Production:	475		Similarity Index:	41%
*from Ecological Site Description (ESD)				

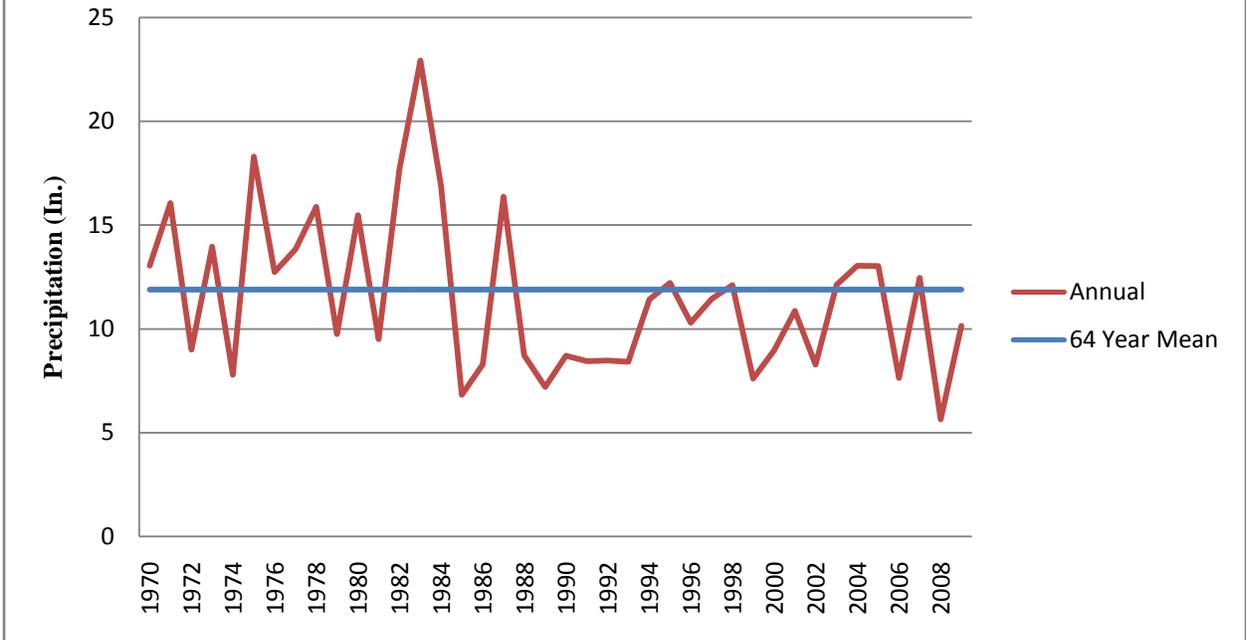
6. Precipitation Data

Annual precipitation greatly influences growing condition of forage species and is often correlated to available forage. Historical climate data from the Western Regional Climate Center at the Eureka, Nevada weather station is being used to represent the annual precipitation on the Silverado Allotment. Table 6.1 and Graph 6.1 summarize annual precipitation data collected. The 64 year mean annual precipitation for this station is 11.89 inches.

Table 6.1—Western Regional Climate Center Precipitation Data from Eureka, NV

YEAR	ANNUAL PRECIP. (inches)	YEAR	ANNUAL PRECIP. (inches)	YEAR	ANNUAL PRECIP. (inches)
1980	15.48	1990	8.71	2000	8.96
1981	9.50	1991	8.44	2001	10.86
1982	17.66	1992	8.48	2002	8.27
1983	22.92	1993	8.41	2003	12.12
1984	16.86	1994	11.42	2004	13.04
1985	6.82	1995	12.21	2005	13.02
1986	8.29	1996	10.30	2006	7.63
1987	16.36	1997	11.44	2007	12.46
1988	8.72	1998	12.11	2008	5.64
1989	7.21	1999	7.60	2009	10.15

Graph 6-1. Precipitation Data (1981-2008) from Western Regional Climate Center from Eureka, NV



APPENDIX II—MAPS

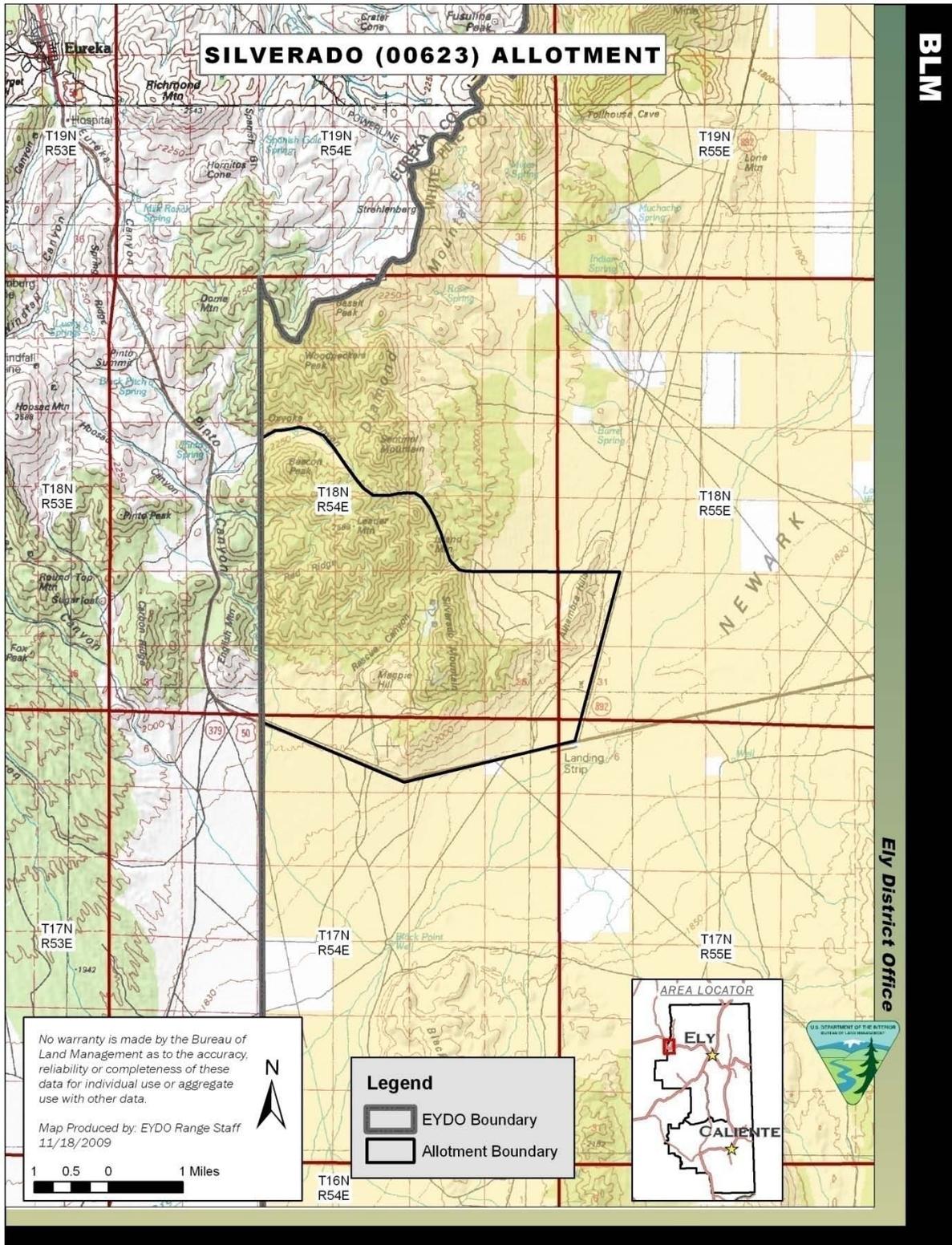


Figure 1—Silverado Allotment Map

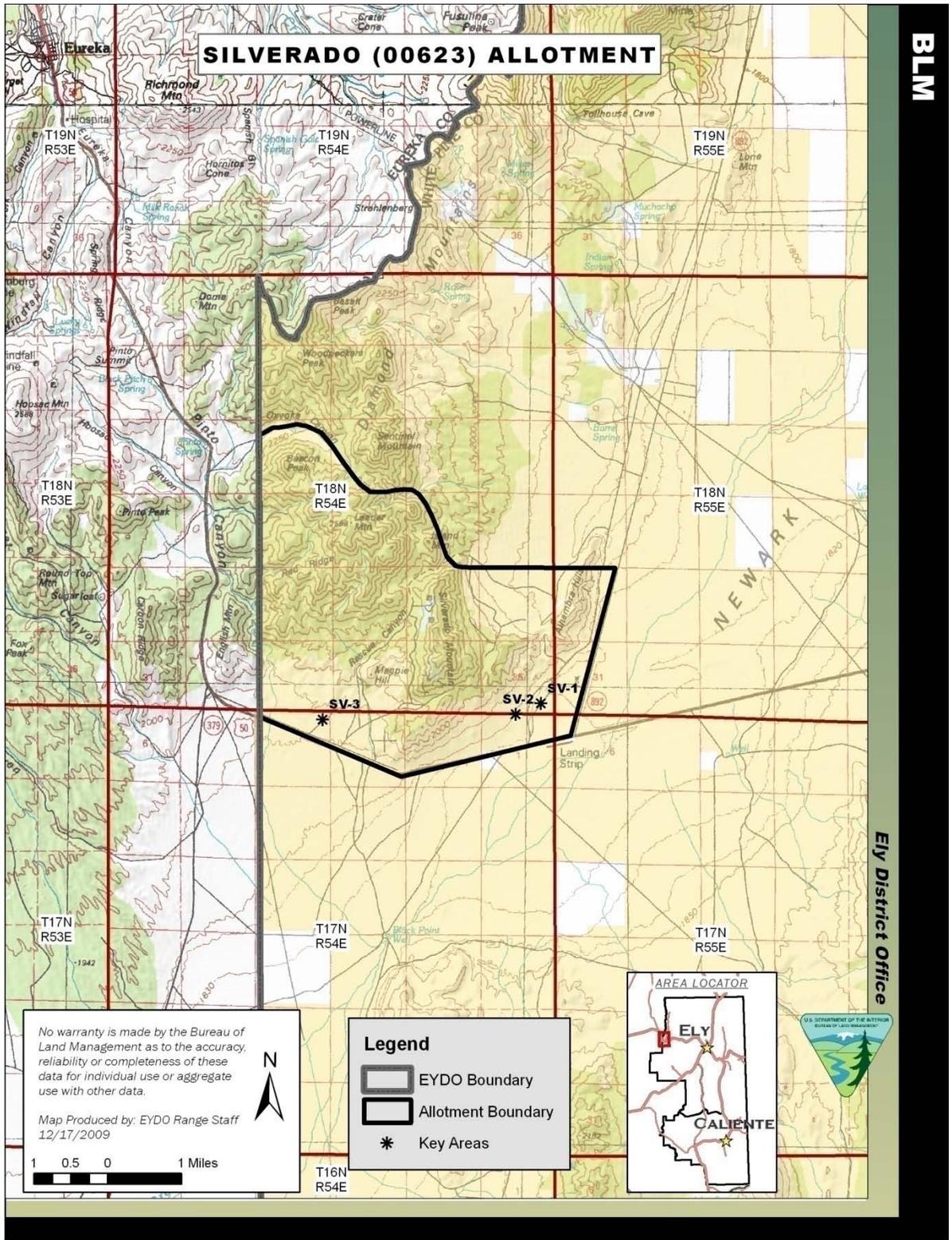


Figure 2—Key Area Locations on the Silverado Allotment

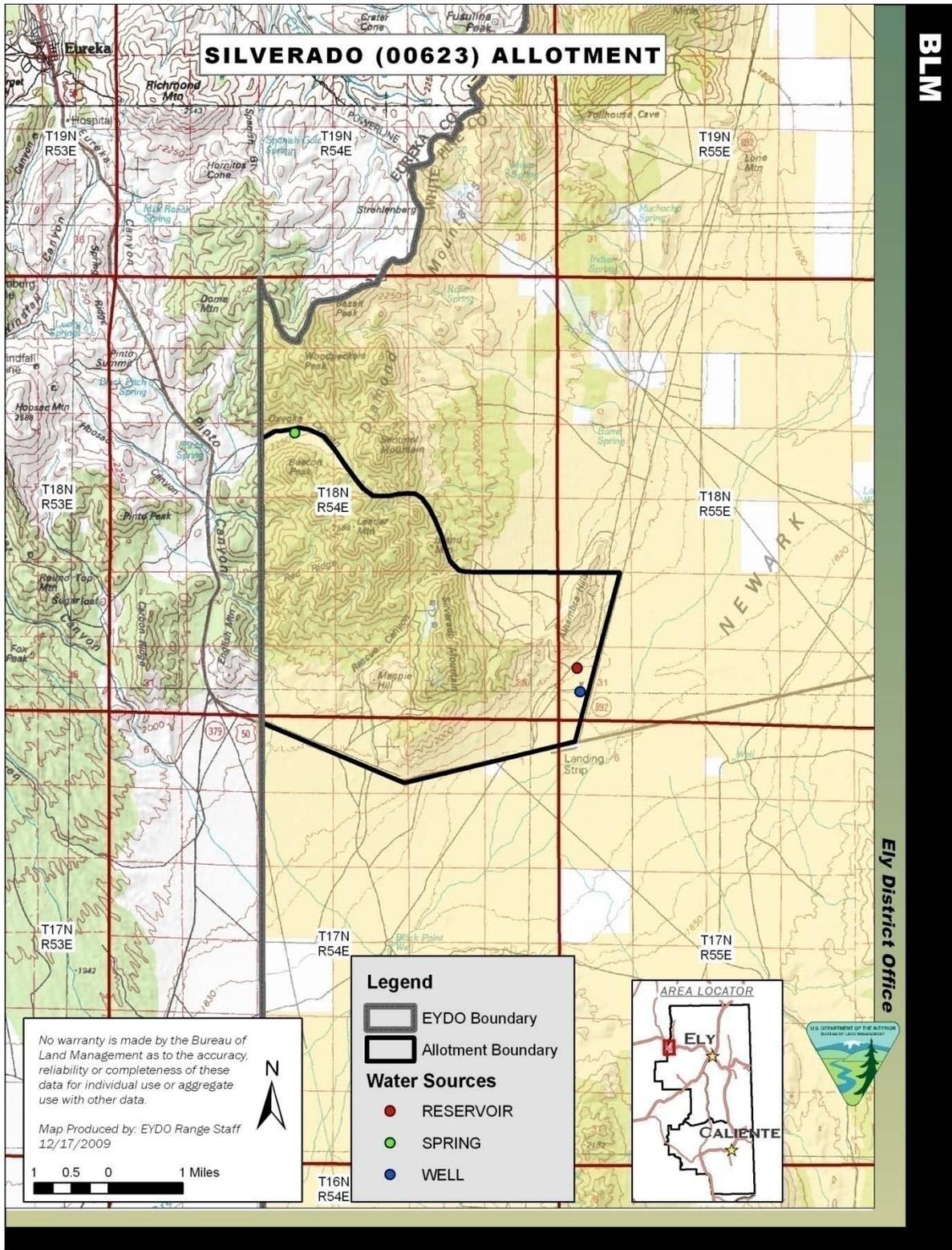


Figure 3—Water Sources on the Silverado Allotment

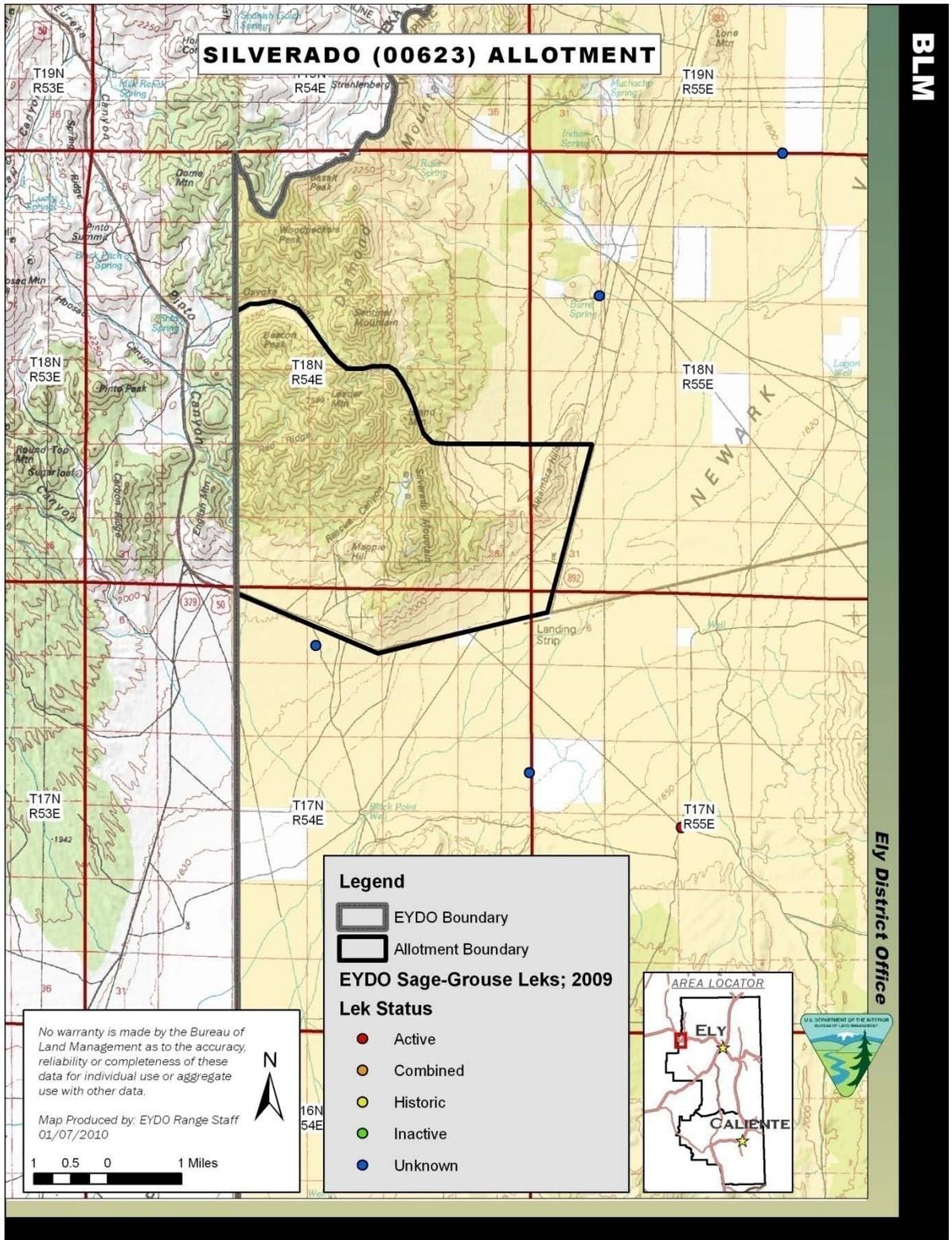


Figure 4—Sage-Grouse Lek Locations near the Silverado Allotment

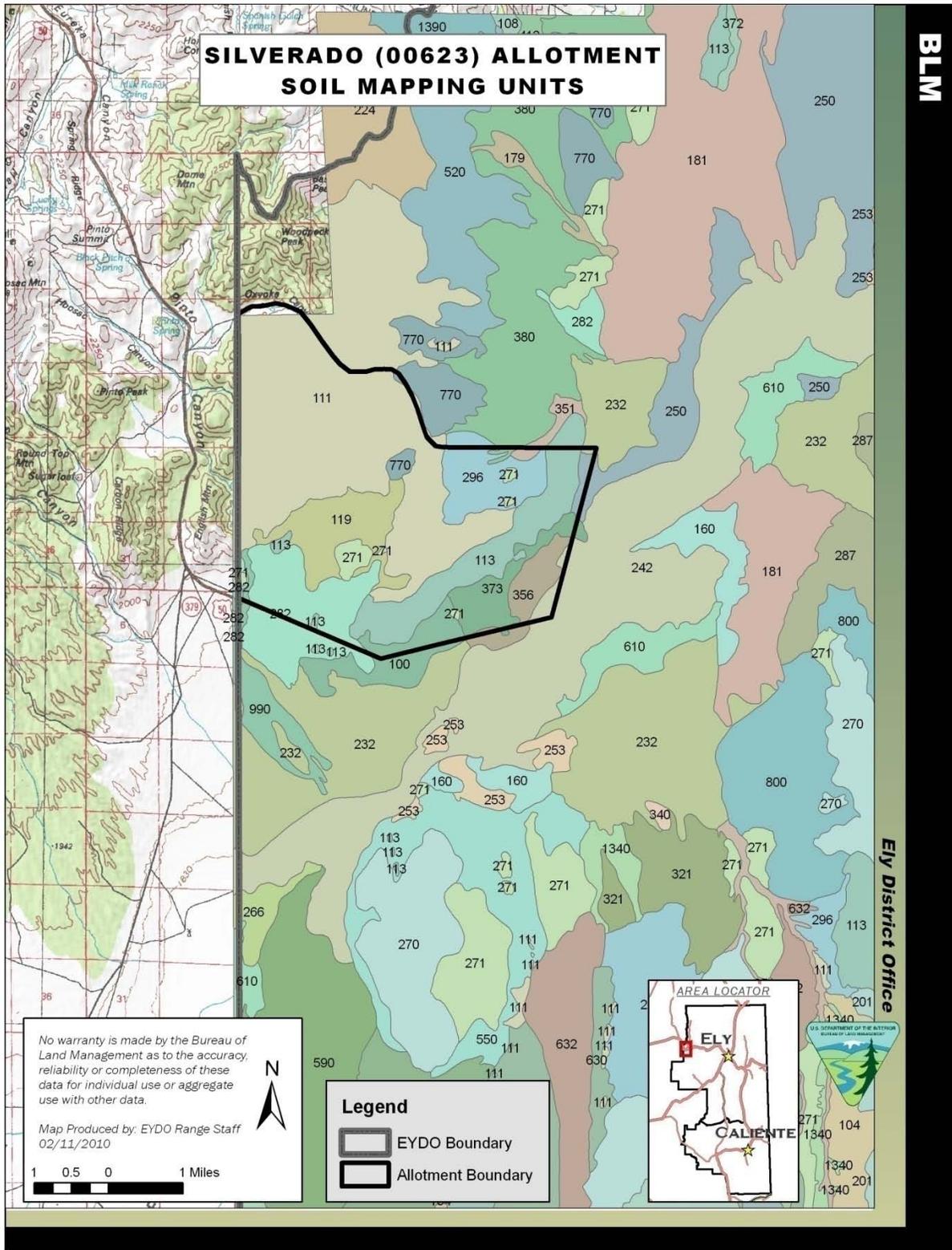


Figure 5—Soil Mapping Units on the Silverado Allotment

APPENDIX III—TERMS AND CONDITIONS
New Grazing Permit

2704506:

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Silverado 00623	115 Cattle	12/01 to 02/28	100	Active	340
*% Public Land is the percent of public land for billing purposes. **AUMs may differ from Active Permitted Use due to a rounding difference with the number of livestock and the period of use.					
Allotment AUMs Summary					
Allotment Name	ACTIVE AUMS	SUSPENDED AUMS	GRAZING PERMITTED USE		
Silverado	338	0	338		

Terms and Conditions:

1. The placement of mineral or salt supplements will be a minimum distance of ½ mile from known water sources, riparian areas, winterfat bottoms, sensitive sites, populations of special status species, and cultural resource sites. Mineral and salt supplements will also be one mile from sage grouse leks.
2. Maximum utilization levels on the Silverado Allotment will be established as follows:
 - Perennial native grasses: 50% current year’s growth
 - Perennial shrubs and half-shrubs: 50% use on current annual production
 - Livestock will be moved to another authorized pasture or removed from the allotment before utilization objectives are met or no later than 5 days after meeting the utilization objectives. Any deviation in livestock movement will require authorization from the authorized officer.

Additional Stipulations Common to All Grazing Allotments:

1. Livestock numbers identified in the Term Grazing Permit are a function of seasons of use and permitted use. Deviations from those livestock numbers and seasons of use may be authorized on an annual basis where such deviations would not prevent attainment of the multiple-use objectives for the allotment.
2. Deviations from specified grazing use dates will be allowed when consistent with multiple-use objectives. Such deviations will require an application and written authorization from the authorized officer prior to grazing use.
3. The authorized officer is requiring that an actual use report (form 4130-5) be submitted within 15 days after completing your annual grazing use.
4. Grazing use will be in accordance with the Standards and Guidelines for Grazing Administration. The Standards and Guidelines have been developed by the respective Resource Advisory Council and approved by the Secretary of the Interior on February 12, 1997. Grazing use will also be in accordance with 43 CFR Subpart 4180 - Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration.

5. If future monitoring data indicates that Standards and Guidelines for Grazing Administration are not being met, the permit will be reissued subject to revised terms and conditions.
6. Pursuant to 43 CFR 10.4 (G) the holder of this authorization must notify the authorized officer by telephone, with written confirmation, immediately upon discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined at 43 CFR 10.2). Further, pursuant to 43 CFR 10.4 (C) and (D), you must stop activities in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the authorized officer.
7. The permittee must notify the authorized officer by telephone, with written confirmation, immediately upon discovery of any hazardous or solid wastes as defined in 40 CFR Part 261.
8. The permittee is responsible for all maintenance of assigned range improvements including wildlife escape ramps for both permanent and temporary water troughs.
9. When necessary, control or restrict the timing of livestock movement to minimize the transport of livestock-borne noxious weed seeds, roots, or rhizomes between weed-infested and weed-free areas.