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

Environmental Assessment
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Term Grazing Permit Renewal for Authorization #2704549
on the Strawberry (00607) Grazing Allotment

Location: *White Pine County, Nevada*

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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 renewal for authorization #2704549 on the Strawberry (00607) Grazing Allotment. The Strawberry Allotment is situated approximately 15-20 miles northeast of Eureka, Nevada. The allotment is found within White Pine County, Nevada (see Figure 1, Appendix I).

The legal location of the Strawberry Allotment is as follows:
T. 22 N., R. 55 E., various sections
T. 21 N., R. 55 E., various sections

1.0.1 Background

Current management practices for the Strawberry Allotment consist of one permittee, authorization #2704549, which is allowed 206 cattle and 1,032 AUMs to be grazed within the periods of 06/01 to 10/31. The permittee has been allowed to graze the public land as early as May 15, based on annual conditions and BLM authorized officer approval, and then remove the cattle in September. In addition, the permittee has used a majority of the allowed AUMs for most of the term of the current permit and is summarized in Table 2-1 of the Standards Determination Document (SDD; see Appendix II).

1.1 Introduction of the Proposed Action.

The Bureau of Land Management (BLM), Egan Field Office proposes to issue and fully process a term grazing permit for authorization #2704549 and authorize grazing on the Strawberry 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 of the allotment was completed in 2009-2010 during the term permit renewal process through a Standards Determination Document (SDD; see Appendix II).

The following is a summary of the SDD by allotment for achievement of the standards.

ALLOTMENT	STANDARD 1 Upland Sites	STANDARD 2 Riparian and Wetland Sites	STANDARD 3 Habitat
Strawberry (00607)	Standard Achieved	**Not achieving the Standard, but making significant progress towards.** Livestock are a contributing factor to not achieving the Standard, failure to meet the standard is also related to other issues or conditions.	**Not achieving the Standard, but making significant progress towards.** Livestock are not a contributing factor to not achieving the Standard, failure to meet the standard is related to other issues or conditions.

1.2 Need for the Proposed Action.
The BLM's need for the proposal is to authorize grazing use in a manner that is consistent with multiple use, sustained yield and achieve the standards for rangeland health by renewing the term grazing permit for authorization #2704549. The purpose is to renew the grazing term 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 for authorization #2704549 and authorize grazing in accordance with applicable laws, regulations, and land use plans (LUP) on approximately 20,821 acres of public land.

1.3.2. To improve vegetative health and growth conditions on the allotments 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 (1997)
- 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 proposal for the term permit renewal for authorization #2704549 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 18, 2009.

The proposal for authorization #2704549 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 Strawberry Allotment SDD (see Appendix II) will be posted to the Ely District Grazing Permit Renewal website for a 30-day external review/public comment period with this Environmental Assessment (EA). Hard copies may also be sent to interested publics.

Potential issues identified through scoping were that the proposed action may affect sage grouse habitat (summer, winter, nesting, and breeding), pygmy rabbit habitat, migratory birds, crucial summer mule deer range and wetland/riparian areas. Wild horses were also identified as a concern because approximately 55 wild horses reside outside of the Diamond Wild Horse Herd Management Area (HMA) and the Triple B HMA.

2.0 Alternatives Including the Proposed Action

2.1 Proposed Action

The BLM proposes to issue and fully process a new term grazing permit for authorization #2704549 and authorize grazing on the Strawberry (00607) Allotment (Figure 1, Appendix I).

2.1.1 Proposed term permit

The renewal of the term grazing permit 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 season of use would remain the same as the current permit. Changes to the current permit include establishing a rotational grazing system to improve habitat conditions. A season of use for the Fairy Dell riparian pasture would be established in order to achieve riparian and wetland health standards. Allowable use levels will be established and specific recommendations regarding livestock supplements would be added to this permit

The **proposed term permit for authorization #2704549** and terms and conditions are as follows:

Table 1. Summary of the Proposed Term Permit for Authorization #2704549

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Strawberry 00607	206 Cattle	06/01 to 10/30	100	Active	1029

*% 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
Strawberry	1032	2224	3256

Terms and Conditions

1. Livestock will be rotated through native ranges using a two year rotation system. This rotation system will be as follows:
    - **Year 1- 06/01 to 06/30 will be in the valley bottom pasture (east of State Highway 892). 07/01 to 08/31 will be in the south bench, fire pasture (west of highway 892). 09/01 to 10/30 will be in the north bench pasture.**
    - **Year 2- 06/01 to 07/30 will be in the fire pasture. 08/01 to 08/31 will be in the valley bottom pasture. 09/01 to 10/30 will be in the north bench pasture.**
    - **Grazing in the Fairy Dell riparian pasture will be for a maximum of 14 days in September.**
2. Allowable Use Levels on current year's growth of riparian vegetation within the Fairy Dell Exclosure will not exceed 35% (Light Use Category).

3. To improve livestock distribution the placement of mineral blocks or salt blocks will be a minimum distance of ½ mile from water sources, riparian areas, sensitive sites, and cultural resource sites. Mineral and salt blocks will also be one mile from sage grouse leks.
4. Maximum utilization levels on the Strawberry Allotment will be established as follows:
    - Perennial native grasses: 50% of current year's growth
    - Perennial non-native grasses: 60% of 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.
5. The permittee will be allowed to use an actual use billing system.
6. To protect riparian values and Newark Valley tui chub habitat, the fenced pond located at T21N R55E Sec. 10 may be grazed seasonally at the discretion of 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.

2.2 Alternative 1: Alternative Season of Use with a Rotational Grazing System

The season of use would be changed from the current permit as well as establishing a rotational grazing system in order for the use of this allotment to better fit into the overall grazing operation of the permittee and to improve habitat conditions. A season of use for the Fairy Dell riparian pasture would be established in order to achieve riparian and wetland health standards. Allowable use levels will be established and specific recommendations regarding livestock supplements would be added to this permit.

The alternative season of use and grazing system and the terms and conditions are as follows:

Table 2. Summary of the Alternative Season of Use with Rotational Grazing System for Authorization #2704549

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Strawberry 00607	206 Cattle	05/01 to 05/31	100	Active	210
Strawberry 00607	206 Cattle	07/01 to 10/29	100	Active	819

*% 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
Strawberry	1032	2224	3256

Terms and Conditions

1. Livestock will be rotated through native ranges using a two year rotation system. This rotation system will be as follows:
    - **Year 1- 05/01 to 05/31 grazing use will be in the valley bottom pasture (east of State Highway 892). 07/01 to 08/31 grazing use will be in the south bench, fire pasture (west of highway 892). 09/01 to 10/29 grazing use will be in the north bench pasture.**
    - **Year 2- 05/01 to 05/31 grazing use will be in the fire pasture. 07/01 to 07/31 grazing use will be in the valley bottom pasture. 08/01 to 10/29 grazing use will be in the north bench pasture and the fire pasture, as needed.**
    - **Grazing in the Fairy Dell riparian pasture will be for a maximum of 14 days in September.**

2. Allowable Use Levels on current year's growth of riparian vegetation within the Fairy Dell Exclosure will not exceed 35% (Light Use Category).
3. To improve livestock distribution the placement of mineral blocks or salt blocks will be a minimum distance of ½ mile from water sources, riparian areas, sensitive sites, and cultural resource sites. Mineral and salt blocks will also be one mile from sage grouse leks.
4. Maximum utilization levels on the Strawberry Allotment will be established as follows:
    - Perennial native grasses: 50% of current year's growth
    - Perennial non-native grasses: 60% of 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.
5. The permittee will be allowed to use an actual use billing system.
6. To protect riparian values and Newark Valley tui chub habitat, the fenced pond located at T21N R55E Sec. 10 may be grazed seasonally at the discretion of the authorized officer. The gate will remain closed at other times.

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.

2.3 No Action Alternative

The No Action Alternative represents the status quo – the current permit would be renewed without establishment of allowable use levels or modifications to the permit terms and conditions.

2.3.1 Current permit

Table 3. Summary of the Current Grazing Permit for Authorization #2704549

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Strawberry 00607	206 Cattle	06/01 to 10/30	100	Active	1029
*% 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		
Strawberry	1032	2224	3256		

Terms and Conditions

1. The following season of use is currently implemented:
   - 06/01 to 08/01 livestock will use the area west of the proposed fence.
   - 08/02 to 09/30 livestock will use fenced native pastures.
   - 10/01 to 10/30 livestock will use the area east of the proposed fence.
2. A maximum of 354 AUMs may be used in the native fenced meadows located in T22N, R55E, Sec. 34 and 35.
3. A maximum of 308 AUMs may be used in the native fenced meadows located in T22N, R55E, Sec. 9 and 10.
4. A maximum of 185 AUMs may be used west of the Strawberry road.
5. A maximum of 185 AUMs may be used east of the Strawberry road.

2.4 Invasive, Non-Native Species and Noxious Weeds

A Weed Risk Assessment (See SDD Appendix IV) was completed on March 3, 2010. The stipulations listed in the Weed Risk Assessment will be followed when grazing occurs on the allotments.

2.5 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).

2.6 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.

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

3.0 Affected Environment and Environmental Effects

3.1 Allotment Information

The Strawberry Allotment encompasses approximately 20,821 public land acres. The grazing allotment occurs within White Pine County, Nevada and is situated approximately 15-20 miles northeast of Eureka, Nevada (Appendix I, Figure 1). The eastern portion of this allotment resides within the Triple B Wild Horse Herd Management Area. The western portion of this allotment borders the Battle Mountain BLM District and the Diamond Wild Horse Herd Management Area (HMA). In 2000, a small portion of the allotment was burned by wildfire. The permit area is within the Newark Valley Watershed.

The primary vegetation types on the Strawberry Allotment are a mixture of mountain big sagebrush (*Artemesia tridentata vaseyana*), Wyoming big sagebrush (*Artemisia tridentata wyomingensis),* and Douglas' rabbitbrush (*Chrysothamnus viscidiflorus*) with Sandberg's bluegrass (*Poa secunda*), bottlebrush squirreltail (*Elymus elymoides),* and Indian ricegrass (*Achnatherum hymenoides*) plant communities. There are also areas of pinyon-juniper (*Pinus monophylla-Juniperus osteosperma*).

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 would contribute to ambient dust in the air due to trailing, but the impact would be temporary and would not approach a level that would exceed any air quality standards. Further analysis is not necessary.
Cultural Resources	No	Impacts from livestock grazing on Cultural Resources are analyzed on page 4.9-5 of the Ely Proposed Resource Management Plan/Environmental Impact Statement (November 2007). Presently, approximately 2.5% of this allotment has been inventoried for cultural resources. Unknown cultural resources may still be present. All eligible historic resources will be monitored for impacts. Mitigation and treatment will be applied as concerns are identified.
Forest Health	No	No Forest Health concerns occur within or adjacent to the project area.
Rangeland Standards and Health	Yes	Impacts from livestock grazing on Rangeland Standards and Health are analyzed on pages 4.16-3 through 4.16-4 of the Ely Proposed Resource Management Plan/Environmental Impact Statement (November 2007). 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). Since there may be possible differences between the impacts of the proposed action and the alternatives this is further analyzed in this EA.
Migratory Birds	No	Continued progress towards the RAC standards will aid in the future desired condition of habitat for migratory bird species of concern. The potential for the proposed livestock grazing to affect migratory birds is discountable because of low density of livestock within the allotments.
Native American Religious Concerns and other concerns	No	Tribal Coordination Letters were sent out January 8, 2009 for the term permit renewal for authorization #2704549 notifying the tribes of a 30 day comment period. No concerns were identified. Direct impacts and cumulative impacts would not occur because there were no identified concerns through coordination.

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 on the permit renewal area, nor would any be introduced by the proposed action.
Water Quality, Drinking/Ground Water Quality, Drinking/Ground (continued)	No	Impacts from livestock grazing on Water Resources were analyzed on page 4.3-5 in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). The proposed action does not pose any impact to ground water in the project area. No surface water in the project area is used as human drinking water sources and no impaired water of the State are present in the project area.
Wilderness	No	No Wilderness or Wilderness Study Areas occur within or adjacent to the allotment.
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. Floodplains, as defined in Executive Order 11988, may exist in the area, but would not be affected by the proposed action.
Watershed Management	No	Impacts from livestock grazing on Watershed Management are analyzed on page 4.19-5 of the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). Further changes to livestock management may be recommended during the watershed analysis process; however no concerns have been identified at this time.
Wetlands/Riparian Zones	Yes	Impacts from livestock grazing on Water Resources were analyzed on page 4.3-5 in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). Further analysis was conducted in this EA.
Noxious and Invasive Weed Management	No	Livestock grazing has the potential to spread noxious and non-native, invasive weeds. However the design features of the proposed action will help prevent the spread noxious and non-native, invasive weeds. No additional analysis is needed.
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	Impacts from livestock grazing on Wild Horses are analyzed on page 4.8-6 of the Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). The eastern portion of the Strawberry Allotment is within the Triple B Wild Horse Herd Management Area

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
		(HMA). Site specific examination of the allotment did not reveal any concerns above those addressed in the EIS.
Soil Resources	No	Impacts from livestock grazing on Soil Resources were analyzed on page 4.4-4 in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). Soils were considered in the SDD (Appendix II). This analysis did not reveal any soil resource concerns.
Prime and Unique Farmlands	No	There is no Prime and Unique Farmlands within or adjacent to the project area.
Special Designations other than Designated Wilderness	No	No Special Designations occur within the project area.
VRM	No	The proposed action is consistent with the VRM classification 3 for the area therefore no direct or cumulative impacts to visual resources would occur.
Special Status Animal Species, other than those listed or proposed by the FWS as Threatened or Endangered	Yes	Impacts from livestock grazing on Special Status Species are analyzed on page 4.7-28 through 4.7-30 of the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). The project area contains nesting, winter and summer brood rearing habitat for **greater sage grouse** (*Centrocercus urophasianus*). There is one known sage grouse lek within the allotment and two leks within three miles of the allotment. Sage-grouse habitat was analyzed in the SDD (Appendix II). Although sage grouse are present within the allotment, livestock turnout dates, grazing rotation, and establishment of allowable use levels are beneficial to providing perennial grass cover and forage for this species. **Analyzed in Section 3.2.1.** The **pygmy rabbit** (*Brachylagus idahoensis*) has potential habitat within the allotment. No occurrences of pygmy rabbits are currently known within the allotment boundaries according to Nevada Natural Heritage Program data. The species prefers areas of tall sagebrush with deep friable soils for digging burrows. The grazing management practices outlined in the proposed action work to maintain or move the vegetative conditions toward the cover and habitat standards outlined by the Standards and Guidelines for Nevada's Northeastern Great Basin Area (1997). These changes will maintain potential pygmy rabbit habitat within the allotment. The **Newark Valley tui chub** (*Gila bicolor newarkensis*) is known to occur in three unnamed spring ponds within the allotment boundaries which are on private and BLM lands. All of the ponds are fenced and only one is on BLM land. Effects of the proposed action on the tui chub and its habitat will be minimal. The number of populations found and numbers in populations has determined that the species is

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Special Status Animal Species, other than those listed or proposed by the FWS as Threatened or Endangered (continued)		secure within its native range (NDOW 2005). Design features in the proposed action, such as restricted grazing at the unnamed spring located at T21N R55E Sec.10, will further reduce impacts from livestock grazing to the tui chub. There are four known raptor nesting locations for the goshawk (*Accipiter gentilis*), Prairie falcon (*Falco mexicanus*) and the golden eagle (*Aquila chrysaetos*). The sites were last checked in 1974 through 1980. Inso far as the allotment has been determined to be progressing toward meeting the standards for rangeland health the habitat for raptors in general and these three species in particular should be maintained.
Fish and Wildlife	No	Impacts from livestock grazing on Fish and Wildlife are analyzed on pages 4.6-10 through 4.6-11 in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). The eastern slope of the Diamond Range has been identified as crucial summer habitat for mule deer. Much of this area is too steep for cattle grazing. General habitat will be maintained or improved by the changes in the proposed action. Site specific examination of the allotment did not reveal any concerns above those addressed in the EIS.
Grazing Uses	No	The proposed action will continue to meet the RMP goals and objectives, including progressing toward meeting the standards for rangeland health. The proposed action is consistent with the need for the action, no further analysis is necessary.
Land Uses	No	There would be no modifications to land use authorizations through the proposed action, therefore no impacts would occur. No direct or cumulative impacts would occur to access and land use.
Recreation Uses	No	The proposed action would result in no impacts to recreational activities.
Paleontological Resources	No	No currently identified paleontological resources are present in the project area.
Mineral Resources	No	There would be no modifications to mineral resources through the proposed action, therefore no direct, indirect, or cumulative impacts would occur to minerals.
Vegetative Resources	Yes	Impacts from livestock grazing on Vegetation (including Riparian) Resources were analyzed on page 4.5-9 in the Ely Proposed Resource Management Plan/Environmental Impact Statement (November 2007). Beneficial impacts to vegetative resources are consistent with the need and objectives for the proposed action. The proposed action and the alternatives may have possible differences in the

Resource/Concern Considered	Issue(s) Analyzed	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Vegetative Resources (continued)		effects to vegetative resources. A detailed analysis for this resource is provided below.
Wild and Scenic Rivers	No	No Wild and Scenic Rivers occur within or adjacent to the project area.
Social and Economic Values	Yes	Analyzed in EA.

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

The resources/concerns that are not present in the proposed action allotment or are affected negligibly by the proposed action and do not require a detailed analysis include air quality, forest health, migratory birds, Native American religious concerns, FWS listed or proposed for listing threatened or endangered species or critical habitat, hazardous or solid wastes, environmental justice, floodplains, special status plant species, special designations other than designated wilderness, VRM, grazing uses, land uses, recreation uses, paleontological resources, mineral resources, and noxious and non native invasive weeds.

The resources that have impacts from livestock grazing disclosed in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007) include Water Resources (page 4.3-5), Soil Resources (page 4.4-4), Vegetation (including Riparian) Resources (page 4.5-9), Fish and Wildlife (pages 4.6-10 through 4.6-11), Wild Horses (page 4.8-6), Cultural Resources (page 4.9-5), Rangeland Standards and Health (pages 4.16-3 through 4.16-4), and Watershed Management (page 4.19-5). These resources do not require a further detailed analysis.

3.2.1 Special Status Animal Species, other than those listed or proposed by the FWS as Threatened or Endangered

Greater Sage Grouse

Affected Environment

The greater sage-grouse (*Centrocercus urophasianus*) is a high-profile Sensitive Species that has been determined to be warranted for listing but which is precluded by other species of higher priority. (**Federal Register** /Vol. 75, No. 55 /Tuesday, March 23, 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).

There is at least one known active sage grouse lek in the allotment and two known lek sites in which the activity status is unknown within a three mile buffer of the Strawberry Allotment (SDD Appendix II, Figure 6). The allotment contains nesting, summer brood rearing, and winter habitat.

Sage grouse often nest in suitable habitat within three miles of a lek site. The sage grouse strutting and nesting period is generally considered to be 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. All of the project area is located within the Diamond Population Management Unit (PMU).

Under the sage-grouse guidelines, the herbaceous component (grass and forb combined) should comprise at least 15% of the vegetative community by cover, and sagebrush should comprise at least 15-25% of vegetative cover (Connelly et al. 2000). Sagebrush habitats were evaluated against the Connelly Guidelines in the SDD (Appendix II). The majority of the Strawberry Allotment is meeting the herbaceous understory and sagebrush requirements set forth within the sage-grouse guidelines. In addition, the allotment is meeting the vegetative recommendations for wildlife habitat in sagebrush plant communities set forth in the Ely District Approved Resource Management Plan.

Environmental Effects

Proposed Action

On the Strawberry Allotment, grazing would begin in June, which is considered to be out of the critical growing season, and extends into the fall. This season of use allows the range to rest during the early spring, or critical growing season. The critical growing season rest in combination with the grazing rotation and the established allowable use levels would be beneficial in providing perennial grass cover and forage for sage grouse habitat. In addition, the design of the rotational system defers grazing activities in the area in which the known lek is located for the time period when the lek and early brood rearing activities occur, which is thought to be beneficial for population stabilization.

Alternative 1

The impacts to sage grouse habitat would be similar to those described under the proposed action. The grazing system and rotation in this proposal is essentially identical to the proposed action, with the exception that grazing would begin in May, which is considered to be in the critical growing season. The negative impacts to vegetation that may be associated with this season of use would likely be eliminated by the design of the rotational system along with the establishment of allowable use levels. This grazing system would allow for livestock to graze early growth for the month of May in one particular pasture which would then be rested for the remainder of the year until after the critical growing period the next summer while grazing is rotated through other pastures throughout the season of use. Grazing would begin in a different pasture the next May. Spring pasture use, under this alternative, allows for complete growing season rest every other year. This would allow grazed vegetation sufficient time to continue photosynthetic processes, recover and complete its growth cycle to reproduce and provide perennial grass cover and forage for sage grouse habitat.

No Action Alternative

The current impacts to special status animal species, including sage grouse would likely continue. The current permit does not establish allowable use levels which could result in the over use of perennial grasses and forbs.

3.2.2 Rangeland Standards and Health and Vegetative Resources

Affected Environment

The Strawberry Allotment occurs within the Northeastern Great Basin Area Resource Advisory Council (RAC) area. The Standards and Guidelines reflect the stated goals of improving rangeland health while providing for the viability of the livestock industry, all wildlife species,

and wild horses and burros in the Northeastern Great Basin Area. 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. For each grazing permit renewal, BLM conducts a Standards Conformance analysis to determine if the current livestock grazing management practices in place are achieving the Standards and conforming to the Guidelines. If the Standards assessed are not achieved, a determination is made if significant progress is being made towards Standard achievement and if livestock are a contributing factor to not achieving the standard.

The vegetative resources for the allotment are primarily described in the SDD for this permit renewal. Vegetation is typical of the Intermountain Great Basin Area. The primary vegetation types on the Strawberry Allotment are a mixture of mountain big sagebrush (*Artemesia tridentata vaseyana*), Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), and Douglas' rabbitbrush (*Chrysothamnus viscidiflorus*) with Sandberg's bluegrass (*Poa secunda*), bottlebrush squirreltail (*Elymus elymoides*), Bluebunch wheatgrass (*Pseudoroegneria spicata*) and Indian ricegrass (*Achnatherum hymenoides*) plant communities. There are also areas of pinyon-juniper (*Pinus monophylla-Juniperus osteosperma*). The primary ecological sites associated with these vegetation types are Loamy sites (028BY007NV, 028BY030NV and 028BY010NV).

Currently, the Strawberry Allotment is achieving the Upland Sites Standard #1. The Riparian/Wetland Standard #2 is not being achieved and livestock were identified as a contributing factor to not meeting the standard. The Riparian/Wetland standard is not addressed in this section but is discussed in the next section of this EA (Section 3.2.3 Riparian). The Habitat Standard #3 is not being achieved only because the vegetative composition by weight does not match those of the Ecological Site Descriptions (ESD). There is, however, considerable herbaceous understory and sufficient cover (See Appendix II; SDD). Significant progress is being made towards the standard and livestock were not identified as a contributing factor. Large portions of the allotment appear to be transitioning toward an altered, shrub-dominant, vegetative state.

Environmental Effects

Proposed Action

The effects of the proposed action on the Rangeland Standards and Health and the Vegetative Resource would be expected to improve conditions. The critical growing season rest in combination with the grazing rotation would allow perennial grasses and forbs to establish healthy roots and would be beneficial in providing perennial grass cover and forage for habitat (Standard #3). In addition, allowable use levels will be established and specific stipulations regarding the placement of livestock supplements will be added to this permit to improve distribution which would assist in the achievement of the standards. These management practices would tend to strengthen the native herbaceous plant component relative to the current shrub dominance. Overall, the proposed action will assist in reducing the impacts of grazing on grasses and forbs and is expected to increase plant health, reproduction, diversity and composition by allowing the plants to maintain and continue photosynthetic processes, recover and grow adequately for reproduction. These management practices would provide a good

opportunity to achieve and make significant progress toward achieving Standard #3 and maintaining or improving native grass composition.

Alternative 1
The response of the vegetative resources to this alternative, including habitat health and condition, would likely be similar as those in the proposed action. The design features of the grazing and rotational systems would likely reduce or eliminate the possible negative effects of grazing in a portion of the critical growing season. Grazing use earlier in the growth cycle and during the critical growth period would be alternated between two pastures every other year which would then be allowed to rest and recover for the remainder of the year until after the critical growing period the next summer. This would allow grazed vegetation sufficient time to maintain and continue photosynthetic processes, recover and complete its growth cycle to reproduce. In addition, allowable use levels will be established and specific stipulations regarding the placement of livestock supplements will be added to this permit to improve distribution which would assist in the achievement of the standards. Based on these management practices, habitat health and condition including plant vigor, seed production, vegetative production, structure, composition, diversity and vegetative cover would still be maintained or improve. This alternative would likely offer an equal opportunity to achieve and make significant progress toward achieving Standard #3 as the proposed action.

No Action Alternative
The current status on the Rangeland Standards and Health would continue because no changes would be made to the current permit. The impacts to vegetative resources would be similar to those described in the proposed action. The impacts to vegetation by grazing or trampling based on the current permit could be intensified because allowable use levels would not be established. Plants may be heavily grazed resulting in declining recovery, reducing plant health and delaying or preventing reproduction. The opportunity for perennial grasses and forbs to establish healthy roots and achieve full phenological development would be reduced. Plant vigor, seed production, vegetative production, structure, composition, diversity and vegetative cover would likely not be improved to the degree which could result from the proposed action or Alternative 1. It is expected that the response of the vegetative community and resulting habitat and condition would be reduced in the absence of established utilization levels, rotational grazing system and the term and condition addressing removal of livestock within 5 days of meeting the utilization objectives.

3.2.3 Riparian
Affected Environment
Currently, the Strawberry Allotment is not achieving the Riparian/Wetlands Sites Standard 2 and livestock were identified as a contributing factor to not achieving the standard. All but two of the springs and associated riparian areas on this allotment are not fenced or protected from livestock use. Some of these areas are not accessible to livestock due to steep terrain or heavy vegetation. The Fairy Dell spring complex and the spring fed pond located at T21N, R55E Sec. 10 are the only riparian areas that are fenced with the ability to regulate livestock use.

Environmental Effects
Proposed Action

The effects of the proposed action on the Riparian/Wetlands Standard 2 would be expected to improve conditions. Design features of the proposed action will aid in the progress towards achieving Standard 2. Grazing in the Fairy Dell Riparian Pasture will be for a maximum of 14 days in September. Establishing a period of use for 14 days during September will provide the best opportunity to maintain and establish adequate riparian vegetative cover and functionality. This will result in improving the ability to dissipate energy during high flows and reduce or improve channelization of the riparian area. Allowable Use Levels on current year's growth of riparian vegetation within the Fairy Dell Pasture will not exceed 35% (Light Use Category). This will serve to maintain adequate riparian vegetation which will maintain or improve functionality through dissipating water flow and soil stability. A term and condition addressing the placement of salt and mineral supplements will be added to the permit. This would help distribute livestock throughout the uplands and divert livestock use away from riparian areas.

A term and condition addressing grazing use in Newark Valley tui chub habitat will be added. To protect riparian values and Newark Valley tui chub habitat, the fenced pond located at T21N R55E Sec. 10 may only be grazed seasonally at the discretion of the authorized officer. Limiting grazing use here will serve to improve vegetation and maintain adequate herbaceous cover for the riparian area. The capture of sediments and the resulting recharge of groundwater would also result from controlled livestock grazing use. These actions will serve to benefit and stabilize the habitat for the Newark Valley tui chub.

Grazing use would also be rotated between the valley bottom, south bench and north bench throughout the grazing use period with specific seasons of use. This would defer livestock grazing between the pasture areas and would promote proper functionality and maintain or improve riparian conditions. This will provide the best opportunity to maintain and establish adequate riparian vegetative cover and is expected to improve the ability to dissipate energy during high flows and reduce or improve channelization of the riparian area. Establishment of utilization levels will serve to maintain adequate riparian vegetation which will maintain or improve functionality through dissipating water flow and soil stability.

Recommendations have been made to fence additional springs to regulate livestock use and improve riparian health (See Appendix II; SDD). This action will be addressed in subsequent environmental assessment documents.

Alternative 1
The impacts to the riparian resource under Alternative 1 will be the same as the proposed action.

No Action Alternative
The terms and conditions would not include grazing practices in the Fairy Dell Riparian Pasture and the fenced pond located at T21N R55E Sec. 10. The opportunity to maintain and establish adequate riparian vegetative cover and functionality would be reduced and making significant progress toward achieving the standard would not occur. The terms and conditions would not include grazing practices to protect the Newark Valley tui chub habitat. The improvement of vegetation and maintenance of adequate herbaceous cover for the riparian area would be reduced or would not result in improvement or stabilization of the riparian area. The capture of sediments and the resulting recharge of groundwater would also be negatively affected.

Utilization levels would not be established which will not promote maintaining adequate riparian vegetation to maintain or improve functionality through dissipating water flow and soil stability and would not progress toward achievement of the riparian standard for the riparian areas in the north and south bench areas.

3.2.4 Social and Economic Values

Affected Environment

The farming and ranching life style and economy is important to White Pine County. Taxes generated from agricultural activity benefit the county and local residents. Sheep and cattle operations have been a way of life in the area since the 1870s. Ranching at the Strawberry Ranch and on the Strawberry Allotment, in particular, has been a source of income for many generations.

Proposed Action

The proposed action does not fit the overall livestock operation of the permittee since breeding occurs on his private land in the month of June. This option may also cost the permittee more for feed during the months that livestock would be required to stay on private lands.

Alternative 1

This alternative would be the most beneficial to the permittee because it would better fit the permittee's livestock operation. This alternative would allow the operator to make use of public lands for the month of May before he brings them back on his private land for breeding during the month of June. This option may also reduce the amount spent on hay for the time that livestock would stay on his private land for the current season of use.

No Action Alternative

The impacts to social and economic values would be similar to those described in the proposed action. In addition, the current permit contains terms and conditions which are unclear and difficult to implement.

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 Special Status Species (sage grouse habitat), Rangeland Standards and Health, Vegetative Resources, Riparian areas and Socioeconomic Values. The Cumulative Effects Study Area (CESA) is defined as the Strawberry Allotment boundaries. 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 allotment year round. OHV use occurs on the roads and two-tracks on the allotments. Range improvements have occurred on the allotment to improve grazing management and include fencing and stock water developments.

Nevada has been prone to extended periods of drought. Under these conditions, wildfires can be frequent. In 2000, the southwestern portion of the Strawberry Allotment was burned by a wildfire. The Strawberry Fire burned approximately 1,604 acres in July 2000. The lower half (east side) of the fire burned with the most intensity. This area (775 acres) was aerially seeded to increase recovery potential and prevent the establishment of noxious weeds and the remainder of the burned area was left to rehabilitate naturally. The burned area was closed to livestock grazing until recovery objectives were met.

4.2 Present Activities

The Strawberry Allotment is currently being grazed by livestock. Hunting, trapping, wildlife viewing, and other activities occur on all allotments year round. OHV use occurs on the roads and two-tracks on the allotments. Maintenance of range improvements is ongoing.

A 370 foot power line and one wood pole were installed to provide power to a new private residence. The impacted area is approximately 370 feet long and 25 feet wide and contains approximately 0.21 acre of public land.

The Newark Valley Watershed Assessment process was recently initiated.

4.3 Reasonably Foreseeable Future Actions (RFFA)

Wildfire could occur within the allotment. Hunting, trapping, wildlife viewing, and other activities will probably occur on the allotment year round. Livestock grazing activities will probably continue to occur during specific periods of the year on the allotment. 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 project and site specific basis.

4.4 Cumulative Effects Summary

<u>Special Status Species</u>

Proposed Action

Transportation activities, including existing road maintenance, grazing, recreation and wildfires within the CESA can contribute to affects to special status species (sage grouse) habitat. The proposed action, in combination with any RFFAs, is expected to have minimal effect on any

greater sage-grouse populations within the CESA. As the proposed action works to continue progress toward the Nevada's Northeastern Great Basin Area Resource Advisory Council (RAC) Standards, it will also benefit greater sage-grouse populations within the CESA.

Alternative 1
The cumulative effects of this proposal are the same as those in the proposed action.

No Action Alternative
The cumulative effects of this proposal are the same as those in the proposed action and Alternative 1.

Rangeland Standards and Health, Vegetation Resources, and Riparian/Wetland Resources
Proposed Action
Transportation activities, including existing road maintenance, grazing, recreation and wildfires within the CESA can contribute to affects of the achievement or progress towards the rangeland standards. The proposed action, in combination with any RFFAs, is expected to continue to progress towards meeting RAC standards within the CESA. As the proposed action works to continue progress toward the RAC standards, it will also benefit vegetative resources and riparian areas within the CESA.

Alternative 1
The cumulative effects of this proposal are the same as those in the proposed action.

No Action Alternative
The cumulative effects of this proposal are the same as those in the proposed action and Alternative 1.

Social and Economic Values
Wildfire within the CESA may affect the economic situation of the permittee due to the closure of grazing use in the burned areas until the rehabilitation goals have been met. No other cumulative effects to social and economic values would occur.

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

TJ Mabey	Rangeland Resources/Project Lead
Amanda Anderson	Rangeland Resources
Gina Jones	Ecologist/Planning and Environmental Coordinator
Mindy Seal	Vegetation/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
Ruth Thompson	Wild Horse and Burro Resources
Elvis Wall	Native American Cultural Concerns
Chris Mayer	Supervisory Rangeland Management Specialist

6.1 Tribes, Individuals, Organizations, or Agencies Consulted (in addition to the 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 the 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 the preliminary EA will be issued.

References

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NDOW. Crookshanks, Chris. 2005. Status and Distribution of Newark Valley Tui Chub (*Gila bicolor newarkensis*) in Nevada. Nevada Department of Wildlife.

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USDOI - BLM. 2006. Standards and Guidelines for Nevada's Northeastern Great Basin Area.

APPENDIX I

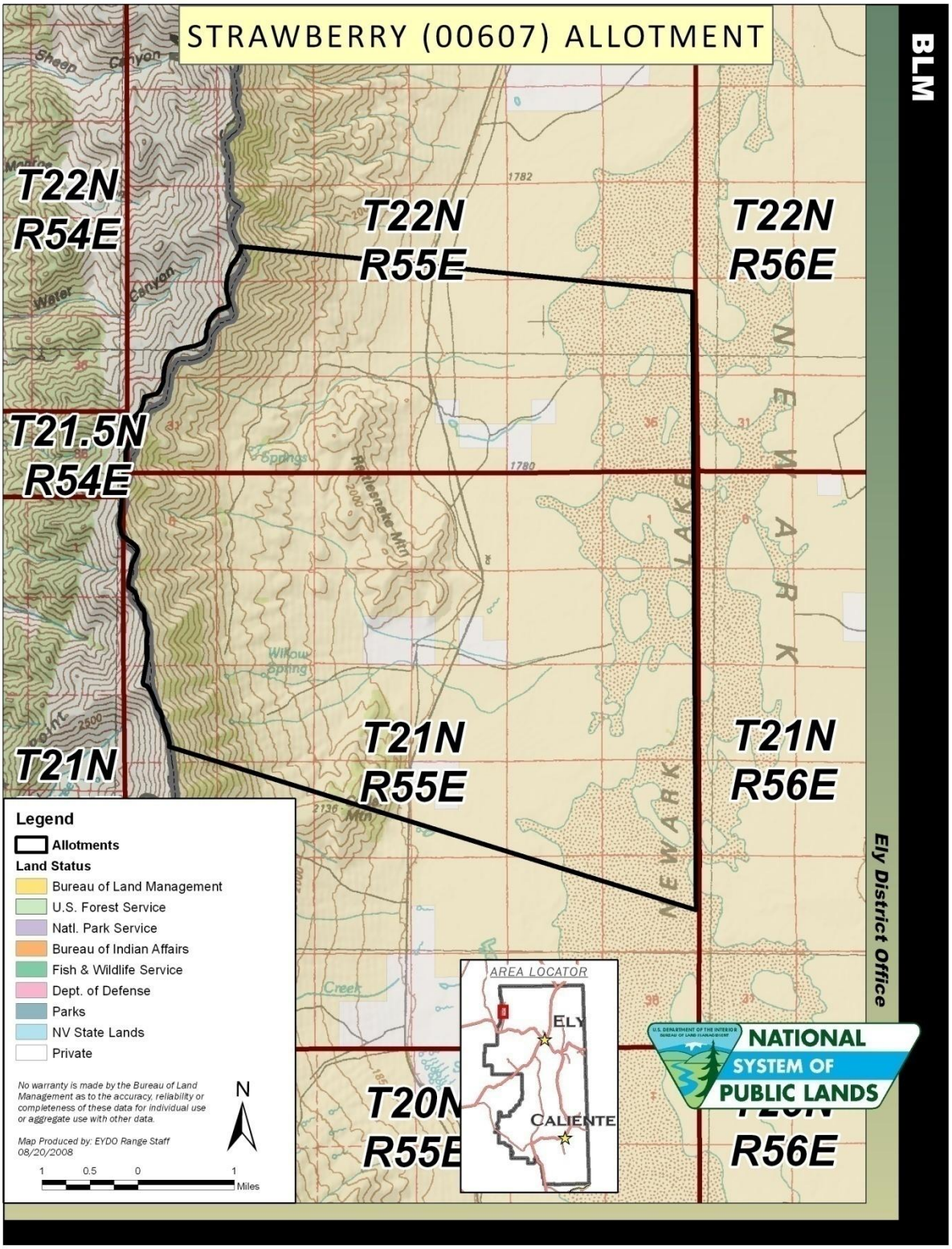

Figure 1. Project Area Map

APPENDIX II
STANDARDS DETERMINATION DOCUMENT
Strawberry (00607) Allotment

Standards and Guidelines Assessment
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 Strawberry 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 Standards were assessed for the Strawberry Allotment by a BLM interdisciplinary team. Documents and publications used in the assessment process include the Soil Survey of Western White Pine Area, Nevada, Parts of White Pine County (USDA-NRCS 1997); Soil Survey of Diamond Valley Area, Nevada (USDA-NRCS 1980); Ecological Site Descriptions for Major Land Resource Area 28B (USDA-NRCS 2003); Interpreting Indicators of Rangeland Health (USDI-BLM et al. 2000); Sampling Vegetation Attributes (USDI-BLM et al. 1996); and the National Range and Pasture Handbook (USDA-NRCS 1997). A complete list of references is included at the end of this document. All are available for public review in the Ely BLM District Office. The interdisciplinary team used rangeland monitoring data, professional observations, and photographs to assess achievement of the Standards and conformance with the Guidelines.

The Strawberry Allotment encompasses approximately 20,821 public lands acres. This grazing permit area occurs within White Pine County, Nevada and is situated approximately 15 to 20 miles northeast of Eureka, Nevada. The area is located on the northwestern bench of Newark Valley and is divided by the legals T 21N, T 22N R 55E (Appendix II, Figure 1). The eastern portion of this allotment resides within the Triple B Wild Horse Herd Management Area. The western portion of this allotment borders the Battle Mountain BLM District and the Diamond Wild Horse Herd Management Area (HMA). Approximately 55 wild horses have migrated from the Diamond HMA and frequently occupy the allotment outside of both Herd Management Areas. This allotment is located within sage grouse, deer, elk, and antelope habitat. No wilderness occurs within or adjacent to the permitted area.

In 2000, the Strawberry Fire burned 1,604 acres. The lower half of the fire (775 acres) burned with the most intensity. This area was aerially seeded to increase recovery potential and prevent the establishment of noxious weeds and the remainder of the burned area was left to rehabilitate naturally. The burned area was temporarily closed to livestock grazing until recovery objectives were met.

The current term permit for authorization #2704549 is issued for the period of 5/1/2000 to 4/30/2010. This is a cattle permit with a total grazing preference of 3,256 AUMs on the Strawberry Allotment. Of the total grazing preference, 1,032 AUMs are active and 2,224 AUMs are suspended nonuse. The current term permit authorizes approximately 206 head of cattle on the Strawberry Allotment with a season of use from 06/01 to 10/30, which is 1,029 AUMs. However, licensed use has been below this permitted use in recent years (Appendix I, Table 2-1).

The primary vegetation types on the Strawberry Allotment are a mixture of mountain big sagebrush (*Artemesia tridentata vaseyana*), Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), and Douglas' rabbitbrush (*Chrysothamnus viscidiflorus*) with Sandberg's bluegrass (*Poa secunda*), bottlebrush squirreltail (*Elymus elymoides*), and Indian ricegrass (*Achnatherum hymenoides*) plant communities. There are also areas of pinyon-juniper (*Pinus monophylla-Juniperus osteosperma*). The primary ecological sites associated with these vegetation types are Loamy sites (028BY007NV, 028BY030NV and 028BY010NV).

Two key areas and one study site have been established and monitored over the past several years on the allotment based on accessibility and general use by livestock, vegetation, and ecological sites. Key area ST-1 is located on the western side of the allotment and the key species are Sandberg's bluegrass and bottlebrush squirreltail with mountain big sagebrush. Key area ST-2 is located on the eastern side of the allotment and the key species are bottlebrush squirreltail, Sandberg's bluegrass, and Indian ricegrass with Wyoming big sagebrush. Study site S-3 was established in 2008 and occurs within the Strawberry Fire area and is located on the lower or eastern portion of the burn and was seeded during fire rehabilitation. The key species present are Douglas' rabbitbrush, bottlebrush squirreltail, and Sandberg's bluegrass. Small patches of cheatgrass (*Bromus tectorum*) were also present within each of the sites. The site ST-1 is associated with a Loamy 12-16" P.Z. (028BY030NV) ecological site, site ST-2 is associated with a Loamy 8-10" P.Z. (028BY010NV) ecological site, and site S-3 is most likely associated with a Loamy 10-12" P.Z. (028BY007NV) ecological site under pre-burn conditions. A summary of monitoring data is located in Appendix I of this document.

PART 1. STANDARD CONFORMANCE 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: *Standard Achieved*

Rangeland monitoring data and professional observation indicate that overall soil condition is currently being maintained on the Strawberry Allotment. Soils are stable and productive and the topsoil is holding in place with no rills or gullies. Vegetative ground cover was measured within or exceeded the expected cover of the Ecological Site Description (ESD) on all sites. Additionally, soils are also protected by rocks, biological crusts, and litter. Line-Point intercept cover data collected on the allotment shows that the allotment is meeting the standard. Measured ground cover is summarized in Appendix I, Table 4-1.

Key area ST-1 occurs on a Cassiro soil association (411; NRCS 2007) with a Loamy 12-16" P.Z. ecological site (028BY030NV). These soils generally have moderately slow permeability. The approximate vegetative ground cover (basal and crown) for this ecological site is 25-35 percent. Monitoring data indicate that this key area has a vegetative cover of 77 percent with a biological crust cover of 1 percent, a herbaceous litter cover of 8 percent, and a woody litter cover of 2 percent. This site has a gravelly soil surface and no sign of erosion was noted.

Key area ST-2 occurs on a Cowgil-Yody-Fax soil association (190; NRCS 2007) with a Loamy 8-10" P.Z. ecological site (028BY010NV). These soils generally have moderate to moderately slow permeability. According to the ESD, 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 47 percent with a biological crust cover of 1 percent, a herbaceous litter cover of 1 percent, and a woody litter cover of 5 percent. This site has a gravelly soil surface and no sign of erosion was noted.

Study site S-3 occurs on a Cassiro soil association (411; NRCS 2007) with a Loamy 10-12" P.Z. ecological site (028BY007NV). These soils generally have moderately slow permeability. According to the ESD, the approximate vegetative ground cover (basal and crown) for this ecological site is 20-30 percent. Monitoring data indicate that this key area has a vegetative cover of 64 percent with a rock cover of 3 percent and a herbaceous litter cover of 2 percent. This site has a gravelly soil surface and no sign of erosion was noted.

In addition to the established key areas, 6 additional random study points within the allotment were used to measure additional vegetative cover in sagebrush communities (Appendix II, Fig. 3).

Study point SGST-1 is located on the western bench portion of the allotment and is within a mountain big sagebrush vegetation community. Monitoring data indicates that this site has a vegetative cover of 85 percent, a herbaceous litter cover of 8 percent and a woody litter cover of 3 percent.

Study point SGST-2 is also located on the western bench portion of the allotment and is within a higher elevation mountain big sagebrush vegetation community. The monitoring data indicates that this site has a vegetative cover of 94 percent, a rock cover of 2 percent, a herbaceous litter cover of 2 percent and a woody litter cover of 1 percent.

Study point SGST-3 is located on the eastern, valley bottom, portion of the allotment and is within a lower elevation Wyoming big sagebrush vegetation community. The monitoring data indicates that this site has a vegetative cover of 57 percent and a herbaceous litter cover of 4 percent.

Study point SGST-4 is also located on the eastern, valley bottom, portion of the allotment and is within a lower elevation Wyoming big sagebrush vegetation community. The monitoring data indicates that this site has a vegetative cover of 35 percent, a rock cover of 3 percent, a herbaceous litter cover of 9 percent and a woody litter cover of 5 percent.

Study point SGST-6 is located on the northeastern, valley bottom, portion of the allotment and is within a lower elevation Wyoming big sagebrush vegetation community. The monitoring data indicates that this site has a vegetative cover of 40 percent, a herbaceous litter cover of 6 percent and a woody litter cover of 8 percent.

Study point SGST-8 is located on the northern portion of the allotment and is within a Wyoming big sagebrush vegetation community. The monitoring data indicates that this site has a vegetative cover of 69 percent, a rock cover of 2 percent, a herbaceous litter cover of 1 percent and a woody litter cover of 1 percent.

This data is summarized in Appendix I, Table 4-1 and 4-2.

Standard 2. Riparian and Wetland Sites
Riparian and wetland areas exhibit a properly functioning condition and achieve state water quality criteria.

As indicated by:

- Stream side riparian areas are functioning properly when adequate vegetation, large woody debris, or rock is present to dissipate stream energy associated with high water flows. Elements indicating proper functioning condition such as avoiding accelerating erosion, capturing sediment, and providing for groundwater recharge and release are determined by the following measurements as appropriate to the site characteristics:
    - Width/Depth ratio; Channel roughness; Sinuosity of stream channel; Bank stability; Vegetative cover (amount, spacing, life form); and other cover (large woody debris, rock).
    - Natural springs, seeps, and marsh areas are functioning properly when adequate vegetation is present to facilitate water retention, filtering, and release as indicated by plant species and cover appropriate to the site characteristics.

- Chemical, physical and biological water constituents are not exceeding the state water quality standards.

The above indicators shall be applied to the potential of the site.

Determination:
□ Achieving the Standard
X Not Achieving the Standard, but making significant progress towards
□ Not Achieving the Standard, and not making significant progress toward standard

Causal Factors
X Livestock are a contributing factor to not achieving the standard.
□ 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: *Not achieving the Standard, but making significant progress towards. Livestock are a contributing factor to not achieving the Standard, failure to meet the standard is also related to other issues or conditions.*

Five springs on the Strawberry Allotment were assessed by an interdisciplinary team for proper functioning condition (PFC) in 2008 (Appendix I, Table 6-1). Fairy Dell Spring is a complex of multiple sources and is considered to be one of the main springs on the allotment. The Fairy Dell complex is fenced to protect it from unlicensed livestock use. The other springs on the allotment are not fenced.

Fairy Dell Spring was found to be functional but at risk and the trend was not apparent. Factors that were noted to be contributing to the lower functionality of the spring were hoof action by cattle and wild horses and low precipitation which has led to the increased channelization of the riparian area and low water flow levels. Currently, this riparian area is authorized for cattle grazing for approximately 14 days in July and is closed to cattle use for the remainder of the grazing season. Wild horses and wildlife use this complex of springs throughout the entire year, obtaining access by jumping over the fence, which also contribute to these factors.

The unnamed spring 1 in T21N R55E Sec. 6 NENE was assessed in 2008 by an interdisciplinary team and found to be in proper functioning condition.

Unnamed spring 2 in T21N R55E Sec. 5 SENW was assessed in 2008 by an interdisciplinary team and found to be functioning but at risk with a downward trend. It was noted that this reduced functionality was due to hoof action by cattle and wild horses and low precipitation which has led to low water flow levels, increased channelization, a lack of riparian vegetation and poor vertical stability. Deer use was also noted during the PFC assessment. It was also noted that there was a mineral block near the spring which may have increased use of the area.

Unnamed spring 3 in T21N R55E Sec. 5 SWNW was assessed in 2008 by an interdisciplinary team and found to be functioning at risk with a downward trend. It was noted that this reduced functionality was due to low precipitation and hoof action by cattle and wild horses which has led to low water flow levels and increased channelization. Also, due to low water flows, the lower reaches of the riparian area were not receiving water. It was also noted that there were signs of deer use within the area assessed.

Unnamed spring 4 in T21N R55E Sec. 5 SESW was assessed in 2008 by an interdisciplinary team and found to be functioning at risk and the trend was not apparent. It was noted that the reduced functionality was due to low precipitation and hoof action by cattle and wild horses which has led to increased channelization and low water flow levels. There was not a diverse age-class of riparian vegetation which indicates a lack of recruitment and maintenance. It was noted that there were signs of deer use within the area assessed. There was a mineral block near the spring which may have increased use to the area.

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
X Not Achieving the Standard, but making significant progress towards
□ Not Achieving the Standard, 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: *Not achieving the Standard, but making significant progress towards. Livestock are not a contributing factor to not achieving the Standard, failure to meet the standard is related to other issues or conditions.*

Rangeland monitoring data (Appendix I) and professional observations indicate that vegetation structure, distribution, and productivity on the Strawberry Allotment are consistent with the Rangeland Ecological Site Descriptions (ESD). Vegetative composition differs from the ESD 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 ST-1 occurs on a Loamy 12-16" P.Z. (028BY030NV) ecological site. The expected vegetative composition by weight for this ecological site is 55 percent grasses, 10 percent forbs and 35 percent shrubs and trees. Composition by weight measured at ST-1 in 2009 was 8 percent grasses, 13 percent forbs, and 76 percent shrubs and approximately 1 percent of the total composition was from non-native invasive species. Total annual production (air-dried) expected for this ecological site is 1500 pounds per acre on a favorable year, 1200 pounds per acre on a normal year, and 900 pounds per acre on an unfavorable year. 2009 was a favorable precipitation year and the annual total production was measured at 1422 pounds per acre in 2009. Similarity index for this key area was calculated to be 39 percent. Additional monitoring data was collected for this site in 2003 and in 2008 and is summarized in Appendix I, Table 5-1.

Key area ST-2 occurs on a Loamy 10-12" P.Z. (028BY010NV) ecological site. The expected vegetative composition by weight for this ecological site is 50 percent grasses, 5 percent forbs and 45 percent shrubs and trees. Composition by weight measured at ST-2 in 2009 was 16 percent grasses, 1 percent forbs, and 82 percent shrubs and approximately 2 percent of the total composition was from non-native invasive species. Total annual production (air-dried) expected for this ecological site is 800 pounds per acre on a favorable year, 600 pounds per acre on a normal year, and 400 pounds per acre on an unfavorable year. The annual total production was measured at 1000 pounds per acre in 2009. Similarity index for this key area was calculated to be 41 percent (See Appendix I, Table 5-1).

Study site S-3 occurs on a Loamy 10-12" P.Z. (028BY007NV) ecological site. The expected vegetative composition by weight for this ecological site is 65 percent grasses, 10 percent forbs and 25 percent shrubs and trees. Composition by weight measured at S-3 in 2009 was 25 percent grasses, 1 percent forbs, and 74 percent shrubs and approximately 3 percent of the total composition was from non-native invasive species. Total annual production (air-dried) expected for this ecological site is 1000 pounds per acre on a favorable year, 800 pounds per acre on a normal year, and 600 pounds per acre on an unfavorable year. The annual total production was measured at 1273 pounds per acre in 2009. Similarity index for this key area was calculated to be 10 percent (See Appendix I, Table 5-1). Also note that this site is within the 2000 Strawberry Fire area.

Vegetative structure, distribution, and productivity are as expected across the Strawberry Allotment however, vegetative composition is shrub dominated. Large portions of the allotment appear to be transitioning toward an altered, shrub-dominant, vegetative state and the burned area is recovering as expected. As this transition occurs, these plant communities may no longer

be accurately represented by the HCPC. The monitoring data collected indicates that the Strawberry Allotment is not achieving the Habitat Standard, but is progressing towards meeting this standard.

Special Status Species

Sage Grouse

The Greater Sage-Grouse (*Centrocercus urophasianus*) is a high-profile Sensitive Species currently undergoing review for Threatened or Endangered Status (USDI 2008). 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). The White Pine County sage-grouse conservation plan (hereafter termed the Plan; 2004) identified approximately 49% (950,773 ac) of potential (1,870,317 ac) sage-grouse habitat within the Butte/Buck/White Pine PMU as not meeting the sage-grouse habitat guideline standards (Connelly et al. 2000). The adjacent Diamond PMU has similar habitat. In the sagebrush habitat rating system used in the Plan, one category, termed "R2", is defined as "Areas with inadequate grass/forb understory composition, adequate sagebrush cover". Based on the composition data collected for the Strawberry allotment, the sagebrush habitat communities at the key areas measured within the allotment fall under this category.

The three key area sites within the Strawberry Allotment occur within sagebrush habitat. In addition to the already established key area sites, 6 additional random study points within the allotment were used to measure additional vegetative cover in sagebrush habitats. As such, all of the sites are in current or potential sage-grouse habitat. Under the sage-grouse guidelines, the herbaceous component (grass and forb) should comprise at least 15% cover and sagebrush should comprise at least 15-25% cover (Connelly et al. 2000).

Key area ST-1 has a herbaceous cover of 92% and a sagebrush cover of 23%, key area ST-2 has a herbaceous cover of 25% and a sagebrush cover of 26% and S-3 has a herbaceous cover of 68% with no sagebrush within the site due to fire. The random study site SGST-1 has a herbaceous cover of 110% and a sagebrush cover of 12%, SGST-2 has a herbaceous cover of 139% and a sagebrush cover of 56%, SGST-3 has a herbaceous cover of 1% and a sagebrush cover of 40%, SGST-4 has a herbaceous cover of 10% and a sagebrush cover of 29%, SGST-6 has a herbaceous cover of 3% and a sagebrush cover of 29% and SGST-8 has a herbaceous cover of 56% and a sagebrush cover of 30%. Based on the cover data collected the majority of the allotment is meeting the sage-grouse habitat guidelines set forth by Connelly et al. (2000). A more detailed summarization can be found in Appendix I, Table 4-2.

Site specific evaluation of sage-grouse habitat guidelines should be tempered with consideration of site potentials described in the ESD. 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 site potentials as described in the ESD for both key areas ST-1 and ST-2 are more than adequate to meet the sage-grouse habitat standards, the key areas do not meet the potential vegetative composition identified in the ESD. They do, however, meet the herbaceous understory requirements set forth within the Connelly Guidelines. In addition, these sites are in the mid phase of the herbaceous state.

There is one known active sage grouse lek in the allotment and two leks in which the activity status is unknown within a three mile radius of the Strawberry Allotment (Appendix II, Figure 6). Strawberry Allotment contains winter and summer brood rearing habitat. Sage grouse often nest in suitable habitat within three miles of a lek site. The Strawberry Allotment is within the Diamond Population Management Unit (PMU).

There are three known populations of Newark Valley tui chub (*Gila bicolor newarkensis*) within the allotment boundary. All of the ponds in which these known populations occur are fenced. These populations occur mainly on private property but one of the populations does occur on BLM administered land.

There are four known nesting locations within the allotment for the goshawk (*Accipiter gentilis*), Prairie falcon (*Falco mexicanus*) and the golden eagle (*Aquila chrysaetos*). The sites were last checked in 1974 through 1980.

The pygmy rabbit (*Brachylagus idahoensis*) is not known to occur within the allotment however, there is potential habitat throughout the allotment.

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

Standard #1: Upland Sites

The Standard is being achieved.

Standard #2: Riparian and Wetlands

The Standard is not being achieved, but significant progress is being made. During PFC assessments, livestock were identified as a causal factor in reduced functionality of the riparian areas assessed on the Strawberry Allotment. A major contributor to not meeting this standard is trampling by wild horses, cattle, and deer because of general use activities (grazing and/or watering) at all of the springs which resulted in increased channelization, hummocking, bare banks or exposed soil, the lack of riparian vegetation and upland vegetation encroachment. Other contributable factors are variable precipitation which results in low water flows, upland vegetation encroachment. The placement of mineral blocks at or near the springs was also identified as a contributing factor. Forage utilization was not an issue.

Standard #3: Habitat
The Standard is not being achieved, but significant progress is being made. Livestock are not a contributing factor to not achieving the Standard. Failure to meet the standard is related to other issues or conditions. These conditions may be the historical grazing patterns on the allotment and/or an altered disturbance regime, both of which contribute to an increase in shrub dominance and the replacement of the major grass species with less productive native grass species identified in the ESD. Wild horse use in the Strawberry Allotment is also a continuing problem. In addition, this area is prone to extremely variable annual precipitation which is also considered a contributing factor (See Appendix I, Table 7-1 and Graph 7-1). The majority of the allotment is achieving the vegetative structure, distribution and productivity portion of this standard but fails to meet the vegetative composition portion of the standard.

On the Strawberry Allotment, utilization has been slight to moderate which is within proper use levels over the majority of the allotment. Licensed livestock use levels have been much lower than allowable use levels over the past ten years (Appendix I, Table 2-1, Table 3-1).

PART 3. GUIDELINE CONFORMANCE REVIEW AND SUMMARY

Grazing is in conformance with all applicable Guidelines as provided in the Northeastern Great Basin Standards and Guidelines.

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

Recommendations:

1. Continue rangeland monitoring of this allotment for livestock in compliance with proper allowable use levels for the Strawberry Allotment.

2. On the Strawberry Allotment, the Active AUMs are recommended to remain:
   - 1,032 Active AUMs.

3. On the Strawberry Allotment, the following season of use is recommended:

   Livestock will be rotated through native ranges using a two year rotation system. This rotation system will be as follows:
   - Year 1- 06/01 to 06/30 will be in the valley bottom pasture (east of State Highway 892). 07/01 to 08/31 will be in the south bench, fire pasture (west of highway 892). 09/01 to 10/30 will be in the north bench pasture.
   - Year 2- 06/01 to 07/30 will be in the fire pasture. 08/01 to 08/31 will be in the valley bottom pasture. 09/01 to 10/30 will be in the north bench pasture.
   - Grazing in the Fairy Dell riparian pasture will be for a maximum of 14 days in September.

4. Salt and/or mineral supplements for livestock shall be located no closer than 1/2 mile from water sources, riparian areas, sensitive sites, and cultural resource sites. In addition, salt and/or mineral supplements for livestock shall be located no closer than 1 mile from

sage grouse leks. Location of supplement away from riparian areas will lessen grazing pressure in these areas allowing them to progress towards the Riparian and Wetland Sites Standard.

5. The permittee will be allowed to use an actual use billing system.

6. Maximum utilization levels on the Strawberry Allotment will be established as follows:
   - Perennial native grasses: 50% current year's growth
     This use level is necessary to allow desirable key herbaceous species to 1) develop above ground biomass for protection of soils, 2) to contribute to litter cover, and 3) develop roots to improve carbohydrate storage for vigor, reproduction, and improve/increase desirable perennial cover.
   - Perennial shrubs and half-shrubs: 50% use on current annual production.
     This use level is necessary to allow desirable perennial key browse species to develop branchlets and woody stature able to withstand the pressure of grazing use. Use would be read in April or prior to the spring re-growth. Use during spring contributes to following season's use level.
   - 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.

7. It is recommended that a fenced riparian pasture be built around an unnamed spring at T21N R55E Sec. 5 SESW / UTM: N 4396598 E 0602169. This would help protect the riparian area and also be able to rotate grazing between the Fairy Dell pasture and this pasture every other year.

8. It is recommended that the Strawberry Fire Fence become a permanent part of the Strawberry Allotment to better control the rotation of cattle throughout the allotment. It is also recommended that the south portion of the Strawberry Fire Fence be extended to prevent cattle from drifting around this portion of the fence.

9. It is recommended that a fence be built along the north side of State Highway 892 to better control cattle rotation and prevent cattle from drifting onto the highway creating a safety hazard.

10. It is recommended that a permanent water haul be established on the north side of the allotment to better distribute cattle to this side of the allotment.

11. Vegetation treatments may be appropriate to prevent portions of the Strawberry Allotment from completing the transition into an altered, shrub-dominate state.

12. To protect riparian values and Newark tui chub habitat, the fenced pond located at T21N R55E Sec. 10 will be grazed seasonally at the discretion of the authorized officer.

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APPENDIX I (SDD)
DATA SUMMARY
Strawberry Allotment

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 locations within the Strawberry Allotment as well as the ecological site associated with the key area in native rangeland and dominate soils of each site.

An ecological site is 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.Strawberry Allotment Key Areas and Study Site

Key Area	Location	Ecological Site	Dominant Species	Soil Mapping Unit
ST-1	T 21N R 55E S5	Loamy 12-16” P.Z. (028BY030NV)	Mountain Big sagebrush, Douglas' Rabbitbrush,Sandberg's bluegrass, and Lupine	411—Cassiro association
ST-2	T 22N R 55E S34	Loamy 8-10” P.Z. (028BY010NV)	Wyoming Big sagebrush, Squirreltail, and Sandberg's bluegrass	190—Cowgil-Yody-Fax association
S-3*	T 21N R55E S16	Loamy 10-12” P.Z. (028BY007NV)	Douglas' Rabbitbrush, Squirreltail, and Sandberg's bluegrass	411—Cassiro association
*Study site S-3 is within the 2000 Strawberry Fire				

2. Licensed Livestock Use

Over the grazing seasons from 1999 to 2009, livestock permitted use on the Strawberry Allotment was 1,029 AUMs in a cattle only operation. During this same time period, livestock licensed use ranged from a high of 1,006 AUMs in 1999 and 2001 to a low of 262 AUMs in 2007. Livestock use has varied dependent on available forage due to growing conditions and voluntary non-use agreements. Table 2-1 summarizes the licensed actual use data for this time period.

Table 2-1. Strawberry Allotment Actual Use

Grazing Year	Authorization # 2704549	
	Licensed Use (AUMs)	% Licensed Use of Permitted Use (AUMs)
1999	1006	97%
2000	738	72%
2001	1006	97%
2002	911	88%
2003	809	78%
2004	639	62%
2005	608	59%
2006	608	59%
2007	262	25%
2008	557	54%
2009	575	56%

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 the key areas. Utilization for the allotment is summarized in Table 3-1.

Table 3-1. Strawberry Allotment Utilization

Key Area/ Location	Key Species	Date	Utilization	Total
ST-1	Sandberg's blugrass	7/8/2003	Light	30%
	Needle and thread	4/23/2009	Slight	6%
	Squirreltail	4/23/2009	Slight	7%
	Squirreltail	6/25/2009	Slight	6%
	Sandberg's blugrass	6/25/2009	Slight	3%
	Squirreltail	10/15/2009	Slight	10%
	Sandberg's blugrass	10/15/2009	Light	27%
ST-2	Squirreltail	7/17/2008	light	33%
	Squirreltail	4/23/2009	Slight	7%
	Indian ricegrass	4/23/2009	slight	10%
	Indian ricegrass	6/24/2009	Slight	8%
	Indian ricegrass	10/15/2009	Moderate	48%
	Squirreltail	10/15/2009	Slight	15%
S-3	Sandberg's blugrass	7/17/2008	Slight	10%
	Squirreltail	7/17/2008	Slight	5%
	Sandberg's blugrass	6/24/2009	Slight	4%
	Squirreltail	6/24/2009	Slight	3%

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 are then compared to the appropriate cover for each ecological site as indicated by the Natural Resources Conservation Service (NRCS) Rangeland Ecological Site Descriptions. Results are also compared to general known healthy rangelands.

Line-Point Intercept cover studies have been conducted at the two key areas, one study site and six random study points within sagebrush plant communities on the Strawberry Allotment in 2009. Tables 4-1 and 4-2 summarize the cover data collected at key areas and random points on native rangeland.

Table 4-1.Strawberry Allotment Ground Cover 2009

Key Area/Study Site	Ecological Site	Bare Ground	Ground Cover					ESD Veg. Cover
			Rock	Bio. Crust	Herb. Litter	Woody Litter	Veg.	
ST-1	028BY030NV	12%	0%	1%	8%	2%	77%	25-35%
ST-2	028BY010NV	46%	0%	1%	1%	5%	47%	10-20%
S-3	028BY007NV	31%	3%	0%	2%	0%	64%	20-30%
*SGST-1		4%	0%	0%	8%	3%	85%	
*SGST-2		1%	2%	0%	2%	1%	94%	
*SGST-3		39%	0%	0%	4%	0%	57%	
*SGST-4		48%	3%	0%	9%	5%	35%	
*SGST-6		46%	0%	0%	6%	8%	40%	
*SGST-8		27%	2%	0%	1%	1%	69%	
*Random study points								

Table 4-2. Strawberry Allotment Vegetative Cover by species (including understory)

Key Area/ Study Sites	Vegetative species	% Cover
ST-1	Mountain Big Sagebrush	23%
	Douglas' rabbitbrush	18%
	Toadflax	4%
	Crepis spp	2%
	Phlox	2%
	Lupine	12%
	Sandburg's Bluegass	40%
	Cheatgrass	14%
	Blue-eyed Mary	1%
	Bulbous Bluegrass	1%
	Squirreltail	14%
	Bluegrass spp	2%
ST-2	Wyoming big sagebrush	26%
	squirreltail	14%
	Sandburg's Bluegass	3%
	Gilia	1%
	Groundsmoke	1%
	Cheatgrass	6%
S-3	Sandburg's Bluegass	30%
	Squirreltail	15%
	Bluegrass spp	2%
	Storksbill	1%
	cheatgrass	20%
	Douglas' rabbitbrush	22%

Key Area/ Study Sites	Vegetative species	% Cover
SGST -1	Lupine	35%
	Mountain Big Sagebrush	12%
	Bluegrass spp	36%
	Bulbous Bluegrass	14%
	Stoneseed	3%
	Blue-eyed Mary	4%
	Douglas' rabbitbrush	6%
	Dandilion	6%
	Crepis spp	1%
	Burr Buttercup	3%
	Cheatgrass	2%
	Astragalus spp	1%
	Stickseed	1%
	Mustard spp	1%
	Phlox	2%
	Squirreltail	1%
SGST -2	Mountain Big Sagebrush	56%
	Lupine	59%
	Bluegrass spp	15%
	Cheatgrass	29%
	Squirreltail	26%
	Douglas' rabbitbrush	8%
	Phlox	2%
	Violet spp	4%
	Unk Grass	1%
	Galium	1%
	Desert Alyssum	1%
	Crepis spp	1%

Key Area/ Study Sites	Vegetative species	% Cover
SGST -3	Wyoming big sagebrush	40%
	Douglas' rabbitbrush	15%
	Greasewood	4%
	Squirreltail	1%
SGST -4	Wyoming big sagebrush	29%
	Squirreltail	4%
	Sandburg's Bluegass	4%
	Phlox	1%
	Astragalus spp	1%
SGST -6	Wyoming big sagebrush	29%
	Douglas' rabbitbrush	8%
	Bluegrass spp	2%
	Unk Forb	1%
SGST -8	Wyoming big sagebrush	30%
	Douglas' rabbitbrush	10%
	Cheatgrass	35%
	Sandburg's Bluegass	9%
	Bluegrass spp	1%
	Squirreltail	11%

5. Similarity Index of Ecological Site Inventory

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.

When the similarity index is computed, a seral stage can be derived. Seral stages are the developmental stages of an ecological succession (NRCS 1997). A similarity index of 0 to 25 percent represents an early seral plant community, 26 to 50 percent represents a mid-seral plant community, 51 to 75 percent represents a late seral plant community, and 76 to 100 percent represents a climax plant community.

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 Strawberry Allotment.

Table 5-1.Total Annual Yield and Composition of Strawberry Allotment Key Areas

Key Area: ST-1
Ecological Site: Loamy 12-16" P.Z. (028BY030NV)
Potential vegetative composition*: 55% grasses, 10% forbs and 35% shrubs and trees.
Total Annual Production (air dry lb/ac)*: 1500 (Favorable), 1200 (Normal), 900 (Unfavorable Year)

Date: 7/9/2003 Plant Common Name	Current Production (air dry lb/ac)	Current % Composition by Weight (air dry)	HCPC % Composition by Weight (air dry)*	% Allowable
Mountain Big sagebrush	1176	73%	15-25%	25%
Douglas' rabbitbrush	151	9%	3%	3%
Sandberg's Bluegrass	127	8%	2%	2%
Squirreltail	20	1%	2%	1%
Lupine	42	3%	3%	3%
Blue-eyed Mary	24	2%	3%	2%
Unk Perennial Forb	9	1%	3%	1%
Cheatgrass	22	1%	---	---
Stoneseed	28	2%	3%	2%
Saltgrass	11	1%	2%	1%
Mustard spp	4	Trace	---	---
Astragalus spp	2	Trace	3%	Trace
Poverty weed	6	Trace	3%	Trace
Total Production:	**1622**		**Similarity Index:**	**40%**

7/17/2008 Plant Common Name	Current Production (air dry lb/ac)	Current % Composition by Weight (air dry)	HCPC % Composition by Weight (air dry)*	% Allowable
Mountain Big sagebrush	1077	84%	15-25%	25%
Douglas' rabbitbrush	170	13%	3%	3%
Unk Perennial Forb	12	1%	3%	1%
Poverty weed	19	2%	3%	2%
Phlox	Trace	Trace	3%	Trace
Sandberg's Bluegrass	2	Trace	2%	Trace
Squirreltail	2	Trace	2%	Trace
Cheatgrass	Trace	Trace	---	---
Lupine	Trace	Trace	3%	Trace
Total Production:	**1282**		**Similarity Index:**	**31%**

6/25/2009 Plant Common Name	Current Production (air dry lb/ac)	Current % Composition by Weight (air dry)	HCPC % Composition by Weight (air dry)*	% Allowable
Mountain Big sagebrush	841	59%	15-25%	25%
Douglas' rabbitbrush	245	17%	3%	3%
Desert Alyssum	9	Trace	3%	Trace
Crepis spp	15	1%	3%	1%
Phlox	10	Trace	3%	Trace
Sandberg's Bluegrass	79	6%	2%	2%
Squirreltail	29	2%	2%	2%
Cheatgrass	6	Trace	---	---
Lupine	130	9%	3%	3%
Astragalus spp	7	Trace	3%	Trace
Stoneseed	7	Trace	3%	Trace
Toadflax	26	2%	3%	2%
Gilia	1	Trace	3%	Trace
Bulbous bluegrass	4	Trace	2%	Trace
Gumweed	13	1%	3%	1%
Total Production:	**1422**		**Similarity Index:**	**39%**

*from Ecological Site Description (ESD)

Key Area: ST-2 Ecological Site: Loamy 10-12" P.Z. (028BY010NVNV) Potential vegetative composition*: 50% grasses, 5% forbs and 45% shrubs and trees. Total Annual Production (air dry lb/ac)*: 800 (Favorable), 600 (Normal), 400 (Unfavorable Year)				
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**
Wyoming Big sagebrush	817	82%	25-35%	35%
Douglas' rabbitbrush	6	Trace	2-5%	Trace
Sandberg's Bluegrass	19	2%	3%	2%
Squirreltail	105	11%	3%	3%
Indian ricegrass	14	1%	3%	1%
Phlox	2	Trace	2%	Trace
Cryptanthia	Trace	Trace	2%	Trace
Cheatgrass	24	2%	---	---
Desert Alyssum	2	Trace	2%	Trace
Astragalus spp	Trace	Trace	2%	Trace
Mustard spp	4	Trace	---	---
Larkspur	7	Trace	2%	Trace
Total Production:	**1000**		**Similarity Index:**	**41%**
*from Ecological Site Description (ESD)				

Key Area: S-3 **This site was burned by the 2000 Strawberry Fire Ecological Site: Loamy 10-12" P.Z. (028BY007NV) Potential vegetative composition*: 65% grasses, 10% forbs and 25% shrubs and trees. Total Annual Production (air dry lb/ac)*: 1000 (Favorable), 800 (Normal), 600 (Unfavorable Year)				
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**
Douglas' rabbitbrush	941	74%	3%	3%
Sandberg's Bluegrass	56	4%	3%	3%
Squirreltail	227	18%	3%	3%
Cheatgrass	35	3%	---	---
Desert Alyssum	Trace	Trace	2%	Trace
Stork's bill	14	1%	2%	1%
Total Production:	**1273**		**Similarity Index:**	**10%**
*from Ecological Site Description (ESD)				

6. Proper Functioning Condition of Riparian Areas

Proper Functioning Condition (PFC) is the method used by the BLM to assess riparian health and functionality. The process is completed by an interdisciplinary (ID) team. The team looks at hydrology, vegetation, and erosion/deposition characteristics of the site in order to determine if the riparian area is in proper functioning condition, functioning at risk, or nonfunctional.

Table 6-1.PFC on the Strawberry Allotment

Riparian Area	Date	Functionality (notes)
Fairy Dell	8/11/2008	Functioning-At Risk (trampling by cattle, wild horses and deer, low precipitation).
Unnamed spring 1 (T21N R55E Sec. 6 NE NE)	8/11/2008	Proper Functioning Condition
Unnamed spring 2 (T21N R55E Sec. 5 SE NW)	8/11/2008	Functioning-At Risk (trampling by cattle, wild horses and deer, low precipitation)
Unnamed Spring 3 (T21N R55E Sec. 5 SW NW)	8/11/2008	Functioning-At Risk (trampling by cattle, wild horses and deer, low precipitation)
Unnamed Spring 4 (T21N R55E Sec. 5 SE SW)	8/11/2008	Functioning-At Risk (trampling by cattle, wild horses and deer, low precipitation)

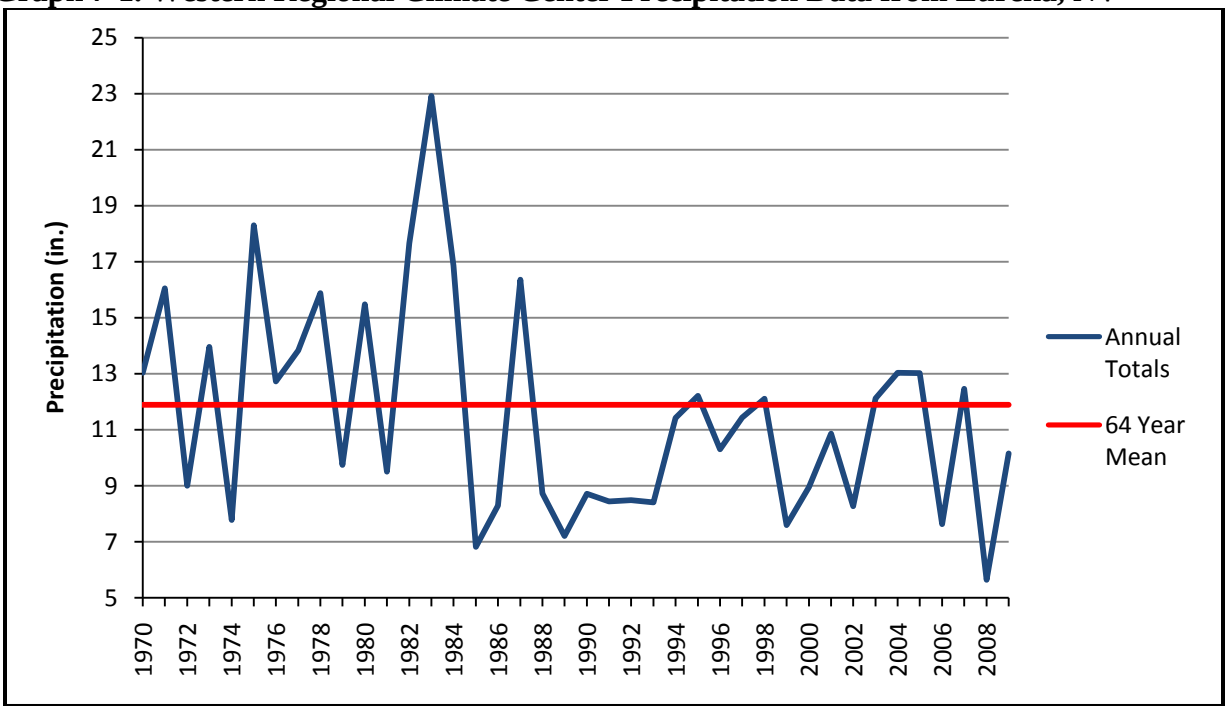
7. Precipitation Data

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 provides an accurate representation of the annual precipitation on the Strawberry Allotment. Table 7-1 and Graph 7-2 summarize annual precipitation data collected since 1970.

Table 7-1.Western Regional Climate Center Precipitation Data from Eureka, NV

YEAR	ANNUAL PRECIP. (inches)	YEAR	ANNUAL PRECIP. (inches)	YEAR	ANNUAL PRECIP. (inches)
1970	13.04	1983	22.92	1996	10.3
1971	16.05	1984	16.86	1997	11.44
1972	9	1985	6.82	1998	12.11
1973	13.96	1986	8.29	1999	7.6
1974	7.78	1987	16.36	2000	8.96
1975	18.3	1988	8.72	2001	10.86
1976	12.73	1989	7.21	2002	8.27
1977	13.83	1990	8.71	2003	12.12
1978	15.88	1991	8.44	2004	13.04
1979	9.74	1992	8.48	2005	13.02
1980	15.48	1993	8.41	2006	7.63
1981	9.5	1994	11.42	2007	12.46
1982	17.66	1995	12.21	2008	5.64

Graph 7-1. Western Regional Climate Center Precipitation Data from Eureka, NV



APPENDIX II (SDD)
Maps

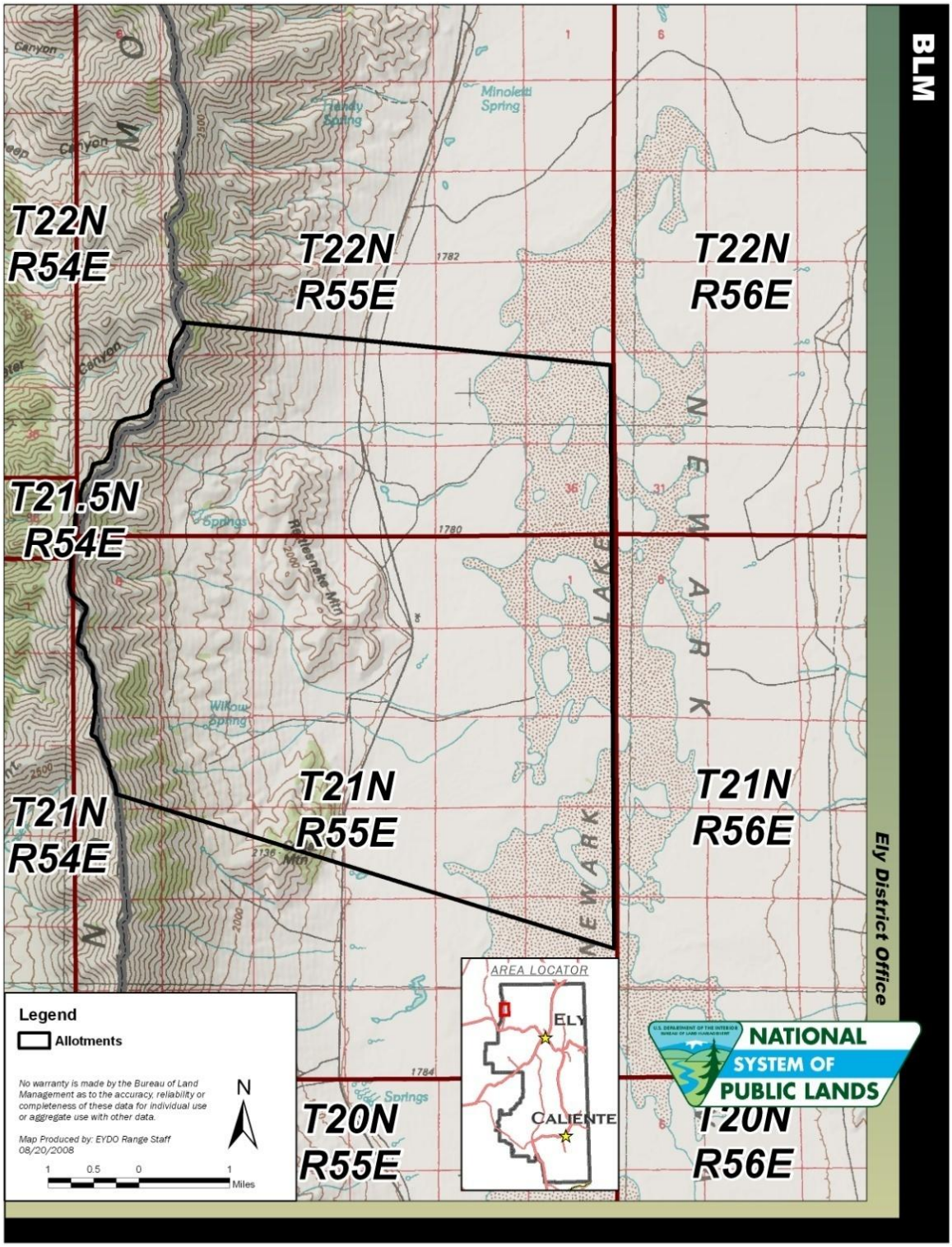


Figure 1: Allotment Map; Strawberry Allotment (00607)

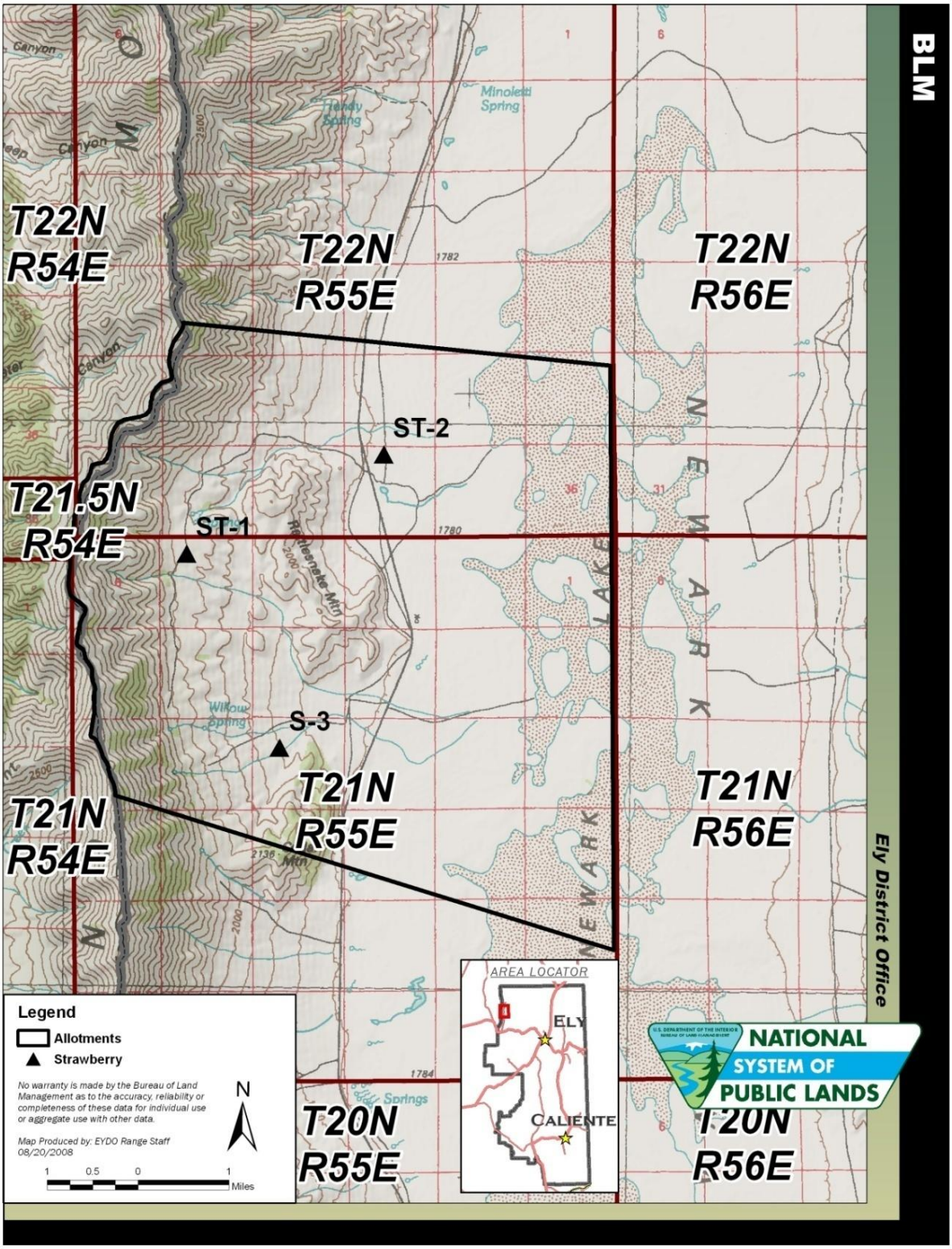


Figure 2: Strawberry Allotment Key Areas

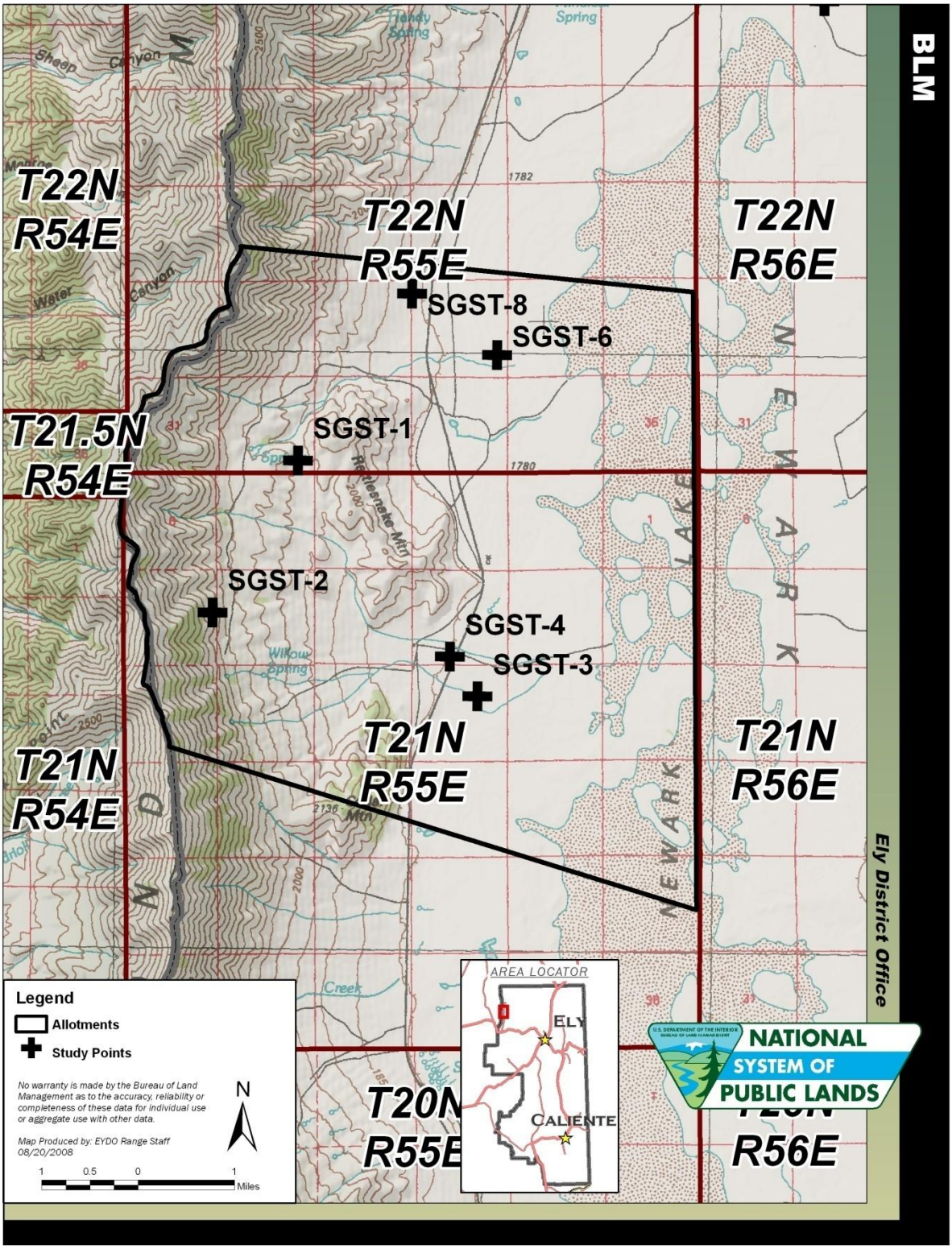


Figure 3: Strawberry Allotment Random Study Points

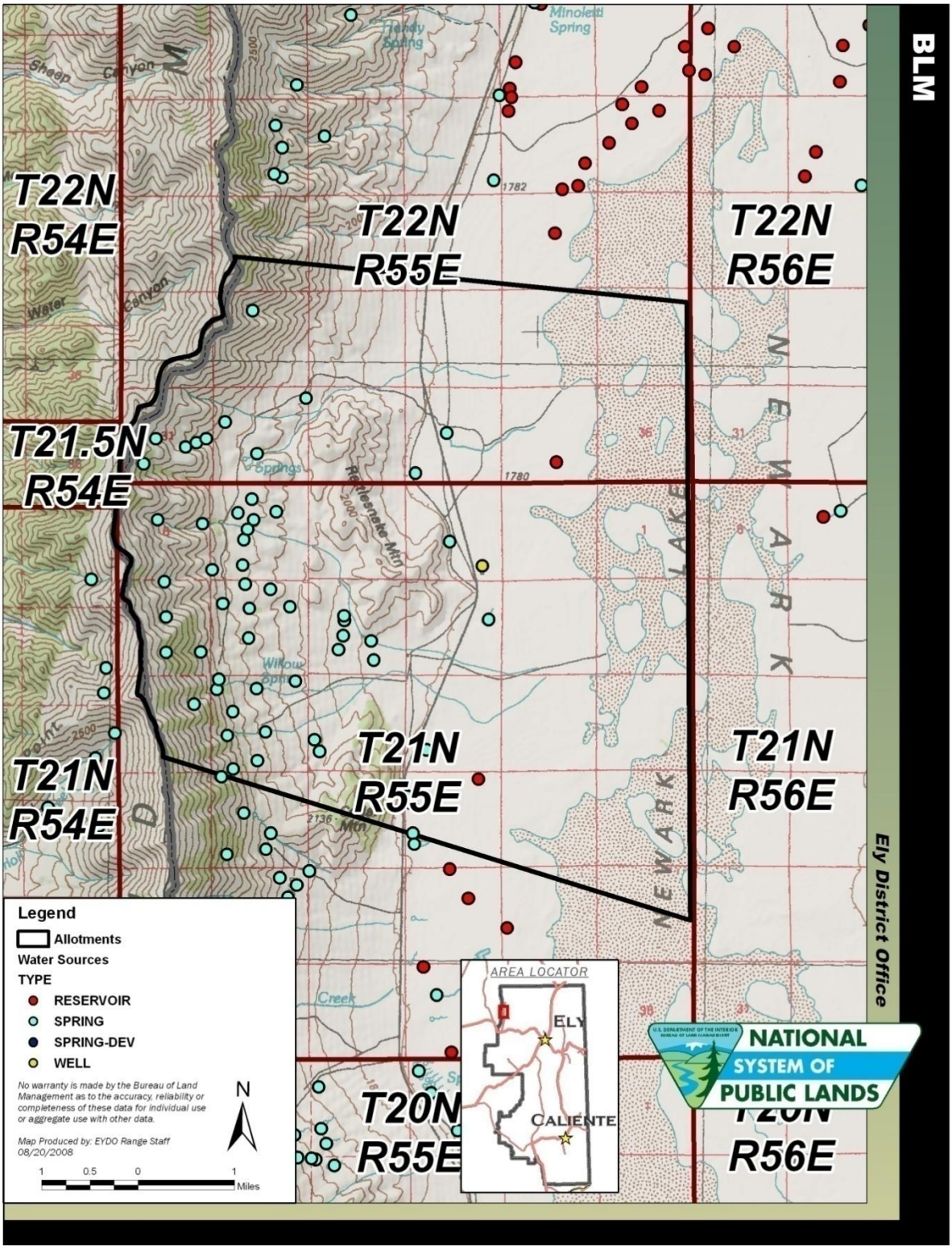


Figure 4: Strawberry Allotment Water Sources

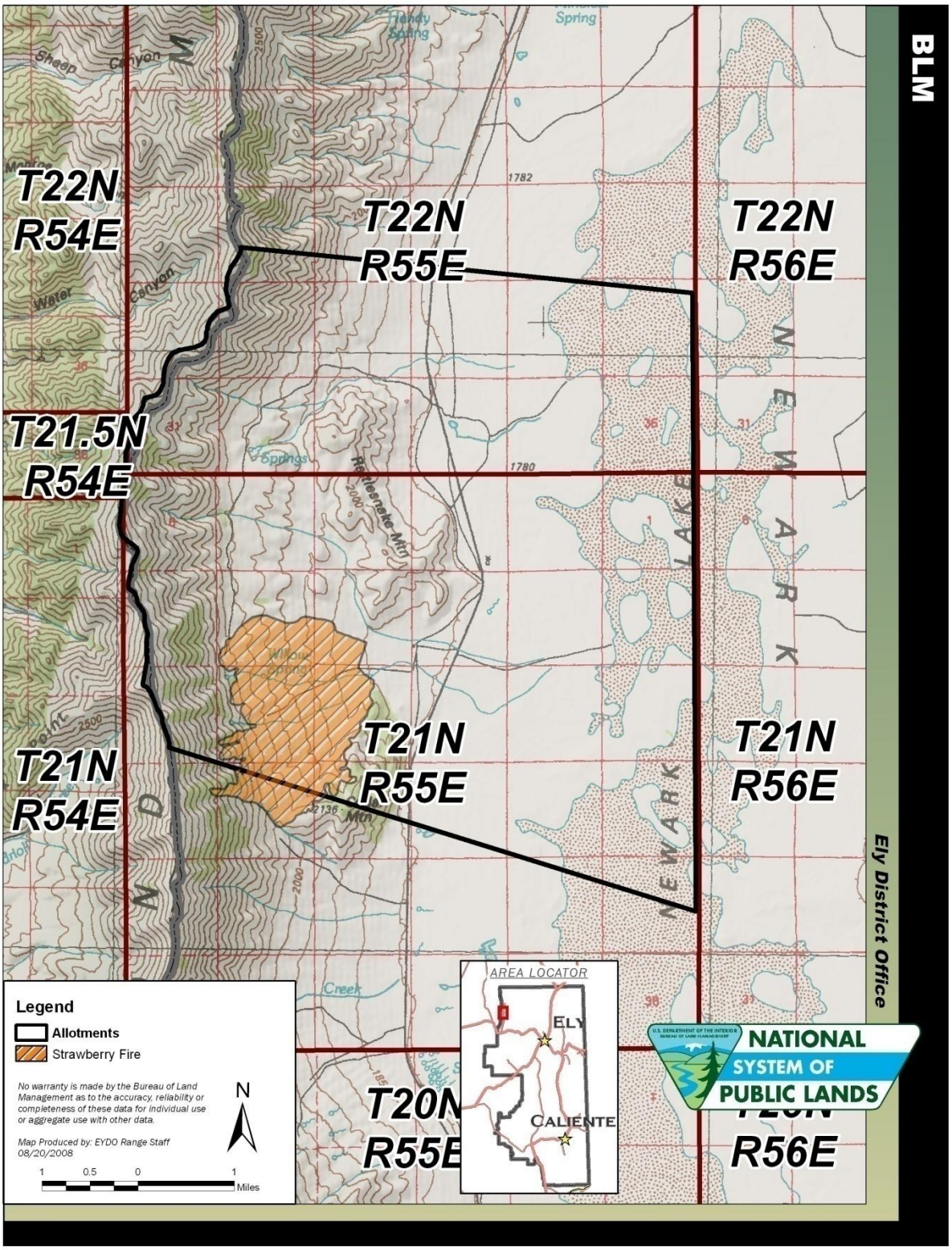


Figure 5: Strawberry Fire on the Strawberry Allotment

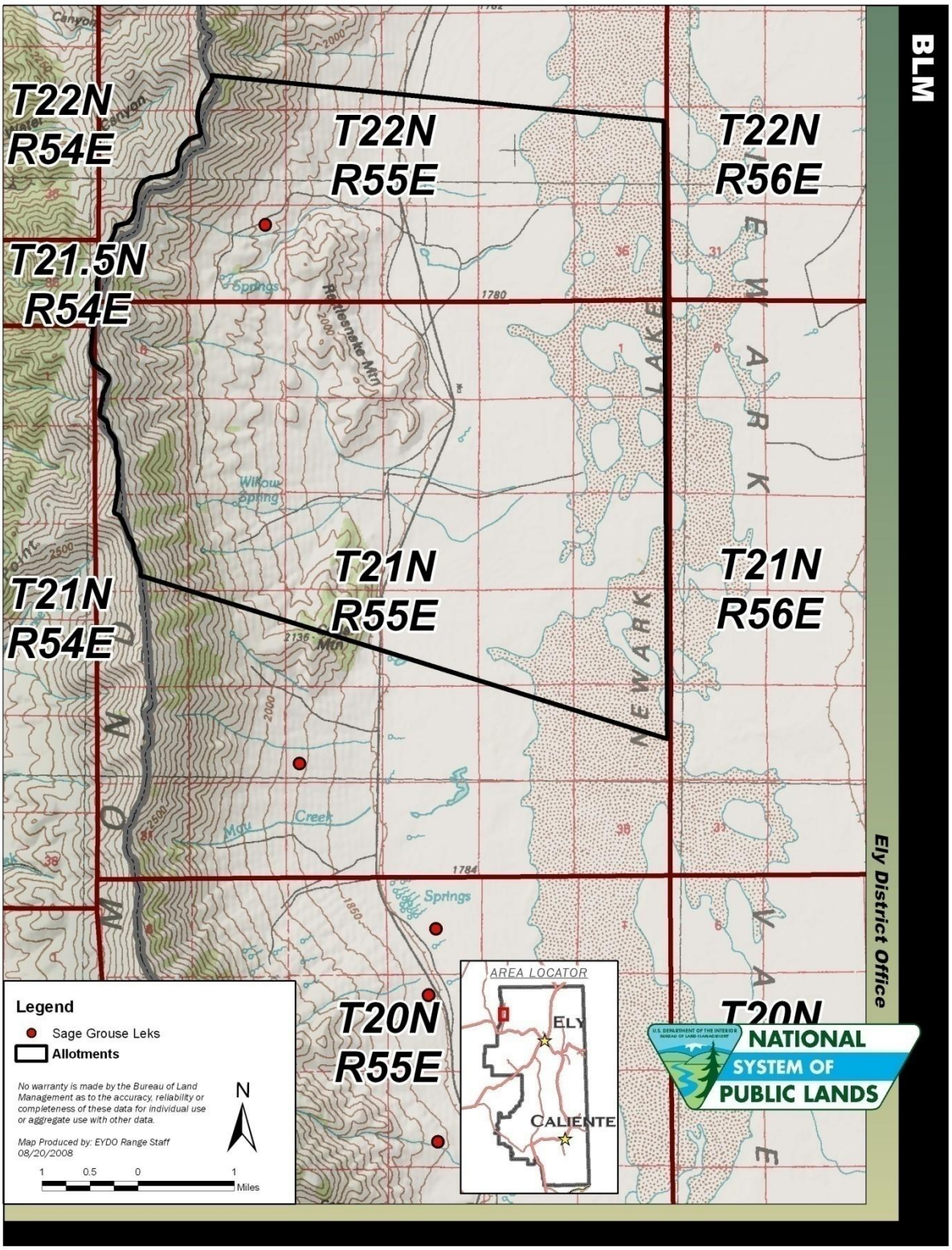


Figure 6: Strawberry Allotment Sage Grouse Lek locations

APPENDIX III (SDD)
TERMS AND CONDITIONS

Authorization # 2704549:

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Strawberry 00607	206 Cattle	06/01 to 10/30	100	Active	1029

*% 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
Strawberry	1032	2224	3256

Terms and Conditions

1. Livestock will be rotated through native ranges using a two year rotation system. This rotation system will be as follows:
    - Year 1- 06/01 to 06/30 will be in the valley bottom pasture (east of State Highway 892). 07/01 to 08/31 will be in the south bench, fire pasture (west of highway 892). 09/01 to 10/30 will be in the north bench pasture.
    - Year 2- 06/01 to 07/30 will be in the fire pasture. 08/01 to 08/31 will be in the valley bottom pasture. 09/01 to 10/30 will be in the north bench pasture.
    - Grazing in the Fairy Dell riparian pasture will be for a maximum of 14 days in September.
2. Allowable Use Levels on current year's growth of riparian vegetation within the Fairy Dell Exclosure will not exceed 35% (Light Use Category).
3. To improve livestock distribution the placement of mineral blocks or salt blocks will be a minimum distance of ½ mile from water sources, riparian areas, sensitive sites, and cultural resource sites. Mineral and salt blocks will also be one mile from sage grouse leks.
4. Maximum utilization levels on the Strawberry Allotment will be established as follows:
    - Perennial native grasses: 50% of 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.
5. The permittee will be allowed to use an actual use billing system.
6. To protect riparian values and Newark tui chub habitat, the fenced pond located at T21N R55E Sec. 10 may be grazed seasonally at the discretion of the authorized officer.
1.

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. The payment of your grazing fees is due on or before the date specified in the grazing bill. This date is generally the opening date of your allotment. If payment is not received within 15 days of the due date, you will be charged a late fee assessment of $25 or 10 percent of the grazing bill, whichever is greater, not to exceed $250. Payment with Visa, MasterCard or American Express is accepted. Failure to make payment within 30 days of the due date may result in trespass action.
5. 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.
6. Grazing use in White Pine County will be in accordance with the Northeastern Great Basin Area 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.
7. 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.
8. The permittee is responsible for all maintenance of assigned range improvements including wildlife escape ramps for both permanent and temporary water troughs.
9. 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.

APPENDIX IV (SDD)
WEEDS RISK ASSESSMENT

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

Term Grazing Permit Renewal for Authorization #2704549
on the Strawberry (00607) Grazing Allotment
White Pine County, Nevada

On March 3, 2010 a Noxious & Invasive Weed Risk Assessment was completed for the term grazing permit renewal for Authorization #2704549 on the Strawberry (00607) Allotment in White Pine County, NV. Changes to the permit were recommended to achieve the Standards and Guidelines for Nevada's Northeastern Great Basin Area on this allotment because livestock grazing was identified as a significant contributing factor in not meeting Standard 2 for the area. The allotment is meeting or progressing toward all of the standards. Allowable use levels will be established and other terms and conditions will be further clarified from the current permit. The proposed season of use is 06/01 to 10/30. The Fairy Dell riparian pasture will be grazed for a maximum of 14 days in September with established allowable current year's growth utilization levels.

Table 1. Proposed Term Permit for Authorization #2704549

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Strawberry 00607	206 Cattle	06/01 to 10/30	100	Active	1029
*% 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
Strawberry	1032	2224	3256

Terms and Conditions

1. Livestock will be rotated through native ranges using a two year rotation system. This rotation system will be as follows:
    - Year 1- 06/01 to 06/30 will be in the valley bottom pasture (east of State Highway 892). 07/01 to 08/31 will be in the south bench, fire pasture (west of highway 892). 09/01 to 10/30 will be in the north bench pasture.
    - Year 2- 06/01 to 07/30 will be in the fire pasture. 08/01 to 08/31 will be in the valley bottom pasture. 09/01 to 10/30 will be in the north bench pasture.
    - Grazing in the Fairy Dell riparian pasture will be for a maximum of 14 days in September.

2. Allowable Use Levels on current year's growth of riparian vegetation within the Fairy Dell Exclosure will not exceed 35% (Light Use Category).
3. To improve livestock distribution the placement of mineral blocks or salt blocks will be a minimum distance of ½ mile from water sources, riparian areas, sensitive sites, and cultural resource sites. Mineral and salt blocks will also be one mile from sage grouse leks.
4. Maximum utilization levels on the Strawberry Allotment will be established as follows:
    - Perennial native grasses: 50% of 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.
5. The permittee will be allowed to use an actual use billing system.
6. To protect riparian values and Newark tui chub habitat, the fenced pond located at T21N R55E Sec. 10 may be grazed seasonally at the discretion of the authorized officer.

No field weed surveys were completed for this project. Instead, the Ely District weed inventory data was consulted. This area was last inventoried in 2009. The following species are found within the boundaries of the allotment:

Carduus nutans	Musk thistle
Lepidium draba	Hoary cress
Acroptilon repens	Russian knapweed
Cirsium vulgare	Bull thistle
Onopordum acanthium	Scotch thistle

The following species are found along roads and drainages leading to the allotment:

Acroptilon repens	Russian knapweed
Centaurea stoebe	Spotted knapweed
Cirsium vulgare	Bull thistle
Carduus nutans	Musk thistle
Lepidium draba	Hoary cress
Cirsium arvense	Canada thistle
Onopordum acanthium	Scotch thistle
Tamarix spp.	Salt cedar

While not officially documented the following non-native invasive weeds probably occur in or around the allotments: cheatgrass (*Bromus tectorum*), halogeton (*Halogeton glomeratus*), horehound (*Marrubium vulgare*), and Russian thistle (*Salsola kali*).

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious/invasive weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious/invasive weed species in the project area.
Low (1-3)	Noxious/invasive weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious/invasive weeds into the project area.
Moderate (4-7)	Noxious/invasive weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious/invasive weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious/invasive weeds within the project area.
High (8-10)	Heavy infestations of noxious/invasive weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious/invasive weeds on disturbed sites throughout much of the project area.

For this project, the factor rates as Moderate (4) at the present time. Grazing can increase the populations of the noxious and invasive weeds already within the permitted areas and could aid in the introduction of weeds from surrounding areas. There are several occurrences of Scotch, musk, and bull thistles at the base of the mountains near the riparian areas. As part of a good grazing plan, the establishment of desirable forages is integral to the weed management program. Desirable forage that emerges during the growing season should be managed to increase its competitiveness. The design features of the proposed action including grazing management for the Fairy Dell riparian pasture and the utilization levels of native plants to help prevent weeds from establishing or spreading and improve native vegetation.

Factor 2 assesses the consequences of noxious/invasive weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (8-10)	Obvious adverse effects within the project area and probable expansion of noxious/invasive weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

This project rates as Moderate (5) at the present time. If new weed infestations establish within the permitted area this could have an adverse impact those native plant communities including reducing productive rangeland by out competing desirable forage species and thistle infestations could become impenetrable, thorny barriers that restrict movement of cattle, wildlife and people. However this area is currently part of the Ely District weed treatment areas and the proposed action includes measures to increase native plants and help prevent weeds from establishing and/or spreading. An increase of cheatgrass could alter the fire regime in the area.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious/invasive weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious/invasive weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.

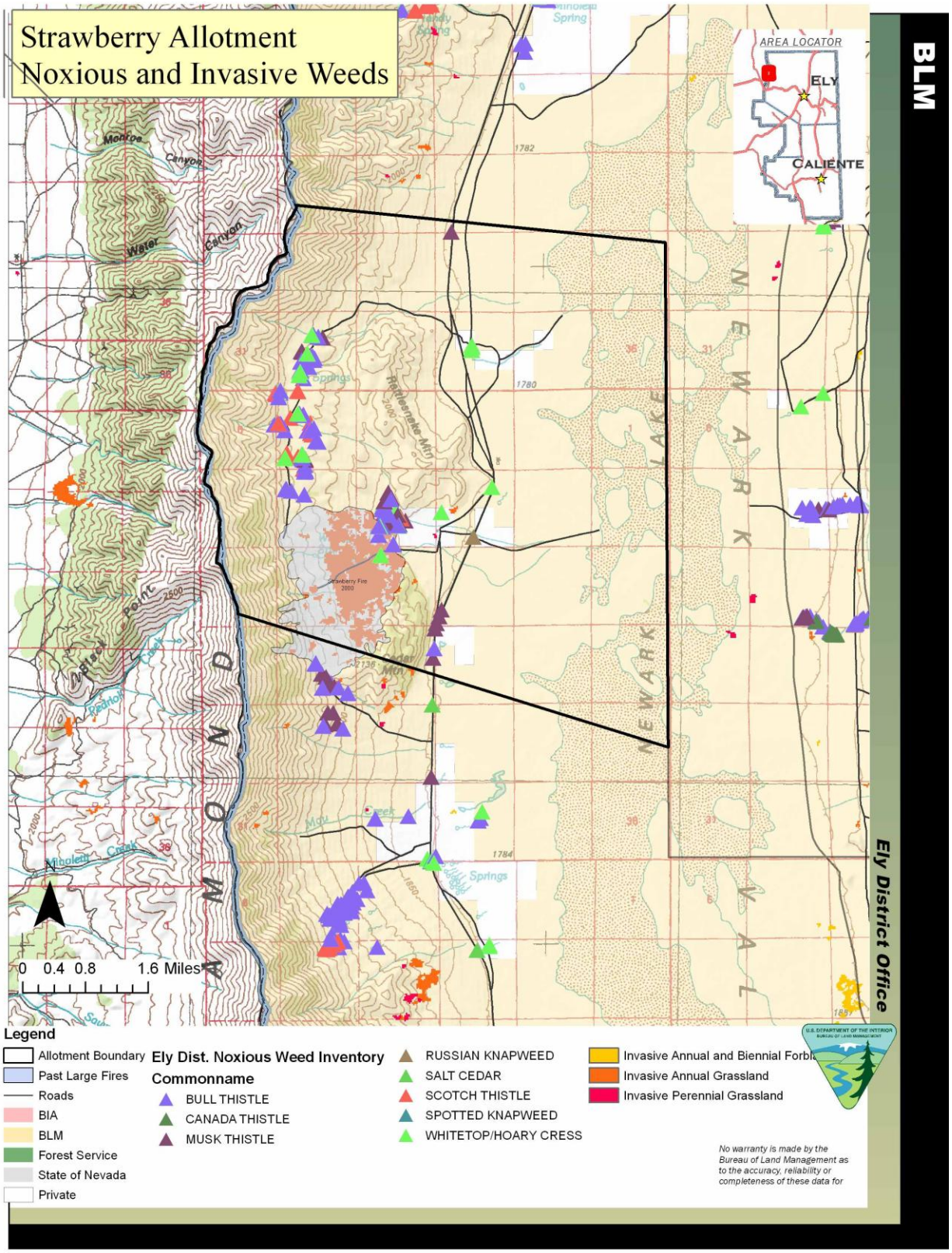
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious/invasive weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.

For this project, the Risk Rating is Moderate (20). This indicates that the project can proceed as planned as long as the following measures are followed:

- To eliminate the introduction of noxious weed seeds, roots, or rhizomes all interim and final seed mixes, hay, straw, hay/straw, or other organic products used for feed or bedding will be certified free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM Ely District Office.
- Prior to entering public lands, the BLM will provide information regarding noxious weed management and identification to the permit holders affiliated with the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will be explained.
- The range specialist for the allotments will include weed detection into project compliance inspection activities. If the spread of noxious weeds is noted, appropriated weed control procedures will be determined in consultation with BLM personnel and will be in compliance with the appropriate BLM handbook sections and applicable laws and regulations.
- Grazing will be conducted in compliance with the Ely District BLM noxious weed schedules. The scheduled procedures can significantly and effectively reduce noxious weed spread or introduction into the project area.
- 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.
- Any newly established populations of noxious/invasive weeds discovered will be communicated to the Ely District Noxious and Invasive Weeds Coordinator for treatment.

Reviewed by: *\/s/Mindy Seal* 3/3/2010

Mindy Seal Date
Natural Resource Specialist


Strawberry Allotment
Noxious and Invasive Weeds
AREA LOCATOR
ELY
CALIENTE
BLM
Ely District Office
NEWARK VALLEY
NEWARK LAKE
Monroe Canyon
Water Canyon
Rattlesnake Mtn
Strawberry Fire 2000
Point
Pearson Creek
Mill Creek
Nicolett Creek
Springs
0 0.4 0.8 1.6 Miles
Legend
Allotment Boundary
Past Large Fires
Roads
BIA
BLM
Forest Service
State of Nevada
Private
Ely Dist. Noxious Weed Inventory
Commonname
BULL THISTLE
CANADA THISTLE
MUSK THISTLE
RUSSIAN KNAPWEED
SALT CEDAR
SCOTCH THISTLE
SPOTTED KNAPWEED
WHITETOP/HOARY CRESS
Invasive Annual and Biennial Forbl
Invasive Annual Grassland
Invasive Perennial Grassland
No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for