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Preliminary Environmental Assessment

Tumbling JR Ranch Term Permit Renewal On the Warm Springs, Cold Creek, Dry Mountain, Warm Springs Trail Allotments

Location: White Pine County, NV

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BLM

NATIONAL SYSTEM OF PUBLIC LANDS

1.0 INTRODUCTION: NEED FOR ACTION

This document identifies issues, analyzes alternatives, and discloses the potential environmental effects associated with the proposed grazing term permit renewal of Tumbling JR Ranch (#2702966) on the Warm Springs Allotment (00606), Cold Creek Allotment (00603), Dry Mountain Allotment (00609), and Warm Springs Trail (00622). The aforementioned allotments are approximately 50 to 100 air miles northwest of Ely, Nevada and are found entirely in White Pine County (see Figure 1, Appendix 1).

1.1 Background

Current management practices on the allotments implemented since the Final Multiple Use Decisions were issued for the Warm Springs Allotment on March 14, 1994, for the Dry Mountain Allotment on July 12, 1990, and Cold Creek Allotment on January 23, 1992.

Since 1999 annual meetings have been held to discuss and develop livestock management practices, grazing schedules and an annual grazing plan. Flexibility in stocking levels, periods of use, and trail routes have been granted. Allowing flexibility has established a long-term stable grazing operation and grazing rotation system. The stocking levels, periods of use and trail routes have been based upon pasture carrying capacity, forage availability and condition, current growing conditions, planned rest periods, and any changes as a result of the previous year's monitoring and achievement of the standards. A livestock grazing management agreement identifying the grazing system associated with the proposed Tumbling JR Ranch term permit renewal was signed, April 2009.

1.2 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 Tumbling JR Ranch (#2702966) and authorize grazing on the Cold Creek, Warm Springs, Dry Mountain, and Warm Springs Trail Allotments. 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 assessments of the rangeland health of each allotment were completed in 2009 during the term permit renewal process through a Standards Determination Document (SDD) (see complete SDD, Appendix II).

Table 1. Summary of SDD by allotment for achievement of the RAC standards.

ALLOTMENT	STANDARD 1 Upland Sites	STANDARD 2 Riparian and Wetland Sites	STANDARD 3 Habitat
Cold Creek (00603)	Uplands: **Standard achieved**	Riparian: **Not achieving the Standard**	Uplands: **Not achieving the Standard**
Warm Springs (00609)	Uplands: **Standard achieved**	Riparian: **Not achieving the Standard**	Uplands: **Not achieving the Standard**
Dry Mountain (00606)	Uplands**: Standard achieved**	Riparian: **N/A**	Uplands: **Not achieving the Standard**
Warm Springs Trail (00622)	Uplands: **Standard Achieved**	Riparian: **N/A**	Uplands: **N/A**

1.3 Need for the Proposed Action.

The need for the proposal is to provide for legitimate multiple uses of the public lands by renewing the term grazing permit for Tumbling JR Ranch 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."

1.4 Objectives of the Proposed Action.

1.4.1. To renew the grazing term permit for Tumbling JR Ranch and authorize grazing in accordance with applicable laws, regulations, and land use plans (LUP) on approximately 445,334 acres of public land.

1.4.2. To improve and/or maintain vegetative health and growth conditions on the allotments and continue to make progress towards achieving the Standards and Guidelines for rangeland health as approved and published by Nevada's Northeastern Great Basin RAC.

1.5 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 (p 87)."

1.6 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 (February 12, 1997).
- White Pine County Land Use Plan (2007).
- White Pine County Elk Management Plan (2007 revision).

1.7 Tiering

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

1.8 Relevant Issues and Internal Scoping/Public Scoping.

The Tumbling JR Ranch term permit renewal proposal was initiated on March 12, 2008, with a presentation to the internal resource specialist team. The proposal was posted on the Ely NEPA web page on March 20, 2008. A letter notifying the permittee and interested public of the term permit renewal was sent on April 24, 2008.

The Tumbling JR Ranch term permit renewal proposal was internally scoped by the Egan Field Office ID team/Resource specialists on October 20, 2008 to identify any relevant issues. Preliminary issues identified were effects of the proposed action on **noxious and invasive, non-native weeds and special status species.**

A two week external review/public comment period will be established to allow interested public to express any concerns not addressed in the preliminary document. A notice of the proposed action was published on the Ely District NEPA website during the two week external public period and all interested parties were sent a notification letter that welcomed comments. No comments were received during the external scoping period.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 Proposed Action

The BLM, Egan Field Office proposes to issue and fully process a **term grazing permit renewal for Tumbling JR Ranch** (#2702966) and authorize grazing on the Cold Creek, Warm Springs, Dry Mountain and Warm Springs Trail Allotments (Figure 1, Appendix 1). The permit would be a ten year period. Grazing use would be in accordance with the April 2009 Livestock Grazing Management Agreement between Tumbling JR Ranch and Egan Field Office (Appendix III, Grazing Management Agreement). Changes to the permit are recommended to achieve the Standards and Guidelines for Nevada's Northeastern Great Basin Area on the allotments.

A Livestock Grazing Management Agreement was established in 2005, between Silver State Ranches (now Tumbling JR Ranch) and the Ely District Bureau of Land Management. This agreement made revisions to the Final Multiple Use Decisions previously issued for the Warm Springs and Dry Mountain Allotments. On March 17, 2006 the agreement was amended to extend the term of the agreement to 05/19/2014. The agreement was amended again in April 2009 as a result of the findings of the standard determination document (SDD) for Tumbling JR Ranch which includes a new grazing system for the Cold Creek Allotment.

Based on review of the monitoring data collected since 1997 and professional observation, livestock number and kind, season-of-use and active use will continue as identified in the agreement for the Warm Springs and Dry Mountain Allotments. Active use for the Warm Springs Allotment would continue to be 7,709 AUMs and the active use for the Dry Mountain Allotment will continue to be 1,149 AUMs. Livestock use will be authorized by use area and will be in accordance with the period of use and active use for each of the eight use areas for the Warm Springs Allotment. Active use for the Cold Creek Allotment will continue at 5,561 AUMs cattle use, for the period of 04/16 to 10/31. The pasture rotation system for the Cold Creek Allotment as identified in the January 23, 1992 FMUD will be amended as a result of the SDD (Appendix II) and the April 2009 Livestock Grazing Management Agreement (Appendix III). Proposed changes to the permit terms and conditions would affect the overall management of livestock based on timing and duration of grazing on the Cold Creek Allotment pasture system. The Cold Creek Allotment will be divided into three units; the North Unit, South Unit and the Diamond Unit. The three units include a total of 18 pastures. Active use for the Warm Springs Trail Allotment will continue unchanged at 938 AUMs with a season of use from 03/01 to 03/31, and 927 AUMs with a season of use from 11/01 to 11/30. Sheep are the kind of livestock.

2.1.1 Proposed term permit

The **proposed term** permit and allotment information are as follows:

Table 2. Proposed Term Permit for Tumbling JR Ranch (#2702966).

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Cold Creek (00603)	850 Cattle	4/16 - 10/31	100	Active	5561
Dry Mountain (00609)	191 Cattle 500 Sheep	10/01 - 04/01 10/01 - 04/01	100 100	Active Active	1149 602
Warm Springs (00606)	642 Cattle	03/01 - 2/28	100	Active	7704
Warm Springs Trail (00622)	4600 Sheep 4700 Sheep	03/01 - 03/31 11/01 - 11/30	100 100	Active Active	938 927

*% Public Land is the percent of public land for billing purposes.
**AUMs may differ from Active Use due to a rounding difference with the number of livestock and the period of use.

Allotment Summary (AUMs)

Allotment	Active AUMs	Suspended AUMs	Grazing Preference
Cold Creek (00603)	5561	4035	9,596
Warm Springs (00606)	7709	16251	23,960
Dry Mountain (00609)	1149	1675	2,824
Warm Springs Trail (00622)	1865	0	0

2.1.2 Terms and Conditions

Livestock grazing will be authorized in accordance with the Livestock Grazing Management Agreement for the Tumbling JR Ranch dated April 2009**.**

Utilization levels will not exceed 50% of current year growth during winter use on key perennial species and will not exceed 45% of current year growth during summer use on key perennial species on all allotments unless otherwise noted.

- 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.

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.

Place salt and supplements at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc. Place salt and mineral supplements at least 1 mile from sage grouse leks.

2.1.3 Warm Springs Allotment:

- Buck and Bald Use Area

Livestock use will continue as spring/summer use with a season of use from 04/01 to 08/01. Permitted use will remain at 2,269 AUMs.
Authorized grazing use in summer use areas will be in accordance with the following use levels:

Utilization levels on key species will not exceed 45% of current year's growth during spring/summer use.
Removal of cattle by 08/01 will continue in order to not exceed proper use levels on the key riparian species

- Ruby Valley Use Area

Livestock use in the Ruby Valley Use area will be either spring/summer fall (4/15-10/15) or winter (10/15-4/15) but not both in the same growing season.

- The Julian and West Bald crested wheatgrass seedings

The Julian and West Bald Seedings will be used and licensed separately for spring/summer/fall cattle use (4/15-10/31). If spring use is made prior to 6/1 it will be alternated between the two seedings from year to year.

- Newark Valley Use Area

The livestock season of use will continue as fall/winter/spring (08/01 to 04/15). Permitted use will continue to be authorized at 357 AUMs.

Authorized grazing use will be in accordance with the following allowable use levels for the Ruby valley Use Area, Julian and West Bald crested wheatgrass seedings and the Newark Valley Use Area: Utilization will not exceed 50% of current year growth during winter use on winterfat and the key perennial species and will not exceed 45% of current year growth during summer use on bitterbrush and the key perennial species.

2.1.4 Dry Mountain Allotment - Warm Springs Allotment

Permitted use for the Dry Mountain Allotment will continue at 1,149 AUMs of cattle use, for the period of 10/01 to 04/01. The permitted sheep use will be 602 AUMs for the period 10/01 to 04/01.
Dry Mountain Allotment/Long Valley Use Area /Long Valley Wash Use Area.

The Long Valley Use Area, the Dry Mountain Allotment, the Long Valley Wash Use Area will be combined. Cattle grazing use will continue as fall/winter with the season of use from 10/01 to 04/01 in the Long Valley, Long Valley Wash and Dry Mountain use areas. Permitted use for Long Valley Use Area, the Dry Mountain Allotment and the Long Valley Wash Use Area combined will not exceed 4,615 AUMs (3,088 AUMs Long Valley Use). Flexibility in stocking levels will allow some of the 1,149 AUMs permitted use from Dry Mountain Allotment to be used in the Long Valley Use Area. This will be dependent upon forage availability. Some grazing use must still be made in the Dry Mountain Allotment. Flexibility associated with these use areas will be determined annually by the authorized officer in accordance with Tumbling JR Ranch.

Authorized grazing use in the winter use areas will be in accordance with the following allowable use levels:

> Utilization levels will not exceed 50% of current year growth during winter use on winterfat and key perennial species.

In order to maintain animal distribution in the Long Valley Use Area and Dry Mountain Allotment, the following wells will all be pumped during the use period, though not necessarily all at the same time, to distribute use:

> Long Valley Well#2 - T21N, R58E, sec. 32, SWSW
> Moore Well - T20N, R58E, sec. 8 NESW
> J&J Well - T20N, R 58E, sec. 20, SWNE
> Maple Syrup Well – T19N, R58E, sec. 3 NENE

2.1.5 Cold Creek Allotment

Active use for the Cold Creek Allotment will continue at 5,561 AUMs cattle use, for the period of 04/16 to 10/31. The pasture rotation system identified in the January 23, 1992 FMUD will be amended as a result of the SDD, (March 2009). The Cold Creek Allotment will be divided into three units; the North Unit, South Unit and the Diamond Unit. The three units include a total of 18 pastures. Refer to the Livestock Grazing Management Agreement for active use AUMs by pasture.

A deferred rest rotation grazing system will be established for the North and South Units. Grazing use will begin in the North Unit on even years. Grazing Use will begin in the South Unit on odd years. When the North Unit is grazed during the spring, grazing will begin on or later than April 16. Cattle will be moved to the South Unit when utilization levels are met and cattle will be removed before or on October 31. Grazing in the South Unit will begin on or later than April 16. Cattle will be moved to the North Unit when utilization levels are met and cattle will be removed on or before October 31.

Within the Northern Unit, the Strawberry Pastures will be rotated annually with the two western pastures used first and then eastern pastures used. The following year the pastures will be switched with the eastern pastures used first and then the western pastures used afterwards.

Movement dates between the North and South Units will be based on annual forage condition and availability. Movement dates in and out of pastures will be based on forage availability, condition and utilization levels. Movement dates may vary each year based on these conditions.

Utilization levels will be established at 60% for the crested wheatgrass seedings and at 50% for the native pastures.

Key riparian areas on Cold Creek Allotment will be utilized in accordance with the deferred rest rotation system. Corta spring is located in the pasture Diamond #3. Abal Springs is located in the Huntinton #4. Unnamed spring is located in Huntington #4. Cold Spring is located in pasture Diamond #1.

Annual stocking levels for the units will not exceed the active AUMS for each unit. The total active use for the Cold Creek Allotment is 5561 AUMS. The total AUMS authorized in the North Unit will not exceed 2019 AUMS. The total AUMS in the South Unit will not exceed 2572 AUMs. Active use AUMS for the pastures within each unit are to be used as guides.

The Diamond Unit contains four pastures. Diamond Pasture #1, #2, #3, will be grazed for 30 days either in fall or spring and alternating from year to year. Diamond #4 will be used every other year.

The aforementioned grazing system will be utilized with flexibility and deviations in livestock numbers, areas of use and period of use. Annual grazing use will not exceed the total 5561 AUMs for Cold Creek Allotment unless authorized. Seasonal basis deviations will be based upon pasture carrying capacity, forage availability and condition, current growing conditions, planned rest periods, and any changes as a result of the previous year's monitoring and achievement of the standards. Deviations warranted annually would not prevent attainment of shared goals, the multiple-use objectives and the standards for grazing administration.

2.1.6 Warm Springs Trail

Permitted use for the Warm Springs Trail Allotment will continue at 938 AUMs with a season of use from 03/01 to 03/31, and 927 AUMs with a season of use from 11/01 to 11/30. Sheep are the kind of livestock.

2.1.7 Terms and Conditions Common to all 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 Invasive, Non-Native Species and Noxious Weeds

A Weed Risk Assessment (See SDD, Appendix II) was completed on March 10, 2008. The stipulations listed in the Weed Risk Assessment would be followed when grazing occurs on the allotments.

2.3 Monitoring

The Ely District Approved Resource Management Plan (August 2008) defines monitoring as, "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. (p.88)"

2.4 No Action Alternative

The No Action Alternative represents the status quo – the permit would be renewed without changes to grazing management, modifications to the permit terms and conditions, and without implementation of a grazing system on the Cold Creek Allotment.

Table 3. Current Term Permit for Tumbling JR Ranch (#2702966).

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Cold Creek (00603)	850 Cattle	4/16 - 10/31	100	Active	5561
Dry Mountain (00609)	191 Cattle 500 Sheep	10/01 - 04/01 10/01 - 04/01	100 100	Active Active	1149 602
Warm Springs (00606)	642 Cattle	03/01 - 2/28	100	Active	7704
Warm Springs Trail (00622)	4600 Sheep 4700 Sheep	03/01 - 03/31 11/01 - 11/30	100 100	Active Active	938 927

*% Public Land is the percent of public land for billing purposes.
**AUMs may differ from Active Use due to a rounding difference with the number of livestock and the period of use.

Allotment Summary (AUMs)			
Allotment	Active AUMs	Suspended AUMs	Grazing Preference AUMs
Cold Creek (00603)	5561	4035	9,596
Warm Springs (00606)	7709	16251	23,960
Dry Mountain (00609)	1149	1675	2,824
Warm Springs Trail (00622)	1865	0	0

The current grazing system for the Warm Springs and Dry Mountain Allotments are the same as the proposed term permit. The current grazing system for the Cold Creek Allotment is identified in the 1992 FMUD.

2.5 Alternatives Considered but Eliminated from Detailed Analysis

No other alternatives are needed to address unresolved conflicts concerning alternative uses of available resources.

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

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

Since the RMP EIS (2007) analyzed a full range of grazing alternatives, including "No-Grazing" (Alternative D) no further analysis is necessary.

3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT AND ASSOCIATED ENVIRONMENTAL CONSEQUENCES.

3.1 Allotment Information

The Cold Creek Allotment, Warm Springs Allotment, Dry Mountain Allotment and Warm Springs Trail are the permitted grazing allotments for Tumbling JR Ranch (Operator No. 2702966).

Cold Creek allotment consists of 62,103 acres of public land. Cold Creek allotment is situated at the north end of Newark Valley, west of the Ruby Mountains and east of the Diamond Range. Cold Creek allotment's northern half is in Huntington Watershed and the southern portion is in the Newark Watershed. The Triple B Herd Management Area (HMA) is within the eastern half of the Cold Creek Allotment.

The Warm Springs Allotment includes 318,740 public acres situated in the northwest corner of White Pine County. The majority of the Warm Springs Allotment is located in the Long Valley Watershed. The northern part of the Warm Springs Allotment is included in the Ruby Valley Watershed and the west portion includes the Newark Watershed. Small portions of the Warm Springs Allotment are included in Huntington and North Butte Watersheds. The Warm Springs allotment includes seven use areas. The Triple B HMA encompasses six of the seven use area on the Warm Springs allotment.

Dry Mountain Allotment is one large grazing pasture of 27,552 acres public land. Dry Mountain Allotment is nestled entirely in the Long Valley Watershed. The crest of Dry Mountain forms the west boundary of the allotment. The Dry Mountain allotment is located south of the Warm Springs Allotment and includes the Triple B HMA.

The Warm Springs Trail encompasses 36,939 acres of public land. For billing purposes, the Warm Springs Sheep Trail has been separated as an allotment. The Warm Springs Trail (0622) runs from North Cold Creek Allotment south across Warm Springs and Newark Allotments and terminates at Six Mile Allotment. The trail includes both Huntington watershed and Newark watershed. The trail also crosses two HMAs, the Triple B and the Pancake.

There is a variety of vegetative community types present in the Proposed Action area. These may include juniper woodland community, aspen woodlands, big sagebrush community, Wyoming sagebrush community, mountain big sagebrush community, black sagebrush community, salt desert shrub community, winterfat community, and wetland/riparian community types.

3.2 Resources/Concerns Considered for Analysis

The following items have been evaluated for the potential for significant effects 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 District BLM in particular.

Resource/Concern Considered	Issue(s) Analyzed ? (Y/N)	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. Direct, indirect or cumulative effects would not approach any level of significance. Detailed analysis is not required.
Cultural Resources	No	The Ely District Resource Management Plan, August 2008, goal is to identify, preserve, and protect significant cultural resources and ensure that they are available for appropriate uses by present and future generations. The BLM conducts field investigations and maintains files of archeological sites on public lands. Analyses of existing documentation indicates that concentrated livestock activities near water sources, along fences, and in areas where livestock seek shelter, could adversely affect cultural resources. The cultural staff will identify cultural properties being impacted by grazing activities to be monitored in order to determine condition, impacts, deterioration, and use of these properties. As necessary, strategies (including mitigation) are developed and implemented in order to reduce threats and resolve conflicts of property.
Forest Health	No	Unique or sensitive forests existing in the Diamond Mountains are inaccessible to livestock (Cold Creek Allotment Evaluation, 1992).
Rangeland Standards and Health	No	Effects 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 effects to rangeland standards and health are consistent with the need and objectives for the proposed action. No further analysis is needed.

Resource/Concern Considered	Issue(s) Analyzed ? (Y/N)	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Migratory Birds	No	The migratory bird species that occur in or near the project area are listed in Appendix IV. Changes to grazing management on the Cold Creek Allotment and progress towards meeting the RAC standards (SDD, Appendix II) will aid in the future desired condition of habitat for migratory bird species. There is potential of livestock trampling of migratory bird nests; however the likelihood of this happening is minimal because of the acreage of the grazing allotments and reduction in permitted number of livestock as a result of the FMUDs for each allotment. Direct, indirect effects to migratory birds populations would not approach any level of significance.
Native American Religious Concerns	No	No concerns were identified through tribal coordination meeting on February 12, 2008. Direct effects and cumulative effects would not occur because there were no identified concerns through coordination.
FWS Listed or proposed for listing Threatened or Endangered Species or critical habitat.*	No	Threatened or Endangered species are not known to be present in the area (Warm Springs Allotment, Cold Creek Allotment, Dry Mountain Allotment, and Warm Springs Trail).
Wastes, Hazardous or Solid	No	No hazardous or solid wastes exist on the permit renewal area, nor would any be introduced.
Water Quality, Drinking/Ground	No	Effects from livestock grazing on Water Resources are analyzed in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007) (page 4.3-5). 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. No CWA section 303(d) impaired waterbodies are found in the project area
Wilderness	No	No Wilderness occurs in Warm Springs Allotment, Cold Creek Allotment, Dry Mountain Allotment, or within the Warm Springs Trail.
Environmental Justice	No	No environmental justice issues are present at or near the project area. No minority or low-income groups would be disproportionately affected by health or environmental effects.

Resource/Concern Considered	Issue(s) Analyzed ? (Y/N)	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
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. Direct, indirect or cumulative effects would not approach any level of significance.
Watershed Management	No	Effects 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). The ability of a watershed to withstand disturbance and retain resilient and resistant vegetation communities is partly dependent on the intensity of livestock grazing. The SDD (Appendix II) describes achievement or non-achievement of the Standards in the project area. Direct, indirect or cumulative effects to the watersheds have not been identified to approach any level of significance. Detailed analysis is not necessary.
Wetlands/Riparian Zones	No	Effects from livestock grazing on Water Resources were analyzed in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007) (page 4.3-5). There are no Wetlands in the proposed term permit renewal area. Site specific evaluation of Standard 2-Riparian and wetland sites of the RAC standards and guidelines were not met on any of the allotments (SDD, Appendix II). Changes in livestock management system on the Cold Creek allotment (Livestock Grazing Agreement, Appendix III) and design features of the proposed action such as terms and conditions will aid in the progress towards achieving Standard 2. Hydrology/riparian report found in administrative record provide affected environment and effects from proposed action. Direct, indirect, or cumulative effects to the riparian zones will not approach any level of significance.
Noxious and Invasive Weed Management	**Yes**	Effects from livestock grazing on Noxious and Invasive Weed Management are analyzed on page 4.21-4 of the Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). Site specific analysis (Weed Risk Assessment, in SDD Appendix II) reveals that changes in the grazing management system of the allotments (Appendix III) will result in changes in the impacts to noxious and invasive weeds. Effects analyzed in EA.

Resource/Concern Considered	Issue(s) Analyzed ? (Y/N)	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	**Yes**	Effects from livestock grazing on Special Status Species are analyzed on page 4.7-28 through page 4.7-30 of the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007). Site-Specific review of the allotments revealed: Newark Valley Tui Chub (*Gila Bicolor newarkensis*) is known in one spring on public land within the allotments and four private springs on the Cold Creek and Warm Springs Allotments. An analysis of Newark Valley tui chub in the wildlife report is included in the administrative record. Direct, indirect, or cumulative effects to the Newark Valley tui chub would not approach any level of significance. The allotments contain nesting, summer, and winter habitat for Greater Sage grouse (*Centrocercus urophasianus*). Analyzed in EA. There is potential habitat for pygmy rabbits (*Brachylagus idahoensis*) consisting of tall sagebrush with deep soils that may occur on the allotments. There are no known occurrences of pygmy rabbits within the allotments. There are a number of known nesting locations of ferruginous hawks, golden eagles and other raptors in the allotments. Direct, indirect, or cumulative effects to special status species will not approach any level of significance.
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 proposed term permit renewal area; Warm Springs Allotment, Cold Creek Allotment, Dry Mountain Allotment, and Warm Springs Trail.
Wild Horses	No	The proposed action allotments are within the Triple B herd management area, the Warm Springs Sheep Trail also crosses into the Pancake HMA. Effects 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). Site specific examination of the allotment did not reveal any concerns above those addressed in the EIS.

Resource/Concern Considered	Issue(s) Analyzed ? (Y/N)	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Fish and Wildlife	No	Effects 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). Site specific review of the allotments revealed yearlong elk (*Cervus canadensis*) habitat, migration corridors for mule deer (*Odocoileus hemionus*). The allotments also contain yearlong habitat for pronghorn antelope (*Antilocapra americana*). Also the allotments contain unoccupied, potential habitat for Rocky Mountain Bighorn Sheep (*Ovis canadensis*). Grazing may have effects on habitat through alteration of vegetative communities. This effect is anticipated to be minimal because design features identified in the proposed action, such as the terms and conditions would aid in progress towards the RAC standard 3 Habitat. Direct, indirect, or cumulative effects to fish and wildlife species will not approach any level of significance. No detailed analyses necessary.
Soil Resources	No	Effects from livestock grazing on Soil Resources were analyzed in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007) (page 4.4-4). Site Specific soil status of the allotments (SDD, Appendix II, see Standard 1. Upland Sites) did not reveal any soil resource concerns above and beyond those disclosed in the RMP/EIS.
Areas of Critical Environmental Concern (ACEC)	No	Not present in the project area. There would be no direct or indirect effects to the Pony Express Trail.
VRM	No	The proposed action is consistent with the VRM classifications in the proposed action area. Direct, indirect or cumulative effects would not approach any level of significance.
Grazing Uses	No	The proposed action and the changes to the Cold Creek Allotment management system will continue to meet the RMP goals and objectives, including progressing to meet 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 effects would occur. Detailed analysis is not required.
Recreation Uses	No	There would be no direct or indirect effects to recreation.

Resource/Concern Considered	Issue(s) Analyzed ? (Y/N)	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Paleontological Resources	No	No paleontological resources are present in the proposed term permit renewal area.
Water Resources	No	Effects from livestock grazing on Water Resources are analyzed in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007) (page 4.3-5). There would be no changes from current uses of water due to the proposed action.
Mineral Resources	No	There would be no modifications to mineral resources through the proposed action, therefore no direct, indirect, or cumulative effects would occur to minerals.
Vegetative Resources	No	Effects from livestock grazing on Vegetation Resources are analyzed in the Ely Proposed Resource Management Plan/Environmental Impact Statement (November 2007) (page 4.5-9). The RAC Standard 3--Habitat for the allotments was evaluated in the SDD (Appendix II). The design features of the proposed action such as the changes to the Cold Creek allotment grazing management system (Appendix III) and the terms and conditions are expected to maintain the vegetative resources of the allotments. No detailed analysis is needed.

The resources that have been identified as affected by the proposed action will be analyzed. These resources are invasive non-native species including noxious weeds and special status species.

3.3 Invasive, Non-native Species, including Noxious Weeds Affected Environment
No field surveys were completed for this renewal. Instead the Ely District weed inventory data was consulted. The following species are found within the boundaries of the Cold Creek allotment:

Carduus nutans	Musk thistle
Cirsium vulgare	Bull thistle
Hyoscyamus niger	Black henbane
Lepidium draba	Hoary cress
Lepidium latifolium	Tall whitetop
Onopordum acanthium	Scotch thistle

The following species are found within the boundaries of the Warm Springs allotment:

Acroptilon repens	Russian knapweed
Carduus nutans	Musk thistle
Centaurea stoebe	Spotted knapweed
Cirsium arvense	Canada thistle

Cirsium vulgare	Bull thistle
Hyoscyamus niger	Black henbane
Lepidium draba	Hoary cress
Lepidium latifolium	Tall whitetop
Onopordum acanthium	Scotch thistle
Tamarix spp.	Salt cedar

The following species are found within the boundaries of the Dry Mountain allotment:

Lepidium draba	Hoary cress

The following species are found along roads and drainages leading to all three allotments:

Acroptilon repens	Russian knapweed
Carduus nutans	Musk thistle
Centaurea stoebe	Spotted knapweed
Cicuta maculata	Water hemlock
Cirsium arvense	Canada thistle
Cirsium vulgare	Bull thistle
Conium maculatum	Poison hemlock
Euphorbia esula	Leafy spurge
Hyoscyamus niger	Black henbane
Lepidium draba	Hoary cress
Onopordum acanthium	Scotch thistle
Tamarix spp.	Salt cedar

All three allotments were last inventoried for noxious weeds in 2002. It should be noted that the Cold Creek and Warm Springs allotments border the BLM Battle Mountain District Office and no weed inventory data for the BLM Battle Mountain District Office is available. While not officially documented the following non-native invasive weeds probably occur in or around the allotment: cheatgrass (*Bromus tectorum*), halogeton (*Halogeton glomeratus*), horehound (*Marrubium vulgare*), and Russian thistle (*Salsola kali*).

3.3.1. Invasive, Non-native Species, including Noxious Weeds - Environmental Effects

For this term permit renewal, the Risk Rating is Moderate (48) (see WRA, Appendix III). Since there are currently so many weed infestations within these allotments the proposed action could increase the populations of the noxious and invasive weeds already within the allotment and could aid in the introduction of weeds from surrounding areas. Within the allotment, watering and salt block sites are of particular concern of new weed infestations due to the concentration of livestock around those sites and the amount of ground disturbance associated with that. If new weed infestations establish within the allotment this could have an adverse impact on those native plant communities since the allotment is currently considered to be mostly weed-free. Also, any increase of cheatgrass could alter the fire regime in the area. By following the stipulations listed in the Weed Risk Assessment affects to weeds should be minimized.

3.4 Sensitive Species-Affected Environment

The greater sage-grouse (*Centrocercus urophasianus*) is a high-profile Sensitive Species currently undergoing review for Threatened or Endangered Status (USDOI 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 (USDOI 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). 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". The Plan estimated approximately 708,000 acres of sagebrush habitat in this category throughout the PMU, which include the Cold Creek, Warm Springs and Dry Mountain allotments. Based on the cover data collected for these three allotments, some of the sagebrush habitat communities at the key areas measured within the allotments fall under this category.

There are approximately five known leks within or near the Cold Creek allotment, 17 known leks within or near the Warm springs allotment and three known leks within or near Dry Mountain allotments according to the NDOW data used by BLM. Cold Creek and Warm Springs allotments contain nesting, summer brood rearing and winter habitat, while Dry Mountain contains summer and nesting habitat. Sage grouse often nest in suitable habitat within three miles of a lek site. The allotments have some of the Butte/Buck/White Pine Valley Population Management Unit (PMU).

Key areas are sited in areas representative of livestock grazing on the major vegetation types throughout an allotment. Three of the key areas within the Cold Creek allotment are: Wyoming big sagebrush/Indian ricegrass/needleandthread, big sagebrush/Thurber's needlegrass/blue bunch wheatgrass or Wyoming big sagebrush/bottlebrush squirreltail/Sandberg's bluegrass ecological sites, and are current or potential sage-grouse habitat. Under the sage-grouse guidelines, the herbaceous grass and forb component 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). One of these sites is meeting the herbaceous understory requirements set forth within the sage-grouse guidelines, as all grasses and forbs combined comprised 15% cover at Diamond #3. Huntington #1 and Huntington #3 had 9% and 1.5% grasses and forbs combined respectively. Only one of the sites is meeting the requirement for sagebrush cover for sage grouse. Diamond #1 has 15% sagebrush while Huntington #1 has 13% and Huntington #3 has 10%.

Some of the key areas within the Warm Springs allotment are shown in the table 4 below:

Table 4. Key Areas on the Warm Springs Allotment and Ecological Site Description with percent grass and forbs in total percent cover.

Key Area	Ecological Site Description	Percent grasses and forbs combined
WS-11	low sagebrush/black sagebrush/blue bunch wheatgrass	7.4%
WS-12	mountain big sagebrush/blue bunch wheatgrass	11%
WS-13	big sagebrush/blue bunch wheatgrass/Thurber's needlegrass	12%
WS-15	black sagebrush/Indian sagebrush/needleandthread	5%
WS-16	Wyoming big sagebrush/Indian ricegrass/needleandthread	6%
WS-17	black sagebrush/Indian ricegrass/needleandthread	3%
WS-21	big sagebrush/Thurber's needlegrass/blue bunch wheatgrass	29%
WS-22	mountain big sagebrush/blue bunch wheatgrass	2%
WS-24	black sagebrush/Indian ricegrass/needleandthread	7.4%

The indicated ecological sites are current or potential sage-grouse habitat. Under the sage-grouse guidelines, the herbaceous grass and forb component 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). The table shows all of sites not meeting the herbaceous understory requirements set forth within the sage-grouse guidelines except one, all grasses and forbs combined comprised 29% cover at WS-21. The other key areas had cover below 15%. All of the key areas except WS-21 had sagebrush at the required levels.

One of the key areas within the Dry Mountain allotment is Wyoming big sagebrush/Indian ricegrass/western wheatgrass. As such it is current or potential sage-grouse habitat. Under the sage-grouse guidelines, the herbaceous grass and forb component 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). This site is not meeting the herbaceous understory requirements set forth within the sage-grouse guidelines, as all grasses and forbs combined comprised only 1% cover at DM-1. The site is also not meeting the requirement for sagebrush at 13%.

3.4.1 Sensitive Species-Environmental Effects

Site specific evaluation of sage-grouse habitat guidelines should be tempered with consideration of site potentials described in the ESD. Site potentials as described in the ESD for most of the key areas named are more than adequate to meet the sage-grouse habitat standards. Because the Cold Creek, Warm Springs and Dry Mountain allotments are not meeting the desired vegetative composition for Standard 3 or the guidelines for sage-grouse habitat the allotments fail to meet the needs of the key "umbrella" species for sagebrush habitats identified in the Ely District Resource Management Plan (2008).

Grazing may have indirect effects on habitat through alteration of vegetative communities. The design features of the proposed action such as the changes to the Cold Creek allotment grazing management system (Appendix IV) and the terms and conditions are expected to maintain the

understory of the allotments. During the winter season, sage grouse need sagebrush for cover and feed. The proposed action design features, changes in the grazing management system (Appendix III), are expected to aid in maintaining progress towards achieving the habitat standard. There is potential of livestock trampling of sage grouse nests; however the likelihood of this happening is minimal because of the acreage of the grazing allotments and the reduction in permitted number through the FMUDs (1990, 1992, 1994).

The sage grouse strutting and nesting period is generally considered to be March 15th through May 31st. 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. Grazing use is yearlong on the Warm Springs allotment

The Warm Springs Allotment includes eight use areas (Buck and Bald Use Area/Diamond Mts., Ruby Valley Use Area, Julian and West Bald seedings Use Area, Newark Valley Use Area, Long Valley Use Area, and Long Valley Wash Use Area.) The cattle operation on this allotment has been year-round, with Newark and Long Valley used as winter/spring range, and the Diamond and Buck/Bald Mountains for spring/summer use. The Julian and West Bald crested wheatgrass seedings and the Ruby Valley Use Area also provide summer forage.

Authorized grazing use will be in accordance with the following allowable use levels for the Ruby valley Use Area, Julian and West Bald crested wheatgrass seedings and the Newark Valley Use Area: Utilization will not exceed 50% of current year growth during winter use on winterfat and the key perennial species and will not exceed 45% of current year growth during summer use on bitterbrush and the key perennial species.

Movement dates and the deferred grazing system for the Warm Springs and Dry Mountain Allotments in addition to specified utilization levels would maintain understory forage and habitat requirements for sage grouse.

Cattle grazing begins April 16 on the Cold Creek Allotment. The sage grouse strutting and nesting period is generally considered to be March 15th through May 31st. A deferred rest rotation grazing system would be established for the North and South Units. Grazing use will begin in the North Unit on even years. Grazing Use will begin in the South Unit on odd years. When the North Unit is grazed during the spring, grazing will begin on or later than April 16. Cattle will be moved to the South Unit when utilization levels are met and cattle will be removed before or on October 31. Grazing in the South Unit will begin on or later than April 16. Cattle will be moved to the North Unit when utilization levels are met and cattle will be removed on or before October 31.

Within the Northern Unit, the Strawberry Pastures will be rotated annually with the two western pastures used first and then eastern pastures used. The following year the pastures will be switched with the eastern pastures used first and then the western pastures used afterwards. Movement dates between the North and South Units will be based on annual forage condition and availability. Movement dates in and out of pastures will be based on forage availability, condition and utilization levels. Movement dates may vary each year based on these conditions.

Utilization levels will be established at 60% for the crested wheatgrass seedings and at 50% for the native pastures.

Movement dates and deferred grazing system for the Cold Creek Allotment in addition to specified utilization levels would maintain grass cover, forage and habitat requirements for sage grouse.

3.5 No Action Alternative Environmental Effects

The no action alternative would renew the term permit without the proposed changes to the management system. Without the changes to grazing management system and the additional terms and conditions included in the proposed action, the native vegetation in the area would be further degraded, which would increase the chance for noxious and invasive, non-native weed invasion.

Minimal beneficial effects to rangeland standards and health would progress at a reduced rate. Without the proposed management system on the Cold Creek Allotment effects to wetlands/riparian zones would continue to be unacceptable. Effects to special status animal species, including sage grouse, pygmy rabbit, Newark Valley tui chub, and fish/wildlife resource would not be maintained as described under the proposed action. Improvements to vegetative resources would not progress.

4.0 CUMULATIVE EFFECTS

According to page 36 of the 1994 BLM publication *Guidelines for Assessing and Documenting Cumulative Impacts*, the cumulative analysis should be focused on those issues and resource values where the incremental impact of the Proposed Action results in a meaningful change in the cumulative effect from other past, present and reasonably foreseeable future actions within the Cumulative Effects Study Area (CESA).

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 effects 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).

The CESA for the cumulative effects analysis on non-native, invasive species and special status specied including sage grouseis defined by the watershed boundaries within all the allotments which are Huntington Watershed, Newark Watershed, Long Valley Watershed, Ruby Valley Watershed, and North Butte Watershed.

4.1 Past Activities

Since the 1980’s, the Bald Mountain Mine has developed mining activities. Livestock grazing has a long history in the region dating back to the 1800’s. Throughout its’ history livestock grazing has been characterized by localized areas of intense use. Nevada is prone to extended

periods of drought. Under these conditions, wildfires can be frequent and quite damaging. The Chrome Fire, located in the Bald Mountain Area of the Warm Springs Allotment, burned approximately 5,164 acres in 2004. Through rehabilitation the acreage was seeded. Crested wheatgrass was also seeded on Cold Creek Allotment and Warm Springs Allotment during the 1960's. Hunting, trapping, wildlife viewing, and other recreational activities have occurred on all allotments year round. Several range improvements have occurred on all allotments to improve grazing management including enclosure fences around several riparian areas.

4.2 Present Activities

All allotments are currently being used for livestock grazing. The Bald Mountain Mine occurs in the Warm Springs Allotment. Hunting, trapping, wildlife viewing, and other recreational activities occur on all allotments year round. Fire suppression activities continue to occur on the allotments. OHV use may occur on the roads and two-tracks on all allotments. An annual re-enactment of the Pony Express Trail ride offers a recreational opportunity to experience the historical open space aspects of the area.

4.3 Reasonably Foreseeable Future Actions

The Bald Mountain Mine North Operations Area Project is currently analyzed in a Draft Environmental Impact Statement (DEIS, November 2008) which may identify adjustments to livestock use. The proposed expansion occurs in the Mooney Basin Operations Area of the Warm Springs Allotment. The North Operation Area DEIS would incorporate existing analysis that includes several environmental assessments and the 1995 Bald Mountain Mine Expansion EIS.

Range improvement projects are considered on an annual basis. Range improvements will be analyzed on a site specific basis, but could include, riparian exclosures and vegetation treatments.

4.4 Cumulative Effects Summary

Land-disturbing and transportation activities within the cumulative effects study area that can increase chances of spreading existing non-native invasive species (including noxious weeds) populations include mining and other ground-disturbing activities, increased traffic, maintenance of existing roads, grazing, recreation, and wildland fires. Effects from past activities have facilitated the spread of noxious species, especially along transportation routes, drainages, and disturbed areas.

Establishment of non-native, invasive species would likely occur under the proposed action and other interrelated projects. However, the spread of noxious weeds would be minimized through the stipulations listed in the Weed Risk Assessment (see SDD Appendix II) incorporated into the proposed action and the active weed control program of the Bald Mountain Mine. In addition, the active BLM Ely District Weed Management Program would minimize the spread of weeds throughout the watersheds.

Mining and livestock grazing are the past, present and reasonably foreseeable future actions potentially impacting special status species. Habitat loss or alteration will result from both the mining activities analyzed in the North Operation Area DEIS and livestock grazing. Reduction in

overall sagebrush habitat would be a small portion of available habitat as analyzed in the North Operation Area DEIS. Rehabilitation is planned in the DEIS but could take 20-30 years. Design features included in the proposed action of livestock grazing such as deferred rotation system could aid in maintaining habitat conditions.

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 CONSULTATION AND COORDINATION

6.1 List of Preparers - BLM Egan Field Office Resource Specialists

Gina Jones	Ecology/Project Lead
Sheri Wysong	Planning and Environmental Coordinator
Bonnie Million	Noxious and Invasive, Non-native Species
Marian Lichtler	Wildlife, Special Status Species, Migratory Birds
Kalem Lenard	Recreation, Visual Resources
Shawn Gibson	Cultural Resources
Amanda Anderson	Rangeland Resources
Mark D'Aversa	Soil, Water Resources, Air, Wetlands and Riparian
Ruth Thompson	Wild Horse and Burro Resources
Melanie Peterson	Hazardous and Solid Waste, Safety
Elvis Wall	Native American Cultural Concerns
Chris Mayer	Supervisory Rangeland Management Specialist

6.2 Persons, Groups or Agencies Consulted

The following persons, groups, and agencies were contacted during the preparation of this document.

6.3●Permittee

- •Tumbling JR Ranch
  - •Ben Patterson
- •Barrick Gold of North America, Inc.
  - •Gary Sundseth

6.4●Nevada Department of Wildlife

- •Steve Foree

6.5●Tribal Coordination

- •Native American Coordination Meeting on February 12, 2008. No concerns were identified through coordination.

6.6 Public Notice of Availability

On April 24, 2008 scoping letters were sent to interested persons and organizations on the Ely District Rangeland Management Interested Public List. A copy of the scoping Interested Public letter was posted on the BLM Ely District website at http://www.blm.gov/nv/st/en/fo/ely_field_office.html. No comments were received. An external review period of the preliminary EA will be issued.

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Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage grouse populations and their habitats. Wildlife Society Bulletin 28:967-985.

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White Pine County Portion (Lincoln/White Pine Planning Area) Sage Grouse Conservation Plan.

Appendix I

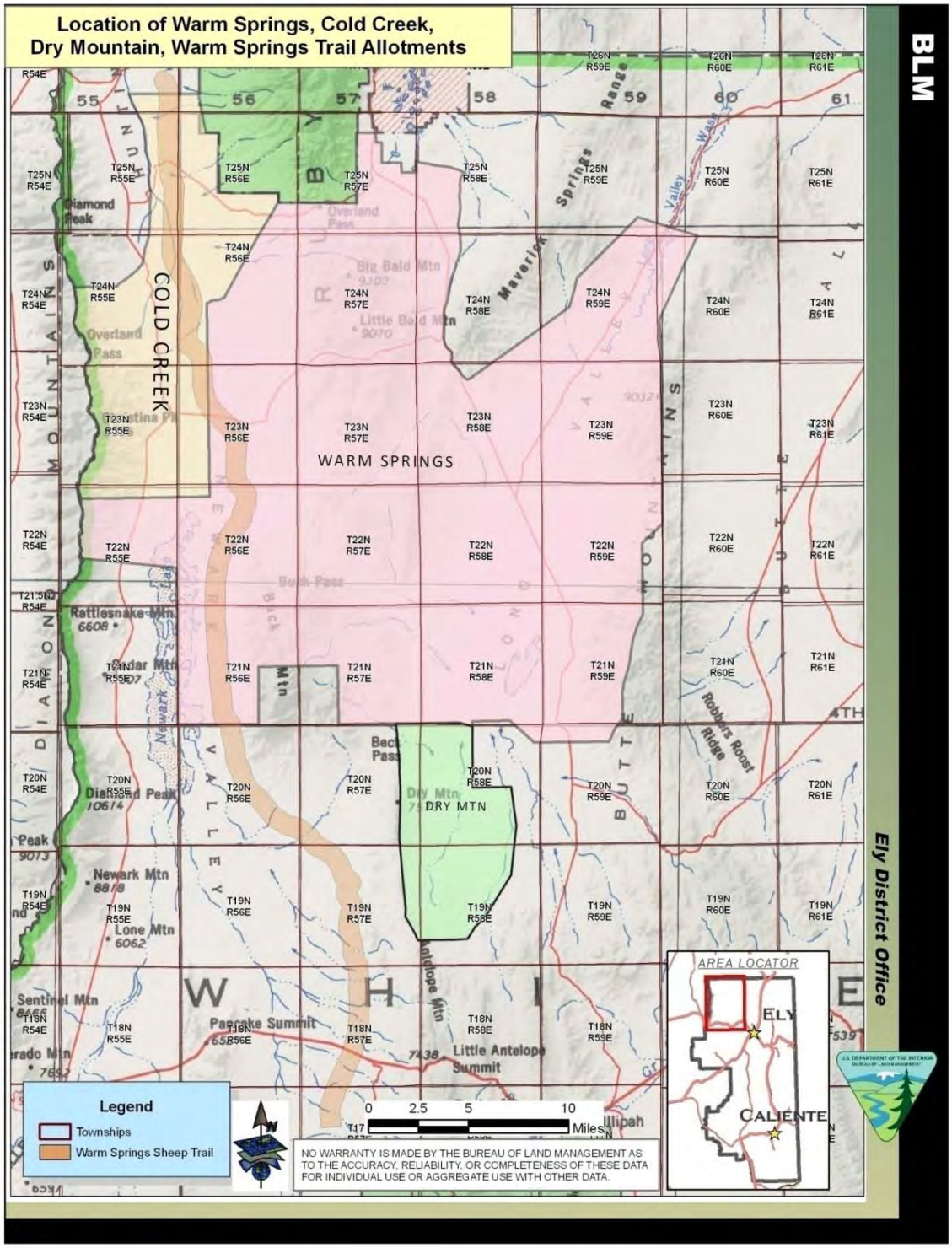

Figure I. Location of Warm Springs Allotment, Cold Creek Allotment, Dry Mountain Allotment, and Warm Springs Trail Allotment.

Appendix II
STANDARDS DETERMINATION DOCUMENT
Tumbling JR Ranch (#2702966) Term Permit Renewal
Paris Livestock (#2704538) Term Permit Renewal
Cold Creek Allotment (0603)
Warm Springs Allotment (0606)
Dry Mountain Allotment (0609)
Warm Springs Trail (0622)

Standards and Guidelines Assessment

Standards and Guidelines for Grazing Administration were developed by the Northeastern Great Basin Area Resource Advisory Council (RAC) and approved by the Secretary of the Interior on February 12, 1997. 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.

This Standards Determination Document (SDD) evaluates and assesses livestock grazing management achievement of the Standards and conformance to the Guidelines for the Cold Creek Allotment (0603), Warm Springs Allotment (0606), Dry Mountain Allotment (0609), and Warm Springs Trail (0622) located in the Ely District Bureau of Land Management (BLM). 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.

Standards for Rangeland Health were reviewed 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 and Eureka Counties, Ecological Site Descriptions for Major Land Resource Area 28B and Major Land Resource Area 25, Interpreting Indicators of Rangeland Health (USDI-BLM et al. 2000), Sampling Vegetation Attributes (USDI-BLM et al. 1996), Nevada Rangeland Monitoring Handbook (USDA-SCS et al. 1984 and 2006), and the National Range and Pasture Handbook (USDA NRCS 2003). The interdisciplinary team also used rangeland monitoring data, maps, professional observations, and photographs to assess achievement of the Standards and conformance to the Guidelines. A complete list of references is included at the end of this Standards Determination Document. All references are available for public review in the Ely BLM District Office. The primary evaluation period for this Standards Determination Document is considered to be from 1998 through 2008.

For Tumbling JR Ranch (#2702966), the current term permit is issued for the period of 9/28/2006 to 5/19/2014. This permit has sheep and cattle use with total active cattle grazing AUMs of 14,414 on the Warm Springs, Cold Creek, and Dry Mountain Allotments and total active sheep AUMs of 2,467 on the Dry Mountain Allotment and Warm Springs Trail Allotment.

For Paris Livestock (#2704538) the current term permit is issued for the period of 10/15/2006 to 10/14/2016. This permit is a sheep permit with total active sheep AUMs of 242 on the Cold Creek Allotment and 615 active sheep AUMs on the Warm Springs Trail Allotment.

Management practices were implemented in the Final Multiple Use Decisions issued for the Dry Mountain Allotment on July 12, 1990, and for the Cold Creek Allotment on January 23, 1992. The Warm Springs Allotment was previously evaluated and a full force and effect multiple use decision was issued March 14, 1994 to Dan Russell. In the transfer process Met Life appealed the transfer decision implementing the full force and effect multiple use decision for the Warm Springs Allotment. Met Life and the BLM came to an out of court settlement agreement and the appeal was dismissed. The out of court settlement agreement stated that all of the AUMs, a total preference of 23,995, would be transferable with 16,251 AUMs suspended preference, and 7,744 AUMs active preference.

A Livestock Grazing Management Agreement was established in 2005, between Silver State Ranches (now Tumbling JR Ranch) and the Ely District Bureau of Land Management. This agreement made revisions to the Final Multiple Use Decisions previously issued for the Warm Springs and Dry Mountain Allotments. On March 17, 2006 the agreement was amended to extend the term of the agreement to 05/19/2014. The agreement recognizes and identifies livestock practices and management procedures along with future shared goals and objectives for the Tumbling JR Ranch and the (BLM). Management practices have been established to serve to maintain, or achieve the Northeastern Great Basin Area (RAC) Standards for Grazing Administration which is specifically related to authorized grazing use.

Allotment Information

The Cold Creek Allotment, Warm Springs Allotment, Dry Mountain Allotment and Warm Springs Trail (Map I, Appendix II) are the permitted grazing allotments for Tumbling JR Ranch (Operator No. 2702966). The Cold Creek Allotment and Warm Springs Trail are also permitted grazing allotments for Paris Livestock (2704538).

Cold Creek allotment consists of 62,103 acres of public land. Cold Creek allotment is situated at the north end of Newark Valley, west of the Ruby Mountains and east of the Diamond Range. Cold Creek allotment's northern half is in Huntington Watershed and the southern portion is in Newark Watershed. The allotment includes both crested wheatgrass seedings and native range, fenced into eighteen pastures and divided into five use areas (Map II, Appendix II). The Triple B Herd Management Area (HMA) is within the eastern half of the Cold Creek allotment.

The Warm Springs Allotment includes 318,740 public acres situated in the northwest corner of White Pine County. The majority of the Warm Springs Allotment is located in the Long Valley Watershed. The northern part of the Warm Springs Allotment is included in the Ruby Valley Watershed and the west portion includes the Newark Watershed. Small portions of the Warm Springs Allotment are included in Huntington and North Butte Watersheds. The Warm Springs allotment includes seven use areas (Map III, Appendix II). The Triple B HMA encompasses six of the seven use areas on the Warm Springs allotment.

Dry Mountain Allotment is one large grazing pasture of approximately 27,552 acres of public land. Dry Mountain Allotment is nestled entirely in the Long Valley Watershed. The crest of Dry Mountain forms the west boundary of the allotment. The Dry Mountain allotment is located south of the Warm Springs Allotment and includes the Triple B HMA.

The Warm Springs Trail encompasses 36,939 acres of public land. For billing purposes, the Warm Springs Sheep Trail has been separated as an allotment. The Warm Springs Trail (0622) runs from north Cold Creek Allotment south across Warm Springs and Newark Allotments and terminates at Six Mile Allotment. The trail includes both Huntington watershed and Newark watershed. The trail also crosses through two HMAs, the Triple B and the Pancake.

Part 1. Standard Conformance Review

Summary of Standards Achievement by Allotment

ALLOTMENT	STANDARD 1 Upland Sites	STANDARD 2 Riparian and Wetland Sites	STANDARD 3 Habitat
Cold Creek	Uplands: **Achieving the Standard**	Riparian: **Not achieving the Standard**	Uplands: **Not achieving the Standard**
Warm Springs	Uplands: **Achieving the Standard**	Riparian: **Not achieving the Standard**	Uplands: **Not achieving the Standard**
Dry Mountain	Uplands**: Achieving the Standard**	Riparian: N/A	Uplands: **Not achieving the Standard**
Warm Springs Trail	Uplands: **Achieving the Standard**	Riparian: N/A	Uplands: **Not achieving the Standard**

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 the potential of the site.

A. COLD CREEK ALLOTMENT:

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:
UPLANDS: *Standard achieved*

Soil mapping units on the Cold Creek Allotment are identified in (Map XI, Appendix II). Rangeland monitoring data and professional judgment conclude that overall soil condition is currently being maintained on the Cold Creek Allotment. Line intercept cover data, collected in 2007, and photo documentation along with professional observation determine that the Cold Creek Allotment is meeting the Standard 1 Upland Sites. The indicator for Standard 1, vegetative cover, registered within or has exceeded the approximate ground cover percentage for all of the key areas where data was collected on Cold Creek Allotment (Table 1.4-1, Appendix I). The present line intercept cover data was compared to the associated Ecological Site Description (ESD).

Key area Diamond #3 occurs on a Fax-Hunnton-Cassiro soil association (1090; NRCS 1997) with a loamy 10-12" ecological site (028BY007NV). These soils typically have moderately slow permeability. Monitoring data (Table 1.4-1, Appendix I) indicate that this key area has a vegetative cover of 48 percent and 57 percent of litter. The cover for this site according to the ESD is 20 to 30 percent. The site has a cover component higher than appropriate for the site. An observation from the data sheet noted soil is well covered and stable.

Key area Diamond #4 also occurs on a Fax-Hunnton-Cassiro soil association (1090; NRCS 1997) with a loamy 10-12" ecological site (028BY007NV). These soils typically have moderately slow permeability. Monitoring data indicate that this key area has a vegetative cover of 33 percent and litter cover of 24 percent. The expected cover for this site according to the ESD is 20 to 30 percent. This is greater than expected for the site (Table 1.4-1, Appendix I).

Key area Newark #1, a crested wheatgrass seeding, occurs on a Blimo-Pyrat soil association (174; NRCS 1997) with a Loamy 8-10" ecological site (028BY010NV). These soils typically have a moderate permeability. The approximate ground cover (basal and ground) for a Loamy 8-10" site is 10-20 percent. Monitoring data indicate that this key area has a vegetative cover of 14 percent and a litter cover of 5.3 percent. Observation notes on the data sheet state cryptograms are present in healthy bunches and that soil appears stable. This is expected for the potential of the site (Table 1.4-1, Appendix I).

Key area Huntington #1, a native range, occurs on a Yody-Dewar association, cool (1050; NRCS 1997) with a Silt Flat ecological site (028BY056NV). These soils typically have a moderate permeability. The approximate ground cover according to the ESD is 5 to 10 percent. Monitoring data indicate that this key area has a vegetative cover of 22 percent and a litter cover of 5 percent. The cover component is more than expected for the site (Table 1.4-1, Appendix I).Observations from the data sheet note cryptograms present around plants and shrubs. Huntington #1 photo (Figure 1) shows vegetative and ground cover of soils.

Figure 1. Representative soils on native range pasture Huntington on the Cold Creek Allotment, White Pine County, Nevada, 2007.

Key area Huntington #3, native range, occurs on a Cowgil-Yody-Fax association (190; NRCS 1997) with a Loamy 8-10" ecological site (028BY010NV). These soils typically have a moderately slow permeability. The approximate ground cover (basal and ground) for this site is 10-20 percent according to the ESD. Monitoring data collected at Huntington #3 indicate that this key area has vegetative cover of 12 percent, and a litter cover of 22 percent, which is within the potential for the site (Table 1.4-1, Appendix I).

Key area Huntington #4, native range, occurs on a Hunnton-Chiara association (1010; NRCS, 1997) with a Loamy 8-10" ecological site (025XY019NV). These soils typically have a slow permeability. The approximate ground cover (basal and ground) for this site is 20-30 percent according to the ESD. Monitoring data (line intercept) collected at Huntington #4 indicate that this key area has appropriate vegetative cover for the site at 28 percent and a litter cover of 4 percent (Table 1.4-1, Appendix I). Observational notes from the data sheet include, soil stable, no pedestalling, and no cryptograms.

Key area Griswold NW, a crested wheatgrass seeding, occurs on a Fax-Hunnton-Cassiro soil association (1090; NRCS 1997) with a Loamy 8-10" ecological site (028BY010NV). These soils typically have moderately slow permeability. The approximate ground cover (basal and ground) for a Loamy 8-10" site is 10 to 20 percent. Line-intercept monitoring data collected at this crested wheatgrass seeding shows 11 percent vegetative cover and 17 percent litter, which is within the approximate ground cover for the site as described by the ESD (Table 1.4-1, Appendix I).

B. WARM SPRINGS ALLOTMENT:

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

Soil Mapping Units on the Warm Springs Allotment are identified in (Map XII, Appendix II). Rangeland monitoring (line-intercept cover) studies accomplished in 1998, 1999, and 2007 (Table 2.4-1, Appendix I) indicate that the amount of vegetative canopy and ground cover is appropriate to the potential or has exceeded the potential (as described by the ESD) values at all key areas studied on the Warm Springs Allotment. The line intercept cover data, photo documentation, and professional judgment collectively conclude that Standard 1, Upland Sites is achieved on the Warm Springs Allotment.

Key area WS-3 (Long Valley) occurs on a Bylo-Tulase soil association (790; NRCS 1997) with a silty 8-10" ecological site (028BY013NV). These soils typically have moderately slow permeability. Monitoring data (line-intercept) collected in 1998 indicate that this key area has a vegetative cover of 22 percent. Monitoring data collected in 2007 indicate that vegetative cover at WS-3 is 9 percent with a litter cover of 14 percent. The ESD describes approximate cover at 10 to 20 percent. The site is lower in vegetative cover compared to the potential for the site, however notes from the data sheet state soils have some cryptograms and are stable with no signs of movement.

Key area WS-4 (Long Valley) occurs on a Zimwala-Uwell soil association (731; NRCS 1997) with a Silty 8-10" ecological site (028BY013NV). These soils typically have slow to very slow permeability. Monitoring data, collected in 1998 indicate that this key area has a vegetative cover of 16 percent. The expected cover for this site according to the ESD is 10 to 20 percent. This site is maintaining the vegetative cover component appropriate to the potential of the site.

Key area WS-5 (Long Valley) occurs on a Zimwala-Uwell-Zimwala, moist soil association (730; NRCS 1997) with a Saline Terrace 5-8" ecological site (028BY047NV). These soils typically have slow to very slow permeability. The approximate ground cover (basal and ground) for a Saline Terrace is 5 to 10 percent. Monitoring data indicate that this key area has a vegetative cover of 19 percent. The site is maintaining cover higher than the potential for the site.

Key area WS-11 (Bald Mountain) occurs on a Cavehill-Grink-Rock outcrop soil association (670; NRCS 1997). These soils typically have moderate permeability. Monitoring data (line-intercept)

indicate that this key area has a vegetative cover of 26 percent. This is greater than expected for the site as the ESD describes cover to be 15 to 20 percent.

Key area WS-12 (Bald Mountain) occurs on a McIvey-Segura-Cropper association (566; NRCS 1997) with a Loamy 12-16" ecological site (028BY030NV). These soils typically have very slow permeability. Monitoring data (line-intercept) indicate that this site has 43 percent cover. This site has exceeded the potential of the site as indicated by the ESD which is 25 to 35 percent.

Key area WS-13 (Buck and Bald) occurs on a Pioche-Segura-Cropper association (481; NRCS 1997) with a Loamy 10-12" ecological site (028BY007NV). These soils typically have slow permeability. Monitoring data (line-intercept) indicate that this site has 31 percent cover. The approximate ground cover for a Loamy 10-12" is 20 to 30 percent. Cover at key area WS-13 is more than the appropriate amount at the site.

Key area WS-15 (Buck and Bald) occurs on a Palinor very gravelly loam, 2 to 15 percent slopes (282; NRCS 1997) with a Shallow Calcareous Loam 8-10" ecological site (028BY011NV). These soils typically have a moderate permeability. The approximate ground cover, according to the ESD is 15 to 20 percent. The monitoring data (line-intercept) collected at this site indicate that cover has exceeded the approximate amount and is 30 percent at WS-15. Soils appear to be stable as shown in Figure 2 below.

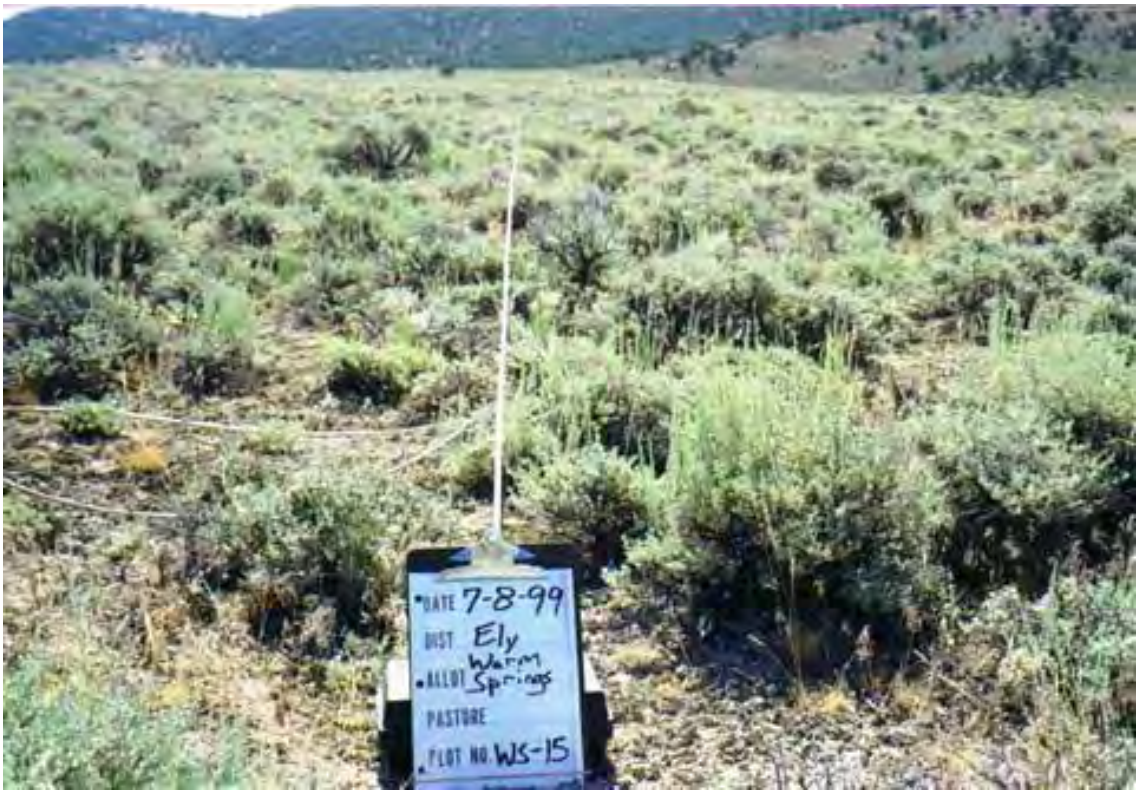

Figure 2. Line intercept cover transect at Key area WS-15 within the Warm Springs Allotment, White Pine County, Nevada, 1999.

Key area WS-16 (Buck and Bald) occurs on a Pyrat-Heist-Tulase association (182; NRCS 1997) with a Shallow Loam 8-10" ecological site. These soils typically have moderate permeability. The monitoring data collected at this site indicate that cover at WS-16 has exceeded the approximate amount for the site. The site has 30 percent and the approximate amount of cover according to the ESD is 10 to 20 percent.

Key area WS-17 (Buck and Bald) occurs on a Palinor very gravelly loam, 2 to 15 percent slopes (282; NRCS 1997) with a Shallow Calcareous Loam 8-10" ecological site (028BY011NV). As noted above, these soils typically have a moderate permeability rate. The approximate ground cover for a Shallow Calcareous Loam is 15 to 20 percent. Monitoring data at WS-17 indicate that cover has exceeded the appropriate at 35 percent.

Key area WS-20 (Buck and Bald) occurs on a Ward bay – Hardol-Adobe association (1372; NRCS 1372) with a Claypan 12-14" ecological site (028BY037NV). These soils typically have moderate permeability. The approximate amount of cover for a Claypan 12-14" according to the ESD is 15 to 20 percent. The line intercept monitoring data shows that cover at WS-20 is 25 percent. The cover is more than appropriate for the site.

Key area WS-21 (Buck and Bald) occurs on a Amelar-Xine-Halacan association (876; NRCS) with a Loamy 10-12" ecological site (028BY007). These soils typically have moderately slow permeability. The approximate ground cover (basal and ground) for a Loamy 10-12"site is 20 to 30 percent. Monitoring data indicate that this key area has a vegetative cover of 46 percent. This has exceeded the approximate cover for the site.

Key area WS-23 (Long Valley) occurs on a Zimwala-Uwell association (731; NRCS 1997) with a Silty Clay 8-10" ecological site (028BY071NV). These soils typically have slow to very slow permeability. Monitoring data indicate that this key area has a vegetative cover of 21 percent. The vegetative cover component at this site is greater than expected for a Silty Clay site, 10 to 15 percent.

Key area WS-24 (Ruby Valley) occurs on a Zimbob association (110; NRCS 1997) with a Shallow Calcareous Loam 8-10" ecological site (028BY011NV). These soils typically have a moderate permeability. Monitoring data indicate that this key area has a vegetative cover of 28 percent. The approximate amount of cover for a Shallow Calcareous Loam is 15 to 20 percent. The site has more than appropriate vegetative cover for the site.

Key area WS-25 occurs on a Automal-Wintermute association (373; NRCS 1997) with a Shallow Calcareous Loam 8-10" ecological site (028BY011NV). These soils typically have a slow permeability. The approximate ground cover (basal and ground) for a Shallow Calcareous Loam site is 15 to 20 percent. Monitoring data indicate that this key area has a vegetative cover of 17 percent. This is as expected for the potential of the site.

Key area WS-26 (Newark Valley) occurs on a Sheffit-Katelana association (250; NRCS 1997) with a Sodic Flat 5-8" ecological site (028BY020NV). These soils typically have a moderately slow permeability. The approximate ground cover (basal and ground) for a Sodic Flat site is 2 to 8 percent. Monitoring data indicate that this key area has a vegetative cover of 19 percent. This site is maintaining cover higher than the potential for the site.

C. DRY MOUNTIAN ALLOTMENT:

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:
UPLANDS: *Standard achieved*

Soil Mapping Units for Dry Mountain Allotment are identified in (Map XIII, Appendix II). Rangeland monitoring data and professional judgment determine that overall soil condition is currently being maintained on the Dry Mountain Allotment. Line intercept cover data collected on the allotment and photo documentation indicate that the allotment is meeting the standard 1. Vegetative cover studies resulted within the approximate ground cover range for all of the key areas where data was collected (Table 3.4-1, Appendix I) on the Dry Mountain Allotment. No vegetative cover studies were conducted at key area DM-3.

Key area DM-5 and DM-1 occur on a Kunzler-Bylo-Zimwala association (643; NRCS 1997). These soils typically have a moderately slow permeability. DM-5 occurs on a Silty 8-10" ecological site (028BY013NV). The approximate ground cover (basal and crown) for a Silty 8-10" site is 10 to 20 percent. Monitoring data collected at DM-5 indicate that this key area has vegetative cover of 18 percent and a litter cover of 4 percent. DM-1 occurs on a Loamy Plain 8-10" ecological site (028BY014NV). Monitoring data collected at DM-1 indicate that this key area has vegetative cover of 14 percent and a litter cover of 2 percent. Approximate ground cover (basal and crown) according to the ESD on a Loamy Plain 8-10" is 10 to 15 percent. Both Key areas DM-1 and DM-5 have cover as expected for the sites based on line-intercept data and professional observations. Figure 3 below shows the soil condition at DM-1.

Figure 3. Key area DM-1 on the Dry Mountain Allotment, White Pine County, Nevada, 2006.

Key area DM-4 occurs on a Tosser-Pyrat-Linoyer association (166; NRCS 1997) with a Coarse Silty 6-8" ecological site (028BY084NV). These soils typically have a moderately rapid permeability. The approximate ground cover (basal and ground) for a Coarse Silty 6-8" site is 10 to 20 percent. Monitoring data collected at DM-4 indicate that this key area has vegetative cover of 13 percent and a litter cover of 5 percent. Key area DM-4 has the appropriate amount of cover as expected for the site characteristics.

Key area DM-2 occurs on a Heist –Tulase association (351; NRCS 1997) with a Coarse Silty 6-8" ecological site (028BY084NV). These soils typically have a moderately rapid permeability. The approximate ground cover (basal and ground) for a Coarse Silty 6-8" site, as described above, is 10 to 20 percent. Monitoring data indicate that this key area has a vegetative cover of 13 percent and litter cover of 4 percent. This is as expected for the appropriate site characteristics.

D. WARM SPRINGS TRAIL ALLOTMENT:

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:
UPLANDS: *Standard achieved*

Rangeland monitoring data and professional observation indicates that acceptable soil condition is currently being maintained on the Warm Springs Trail Allotment. Line intercept cover data collected on the allotment shows that the allotment is meeting the standard 1. Upland Soils. Vegetative line intercept cover registered within or greater than the approximate cover percentage for all of the key areas where data was collected (Table 4.4-1, Appendix I).

Key area Huntington #1 on the Cold Creek Allotment intersects the Warm Springs Trail. Key Area Huntington #1, a native range, occurs on a Yody-Dewar association (1050; NRCS 1997) with a Silt Flat ecological site (028BY056NV). These soils typically have a moderate permeability. The approximate ground cover according to the ESD is 5 to 10 percent. Monitoring data indicate that this key area has a vegetative cover of 22 percent. The cover component is more than expected for the site.

Key area WS-25 (Newark Valley) located on the Warm Springs Allotment intersects the Warm Springs Trail and is described in section B. Warm Springs Allotment. Key area WS-25 occurs on a Automal-Wintermute association (373; NRCS 1997) with a Shallow Calcareous Loam 8-10" ecological site (028BY011NV). These soils typically have a slow permeability. The approximate ground cover (basal and ground) for a Shallow Calcareous Loam site, as noted above, is 15 to 20 percent. Monitoring data indicate that this key area has a vegetative cover of 17 percent. This is as expected for the potential of the site.

Key area WS-26 (Newark valley) intersects the Warm Springs Trail and on a Sheffit-Katelana association (250; NRCS 1997) with a Sodic Flat 5-8" ecological site (028BY020NV). These soils typically have a moderately slow permeability. The approximate ground cover (basal and ground) for this site type is 2 to 8 percent. Monitoring data indicate that this key area has a vegetative cover of 19 percent. This site is maintaining cover higher than the potential for the site.

Key area N-6, located in Newark Allotment intersects the Warm Springs Trail, and occurs on a Shallow Calcareous Loam 8-10" ecological site (028BY011NV). Key area N-6 occurs on a Palinor very gravelly loam, 2 to 15 percent slopes with moderate permeability. Monitoring data indicate that this key area has a vegetative cover of 21 percent. This is higher than expected for the site as vegetative cover described by the ESD is 15-20 percent. Professional interpretation concludes that characteristics are maintaining soil stability.

Standard 2. Riparian and Wetland Sites:

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

As indicated by:

- Canopy and ground cover, including litter, live vegetation, and biological crust, and rock appropriate to potential of the ecological site.
- Ecological processes are adequate for the vegetative communities.

Riparian Indicators:

- 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 acceleration 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).
    - Other covers (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.

Water Quality Indicators:

- Chemical, physical and biological constituents do not exceed the State water quality Standards.

A. COLD CREEK ALLOTMENT:

Determination:

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

There are thirty springs located within the Cold Creek Allotment (Map VIII, Appendix II). Most springs located within the Cold Creek Allotment are in the Diamond Mountains and inaccessible to livestock and will not be considered for this standards determination. No riparian data has been collected on these springs. A memo dated 12/17/1990 in the monitoring files has acknowledged key riparian sites in Cold Creek Allotment including Corta Spring complex, Abal Springs, unnamed spring, and Cold Spring. These four riparian areas are considered to be representative of livestock use across the allotment. The key riparian springs were assessed using Proper Functioning Condition (PFC) Method on July 28, 2008 (Table 1.5-1, Appendix I).

Corta Spring, (located in Diamond #3 pasture) is a lotic system complex is identified as an important spring source on the Cold Creek Allotment. Corta Spring complex was included in a series of springhead exclosures in 1990, designed to alleviate livestock overuse and trampling. In the summer of 2008, PFC assessment at Corta Spring was rated as Functioning at Risk with a trend that was not apparent. Corta Spring was described to have moderate grazing on the vegetation, but the appropriate riparian vegetation species are present and appear healthy in the riparian area. USDOI-BLM Technical Reference 1737-14, 1997, describes that utilization should be considered along with the potential of vegetative regrowth to ensure riparian function/integrity. Additional notes from the PFC form at Corta Spring include hummocking present and no definite channel.

Abal Springs, (located in Huntington #4 pasture) is a lotic system (Figure 4) was rated as Functioning at Risk with a downward trend during the PFC assessment in July of 2008. The interdisciplinary team identified undesirable vegetative species in the riparian area and the lack of adequate riparian vegetative cover present to dissipate energy during high flows. Upland species encroachment, hummocking, and lack of young and mid age classes of vegetation were recorded. Other notes from the data form include evident use by horses and cattle.

Figure 4. Abal springs complex, Cold Creek Allotment, White Pine County, Nevada, 2008.

Unnamed spring in the Cold Creek Allotment is an ephemeral seep and did not have surface water present during the assessment in summer 2008. The ID Team determined this site did not meet the criteria for determining PFC. No assessment was made.

Cold Spring on the Cold Creek Allotment is a lotic system that terminates in Cold Creek Reservoir. During summer 2008, Cold Spring was rated as Proper Functioning Condition.

B. WARM SPRINGS ALLOTMENT:

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

Causal Factors:
□ Livestock are a contributing factor to not achieving the standard
X **Livestock are not a contributing factor to not achieving the standard**
X **Failure to meet the standard is related to other issues or conditions**

Guidelines Conformance:
X In conformance with the Guidelines
□ Not in conformance with the Guidelines

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

Water resources for Warm Springs Allotment are identified in (Map IX, Appendix II). In 1997 and 1998 assessment of seventeen springs on the Warm Springs Allotment was performed by an interdisciplinary (ID) team using the Proper Functioning Condition (PFC) method (Table 2.6-1, Appendix I). Of these three were lotic (stream) and fourteen were lentic sites. Of the two lotic sites, two were rated as PFC while one was functioning at risk with a downward trend. Of the fourteen lentic sites, ten were rated as proper functioning condition while four were rated as functioning at risk with a downward trend.

In 1998, the two lotic or stream riparian areas (Deadman Creek and Old Deadman Creek) were both rated as proper functioning condition (PFC). Of the fifteen lentic sites (springs) studied in 1999, ten were rated at PFC and four are Functioning-at-Risk (FAR) with an upward trend.

In 2008, unnamed spring, a lotic system, located at Township 21N, Range 56E, section 22 was assessed with the PFC method (Table 2.6-1, Appendix I). Unnamed spring was rated as functioning at risk with a downward trend. The ID team identified contributing factors as upland species encroachment into the riparian area. Figure 5 below is a representative photo of unnamed spring.

Figure 5. Unnamed Spring located at Township 21N, Range 56E, section 22 on the Warm Springs Allotment, White Pine County Nevada, 2008.

In November 2008, Unnamed Spring located at Township 22N, Range 56 E, section 28, on the Warm Springs Allotment was visited. The spring is known to have the BLM special status species, Newark Valley Tui Chub (*Gila bicolor newarkensis*). No PFC data was collected but notes and photo documentation of the spring were collected. Field notes specified moderate grazing on the riparian

vegetation in a wet meadow area. There was sign of use by cattle and wild horse use. The water quality appeared good as noted by the clarity of the water. The field notes also included the lack of vegetation at the spring source, along the banks. It was noted that the spring source would benefit from an exclosure fence to improve bank stability.

C. DRY MOUNTIAN ALLOTMENT:

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

Causal Factors:
□ Livestock are a contributing factor to not achieving the standard
□ Livestock are not a contributing factor to not achieving the standard
□ Failure to meet the standard is related to other issues or conditions

Guidelines Conformance:
□ In conformance with the Guidelines
□ Not in conformance with the Guidelines

Conclusion:
RIPARIAN**:**
Water resources on the Dry Mountain Allotment are displayed in (Map X, Appendix II). Water sources on the Dry Mountain Allotment include wells and developed springs with no remaining riparian areas. No PFC data has been collected on the Allotment.

D. WARM SPRINGS TRAIL ALLOTMENT:

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

Conclusion:
RIPARIAN: Through the Cold Creek Allotment, Warm Springs Trail intersects developed water sources on public land. Through the Warm Springs Allotment, the trail intersects four public springs. There is no PFC data for these springs. The trail is used for trailing sheep where the sheep utilize snow and/or hauled water for their main water source.

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.

A. COLD CREEK ALLOTMENT:

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

Causal Factors
□ Livestock are a contributing factor to not achieving the standard.
X **Livestock are not a contributing factor to not achieving the standard**
X **Failure to meet the standard is related to other issues or conditions**

Guidelines Conformance:
X **In conformance with the Guidelines**
□ Not in conformance with the Guidelines

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

The Cold Creek Allotment is divided into five use areas (Map II, Appendix II). The Griswold and Strawberry units are crested wheatgrass seedings. Huntington and Diamond units each have four native range pastures and the Newark unit contains one native range pasture and one crested wheatgrass seeding pasture. No habitat data was collected on the crested wheatgrass seedings.

Table 1.4-2, Appendix I, shows the results of line intercept cover study performed in 2007 and the composition of shrubs, forbs, and grasses at each native range key area on Cold Creek Allotment.

Line intercept cover data (Table 1.4-2, Appendix I) shows that key area Diamond #3 has 48 percent total cover consisting of 25 percent grasses, 6 percent forbs, and 68 percent shrubs. Diamond #3 also has 1

percent cheatgrass composition. Photo documentation, professional knowledge, and the line intercept cover data reveals appropriate species are present but the composition by class is not appropriate for the site.

Line intercept cover data (Table 1.4-2, Appendix I) shows that key area Diamond #4 has 33 percent total cover consisting of 61 percent grasses, trace amount of forbs, and 39 percent grasses. The appropriate species are present at Diamond #4 but the composition of forbs, shrubs, and grasses, collected by line-intercept cover is not appropriate for the site. Photo documentation (Figure 6) shows high grass component under sagebrush and throughout interspaces, however the forb component is lacking at Diamond #4.

Figure 6. Key area Diamond #4 on the Cold Creek Allotment, White Pine County, Nevada, 2007.

Line intercept cover data (Table 1.4-2, Appendix I) shows that key area Huntington #3 has 13 percent total cover consisting of 6 percent grasses, 3 percent forbs, and 88 percent shrubs. The undesirable species, cheatgrass is present at Huntington #3 at 2 percent of the understory. Professional interpretation and photo documentation conclude that the shrub component is high at key area Huntington #3, while the grass and forb component is lacking.

Line intercept cover data (Table 1.4-2, Appendix I) shows that key area Huntington #4 has 28 percent total cover consisting of 70 percent grasses, trace amount of forbs, and 28 percent shrubs. Based on photo documentation and professional interpretation Huntington #4 appears to generally exhibit a healthy, productive, and diverse population of native plant species, however the forb component is lacking at the site.

Line intercept cover data (Table 1.4-2, Appendix I) shows that key area Huntington #1 has 22 percent total cover comprised of 39 percent grasses, trace amount of forbs and 59 percent shrubs. Based on photo documentation and professional interpretation Huntington #1 has a diverse population of native

plant species; however the forb component is lacking at the site. Cheatgrass was noted to be abundant along the major roadway in the allotment.

Of the indicators for Standard 3, vegetation composition (relative abundance of species) by line-intercept cover show that overall, the vegetative classes of grasses, shrubs, and forbs are present at each key area studied on Cold Creek Allotment. However, the appropriate amount of each vegetative class (Table 1.4-2, Appendix I) is not present at each key area for each site on the Cold Creek Allotment. The herbaceous understory is reduced within the overall Cold Creek Allotment. In summary, indicators suggest that the Cold Creek Allotment is not meeting the Habitat Standard.

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). 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". The Plan estimated approximately 708,000 acres of sagebrush habitat in this category throughout the PMU, which includes the Cold Creek allotment. Based on the cover data collected for the Cold Creek allotment, some of the sagebrush habitat communities at the key areas measured within the allotment fall under this category.

Key areas are sited in areas representative of livestock grazing on the major vegetation types throughout an allotment. Three of the key areas within the Cold Creek allotment are: Wyoming big sagebrush/Indian ricegrass/needleandthread, big sagebrush/Thurber's needlegrass/bluebunch wheatgrass or Wyoming big sagebrush/bottlebrush squirreltail/Sandberg's bluegrass ecological sites, and are current or potential sage-grouse habitat. Under the sage-grouse guidelines, the herbaceous grass and forb component 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). One of these sites is meeting the herbaceous understory requirements set forth within the sage-grouse guidelines, as all grasses and forbs combined comprised 15% cover at Diamond #3, (Table 1.4-2). Huntington #1 and Huntington #3 had 9% and 1.5% grasses and forbs combined respectively. Only one of the sites is meeting the requirement for sagebrush cover. Diamond #1 has 15% sagebrush while Huntington #1 has 13% and Huntington #3 has 10%.

There are five known leks within or near the Cold Creek allotment according to the NDOW data used by BLM. Three are classified as active and two as unknown. Cold Creek allotment contains nesting, summer brood rearing and winter habitat. Sage grouse often nest in suitable habitat within three miles of a lek site. The allotment has some of the Butte/Buck/White Pine Valley Population Management Unit (PMU).

Site specific evaluation of sage-grouse habitat guidelines should be tempered with consideration of site potentials described in the ESD. Site potentials as described in the ESD for key areas Huntington #1 and #3 are not adequate to meet the sage-grouse habitat standards. The site potential at Diamond #1 is

more than adequate. Because the Cold Creek allotment is not meeting the desired vegetative composition for Standard 3 or the guidelines for sage-grouse habitat, the allotment fails to meet the needs of the key "umbrella" species for sagebrush habitats identified in the Ely District Resource Management Plan (2008).

B. WARM SPRINGS ALLOTMENT:

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

Causal Factors:

□ Livestock are a contributing factor to not achieving the standard
X **Livestock are not a contributing factor to not achieving the standard**
X **Failure to meet the standard is related to other issues or conditions**

Guidelines Conformance:
X **In conformance with the Guidelines**
□ Not in conformance with the Guidelines

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

The Warm Springs Allotment is divided into six native range use areas and two crested wheatgrass seedings (Map III, Appendix I). Data for the following indicators will be used to evaluate Warm Springs Allotment habitat; composition (relative abundance of species) and vegetation productivity. Table 2.5-1, Appendix I shows the results of ecological condition studies performed in 1998 and 1999 on the Warm Springs Allotment along with the potential vegetative composition and production as described by the ESD.

Key area WS-3 (Long Valley) occurs on a Silty 8-10" ecological site (028BY013NV). The ESD potential vegetative composition by weight expected at HCPC for this site is about 30 percent grasses, 5 percent forbs, and 65 percent shrubs. Existing vegetative composition at key area WS-3 studied through ecological condition in 1998 resulted in 1 percent grasses, trace amount of forbs, and 99 percent shrubs. Key area WS-3 has a current production of 277 pounds per acre (dry weight). The approximate production for this site type is 300 pounds per acre (dry weight) in an unfavorable year, 500 pounds per acre (dry weight) on a normal year, and 700 pounds per acre (dry weight) on a favorable year, according to the ESD. WS-3 is indicated to be in mid-seral stage based on the 1998 ecological condition study. The data and photo documentation (Figure 7) shows that shrubs have exceeded the HCPC plant composition given the site.

Figure 7. Ecological condition transect at Key area WS-3 within the Warm Springs Allotment, White Pine County, Nevada, 1998.

Key area WS-4 (Long Valley) occurs on a Silty 8-10" ecological site (028BY013NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 30 percent grasses, 5 percent forbs, and 65 percent shrubs. Existing vegetative composition at WS-4 studied through ecological condition in 1998 resulted in 32 percent grasses, 33 percent forbs, and 35 percent shrubs. Key area WS-4 has a current production of 307 pounds per acre (dry weight). The approximate production for this Silty 8-10" site is 300 pounds per acre (dry weight) in an unfavorable year, 500 pounds per acre (dry weight) on a normal year, and 700 pounds per acre (dry weight) in a favorable year, according to the ESD. WS-4 has the appropriate species present but not in the appropriate amount as shown by the ecological conditions study. The seral stage of key area WS-4 is late seral.

Key area WS-5 (Long Valley) occurs on a Saline Terrace 5-8" ecological site (028BY047NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 15 percent grasses, 5 percent forbs, and 65 percent shrubs. Existing vegetative composition at WS-5 studied through ecological condition in 1998 resulted in 28 percent grasses, trace amount of forbs and 72 percent shrubs. Key area WS-5 has a current production of 570 pounds per acre (dry weight). The approximate production for this Saline Terrace 5-8" site is 200 pounds per acre (dry weight) in an unfavorable year, 400 pounds per acre (dry weight) on a normal year, and 600 pounds per acre (dry weight) in a favorable year, according to the ESD. WS-5 has the appropriate species present but the amount is not consistent with the ESD. The forb component is lacking as evident by the ecological condition study. The key area was found to be in the late seral stage.

Key area WS-11 (Bald Mountain) occurs on a Mountain Ridge 12-14" ecological site (028BY034NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 45 percent grasses, 10 percent forbs, and 45 percent shrubs. Existing vegetative composition at WS-11 studied through ecological condition in 1998 resulted in 16 percent grasses, 6 percent forbs, and 78

percent shrubs. Key area WS-11 has a current production of 646 pounds per acre (dry weight). The approximate production for this Mountain Ridge 12-14" site is 600 pounds per acre (dry weight) in an unfavorable year, 400 pounds per acre (dry weight) on a normal year, and 600 pounds per acre (dry weight) in a favorable year, according to the ESD. The results show that in comparison to the ESD the shrub component has exceeded the appropriate amount and the grass/forb component has decreased. WS-11 was found to be in late seral stage.

Key area WS-12 (Bald Mountain) occurs on a Loamy 12-16" ecological site (028BY030NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 55 percent grasses, 10 percent forbs, 35 percent shrubs. Existing vegetative composition at WS-12 studied through ecological condition in 1998 resulted in 10 percent grasses, 4 percent forbs, and 35 percent shrubs. The results show that the shrub component is appropriate to the site characteristics but the grass/forb component is lacking. Cheatgrass is a component of the grass class at this site. The seral stage of WS-12 is mid seral stage.

Key area WS-13 (Buck and Bald) occurs on a Loamy 10-12" ecological site (028BY007NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 65 percent grasses, 10 percent forbs, and 25 percent shrubs. Existing vegetative composition at WS-13 studied through ecological condition in 1998 resulted in 26 percent grasses, 29 percent forbs, and 45 percent shrubs. The results show that the current conditions are not consistent with the HCPC. Photo documentation shows a mature stand of big sagebrush. The data collected shows 86 percent of the forb understory is lupine species. Trace amount of cheatgrass was found at this site. The seral stage of WS-13 is late seral stage.

Key area WS-15 (Buck and Bald) occurs on a Shallow Calcareous Loam 8-10" ecological site (028BY011NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 50 percent grasses, 5 percent forbs, and 45 percent shrubs. Existing vegetative composition at WS-15 studied through ecological condition in 1999 resulted in composition of 13 percent grasses, 4 percent forbs, 82 percent shrubs. Key area WS-15 has a current production of 451 pounds per acre (dry weight). The approximate production for this Shallow Calcareous Loam 8-10" site is 250 pounds per acre (dry weight) in an unfavorable year, 450 pounds per acre (dry weight) on a normal year, and 600 pounds per acre (dry weight) in a favorable year, according to the ESD. The results and photo documentation show low grass component and high shrub component than expected for the site. The data reported 1 percent composition of cheatgrass. The data shows WS-15 to be late seral stage.

Key area WS-16 (Buck and Bald) occurs on a Shallow Loam 8-10" ecological site (028BY080NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 55 percent grasses, 10 percent forbs, 35 percent shrubs. Existing vegetative composition at WS-16 studied through ecological condition in 1999 resulted in 21 percent grasses, 1 percent forbs, and 78 percent shrubs. The results show that the shrub component is greater than expected for the site and the understory, grasses and forbs are lower than expected for the site. Photo documentation (Figure 8) supports the conclusion. According to the data the seral stage of WS-16 is late seral stage.

Figure 8. Ecological condition transect at WS-16, on the Warm Springs Allotment, White Pine County, Nevada, 1999.

Key area WS-17 (Buck and Bald) occurs on a Shallow Calcareous Loam 8-10" ecological site (028BY011NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 50 percent grasses, 5 percent forbs, and 45 percent shrubs. Existing vegetative composition at WS-17 studied through ecological condition in 1998 resulted in 7 percent grasses, 3 percent forbs, and 90 percent shrubs. Cheatgrass is present in trace amounts at WS-17. The data and photo documentation for WS-17 show higher shrub component than expected for the site and low understory component. Key area WS-17 has a current production of 569 pounds per acre (dry weight). The approximate production for this Shallow Calcareous Loam 8-10" site is 350 pounds per acre (dry weight) in an unfavorable year, 500 pounds per acre (dry weight) on a normal year, and 700 pounds per acre (dry weight) in a favorable year, according to the ESD. The seral stage at WS-17 is mid seral.

Key area WS-20 (Buck and Bald) occurs on a Claypan 12-14" ecological site (028BY037NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 50 percent grasses, 10 percent forbs, and 40 percent shrubs. Existing vegetative composition at WS-20, studied through ecological condition in 1999 resulted in 28 percent grasses, 12 percent forbs, and 60

percent shrubs. The grasses are lower than expected for the site however the forbs are higher as well as the shrub component. Photo documentation at WS-20 shows abundant perennial grasses. Key area WS-20 has a current production of 446 pounds per acre (dry weight). The approximate production for this Claypan 12-14" site is 400 pounds per acre (dry weight) in an unfavorable year, and 500 pounds per acre (dry weight) in a normal year, and 600 pounds per acre (dry weight) in a favorable year, according to the ESD. The seral stage at WS-20 is late seral.

Key area WS-21 (Buck and Bald) occurs on a Loamy 10-12" ecological site (028BY007NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 65 percent grasses, 10 percent forbs, and 25 percent shrubs. Existing vegetative composition at WS-21, studied through ecological condition in 1999 resulted in 41 percent grasses, 10 percent forbs, and 50 percent shrubs. The data shows lower grass component and higher shrub component than expected for the site, the forb component is as expected for the site. Key area WS-21 has a current production of 540 pounds per acre (dry weight). The approximate production for this Loamy 10-12"site is 600 pounds per acre (dry weight) in an unfavorable year, 800 pounds per acre (dry weight) on a normal year, and 1,000 pounds per acre (dry weight) in a favorable year, according to the ESD. The seral stage at WS-21 is late seral.

Key area WS-22 (Buck and Bald) occurs on a Gravelly Loam 12-14" ecological site (028BY046NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 40 percent grasses, 10 percent forbs, and 50 percent shrubs. Existing vegetative composition at WS-22, studied through ecological condition in 1999 resulted in 7 percent grasses, 1 percent forbs, and 87 percent shrubs. Key area WS-22 has a current production of 1082 pounds per acre (dry weight). The approximate production for this Claypan 12-14" site is 700 pounds per acre (dry weight) in an unfavorable year, and 900 pounds per acre (dry weight) in a normal year, and 1200 pounds per acre (dry weight) in a favorable year, according to the ESD. The data, as well as photo documentation, indicate low grass/forb component and high shrub component. The seral stage at WS-22 is late seral.

Key area WS-23 (Long Valley) occurs on a Silty Clay 8-10" ecological site (028BY071NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 45 percent grasses, 5 percent forbs, and 55 percent shrubs. Existing vegetation composition at WS-23, studied through ecological condition in 1999, resulted in 39 percent grasses, 0 percent forbs, and 61 percent shrubs. Key area WS-23 has a current production of 582 pounds per acre (dry weight). The approximate production for this Claypan 12-14" site is 200 pounds per acre (dry weight) in an unfavorable year, 400 pounds per acre (dry weight) in a normal year, and 600 pounds per acre (dry weight) in a favorable year, according to the ESD. The data and photo documentation as shown below (figure #) indicate low understory component and high shrub component. The seral stage at WS-23 is later seral.

Key area WS-24 (Ruby Valley) occurs on a Shallow Calcareous Loam 8-10" ecological site (028BY011NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 50 percent grasses, 5 percent forbs, and 45 percent shrubs. Existing vegetation composition at WS-24, studied through ecological condition in 1999, resulted in 24 percent grasses, 16 percent forbs, and 58 percent shrubs. Key area WS-24 has a current production of 183 pounds per acre (dry weight). The approximate production for this Shallow Calcareous Loam site is 250 pounds per acre (dry weight) in an unfavorable year, 450 pounds per acre (dry weight) in a normal year, and 600 pounds per acre (dry

weight) in a favorable year, according to the ESD. The data and photo documentation indicate low grass component and high shrub and forb component at WS-24. The seral stage at WS-24 is late seral.

Key area WS-26 (Newark Valley) occurs on a Sodic Flat 5-8" ecological site (028BY020NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 15 percent grasses, 5 percent forbs, and 80 percent shrubs. Existing vegetation composition at WS-26, studied through ecological condition in 1999, resulted in 1 percent grasses, 0 percent forbs, and 99 percent shrubs. Key area WS-26 has a current production of 667 pounds per acre (dry weight). The approximate production for this Sodic Flat 5-8" site is 200 pounds per acre (dry weight) in an unfavorable year, 350 pounds per acre (dry weight) in a normal year, and 500 pounds per acre (dry weight) in a favorable year, according to the ESD. The seral stage of WS-26 is late seral stage.

In summary, monitoring data indicates that herbaceous understory is reduced within the Warm Springs Allotment. Overall production is within the appropriate amount for the Allotment. Taken collectively, these indicators suggest that the Warm Springs allotment is not meeting the Standard for habitat.

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). 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". The Plan estimated approximately 708,000 acres of sagebrush habitat in this category throughout the PMU, which includes the Warm Springs allotment. Based on the cover data collected for the Warm Springs allotment, some of the sagebrush habitat communities at the key areas measured within the allotment fall under this category.

Key areas are sited in areas representative of livestock grazing on the major vegetation types throughout an allotment. Some of the key areas within the Warm Springs allotment are as shown in the table:

Table 1. Key Areas showing Ecological Site description and percent grass and forbs in total percent cover.

Key Area	Ecological Site Description	Percent grasses and forbs combined
WS-11	low sagebrush/black sagebrush/bluebunch wheatgrass	7.4%
WS-12	mountain big sagebrush/bluebunch wheatgrass	11%
WS-13	big sagebrush/bluebunch wheatgrass/Thurber's needlegrass	12%
WS-15	black sagebrush/Indian sagebrush/needleandthread	5%
WS-16	Wyoming big sagebrush/Indian ricegrass/needleandthread	6%
WS-17	black sagebrush/Indian ricegrass/needleandthread	3%
WS-21	big sagebrush/Thurber's needlegrass/bluebunch wheatgrass	29%
WS-24	black sagebrush/Indian ricegrass/needleandthread	2%

The indicated ecological sites are current or potential sage-grouse habitat. Under the sage-grouse guidelines, the herbaceous grass and forb component 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). As can be seen in the table all of these sites are not meeting the herbaceous understory requirements set forth within the sage-grouse guidelines except one, all grasses and forbs combined comprised 29% cover at WS-21. The other key areas had cover below 15%. All of the key areas except WS-21 had sagebrush at the required levels.

There are seventeen known leks within or near the Warm Springs allotment according to the NDOW data used by BLM. Fourteen are classified as active, one as historic and two as unknown. Warm Springs allotment contains nesting, summer brood rearing and winter habitat. Sage grouse often nest in suitable habitat within three miles of a lek site. The allotment has some of the Butte/Buck/White Pine Valley Population Management Unit (PMU).

Site specific evaluation of sage-grouse habitat guidelines should be tempered with consideration of site potentials described in the ESD. Site potentials as described in the ESD for seven of the eight key areas are more than adequate to meet the sage-grouse habitat standards. Because the Warm Springs allotment is not meeting the desired vegetative composition for Standard 3 or the guidelines for sage-grouse habitat, the allotment fails to meet the needs of the key "umbrella" species for sagebrush habitats identified in the Ely District Resource Management Plan (2008).

C. DRY MOUNTIAN ALLOTMENT:

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

Causal Factors:
□ Livestock are a contributing factor to not achieving the standard
X **Livestock are not a contributing factor to not achieving the standard**
X **Failure to meet the standard is related to other issues or conditions**

Guidelines Conformance:
X **In conformance with the Guidelines**
□ Not in conformance with the Guidelines

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

Dry Mountain Allotment is one grazing pasture containing winterfat, Wyoming big sagebrush, and other plant communities. The results of monitoring studies (Table 3.4-2, Appendix I) line intercept cover data, for the Dry Mountain Allotment performed in 2006 show that overall the Standard 3 on the Dry Mountain Allotment is not achieved. The shrub component is high and the understory is lacking on the Allotment.

Key area DM-5 occurs on a Silty 8-10" ecological site (028BY013NV). Dominant species of the ecological site are winterfat and Indian ricegrass . Line intercept cover data collected in 2006 (Table 3.4-2, Appendix I) shows that key area DM-5 has 18 percent total cover consisting of 0 percent grasses, 0 percent forbs, and 99 percent shrubs. Based on photo documentation, professional knowledge and line intercept cover data; DM-5 does not have the appropriate species composition for the site. The Line intercept cover data sheet (2006) notes Indian rice grass in the area.

Key area DM-1 occurs on a Loamy Plain 8-10" P.Z. ecological site (028BY014NV). Dominant species of the ecological site are Wyoming big sagebrush, Indian Rice grass, and western wheatgrass. Line intercept cover data collected in 2006 (Table 3.4-2, Appendix I) shows that key area DM-1 has 14 percent total cover with composition of 4 percent grasses, 0 percent forbs, and 96 percent shrubs. According to the data and photo documentation DM-1 has low understory component and high shrub component.

Key area DM-4 occurs on a Coarse Silty 6-8"P.Z. ecological site (028BY084NV). Line intercept cover data collected in 2006 (Table 3.4-2, Appendix I) shows that key area DM-4 has 13 percent total cover with 16 percent grasses, 0 percent forbs, and 84 percent shrubs. According to the line intercept data sheet the grass component is Sandberg's bluegrass (*Poa secunda*). The understory component and shrub composition is not appropriate to the potential of the site based on line intercept cover data and photo documentation (Figure 9).

Figure 9. Key area DM-4 on the Dry Mountain Allotment, White Pine County, Nevada, 2006.

Key area DM-2 occurs on a Coarse Silty 6-8" P.Z. ecological site (028BY084NV). Line intercept cover data collected in 2006 (Table 3.4-2, Appendix I) shows that key area DM-2 has a total cover of 12 percent. The composition, by line intercept cover, of DM-2 is 0 percent grasses, 24 percent forbs, and 76 percent shrubs. The forb component is halogeton. Photo documentation and line intercept cover data show that the composition of DM-2 is not appropriate to the potential of the site.

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). 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". The Plan estimated approximately 708,000 acres of sagebrush habitat in this category throughout the PMU, which includes the Dry Mountain allotment. Based on the cover data collected for the Dry Mountain allotment, some of the sagebrush habitat communities at the key areas measured within the allotment fall under this category.

Key areas are sited in areas representative of livestock grazing on the major vegetation types throughout an allotment. One of the key areas within the Dry Mountain allotment is Wyoming big sagebrush/Indian ricegrass/western wheatgrass. As such, it is current or potential sage-grouse habitat. Under the sage-grouse guidelines, the herbaceous grass and forb component 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). This site is not meeting the herbaceous understory requirements set forth within

the sage-grouse guidelines, as all grasses and forbs combined comprised only 1% cover at DM-1. The site is also not meeting the requirement for sagebrush at 13%.

There are three known leks within or near the Dry Mountain allotment according to the NDOW data used by BLM. Two are classified as active and one as unknown. Dry Mountain allotment contains nesting and summer brood rearing habitat. Sage grouse often nest in suitable habitat within three miles of a lek site. The allotment has some of the Butte/Buck/White Pine Valley Population Management Unit (PMU).

Site specific evaluation of sage-grouse habitat guidelines should be tempered with consideration of site potentials described in the ESD. Site potentials as described in the ESD for the key area are more than adequate to meet the sage-grouse habitat standards. Because the Dry Mountain allotment is not meeting the desired vegetative composition for Standard 3 or the guidelines for sage-grouse habitat, the allotment fails to meet the needs of the key "umbrella" species for sagebrush habitats identified in the Ely District Resource Management Plan (2008).

D. WARM SPRINGS TRAIL ALLOTMENT:

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

Causal Factors:
□ Livestock are a contributing factor to not achieving the standard
X **Livestock are not a contributing factor to not achieving the standard**
X **Failure to meet the standard is related to other issues or conditions**

Guidelines Conformance:
X **In conformance with the Guidelines**
□ Not in conformance with the Guidelines

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

Two key areas with ecological condition data within the Warm Springs Trail are evaluated for the habitat standard (Table 4.5-1, Appendix I).

Key area WS-26 (Newark Valley) occurs on a Sodic Flat 5-8" ecological site (028BY020NV). According to the ESD the potential vegetative composition expected at HCPC for this site is about 15 percent grasses, 5 percent forbs, and 80 percent shrubs. Existing vegetation composition at WS-26, studied through ecological condition in 1999, resulted in 1 percent grasses, 0 percent forbs, and 99 percent shrubs. Key area WS-26 has a current production of 667 pounds per acre (dry weight). The approximate production for this Sodic Flat 5-8" site is 200 pounds per acre (dry weight) in an unfavorable year, 350 pounds per acre (dry weight) in a normal year, and 500 pounds per acre (dry

weight) in a favorable year, according to the ESD. This site has exceeded amount of production. The similarity index is 81 percent at WS-26.The seral stage of WS-26 is late seral.

N-6 occurs on ESD Shallow Calcareous Loam 8-10" ecological site (028BY011NV). The dominant species for this site are black sagebrush and Indian ricegrass. According to the ESD the potential vegetative composition expected at HCPC for this site is about 50 percent grasses, 5 percent forbs, and 45 percent shrubs. Existing vegetation composition at N-6 studied through ecological condition in 2008 resulted in 2 percent grasses, trace amounts of forbs, and 98 percent shrubs. Production at N-6, collected in 2008 is 280 pounds per acre (dry weight). According to the ecological site description (ESD) total annual air-dry production in an unfavorable year is 250 pounds per acre. The similarity index at this site is 40 percent, mid-seral phase.

Percent vegetation composition by weight shows that shrubs are higher than what is expected while grasses are lower when compared to the HCPC in the ESD on the Warm Springs Trail. However dominate species on the ground are the same as the dominate species in the ecological site description.

Part 2. Are Livestock a Contributing Factor of not Meeting the Standards?

Summary Review:

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

Cold Creek Allotment

Standard #1: Upland Sites
The Standard is being achieved.

Standard #2: Riparian and Wetlands
The Standard is not being achieved. Cattle have been identified as a contributing factor. Domestic Sheep are not a contributing factor. PFC assessments on the Cold Creek Allotment identified a combination of factors as contributing to unacceptable conditions. Some factors for not meeting Standard #2 on Cold Creek Allotment include excessive grazing (wild horses, cattle, wildlife), variable precipitation (Table 1.5-1, Appendix I), upland species encroachment.

Standard #3: Habitat
Standard # 3 Habitat is not achieved on Cold Creek Allotment. Livestock are **not the** contributing factor toward not achieving the Standard. Utilization studies performed on the Cold Creek Allotment were done by key forage plant methods in 1997 and 2007. Data collected on Cold Creek Allotment (Table 1.3-1, Appendix I) show that utilization levels did not exceed the moderate levels (41-60 percent) for any site studied. Over the grazing seasons from 1999 to 2008, livestock permitted use on the Cold Creek Allotment for Paris Livestock was 242 AUMs in a sheep only operation. During this same time period, livestock actual use for Paris Livestock (Table 1.2-2, Appendix 1) ranged from a high of 293 AUMs in 2005 to a low of 87 AUMs in 2003. Livestock use has varied dependent on available forage due to growing conditions. Tumbling JR Ranch actual use is identified in Table 1.2-1, Appendix I. Table 1.3-2,

Appendix I compares the level of utilization measured to the licensed use for the same year. Failure to meet the standard is related to other issues or conditions.

Warm Springs Allotment

Standard #1: Upland Sites
The Standard is being achieved.

Standard #2: Riparian and Wetlands
The Standard is not being achieved. Livestock are not a significant contributing factor to not meeting the standard. Summary of PFC data, Re-evaluation for Warm Springs Allotment (2000) did not identify livestock as a contributing factor to unacceptable conditions. Furthermore, since 1999 annual meetings have been held to discuss and develop livestock management practices, grazing schedules, and an annual grazing plan. Flexibility in stocking levels, periods of use, and trail routes have been granted. Allowing flexibility has established a long-term stable grazing operation and grazing rotation system. The stocking levels, periods of use, and trail routes have been based upon pasture carrying capacity, forage availability and condition, current growing conditions, and planned rest periods. Unnamed spring, known to have Newark Valley Tui Chub, located at Township 22 N, Range 56E, section 28 is recommended to have the source fenced to protect the riparian area from heavy grazing and trampling. While livestock use the spring, wild horses also graze the riparian area.

Standard #3: Habitat
The Standard is not being achieved. Livestock are not a contributing factor. Key forage plant utilization methods (Table 2.3-1, Table3.3-2, Table 2.3-4, Appendix I) were conducted on twenty two of twenty nine key areas between the years 1997 and 2007. The results (Table #, Appendix I) show that seven key areas have no detectable use when studied in the years 1997 to 2000. The results also show that in particular years six key areas did not exceed the slight level (1-20 percent) of utilization, nineteen key areas did not exceed the light level (21-40 percent) of use and fourteen key areas were in the moderate level (41-60 percent) of use. The key plant forage utilization method performed in 2001 and 2003 at certain key areas found one key area (WS-5) to have heavy use (61-80 percent). Table 2.3-3, Appendix I compares the level of utilization measured to the licensed use for the same year. Overall utilization levels on the Warm Springs Allotment have been at acceptable levels except one year at WS-5. Further support is shown by utilization and use pattern mapping conducted within the Long Valley use area in 2007. The northern portion of the Long Valley grazing unit in the Warm Springs Allotment was mapped for utilization patterns (Map XIV, Appendix II). The majority of use was slight (1-20%) to light (21-40%). There are areas of heavy (61%) utilization, these are near water sources. The utilization on the majority of winterfat communities was slight (1-20%). Table 2.2-1, Appendix I shows the licensed use for Tumbling JR Ranch.

Dry Mountain Allotment

Standard #1: Upland Sites
The Standard is being achieved.

Standard #2: Riparian and Wetlands
Not Applicable

Standard #3: Habitat
The Standard is not being achieved. Livestock are not a contributing factor. Utilization measured in 2002, 2003, and 2006, (Table 3.3-1, Table 3.3-2, Table 3.3-3, Appendix I) show that no utilization level exceeded the moderate level (41-60 percent). Utilization measurements and use pattern mapping conducted within the Long Valley/Dry Mountain use area in 2007 show predominantly slight to light use (Map XIV, Appendix II). Heavy use was measured near a water source, Maple Syrup Well. Table 3.2-1, Appendix I shows licensed use for Tumbling JR Ranch.

Warm Springs Trail

Standard #1: Upland Sites
The Standard is being achieved.

Standard #2: Riparian and Wetlands
Not Applicable

Standard #3: Habitat
The Standard is not being achieved. Livestock are not the contributing factor to not achieving the Standard. Failure to meet the standard is related to other issues or conditions. Table 4.3-1, Appendix I shows the results of utilization measurements on the Warm Springs Trail. The utilization levels did not exceed the moderate level (41-60 percent) for any site studied. Furthermore actual use on the trail was lower than permitted use for Paris Livestock (Table 4.2-1, Appendix I). Tumbling JR Ranch has not licensed use on the trail for the review period (1998-2008).

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 (1997).

Part 4. Management Practices to Conform With Guidelines

TUMBLING JR RANCH

Discussion:
A Livestock Grazing Management Agreement was established in 2005, between Silver State Ranches (now Tumbling JR Ranch) and the Ely District Bureau of Land Management. On March 17, 2006 the agreement was amended to extend the term of the agreement to 05/19/2014. The agreement was amended again in April 2009 as a result of completing the SDD to include a grazing system for the Cold Creek Allotment. Based on review of the monitoring data collected since 1997 and professional observation, livestock number and kind, season-of-use and active use will continue as identified in the agreement for the Warm Springs and Dry Mountain Allotments. Active use for the Warm Springs Allotment will continue to be 7,744 AUMs and the active use for the Dry Mountain Allotment will continue to be 1,149 AUMs. Livestock use will be authorized by use area and will be in accordance with the period of use and active use for each of the eight use areas. Permitted use for the Cold Creek Allotment will continue at 5,561 AUMs cattle use, for the period of 04/16 to 10/31. The pasture rotation

system identified in the January 23, 1992 FMUD will be amended as a result of the SDD, (March 2009) and the March 2009 Livestock Grazing management Agreement. The Cold Creek Allotment will be divided into three units; the North Unit, South Unit and the Diamond Unit. The three units include a total of 18 pastures. Active use for the Warm Springs Trail Allotment will continue at 938 AUMs with a season of use from 03/01 to 03/31, and 927 AUMs with a season of use from 11/01 to 11/30. Sheep are the kind of livestock. Refer to the Livestock Grazing Management Agreement for the Tumbling JR Ranch (Appendix IV) for a detailed description of the grazing systems and terms and conditions to achieve management and resource condition objectives.

Recommendations:
Grazing use authorized by allotment for Tumbling JR Ranch (#2702966) is as follows:

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Cold Creek (00603)	850 Cattle	4/16 - 10/31	100	Active	5561
Dry Mountain (00609)	191 Cattle 500 Sheep	10/01 - 04/01 10/01 - 04/01	100 100	Active Active	1149 602
Warm Springs (00606)	642 Cattle	03/01 - 2/28	100	Active	7704
Warm Springs Trail (00622)	4600 Sheep 4700 Sheep	03/01 - 03/31 11/01 - 11/30	100 100	Active Active	938 927

*% Public Land is the percent of public land for billing purposes.
**AUMs may differ from Active Use due to a rounding difference with the number of livestock and the period of use.

Allotment Summary (AUMs)

Allotment	Active AUMs	Suspended AUMs	Permitted Use
Cold Creek (00603)	5561	4035	9596
Warm Springs (00606)	7709	16251	23960
Dry Mountain (00609)	1149	1675	2824
Warm Springs Trail (00622)	1865	0	1865

Riparian Recommendations:

Abal Springs

Abal Springs is located in the Huntington #4 pasture within the Cold Creek Allotment. Huntington # 4 pasture is in the South Unit of the Cold Creek Allotment.

A deferred rest rotation grazing system will be established for the North and South Units. Grazing use will begin in the North Unit on even years. Grazing Use will begin in the South Unit on odd years. When the North Unit is grazed during the spring, grazing will begin on or later than April 16. Cattle will be moved to the South Unit when utilization levels are met and cattle will be removed before or on October 31. Grazing in the South Unit will begin on or later than April 16. Cattle will be moved to the North Unit when utilization levels are met and cattle will be removed on or before October 31.

Movement dates between the North and South Units will be based on annual forage condition and availability and riparian habitat condition. Movement dates in and out of pastures will be based on forage availability,condition and upland and riparian utilization levels. Movement dates may vary each year based on these conditions. Utilization levels will be established at 60% for the crested wheatgrass seedings and at 50% for the native pastures and riparian vegetation.

Corta Springs
Corta spring is located in the pasture Diamond #3. The Diamond Unit contains four pastures. Diamond Pasture #1, #2, #3, will be grazed for 30 days either in fall or spring and alternating from year to year. Diamond #4 will be used every other year. This grazing system will be utilized with flexibility and deviations in livestock numbers, areas of use and period of use. Annual grazing use will not exceed the total 5561 AUMs for Cold Creek Allotment unless authorized. Seasonal basis deviations will be based upon pasture carrying capacity, forage availability and condition, current growing conditions, riparian habitat and vegetation condition, planned rest periods, and any changes as a result of the previous year's monitoring and achievement of the standards. Utilization levels will be established at 60% for the crested wheatgrass seedings and at 50% for the native pastures and riparian vegetation.

Unnamed spring
Unnamed Spring, known to have the BLM sensitive species, Newark Valley Tui Chub, located at Township 22 N, Range 56E, section 28 (within the Warm Springs Allotment) is recommended to have the source **fenced to protect the riparian area** from heavy grazing and trampling. While livestock use the spring, wild horses also graze the riparian area.

PARIS LIVESTOCK

Grazing use authorized for Paris Livestock will continue as follows:

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Cold Creek 00603	1182 Sheep 1200 Sheep	04/15 to 04/30 11/01 to 11/15	100 100	Active Active	124 118
Warm Springs Trail 00622	2750 Sheep 2754 Sheep	4/15 to 05/01 11/15 to 12/01	100 100	Active Active	307 308

*% 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
Cold Creek	242	0	242
Warm Springs Trail	615	0	615

Terms and Conditions for Cold Creek Allotment (00603):

1. 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, winterfat bottoms, sensitive sites, populations of special status species, and cultural resource sites.
2. The pasture rotation system identified in the Final Multiple Use Decision dated January 23, 1992 will be amended as a result of the SDD, (March 2009).
3. On the Cold Creek Allotment, sheep preference will remain at 242 AUMs tied to the Diamond #3 and Diamond #4 Pastures. Flexibility in sheep numbers will be allowed up to a maximum of 6,600 head, not to exceed the maximum active AUMS. Flexibility in period of use will be allowed from 3/1 to 11/31.
4. Maximum allowable use levels will be established as follows:
    a. Perennial native grasses: 50% current year's growth
    b. Perennial shrubs and half-shrubs: 50% use on current annual production.
    c. Perennial non-native seedings: 65% current year's growth
    d. 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.

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Appendix I
Data Summary
Cold Creek Allotment, Warm Springs Allotment, Dry Mountain Allotment, Warm Springs Trail

1. Key Area 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.

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

2. 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). Utilization data collected reflects use by all herbivores.

3. Line Intercept Cover Studies
Canopy cover is the percent of ground covered by a vertical projection of the outermost perimeter of the natural spread of foliage, including small openings (Swanson 2006). The Line Intercept Method is a commonly used method of determining the relative percent live foliar or canopy cover of a range site by plant class (tree, shrub, grass, forb, or annual). The method also estimates the percent live foliar cover by plant species. The results are then compared to the approximate 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

4. 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.

5. Proper Functioning Condition
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.

1.0 Monitoring Data for the Cold Creek Allotment

Table. 1.1 Key Areas (Map IV, Appendix II) and Ecological Sites on the Cold Creek Allotment

Pasture/Key Area	Location (UTMs)	Ecological Site	Dominate Species of HCPC
Diamond #3 (Native Range)	11S N4419085 E0604793	Loamy 10-12" (028BY007NV)	big sagebrush, Thurber's needlegrass, bluebunch wheatgrass
Diamond #4 (Native Range)	11S N4418570 E0606298	Loamy 10-12" (028BY007NV)	big sagebrush, Thurber's needlegrass, bluebunch wheatgrass
Newark #1 (Crested wheatgrass seeding)	11S N4413155 E611000	Loamy 8-10" P.Z. (028BY010NV)	Wyoming big sagebrush, Indian ricegrass, needleandthread
Huntington #1 (Native Range)	11S N4433924 E0608614	Silt Flat (028BY056NV)	Wyoming big sagebrush, bottlebrush squirreltail, Sandberg's bluegrass
Huntington #3 (Native Range)	11S N4414668 E608101	Loamy 8-10" P.Z. (028BY010NV)	Wyoming big sagebrush, Indian rice grass, needleandthread

Pasture/Key Area	Location (UTMs)	Ecological Site	Dominate Species of HCPC
Huntington #4 (Native Range)	11S N4418478 E0606552	Loamy 8-10" (25XY019NV)	Wyoming big sagebrush, Thurber's needlegrass, bluebunch wheatgrass---
Griswold NW (Crested wheatgrass seeding)	11S N4425008 E0606974	Loamy 8-10" (028BY010NV)	Wyoming big sagebrush, Indian ricegrass, and needleandthread

1.2 Licensed Livestock Use

Tumbling JR Ranch

Table 1.2-1. Tumbling JR Ranch licensed use in Cold Creek Allotment by pasture, 1999-2007**.**

Grazing Year	1999	2000	2001	2002	2003	2004	2005	2006	2007
Cold Creek Allotment by pasture									
Total AUMs	**3577**	**4149**	**2488**	**3092**	**1144**	**1117**	**2005**	**2572**	**1983**
SEEDING		592						31	
DIAMOND #1	151								
DIAMOND #2		232							
GRISWOLD NE		349		705					
GRISWOLD NW	286		627						
GRISWOLD SE	312	272							
GRISWOLD SW	260	369				473			
HUNTINGTON #1	281				250				
HUNTINGTON #2						166			
HUNTINGTON #3	309	408		245	237	274			
HUNTINGTON #4	378	395	698	775					
NEWARK #1	418	326	252	261					
NEWARK #2		158	194	217					
STRAWBERRY NE	211								
STRAWBERRY NW	406	458	606	726					
STRAWBERRY SE	424								
STRAWBERRY SW		371			570		2005	2541	1983
COLD CREEK	141	219	111	163	87	204			

Paris Livestock

Over the grazing seasons from 1999 to 2008, livestock permitted use on the Cold Creek Allotment for Paris Livestock was 242 AUMs in a sheep only operation. During this same time period, livestock actual use ranged from a high of 293 AUMs in 2005 to a low of 87 AUMs in 2003. Livestock use has varied dependent on available forage due to growing conditions. Table X summarizes the licensed actual use data for this time period.

Table 1.2-2. Cold Creek Allotment Actual Use by Paris Livestock from 1999-2008**.**

Grazing Year	Actual Use (AUMs)	% Actual Use of Permitted Use (AUMs)	Grazing Year	Actual Use (AUMs)	% Actual Use of Permitted Use (AUMs)
1999	254	105%	2004	204	84%
2000	219	90%	2005	293	121%
2001	111	46%	2006	262	108%
2002	163	67%	2007	249	103%
2003	87	36%	2008	214	88%

1.3 Utilization

Table 1.3-1. Utilization studies were performed on the Cold Creek Allotment using the Key Forage Plant Method in summer of 2007 and summer of 1997.

Cold Creek		
Utilization		
Date	Pasture/Study Site	Key Area/UTMs
7/30/2007	**Diamond #3**	11S N4419085 E0604793
Key Species	Percent Use	Category
Sandbergs bluegrass	6%	slight
basin wildrye	9%	slight
Date	Pasture/Study Site	Key Area/UTMs
8/3/2007	**Diamond #4**	11S N4418570 E0606298
Key Species	Percent Use	Category
Indian ricegrass	9%	slight
basin wildrye	12%	slight
Date	Pasture/Study Site	Key Area/UTMs
7/24/2007	**Newark #1**	11S N4413155 E611000
Key Species	Percent Use	Category
crested wheatgrass	37%	light
Date	Pasture/Study Site	Key Area/UTMs
7/24/2007	**Huntington #3**	11S N4414668 E608101

Table 1.3-1. Utilization studies were performed on the Cold Creek Allotment using the Key Forage Plant Method in summer of 2007 and summer of 1997.

Key Species	Percent Use	Category
Indian ricegrass	50%	moderate

Date	Pasture/Study Site	Key Area/UTMs
7/27/2007	**Huntington #4**	11S N4418478 E0606552
Key Species	Percent Use	Category
crested wheatgrass	17%	slight
Sandbergs bluegrass	8%	slight

Date	Pasture/Study Site	Key Area/UTMs
7/30/2007	**Griswold NW**	11S N4425008 E0606974
Key Species	Percent Use	Category
crested wheatgrass	13%	slight
Sandbergs bluegrass	4%	slight

Date	Pasture/Study Site	Key Area/UTMs
10/25/1997	**Huntington #1**	11S N4433924 E0608614
Key Species	Percent Use	Category
bottlebrush squirreltail	10%	slight

Date	Pasture/Study Site	Key Area/UTMs
10/15/1997	**Griswold NE**	11S N4421452 E0606502
Key Species	Percent Use	Category
crested wheatgrass	38%	moderate

Date	Pasture/Study Site	Key Area/UTMs
8/6/1997	**Griswold SW**	11S N4421834 E608434
Key Species	Percent Use	Category
crested wheatgrass	52%	moderate

Date	Pasture/Study Site	Key Area/UTMs
10/15/1997	**Griswold SE**	11S N4421443 E609516
Key Species	Percent Use	Category
crested wheatgrass	46%	moderate

Date	Pasture/Study Site	Key Area/UTMs
10/25/1997	**Strawberry NE**	11S N4438345 E0610725
Key Species	Percent Use	Category
crested wheatgrass	48%	moderate

Date	Pasture/Study Site	Key Area/UTMs
8/19/1997	**Strawberry SE**	11S N4435367 E0611440
Key Species	Percent Use	Category

Table 1.3-1. Utilization studies were performed on the Cold Creek Allotment using the Key Forage Plant Method in summer of 2007 and summer of 1997.

crested wheatgrass	48%	moderate

Date	Pasture/Study Site	Key Area/UTMs
10/25/1997	**Strawberry SW**	11S N4434558 E0607707
Key Species	Percent Use	Category
crested wheatgrass	10%	slight

Table 1.3-2. Utilization Levels and associated licensed use (Tumbling JR Ranch) in 1997 and 2000 at Key areas within the Cold Creek Allotment.

Year of Key Area Reading		1997	2007
Use Area	Key Area		
Diamond	#3		Slight
	#4		Slight
	* Total AUMs Licensed on Allotment Each Year		**0**
Newark	#1		Light
	* Total AUMs Licensed on Allotment Each Year		**0**
Huntington	#3		Moderate
	#1		Slight
	#4		Slight
	* Total AUMs Licensed on Allotment Each Year		**0**
Griswold	NW		Slight
	NE	Moderate	
	SW	Moderate	
	SE	Moderate	
	* Total AUMs Licensed on Allotment Each Year	**847**	**0**
Strawberry	NE	Moderate	
	SE	Moderate	
	SW	Slight	
	* Total AUMs Licensed on Allotment Each Year	**985**	**0**

* From grazing billings.

1.4 Line Intercept Cover

Table 1.4-1. Vegetative cover measured at various key areas and study sites on the Cold Creek Allotment during summer 2007, and Potential Natural Community (PNC).

Cold Creek				
Date		Pasture		Study Site/UTMs
7/30/2007		Diamond #3		11S N4419085 E0604793
		Range Site		
Loamy 10-12” 028BY007NV ARTR2/ACTH7-PSSP				
Vegetation	Litter	Cover (%)	Composition (%)	Potential Natural Condition
wyoming sagebrush		15%	31%	
antelope bitterbrush		18%	37%	
sandbergs bluegrass		12%	25%	
other veg		3%	6%	
Total	57%	48%		20% to 30%

Date		Pasture		Study Site/UTMS
8/3/2007		Diamond #4		11S N4418570 E0606298
		Range Site		
Loamy 10-12” 028BY007NV ARTR2/ACTH7-PSSP				
Vegetation	Litter	Cover (%)	Composition (%)	Potential Natural Condition
Sandbergs bluegrass		6%	18%	
wyoming sagebrush		13%	39%	
Indian ricegrass		0.3%	0.9%	
crested wheatgrass		14%	42%	
TOTAL	24%	33%		20% to 30%

Date		Pasture		Study Site/UTMs
7/24/2007		Newark #1		11S N4413155 E611000
		Range Site		
Loamy 8-10” 028BY010NV ARTRW/ACHY-HECO26 (Crested Wheatgrass Seeding)				
Vegetation	Litter	Cover (%)	Composition (%)	Potential Natural Condition
wyoming sagebrush		9%	64%	
crested wheatgrass		5%	35%	
Total	5%	14%		10% to 20%

Table 1.4-1. Vegetative cover measured at various key areas and study sites on the Cold Creek Allotment during summer 2007, and Potential Natural Community (PNC).

Date	Pasture	Key Area/UTMs
8/24/2007	Huntington #1	11S N4433924 E0608614
Range Site		
Silt Flat 028BY056NV ARTRW/ELEL5-POSE		

Vegetation	Litter	Cover (%)	Composition (%)	Potential Natural Condition
Sandbergs bluegrass		8%	36%	
needlegrass		0.6%	2.7%	
rabbitbrush		0%	0%	
sagebrush spp.		13%	59%	
other vegetation		0%		
TOTAL	5%	22%		5% to 10%

Date	Pasture	Key Area/UTMs
7/24/2007	Huntington #3	11S N4414668 E608101
Range Site		
Loamy 8-10” 028BY010NV ARTRW/ACHY-HECO26		

Vegetation	Litter	Cover (%)	Composition (%)	Potential Natural Condition
wyoming sagebrush		10%	83%	
Indian ricegrass		0.75%	6.25%	
rabbitbrush spp.		1.05%	4.7%	
other vegetation		0.74%	3.0%	
TOTAL	22%	12.54%		10% to 20%

Date	Pasture	Key Area/UTMs
7/27/2007	Huntington #4	11S N4418478 E0606552
Range Site		
Loamy 8-10” 25XY019NV ARTRW/ACTH7-PSSP		

Vegetation	Litter	Cover (%)	Composition (%)	Potential Natural Condition
wyoming sagebrush		8%	28%	
Sandbergs bluegrass		3%	10%	
crested wheatgrass		17%	60%	
Total	4%	28%		20% to 30%

Date	Pasture	Key Area/UTMs

Table 1.4-1. Vegetative cover measured at various key areas and study sites on the Cold Creek Allotment during summer 2007, and Potential Natural Community (PNC).

7/30/2007	Griswold NW	11S N4425008 E0606974
Range Site		
Loamy 8-10" 028BY010NV ARTRW/ACHY-HECO26 (Crested wheatgrass Seeding)		

Vegetation	Litter	Cover (%)	Composition (%)	Potential Natural Condition
wyoming sagebrush		8%	69%	
Sandbergs bluegrass		1%	8.6%	
rabbitbrush spp.		2%	17%	
Indian ricegrass		0.37%	3%	
crested wheatgrass		0.20%	1.7%	
Total	17%	11.57%		10% to 20%

Table 1.4-2. Cover Data measured at native key areas within the Cold Creek Allotment (2007) and Associated Potential Natural Community (PNC) values for the ecological site.

Cold Creek Allotment (Key Area)	**Ecological Site**	**(%) Cover at key area**	**Existing Vegetative Composition At Key Area by Cover(%)**
Diamond (#3)	Loamy 10-12" **028BY007NV** ARTR2/ACTH7 – PSSP	48%	Grasses = 25% Forbs = 6% Shrubs = 68%
Diamond (#4)		33%	Grasses = 61% Forbs = Trace Shrubs = 39%
Newark (#1)	Loamy 8-10" **028BY010NV** ARTRW/ACHY - HECO26	14%	Grasses = 35% Forbs = Trace Shrubs = 64%
Huntington (#3)		12.54%	Grasses = 6% Forbs = 3% Shrubs = 88%
Huntington (#4)	Loamy 8-10" **025XY019NV** ARTRW/ACTH7 - PSSP	28%	Grasses = 70% Forbs = Trace Shrubs = 28%
Huntington (#1)	Silt Flat **028BY056NV** ARTRW/ELEL5 - POSE	22%	Grasses = 39% Forbs = Trace Shrubs = 59%

1.5 Proper Functioning Condition

Table 1.5-1. Functioning condition of Key Riparian Areas on the Cold Creek Allotment. Riparian areas were rated as Proper functioning condition (PFC), Functioning at risk (FAR) with an upward or downward trend, or non-functinal in 2008.

Name	Location	Type	Rating-Trend	Comments
Abal Springs	T 24N, R55E sec. 16	Lotic	Functioning at Risk-Downward Trend	-Upland species appear to be encroaching on riparian area. -Species utilizing spring include Sage grouse, livestock, horses
Corta Springs	T24N, R55E sec. 33	Lotic	Functioning at Risk-Not Apparent	-Undesirable vegetative species present in riparian area hummacking present and no definite channel
Unnamed Spring	T24N, R55E sec. 15	Seasonal Seep		-Unnamed Spring is an intermittent water source. No surface water at time of assessment
Cold Spring	T24N, R56E sec. 26	Lotic	Proper Functioning Condition	

2.0 Monitoring Data for the Warm Springs Allotment

Table 2.1. Key areas (Map V, Appendix II) and ecological sites studied on Warm Springs Allotment.

Pasture/Key Area	Ecological Site	Dominate Species of HCPC
WS-3	Silty 8-10” (028BY013NV)	Winterfat Indian ricegrass
WS-4	Silty 8-10” (028BY013NV)	Winterfat Indian ricegrass
WS-5	Saline Terrace 5-8” (028BY047NV)	Sickle saltbush Western wheatgrass
WS-11	Mountain Ridge 12-14” (028BY034NV)	Low sagebrush Black sagebrush Bluebunch wheatgrass
WS-12	Loamy 12-16” (028BY030NV)	Mountain big sagebrush Bluebunch wheatgrass
WS-13	Loamy 10-12” (028BY007NV)	Big sagebrush Thurber’s needlegrass Bluebunch wheatgrass
WS-15	Shallow Calcareous	Black sagebrush

Pasture/Key Area	Ecological Site	Dominate Species of HCPC
	Loam 8-10” (028BY011NV)	Indian Sagebrush Needleandthread
WS-16	Shallow Loam 8-10” (028BY080NV)	Wyoming big sagebrush Indian rice grass Needleandthread
WS-17	Shallow Calcareous Loam 8-10” (028BY011NV)	Black sagebrush Indian rice grass Needleandthread
WS-20	Claypan 12-14” (028BY037NV)	Low sagebrush Bluebunch wheatgrass
WS-21	Loamy 10-12” (028BY007NV)	Big sagebrush Thurber’s needlegrass Bluebunch wheatgrass
WS-23	Silty Clay 8-10” (028BY071NV)	Winterfat Thickspike wheatgrass Western wheatgrass
WS-24	Shallow Calcareous Loam 8-10” (028BY011NV)	Black sagebrush Indian ricegrass needleandthread
WS-25	Shallow Calcareous Loam 8-10” (028BY011NV)	Black sagebrush Indian rice grass needleandthread
WS-26	Sodic Flat 5-8” (028BY020NV)	Black greasewood Alkali sacaton Inland saltgrass

2.2 Licensed Livestock Use

Table 2.2-1. Tumbling JR Ranch licensed use in Warm Springs Allotment by use area 1999-2007**.**

Sum of AUMs by pasture Grazing Year	1999	2000	2001	2002	2003	2004	2005	2006	2007
BUCK AND BALD	2382	1754	842	1345	1782				
DIAMOND MOUNTAIN						41			
JULIAN SEEDING	112	584				489			
LONG VALLEY		4859	3679	5002	2191	4368	3886	5125	1461
RUBY VALLEY	485	817	1029						
W. BALD SEEDING			1162	1319					
NEWARK VALLEY	2324					394	4123		2572

2.3 Utilization

Use Pattern Mapping

See Map XIV, Appendix II for results of use pattern mapping measured in Long Valley, 2007.

Table 2.3-1. Utilization data measured during 1997-2003 for Warm Springs Allotment key areas.

Long Valley Use Area							
Key Area	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
WS-3		Winterfat 26%	Winterfat 34%		Winterfat 52%	Winterfat 24%	
WS-4		Winterfat 46%	Winterfat 30%		Winterfat 44%	Winterfat 27%	
WS-5						Saltbush spp. 36%	Saltbush spp. 68%
					Winterfat 66%	Winterfat 44%	Winterfat 58%
		Indian ricegrass 52%	Indian ricegrass 38%		Indian ricegrass 68%	Indian ricegrass 36%	Indian ricegrass 68%
WS-7		Winterfat 40%	Winterfat 34%				
		Indian ricegrass 42%	Indian ricegrass 38%				
WS-8							Indian ricegrass 54%
		Winterfat 42%	Winterfat 34%				Winterfat 48%
WS-9		sickle saltbush 56%	sickle saltbush 40%				
		Winterfat 44%	Winterfat 36%				
WS-23		Winterfat 36%	Winterfat 38%				Winterfat 48%
		Atriplex spp. 46%	Atriplex spp. 28%				

Table 2.3-2. Utilization data measured during 1997-2003 for Warm Springs Allotment key areas.

Buck and Bald Use Area							
Key Area	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
WS-11	Bluegrass 39% Bluebunch wheatgrass 50% Antelope bitterbrush 33%	Bluegrass 33% Needlegrass 35%	Bluegrass 21%	Bluegrass 54% Indian ricegrass 52%			
WS-12	No Recent Use	Antelope bitterbrush 12% Bluebunch wheatgrass 40% Needlegrass 34%	Antelope bitterbrush 21% Bluebuch wheatgrass 33% Needlegrass 37%	No Recent Use			
WS-13	Bluegrass 39% Indian ricegrass 39% Bluebunch wheatgrass 37%	Bluegrass 57% Indian ricegrass 58% Antelope bitterbrush 39%	Bluegrass 45% Antelope bitterbrush 17%	Bluegrass 37% Indian ricegrass 30%	Indian ricegrass 13%		
WS-14	Sandbergs bluegrass 32% Western wheatgrass 27% Indian ricegrass 46%	Sandbergs bluegrass 51% Western wheatgrass 57% Needlegrass 51%	Sandbergs bluegrass 45% Western wheatgrass 38% Needlegrass 26%	Sandbergs bluegrass 40% Western wheatgrass 32% Needlegrass 30%	Sandbergs bluegrass 36% Western wheatgrass 34% Needlegrass 32%		
WS-15	Bluegrass 25% Indian ricegrass 22%	No Recent Use	No Recent Use	Indian ricegrass 35% bluegrass 37%	Indian ricegrass 40% Bluebunch wheatgrass 44% Bluegrass 48%		

Table 2.3-2. Utilization data measured during 1997-2003 for Warm Springs Allotment key areas.

Buck and Bald Use Area							
Key Area	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
WS-16	Indian ricegrass 20% Bluegrass 18% Squirreltail 20%	No Recent Use					
WS-17	Indian ricegrass 29% Bluegrass 26%	Indian Ricegrass 18% Western wheatgrass 23%	No Recent Use				
WS-18	No Recent Use	No Recent Use					
WS-19	Bluegrass 28% Indian ricegrass 45% Western wheatgrass 45%	Antelope bitterbrush 19% Needlegrass 28%		Antelope bitterbrush 13% Indian ricegrass 39%	Sandbergs bluegrass 28% Indian ricegrass 52%		
WS-20		Sandbergs bluegrass 25%	Sandbergs bluegrass 21%	No Recent Use	Sandbergs bluegrass 28%		
WS-21	Antelope bitterbrush 15% Indian ricegrass 48%	Antelope bitterbrush 21% Indian ricegrass 23% Western wheatgrass 20%	Antelope bitterbrush 21% Indian ricegrass 35% Bluebunch wheatgrass 33%	Antelope bitterbrush 17% Basin wildrye 44% Bluebunch wheatgrass 36%	Indian ricegrass 52% Sandbergs bluegrass 48%		
WS-22	Antelope bitterbrush 15% Indian ricegrass		Bluebunch wheatgrass 33% Antelope bitterbrush 21%	Basin wildrye 44% Antelope bitterbrush 17%	Antelope bitterbrush 20%		

Table 2.3-2. Utilization data measured during 1997-2003 for Warm Springs Allotment key areas.

Buck and Bald Use Area							
Key Area	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
	33%		Indian ricegrass 35%	Bluebunch wheatgrass 36%			
WS-24				No Recent Use			
WS-27							saltbush spp. 36%
WS-29				Antelope bitterbrush 11% Nevada bluegrass 27% Bluebunch wheatgrass 23%			

Table 2.3-3. Utilization Levels and Associated Licensed Use, from 1999 through 2003, at Key Areas Monitored Using Key Forage Plant Method within the Warm Springs Allotment.

Year of Key Area Reading		1999	2000	2001	2002	2003
Use Area	Key Area	Utilization Level				
Long Valley	WS-3	Light		Moderate	Light	
	WS-4	Light		Moderate	Light	
	WS-5	Light		Heavy	Moderate	Heavy
	WS-7	Light				
	WS-8	Light				Moderate
	WS-9	Light				
	WS-23	Light				Moderate
	* Total AUMs Licensed on Use Area Each Year	0	4,859	3,679	5,002	2,191
Buck and Bald	WS-11	Light	Moderate			
	WS-12	Light	No Use			
	WS-13	Moderate	Light	Slight		
	WS-14	Moderate	Light	Light		
	WS-15	No Use	Light	Moderate		
	WS-16					
	WS-17	No Use				
	WS-18					
	WS-19		Light	Moderate		
	WS-20	Light	No Use	Light		
	WS-21	Light	Moderate	Moderate		
	WS-22	Light	Moderate	Slight		
	WS-24		No Use			
	WS-27					Light
	WS-29		Light			
	* Total AUMs Licensed on Allotment Each Year	2,382	8,014	6,712	7,666	3,973

* From grazing billings.

Table 2.3-4. Utilization data collected during 2007 for Warm Springs Allotment key areas.

Date	Pasture/Study Site	Key Area
10/5/2007	**Long Valley ***	WS-3
Key Species	Percent Use	Category
winterfat	0%	None
bottlebrush squirreltail	1%	Slight

Date	Pasture/Study Site	Key Area
10/5/2007	**Long Valley ***	WS-4
Key Species	Percent Use	Category
Bottlebrush squirreltail	3%	Slight
winterfat	10%	Slight

*** In 2007 the licensed Use of Cattle AUMs in the Long Valley Use area was 1,461.**

2.4 Line Intercept Cover

Table 2.4-1. Line-Intercept Cover data collected on the Warm Springs Allotment. Vegetative cover was collected using line-intercept method on key area WS-3 in 2007 and on twelve key areas in 1998 and on key area WS-16 in 1999.

Line Intercept Cover

Date		Pasture		Key Area/UTMs
10/5/2007		**Long Valley**		WS-3
		Ecological Site		
		Silty 8-10" 028BY013NV KRLA/ACHY		
Species	Litter	Cover (%)	Composition (%)	Potential Natural Condition
winterfat		9%	96%	
bottlebrush squirreltail		0%	4%	
Total Cover	14%	9%		10% to 20%

Line Intercept Cover

Date	Pasture		Key Area/UTMs
9/4/1998	**Long Valley**		WS-3
	Ecological Site		
	Silty 8-10" 028BY013NV KRLA/ACHY		
Species	Cover (%)	Composition (%)	Potential Natural Condition
winterfat	21%	95%	
bottlebrush squirreltail	1%	5%	
Total Cover	22%		10% to 20%

Table 2.4-1. Line-Intercept Cover data collected on the Warm Springs Allotment. Vegetative cover was collected using line-intercept method on key area WS-3 in 2007 and on twelve key areas in 1998 and on key area WS-16 in 1999.

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
9/4/1998	**Long Valley**		WS-4
	Range Site		
	Silty 8-10" 028BY013NV KRLA/ACHY		
Species	Cover (%)	Composition (%)	Potential Natural Condition
winterfat	11%	68%	
bottlebrush squirreltail	4%	25%	
phlox spp.	1%	6%	
Total Cover	16%		10% to 20%

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
8/26/1998	**Long Valley**		WS-5
	Ecological Site		
	Saline Terrace 5-8" 028BY047NV ATFA/PASM-ACHY		
Species	Cover (%)	Composition (%)	Potential Natural Condition
sickle Saltbush	10%	52%	
winterfat	0%		
Mustard spp.	1%	5%	
Indian Ricegrass	1%	5%	
bottlebrush suirreltail	7%	36%	
Total Cover	19%		5% to10%

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
7/10/1998	**Buck and Bald**		WS-11
	Ecological Site		
	Mountain Ridge 12-14Range Site 028BY034NV ARAR8-ARNO4/PSSPS-ACTH7		
Species	Cover (%)	Composition (%)	Potential Natural Condition
bluegrass spp.	4%	15%	
bottlebrush squirreltail	1%	3%	
needleandthread	0%	0%	
Milkvetch spp.	0%	0%	
groundsel	0%	0%	
buckwheat	0.4%	1%	
Haplopappus spp.	0%	0%	
Asteraceae	2%	7%	
white aster	0%	1%	
low sagebrush	6%	21%	

Table 2.4-1. Line-Intercept Cover data collected on the Warm Springs Allotment. Vegetative cover was collected using line-intercept method on key area WS-3 in 2007 and on twelve key areas in 1998 and on key area WS-16 in 1999.

black sagebrush	11%	42%	
rabbitbrush	0%	0%	
Total Cover	26%		15% to 20%

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
7/10/1998	**Buck and Bald**		WS-12
	Ecological Site		
	Loamy 12-16" 028BY030NV ARTRV/PSSPS		
Species	Cover (%)	Composition (%)	Potential Natural Condition
bluegrass spp.	3%	6%	
cheatgrass	6%	14%	
bottlebrush squirreltail	1%	3%	
Therber's needlegrass	3%	7%	
bluebunch wheatgrass	0%	1%	
mountain big sagebrush	18%	42%	
rabbitbrush	5%	11%	
antelope bitterbrush	2%	4%	
phlox spp.	1%	1%	
milkvetch spp.	0%	0.%	
Asteraceae	2%	4%	
pepperweed	0%	1%	
Lupine	1%	3%	
mustard spp.	0%	1%	
Total Cover	43%		25% to 35%

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
7/10/1998	**Buck and Bald**		WS-13
	Ecological Site		
	Loamy 10-12" 028BY007NV ARTR2/ACTH7-PSSP		
Species	Cover (%)	Composition (%)	Potential Natural Condition
bottlebrush squireltail	1%	4%	
Indian Ricegrass	1%	3%	
bluegrass spp	2%	8%	
Thurbers needlegrass	2%	6%	
bluebunch wheatgrass	0%	1%	
Lupin	5%	12%	
phlox spp.	1%	4%	
cheatgrass	1%	3%	
groundsel	0%	1%	
buckwheat	0%	0%	

Table 2.4-1. Line-Intercept Cover data collected on the Warm Springs Allotment. Vegetative cover was collected using line-intercept method on key area WS-3 in 2007 and on twelve key areas in 1998 and on key area WS-16 in 1999.

big sagebrush	16%	51%	
Total Cover	31%		20% to 30%

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
9/9/1998	**Buck and Bald**		WS-15
	Ecological Site		
	Shallow Calcareous Loam 8-10" 028BY011NV ARNO4/ACHY-HECO26		
Species	Cover (%)	Composition (%)	Potential Natural Condition
black sagebrush	25%	83%	
sandberg bluegrass	3%	8%	
cheatgrass	0%	1%	
rabbitbrush spp.	1%	4%	
Indian Ricegrass	1%	2%	
phlox spp.	1%	3%	
needleandthread	0%	0%	
Total Cover	31%		15% to 20%

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
7/17/1999	**Buck and Bald**		WS-16
	Ecolgoical Site		
	Shallow Loam 8-10" 028BY080NV ARTW/ACHY-HECO26		
Species	Cover (%)	Composition (%)	Potential Natural Condition
wyoming big sagebrush	18%	59.0%	
Sandbergs bluegrass	2%	1%	
rabbitbrush spp.	5%	16%	
phlox spp.	2%	6%	
bottlebrush squirreltail	1%	5%	
spiny hopsage	2%	6%	
Indian Ricegrass	1%	2%	
Total Cover	30%		10% to 20%

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
7/9/1998	**Buck and Bald**		WS-17
	Ecological Site		
	Shallow Calcereous Loam 8-10" 028BY011NV ARNO4/ACHY-HECO26		
Species	Cover (%)	Composition (%)	Potential Natural Condition
black sagebrush	30%	85%	

Table 2.4-1. Line-Intercept Cover data collected on the Warm Springs Allotment. Vegetative cover was collected using line-intercept method on key area WS-3 in 2007 and on twelve key areas in 1998 and on key area WS-16 in 1999.

Sandbergs bluegrass	2%	5%	
rabbitbrush spp.	2%	7%	
bottlebrush Squirreltail	1%	2%	
buckwheat	0%	1%	
phlox spp.	0%	0%	
Total Cover	35%		15% to 20%

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
8/5/1998	**Buck and Bald**		WS-20
	Ecological Site		
	Claypan 12-14" 028BY037NV ARAR8/PSSPS		
Species	Cover (%)	Composition (%)	Potential Natural Condition
Sandberg's Bluegrass	4%	16%	
bottlebrush squirreltail	2%	8%	
phlox spp.	0%	0%	
Lupine	2%	7%	
annual forb	1%	2%	
low sagebrush	14%	54%	
rabbitbrush spp.	1%	4%	
unknown spp.	2%	8%	
Total Cover	25%		15% to 20%

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
9/18/1998	**Buck and Bald**		WS-21
	Ecological Site		
	Loamy 10-12" 028BY007NV ARTR2/ACTH7-PSSP		
Species	Cover (%)	Composition (%)	Potential Natural Condition
mountain big sagebrush	6%	13.%	
rabbitbrush spp.	11%	23%	
Sandbergs bluegrass	10%	23%	
Nevada bluegrass	1%	3%	
bluebunch wheatgrass	3%	6%	
Indian Ricegrass	5%	11%	
phlox spp.	4%	8%	
groundsel	3%	7%	
perennial forb	3%	6%	
Total Cover	46%		20% to 30%

Table 2.4-1. Line-Intercept Cover data collected on the Warm Springs Allotment. Vegetative cover was collected using line-intercept method on key area WS-3 in 2007 and on twelve key areas in 1998 and on key area WS-16 in 1999.

Line Intercept Cover

Date	Pasture		Key Area/UTMs
8/26/1998	**Long Valley**		WS-23
	Ecological Site		
	Silty Clay 8-10" 028BY071NV KRLA2/ELMA-PASM		
Species	Cover (%)	Composition (%)	Potential Natural Condition
winterfat	15%	70%	
Nuttall's saltbush	5%	24%	
perennial grass	0%	1%	
Indian Ricegrass	1%	3%	
Total Cover	21%		10% to 15%

Line Intercept Cover

Date	Pasture		Key Area/UTMs
9/8/1998	**Ruby Valley**		WS-24
	Ecological Site		
	Shallow Calcareous Loam 8-10" 028BY011NV ARNO4/ACHY-HECO26		
Species	Cover (%)	Compostion (%)	Potential Natural Condition
Rabbitbrush spp.	4%	14%	
black sagebrush	22%	77%	
phlox spp.	1%	2%	
Indian Ricegrass	1%	4%	
Sandbergs bluegrass	0%	1%	
bottlebrush squirreltail	0%	1%	
buckwheat	0%	1%	
Total Cover	28%		15% to 20%

Line Intercept Cover

Date	Pasture		Key Area/UTMs
7/8/1999	**Newark Valley**		WS-25
	Ecological Site		
	Shallow Calcereous Loam 8-10" 028BY011NV ARNO4/ACHY-HECO26		
Species	Cover (%)	Composition (%)	Potential Natural Condition
bottlebrush squirreltail	2%	12%	
Sandbergs bluegrass	1%	7%	
Indian Ricegrass	0%	2%	
shadscale	4%	24%	
rabbitbrush	6%	37%	
spiny hopsage	2%	14%	
black sagebrush	1%	4%	

Table 2.4-1. Line-Intercept Cover data collected on the Warm Springs Allotment. Vegetative cover was collected using line-intercept method on key area WS-3 in 2007 and on twelve key areas in 1998 and on key area WS-16 in 1999.

Total Cover	17%	15% to 20%

Line Intercept Cover

Date	Pasture		Key Area/UTMs
7/23/1999	**Newark Valley**		WS-26
	Ecological Site		
	Sodic Flat 5-8" 028BY020NV SAVE4/SPAI-DISP		
Species	Cover (%)	Composition (%)	Potential Natural Condition
bottlebrush squirreltail	3%	16%	
Greasewood spp.	12%	63%	
pepperweed	0%	0%	
sickle saltbush	4%	23%	
Total Cover	19%		2% to 8%

2.5. Similarity Index of Ecological Site Inventory

Table 2.5-1. Current species composition by key area on Warm Springs Allotment compared to expected composition at Historical Climax Potential Community (HCPC).

Key Area	Range Site	Associated Vegetation Type	Current species composition (%) (air dry weight)		Seral Stage	Current Composition (%) by Group (air dry weight)	Potential Vegetative Composition Expected at HCPC (%)	Total annual Production (lbs/acre)	
								Existing	ESD Favorable Normal Unfavorable (years)
WS-3 (Long Valley)	028BY013 NV	KRLA2/ACHY Silty 8-10"	bottlebrush squirreltail winterfat	1.0% 99.0%	Mid Seral	Grasses = 1 % Forbs = Trace Shrubs = 99%	Grasses = 30% Forbs = 5% Shrubs = 65%	277	700 500 300
WS-4 (Long Valley)	028BY013 NV	KRLA2/ACHY Silty 8-10"	bottlebrush squirreltail Indian ricegrass Phlox spp. winterfat	15.0% 10.0% 39.0% 36.0%	Late Seral	Grasses = 32% Forbs = 33% Shrubs = 35%	Grasses = 30% Forbs = 5% Shrubs = 65%	307	700 500 300
WS-5 (Long Valley)	028BY047 NV	ATFA/PASM-ACHY Saline Terrace 5-8"	bottlebrush squirreltail sickle saltbush rabbitbrush spp. winterfat	28.0% 64.0% 6.0% 2.0%	Late Seral	Grasses = 28% Forbs = Trace Shrubs = 72%	Grasses = 15% Forbs = 5% Shrubs = 80%	570	600 400 200
WS-11 (Bald Mountain)	028BY034 NV	ARAR8-ARNO4/PSSP-ACTH7 Mountain Ridge 12-14"	Sandbergs bluegrass bottlebrush squirreltail Indian ricegrass mustard spp. phlox spp. unknown forb buckwheat senecio spp. unknown annual forb low sagebrush black sagebrush rabbitbrush spp.	12.0% 4.0% Trace 1.0% 1.0% 1.0% Trace 1.0% 2.0 % 44.0% 33.0% 1.0%	Late Seral	Grasses = 16% Forbs = 6% Shrubs = 78%	Grasses = 45% Forbs = 10% Shrubs = 45%	646	600 400 200

Table 2.5-1. Current species composition by key area on Warm Springs Allotment compared to expected composition at Historical Climax Potential Community (HCPC).

Key Area	Range Site	Associated Vegetation Type	Current species composition (%) (air dry weight)	Seral Stage	Current Composition (%) by Group (air dry weight)	Potential Vegetative Composition Expected at HCPC (%)	Total annual Production (lbs/acre)	
							Existing	ESD Favorable Normal Unfavorable (years)
WS-12 (Bald Mountain)	028BY030 NV	ARTRV/PSSPS Loamy 12-16”	cheatgrass 11.0% bottlebrush squirreltail 4.0% Indian ricegrass Trace Sandbergs bluegrass 2.0% bluebunch wheatgrass 1.0% needlegrass 3.0% Phlox spp. 2.0% Lupine spp. 2.0% mountain big sagebrush 71.0% antelope bitterbrush 2.0% rabbitbrush spp. 2.0%	Mid Seral	Grasses = 10% Forbs = 4% Shrubs = 75%	Grasses = 55% Forbs = 10% Shrubs = 35%		
WS-13 (Buck and Bald)	028BY007 NV	ARTR2/ACTH7 –PSSP Loamy 10-12”	bottlebrush squirreltail 7.0% Sandbergs bluegrass 3.0% needlegrass 10.0% bluebunch wheatgrass 2.0% Indian ricegrass 4.0% cheatgrass Trace senecio spp. 1.0% Lupine spp. 25.0% phlox spp. 3.0% mountain big sagebrush 43.0% rabbitbrush spp. 1.0% sagebrush spp. 1.0%	Late Seral	Grasses = 26% Forbs = 29% Shrubs = 45%	Grasses = 65% Forbs = 10% Shrubs = 25%		

Table 2.5-1. Current species composition by key area on Warm Springs Allotment compared to expected composition at Historical Climax Potential Community (HCPC).

Key Area	Range Site	Associated Vegetation Type	Current species composition (%) (air dry weight)	Seral Stage	Current Composition (%) by Group (air dry weight)	Potential Vegetative Composition Expected at HCPC (%)	Total annual Production (lbs/acre)	
							Existing	ESD Favorable Normal Unfavorable (years)
WS-15 (Buck and Bald)	028BY011 NV	ARNO4/ACHY – HECO26 Shallow Calcareous Loam 8-10”	black sagebrush 71.0% shadscale 10.0% rabbitbrush spp. 1.0% Sandbergs bluegrass 8.0% bottlebrush squirreltail 4.0% aster spp. 3.0% phlox spp. 1.0% cheatgrass 1.0% Indian ricegrass 1.0%	Late Seral	Grasses = 13% Forbs = 4% Shrubs = 82%	Grasses = 50% Forbs = 5% Shrubs = 45%	451	600 450 250
WS-16 (Buck and Bald)	028BY080 NV	ARTRW/ACHY – HECO26 Shallow Loam 8-10”	Wyoming sagebrush 57.0% spiny hopsage 6.0% rabbitbrush spp. 15.0% Indian ricegrass 1.0% bottlebrush squirreltail 13.0% Sandberg bluegrass 7.0% phlox spp. 1.0%	Late Seral	Grasses = 21% Forbs = 1% Shrubs = 78%	Grasses = 55% Forbs = 10% Shrubs = 35%		
WS-17 (Buck and Bald)	028BY011 NV	ARNO4/ACHY – HECO26 Shallow Calcareous Loam 8-10”	Sandberg bluegrass 2.0% Indian ricegrass 2.0% bottlebrush squirreltail 3.0% cheatgrass Trace phlox spp. 1.0% buckwheat 1.0% senecio spp. 1.0% black sagebrush 80.0% rabbitbrush spp. 10.0%	Mid Seral	Grasses = 7% Forbs = 3% Shrubs = 90%	Grasses = 50% Forbs = 5% Shrubs = 45%	569	700 500 350

Table 2.5-1. Current species composition by key area on Warm Springs Allotment compared to expected composition at Historical Climax Potential Community (HCPC).

Key Area	Range Site	Associated Vegetation Type	Current species composition (%) (air dry weight)	Seral Stage	Current Composition (%) by Group (air dry weight)	Potential Vegetative Composition Expected at HCPC (%)	Total annual Production (lbs/acre)	
							Existing	ESD Favorable Normal Unfavorable (years)
WS-20 (Buck and Bald)	028BY037 NV	ARAR8/PSSPS Claypan 12-14"	bluegrass spp. 22.0% bottlebrush squirreltail 6.0% Lupine 12.0% low sagebrush 55.0% rabbitbrush spp. 5.0%	Late Seral	Grasses = 28% Forbs = 12% Shrubs = 60%	Grasses = 50% Forbs = 10% Shrubs = 40%	446	600 500 400
WS-21 (Buck and Bald)	028BY007 NV	ARTR2/ACTH7 –PSSP Loamy 10-12"	Wyoming sagebrush 34.0% *Tetradymia* spp. 10.0% rabbitbrush spp. 6.0% thickspike wheatgrass 11.0% Indian ricegrass 23.0% Bottlebrush squirreltail 2.5% bluegrass spp. 3.0% needlegrass 1.0% phlox spp. 9.0% Lupine 0.5%	Late Seral	Grasses = 40% Forbs = 10% Shrubs = 50%	Grasses = 65% Forbs = 10% Shrubs = 25%	540	350 225 150
WS-22 (Buck and Bald)	028BY046 NV	PUTR2-ARTRV/PSSP-ACTH7 Gravelly Loam 12-14"	antelope bitterbrush 29.0% mountain big sagebrush 52.0% bluebunch wheatgrass 6.0% rabbitbrush spp. 2.0% bluegrass spp. 1.0% cheatgrass 5.0% snowberry spp. 4.0% Mustard spp. 1.0%	Late Seral	Grasses = 7% Forbs = 1% Shrubs = 87%	Grasses = 40% Forbs = 10% Shrubs = 50%	1082	1200 900 700
WS-23 (Long Valley)	028BY071 NV	KRLA2/ELMA7 –PASM Silty Clay 8-10"	bottlebrush squirreltail 2.0% western wheatgrass 36.0% Indian ricegrass 1.0% winterfat 30.0% saltbush spp. 31.0%	Late Seral	Grasses = 39% Forbs = 0% Shrubs = 61%	Grasses = 45% Forbs = 5% Shrubs = 55%	582	250 150 100

Table 2.5-1. Current species composition by key area on Warm Springs Allotment compared to expected composition at Historical Climax Potential Community (HCPC).

Key Area	Range Site	Associated Vegetation Type	Current species composition (%) (air dry weight)		Seral Stage	Current Composition (%) by Group (air dry weight)	Potential Vegetative Composition Expected at HCPC (%)	Total annual Production (lbs/acre)	
								Existing	ESD Favorable Normal Unfavorable (years)
WS-24 (Ruby Valley)	028BY011 NV	ARNO4/ACHY – HECO26 Shallow Calcareous Loam 8-10”	Indian ricegrass bottlebrush squirreltail phlox spp. buckwheat black sagebrush rabbitbrush spp. Winterfat	18.0% 6.0% 11.0% 5.0% 44.0% 14.0% 0.2%	Late Seral	Grasses = 24% Forbs = 16% Shrubs = 58%	Grasses = 50% Forbs = 5% Shrubs = 45%	183	700 500 350
WS-26 (Newark Valley)	028BY020 NV	SAVE4/SPAI –DISP Sodic Flat 5-8”	bottlebrush squirreltail greasewood spp. sickle saltbush	1.0% 80.0% 19.0%	Late Seral	Grasses = 1% Forbs = 0% Shrubs = 99%	Grasses = 15% Forbs = 5% Shrubs = 80%	667	500 350 200

Each of the respective Ecological Sites at each of the key areas was determined using soil mapping units determined by the Natural Resources Conservation Service (NRCS). During field inspections adjustments were made, if needed, to determine the most appropriate ecological site for the area. Ecological Condition was completed on the listed key areas using the double sampling method described in the Soil Conservation Service National Range Handbook (July 13, 1976) and the Bureau of Land Management National Range Handbook H-4410-1 (1984). This data was then compared to the appropriate Ecological Site Description, also published by NRCS, which was determined for each key area. Ecological sites are defined as ecological subdivisions of rangelands that are differentiated in terms of the climax (original or natural potential) plant community they are capable of supporting.

Condition ratings were calculated using percent composition by air-dry weight, derived from using the above double sampling method, and comparing these values to the most appropriately applicable ecological site to determine a rating. The rating is defined as being the percent of the HCPC which may also be referred to as historic climax (existed before European immigration and settlement). Therefore, the seral stages listed above, for each key area are an indicator of the percent of climax for the respective range site on which they occur. A rating of $\geq$ 75 % is considered the HCPC with values approaching 100% being the species composition and plant diversity indicated by the applicable ecological site description.

2.6 Proper Functioning Condition

Table 2.6-1. Functioning condition of seventeen riparian areas on the Warm Springs Allotment. Riparian areas were rated as Proper functioning condition (PFC), Functioning at risk (FAR) with an upward or downward trend, or non-functional.

Type	Location	Functioning Condition	Date
Lotic	Deadman Creek T21R56sec.9	PFC	1998
Lotic	Old Deadman Creek T21R56sec.16	PFC	1998
Lentic	Woodchuck Spring T21R57sec.4	PFC	1999
Lentic	Cherry Spring T24R37sec.26	PFC	1999
Lentic	Cotton-wood Spring T22R57sec.30	PFC	1999
Lentic	Seven Unnamed Springs T21R56 sec.15-22	FAR-Upward	1999
Lentic	Orchard Canyon T22R56sec.23	PFC	1999
Lentic	Unnamed Spring T22R57sec.32	PFC	1999
Lentic	Unnamed Spring T22R56sec.28	PFC	1999
Lentic	Water Canyon T24R57sec.20	PFC	1999
Lentic	Unnamed Spring T24R57sec.21	FAR-Upward	1999
Lentic	Unnamed Spring T21R56sec.22	FAR-Upward	1999
Lentic	Little Willow Spring T21R57sec.6	FAR-Upward	1999
Lentic	Moore Spring T22R56sec.35	PFC	1999
Lentic	Mill Spring T24R57sec.17	PFC	1999
Lentic	Bourne Tunnel T24R57sec.33	PFC	1999
Lotic	Unnamed Spring T21N, R56E, sec.22	FAR-Downward	2008

3.0 Monitoring Data for the Dry Mountain Allotment

Table 3.1 Key Areas (Map VI, Appendix II) and Ecological Sites on the Dry Mountain Allotment

Pasture/Key Area	Location-UTMs	Ecological Site	Dominate Species of HCPC
DM-1	11S N4384997 E0632133	Loamy Plain 8-10" P.Z. (028BY014NV)	Wyoming sagebrush Indian rice grass western wheatgrass
DM-2	11S N4383410 E0630459	Coarse Silty 6-8" P.Z. (028BY084NV)	Winterfat Indian ricegrass
DM-3	11S N4384203 E0628736	(028BY083NV)	Black sagbrush

Pasture/Key Area	Location-UTMs	Ecological Site	Dominate Species of HCPC
DM-4	11S N4380990 E0631553	Coarse Silty 6-8" P.Z. (028BY084NV)	Winterfat Indian ricegrass
DM-5	11S N4387387 E0632454	Silty 8-10" (028BY013NV)	Winterfat Indian ricegrass

3.2 Licensed Use for Tumbling JR Ranch

Table 3.2-1. Tumbling JR Ranch licensed use in Dry Mountain Allotment by pasture, 1999-2007.

Sum of Cattle Aums	1999	2000	2001	2003	2005	2006	2007
DRY MOUNTAIN						368	
Pasture	705	493	579	1658	921	408	322

3.3 Utilization

Use Pattern Mapping

See Map XIV, Appendix II for use pattern map of Long Valley, 2007.

Table3.3-1. Summary of utilization measurements using the key forage plant method on Dry Mountain Allotment, **2006**.

Date	Key Area	Veg type/Range Site	Location (UTMs)	
8/15/2006	DM-5	Winterfat	11S N4387387 E632454	
Key Species		% Use	Category	Notes
Winterfat		48%	Moderate	Cured mustard in meadow

Date	Key Area	Veg type/Range Site	Location (UTMs)	
8/15/2006	DM-1	Wyoming Sagebrush	11S N4384997 E632133	
Key Species		% Use	Category	Notes
Indian ricegrass		27%	Light	No invasive species detected

Date	Key Area	Veg type/Range Site	Location (UTMs)	
8/15/2006	DM-4	Winterfat	11S N4380990 E631553	
Key Species		% Use	Category	Notes
Winterfat		46%	Moderate	Trace of halogeton in meadow

Date	Key Area	Veg type/Range Site	Location (UTMs)	
8/15/2006	DM-2	Winterfat	11S N4383410 E630459	
Key Species		% Use	Category	Notes
Winterfat		40%	Moderate	Bluegrass present at site

Date	Key Area	Veg type/Range Site	Location (UTMs)	
8/15/2006	DM-3	Black Sagebrush	11S N4384203 E628736	
Key Species		% Use	Category	Notes
Winterfat		46%	Moderate	Soil is stable, no detection of invasive species
Indian ricegrass		48%	Moderate	

Table 3.3-2. Summary of utilization measurements using the Key Forage Plant Method on Dry Mountain Allotment, **2003**.

Date	Key Area	Veg type/Range Site	Location	
5/29/2003	DM-5	Winterfat	11S N4387387 E632454	
Key Species		% Use	Category	Notes
Winterfat		40%	Light	
Date	Key Area	Veg type/Range Site	Location	
5/29/2003	DM-1	Wyoming Sagebrush	11S N4384997 E632133	
Key Species		% Use	Category	Notes
Indian ricegrass		22%	Light	

Table 3.3-2. Summary of utilization measurements using the Key Forage Plant Method on Dry Mountain Allotment, **2003**.

Date	Key Area	Veg type/Range Site	Location	
8/15/2003	DM-4	Winterfat	11S N4380990 E631553	
Key Species		% Use	Category	Notes
Winterfat		54%	Moderate	Small patches of Sandbergs bluegrass
Date	Key Area	Veg type/Range Site	Location	
5/29/2003	DM-2	Winterfat	11S N4383410 E630459	
Key Species		% Use	Category	Notes
Winterfat		52%	Moderate	
Date	Key Area	Veg type/Range Site	Location	
5/29/2003	DM-3	Black Sagebrush	11S N4384203 E628736	
Key Species		% Use	Category	Notes
Winterfat		48%	Moderate	

Table 3.3-3. Summary of utilization measurements using the Key Forage Plant Method on Dry Mountain Allotment, **2002.**

Date	Key Area	Veg type/Range Site	Location	
5/6/2002	DM-5	Winterfat	11S N4387387 E632454	
Key Species		% Use	Category	Notes
Winterfat		28%	Light	Winterfat has low vigor
Date	Key Area	Veg type/Range Site	Location	
5/6/2002	DM-1	wyoming sagebrush	11S N4384997 E632133	
Key Species		% Use	Category	Notes
Indian ricegrass		28%	Light	Low to moderate vigor of grasses

Table 3.3-3. Summary of utilization measurements using the Key Forage Plant Method on Dry Mountain Allotment, **2002.**

Date	Key Area	Veg type/Range Site	Location	
4/25/2002	DM-4	winterfat	11S N4380990 E631553	
Key Species		% Use	Category	Notes
Winterfat		50%	Moderate	
Sandbergs bluegrass		42%	Moderate	
Date	Key Area	Veg type/Range Site	Location	
4/25/2002	DM-2	Winterfat	11S N4383410 E630459	
Key Species		% Use	Category	Notes
Winterfat		35%	Light	

Table 3.3-4. Utilization Levels and associated licensed use for Tumbling JR Ranch, 2002, 2003 and 2006 at Key Areas within the Dry Mountain Allotment.

Year of Key Area Reading		2002	2003	2006
Use Area	Key Area			
Dry Mountain	DM-1	Light	Light	Light
	DM-2	Light	Moderate	Moderate
	DM-3	Light	Moderate	Moderate
	DM-4	Moderate	Moderate	Moderate
	DM-5	Light	Light	Moderate
	* Total AUMs Licensed on Allotment Each Year	0	1,658	776

* From grazing billings.

3.4 Line-Intercept Cover

Table 3.4-1. Vegetative cover and composition data by key areas measured on the Dry Mountain Allotment, 2006, compared to the Potential Natural Community (PNC).

Line Intercept Cover

Date	Key Area	Veg type/Range Site		Location
8/10/2006	**DM-5**	Winterfat		11S N4387387 E632454
		Range Site		
		28BY013NV		
Vegetation	Litter	Cover (%)	Composition (%)	Potential Natural Condition
sagebrush spp.		8%	44%	
winterfat		10%	55%	
other vegetation		0		
Total Cover	4%	18%		10-20%

Table 3.4-1. Vegetative cover and composition data by key areas measured on the Dry Mountain Allotment, 2006, compared to the Potential Natural Community (PNC).

Date	Key Area	Veg type/Range Site		Location
8/15/2006	**DM-1**	wyoming sagebrush Range Site		11S N4384997 E632133
Vegetation	Litter	Cover (%)	Composition (%)	Potential Natural Condition
sagebrush spp.		13%	96%	
Indian ricegrass		1%	4%	
Total Cover	2%	14%		10-20%
Date	Key Area	Veg type/Range Site		Location
8/15/2006	**DM-4**	winterfat Range Site		11S N4380990 E631553
		28BY084NV		
Vegetation	Litter	Cover (%)	Composition (%)	Potential Natural Condition
winterfat		11%	84%	
bluegrass spp.		2%	16%	
Total Cover	5%	13%		10-20%
Date	Key Area	Veg type/Range Site		Location
8/15/2006	**DM-2**	Winterfat Range Site		11S N4383410 E630459
		28BY084NV		
Vegetation	Litter	Cover (%)	Composition (%)	Potential Natural Condition
winterfat		10%	76%	
halogeton		3%	24%	
Total Cover	4%	13%		10-20%

Table 3.4-2. Vegetative composition by cover measured at four key areas on the Dry Mountain Allotment.

Allotment (Key Area)	Ecological Site	% Cover	Existing Vegetative Composition At Key Area (%) by Cover
Dry Mountain (DM-5)	Silty 8-10" (028BY013NV) KRLA2/ACHY	18%	Grasses = 0% Forbs = 0% Shrubs =99%
Dry Mountain (DM-1)	Loamy Plain 8-10" (028BY014NV) ARTRW/ACHY-PASM	14%	Grasses = 4% Forbs = 0% Shrubs = 96%
Dry Mountain (DM-4)	Coarse Silty 6-8" (028BY084NV) KRLA2/ACHY	13%	Grasses =16% Forbs = 0% Shrubs = 84%
Dry Mountain (DM-2)		13%	Grasses = Trace Forbs = 24% Shrubs = 76%

4.0 Monitoring Data for the Warm Springs Trail

Table 4.1. Key areas (Map VII, Appendix II) and ecological sites studied on Warm Springs Trail Allotment.

Pasture/Key Area	Location-UTMs	Ecological Site	Dominate Species of HCPC
Huntington #1	11S N4433924 E0608614	Silt Flat (028BY056NV)	Wyoming big sagebrush, bottlebrush squirreltail, Sandberg's bluegrass
Griswold SE (crested wheatgrass)	11S N4421443 E0609516		
Strawberry SW (crested wheatgrass)	11S N4434558 E0607707		
WS-25	11S NE	Shallow Calcareous Loam 8-10" (028BY011NV)	Black sagebrush Indian rice grass needleandthread
WS-26	11S N E	Sodic Flat 5-8" (028BY020NV)	Black greasewood Alkali sacaton Inland saltgrass
N-6	11S N4370251 E624327	Shallow Calcareous Loam 8-10" (028BY011NV)	Black sagebrush Indian ricegrass needleandthread

4.2 Licensed Use

Tumbling JR Ranch

Tumbling JR Ranch has not licensed use on the Warm Springs Trail for the ten year review period of this document (1998-2008).

Paris Livestock

Over the grazing seasons from 1999 to 2008, livestock permitted use on the Warm Springs Trail Allotment for Paris Livestock was 615 AUMs in a sheep only operation. During this same time period, livestock actual use ranged from a high of 381 AUMs in 2007 to a low of 253 AUMs in 2003. Livestock use has varied dependent on available forage due to growing conditions. Table 4.2-1 summarizes the licensed actual use data for this time period.

Table 4.2-1. Warm Springs Trail Allotment Actual Use by Paris Livestock**.**

Grazing Year	Actual Use (AUMs)	% Actual Use of Permitted Use (AUMs)	Grazing Year	Actual Use (AUMs)	% Actual Use of Permitted Use (AUMs)
1999	360	59%	2004	310	50%
2000	306	50%	2005	330	54%
2001	327	53%	2006	346	56%
2002	291	47%	2007	381	62%
2003	253	41%	2008	178	29%

4.3 Utilization

Table 4.3-1. Summary of utilization measurements using the Key forage Plant Method at five key areas on the Warm Springs Trail.

Date	Pasture/Study Site	UTMs
10/25/1997	**Strawberry SW**	11S N4434558 E0607707
Key Species	Percent Use	Category
crested wheatgrass	10%	slight

Date	Pasture/Study Site	UTMs
10/25/1997	**Huntington #1**	11S N4433924 E0608614
Key Species	Percent Use	Category
bottlebrush squirreltail	10%	slight

Date	Pasture/Study Site	UTMs
10/15/1997	**Griswold SE**	11S N4421443 E609516
Key Species	Percent Use	Category
crested wheatgrass	46%	moderate
Date	Pasture/Study Site	UTMs
7/10/2007	**N-6**	11S N4370251 E624327
Key Species	Percent Use	Category
Indian ricegrass	17%	slight
winterfat	27%	light
Date	Pasture/Study Site	Key Area/UTMs
7/4/2008	**N-6**	11S N4370251 E624327
Key Species	Percent Use	Category
Indian ricegrass	9%	slight
winterfat	5%	slight

4.4 Line Intercept Cover

Table 4.4-1. Vegetative cover measured at various key areas on the Warm Springs Trail Allotment during summer 2007, and Potential Natural Community (PNC).

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
8/24/2007	Huntington #1		11S N4433924 E0608614
	Range Site		
	Silt Flat 028BY056NV ARTRW/ELEL5-POSE		
Vegetation	Cover (%)	Composition(%)	Potential Natural Condition
Sandbergs bluegrass	8%	36%	
needlegrass	1%	3%	
Rabbitbrush	0%	0%	
sagebrush spp.	13%	59%	
other vegetation	0%		
TOTAL	22%		5% to 10%

Line Intercept Cover

Date	Pasture	Key Area/UTMs
7/8/1999	Newark Valley	WS-25
	Range Site	
	Shallow Calcereous Loam 8-10" 028BY011NV ARNO4/ACHY-HECO26	

Species	Cover (%)	Composition (%)	Potential Natural Condition
bottlebrush squirreltail	2%	12%	
Sandbergs bluegrass	1%	7%	
Indian ricegrass	0.3%	2%	
shadscale	4%	24%	
rabbitbrush spp.	6%	37%	
spiny hopsage	2%	14%	
black sagebrush	1%	4%	
Total Cover	17%		15%-20%

Line Intercept Cover

Date	Pasture	Key Area/UTMs
7/23/1999	Newark Valley	WS-26
	Range Site	
	Sodic Flat 5-8" 028BY020NV SAVE4/SPAI-DISP	

Species	Cover (%)	Composition (%)	Potential Natural Condition
bottlebrush squirreltail	3%	16%	
greasewood spp.	12%	63%	
pepperweed	0%	1%	
sickle saltbush	4%	23%	
Total Cover	19%		2%-8%

Line Intercept Cover

Date	Pasture	Key Area/UTMs
7/11/2008	Newark Allotment	N-6/ E624327 N4370251
	Range Site	
	Shallow Calcareous Loam 8-10” 028BY011NV ARNO4/ACHY/HECO26	

Species	Cover (%)	Composition (%)	Potential Natural Condition
Indian Ricegrass	0.%	1%	
long leaf phlox	0%	Trace	
phlox spp.	0.%	Trace	
black sagebrush	17%	93%	
rabbitbrush spp.	4%	5%	
winterfat	1%	Trace	
Total Cover	21%		15-20%

Line Intercept Cover			
Date	Pasture		Key Area/UTMs
7/10/2007	Newark Allotment		N-6/E624327 N4370251
	Range Site		
Shallow Calcareous Loam 8-10” 028BY011NV ARNO4/ACHY/HECO26			
Species	Cover (%)	Composition (%)	Potential Natural Condition
Indian Ricegrass	1%		
bottlebrush squirreltail	0%		
prickly phlox	0%		
black sagebrush	19%		
rabbitbrush spp.	3%		
winterfat	1%		
Total Cover	24%		15-20%

4.5 Similarity Index of Ecological Site Inventory

Table 4.5-1. Ecological Condition measured at two key areas on the Warm Springs Trail, 1999 and 2008.

Warm Springs Trail Allotment (Key Area)	Ecological Site	(%) Cover at key area	Existing Vegetative Composition At Key Area (%)	Potential Vegetative Composition Expected at HCPC (%)	Similarity Index
WS-26 (1999)	Sodic Flat **028BY020NV** SAVE4/SPAI	19%	Grasses = 1% Forbs = Trace Shrubs = 99%	Grasses = 15% Forbs = 5% Shrubs = 80%	81% HCPC
Newark N-6 (2008)	Shallow Calcareous Loam **028BY011NV** ARNO4/ACHY/HECO 4	21%	Grasses = 1% Forbs = 1% Shrubs = 98%	Grasses = 50% Forbs = 5% Shrubs = 45%	40% mid-seral

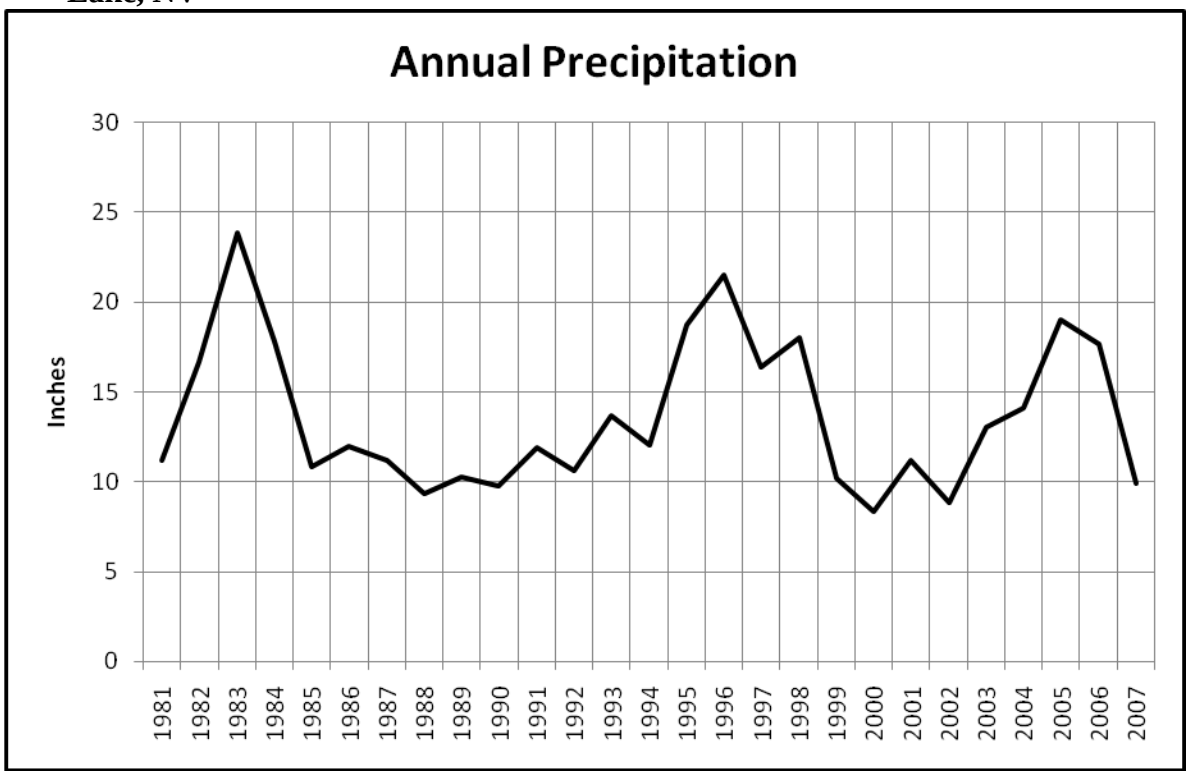
5.0 Precipitation data

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 Ruby Lake, Nevada weather station provides an accurate representation of the annual precipitation on the Railroad Pass Allotment. Table 5.1 and Figure 5.2 summarize annual precipitation data collected since 1981.

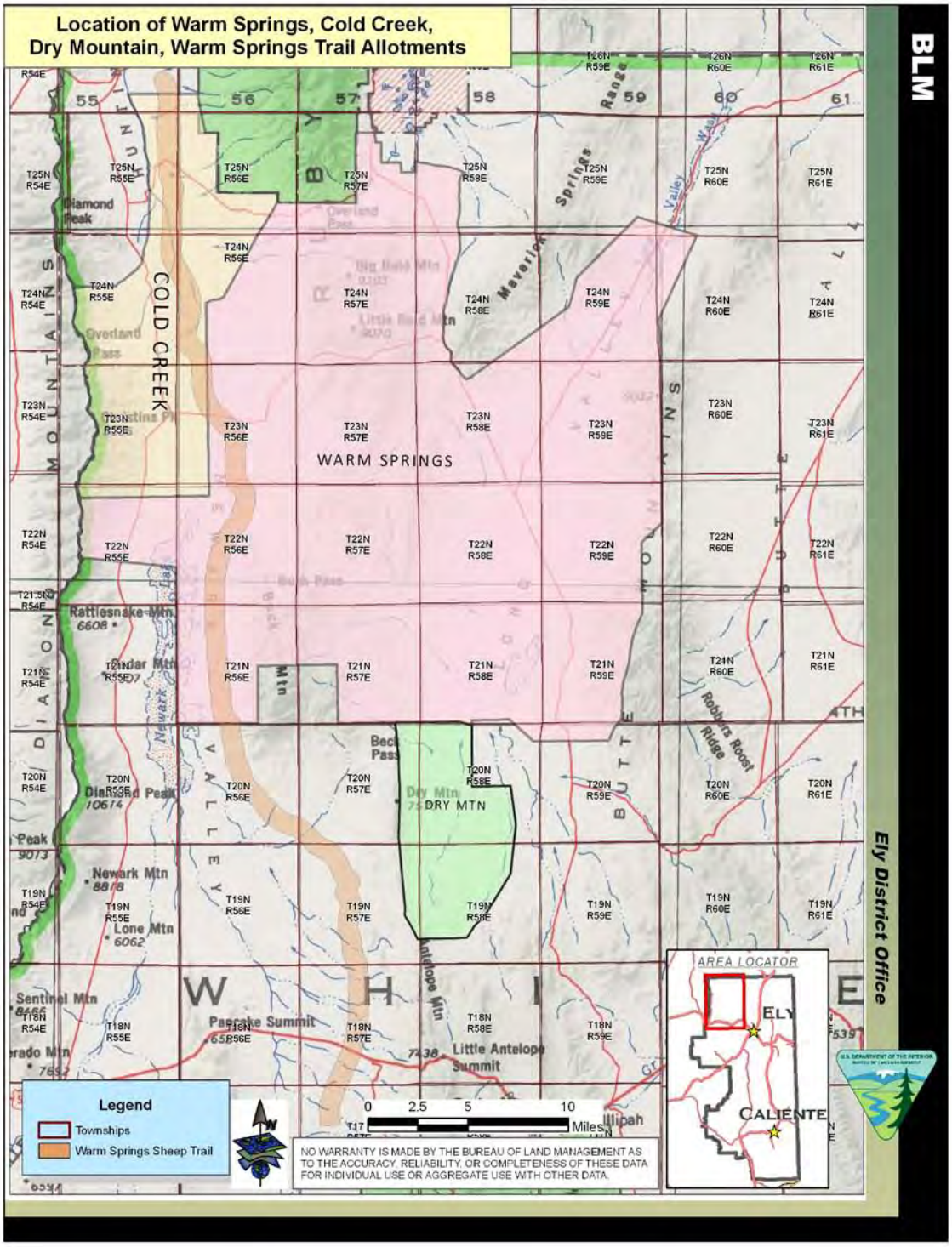
Table 5.1. Western Regional Climate Center Precipitation Data from Ruby Lake, NV

YEAR	ANNUAL PRECIP. (inches)	YEAR	ANNUAL PRECIP. (inches)	YEAR	ANNUAL PRECIP. (inches)
1981	11.22	1990	9.78	1999	10.20
1982	16.67	1991	11.89	2000	8.34
1983	23.86	1992	10.62	2001	11.19
1984	17.78	1993	13.67	2002	8.85
1985	10.84	1994	12.02	2003	13.06
1986	12.00	1995	18.70	2004	14.08
1987	11.20	1996	21.48	2005	19.00
1988	9.34	1997	16.40	2006	17.65
1989	10.28	1998	18.03	2007	9.92

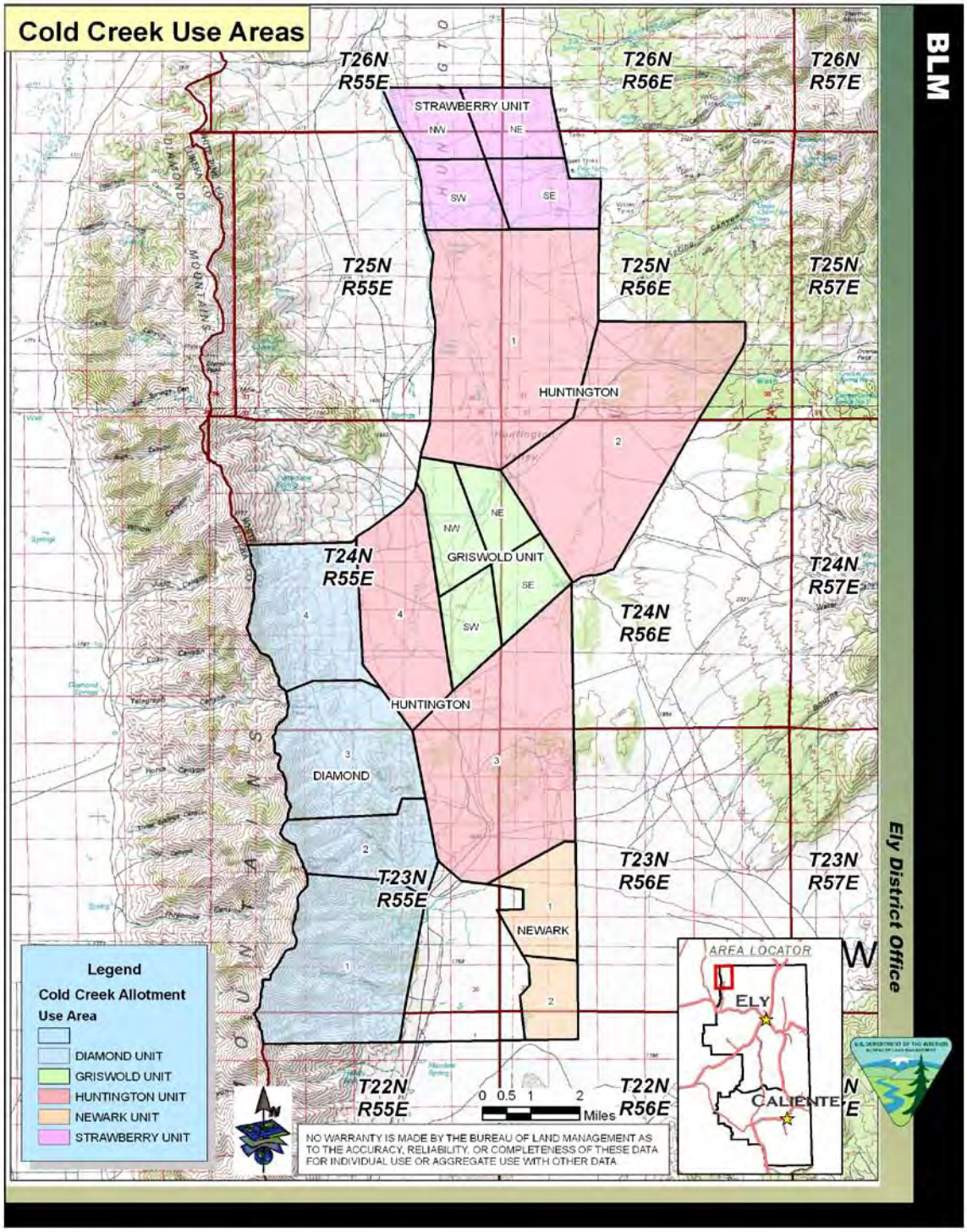
Figure 5.2. Precipitation Data (1981-2007) from Western Regional Climate Center from Ruby Lake, NV



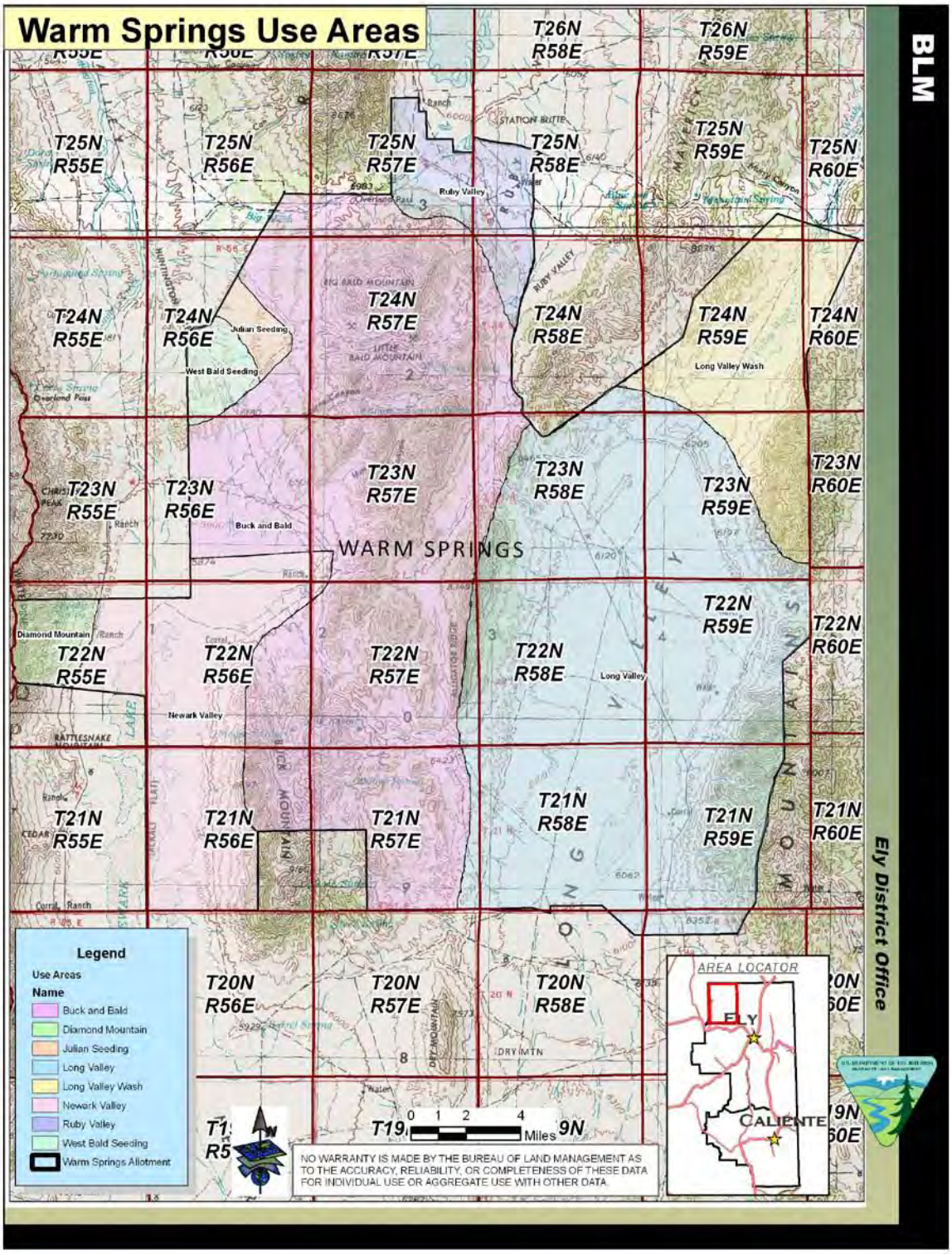
Appendix II - Maps



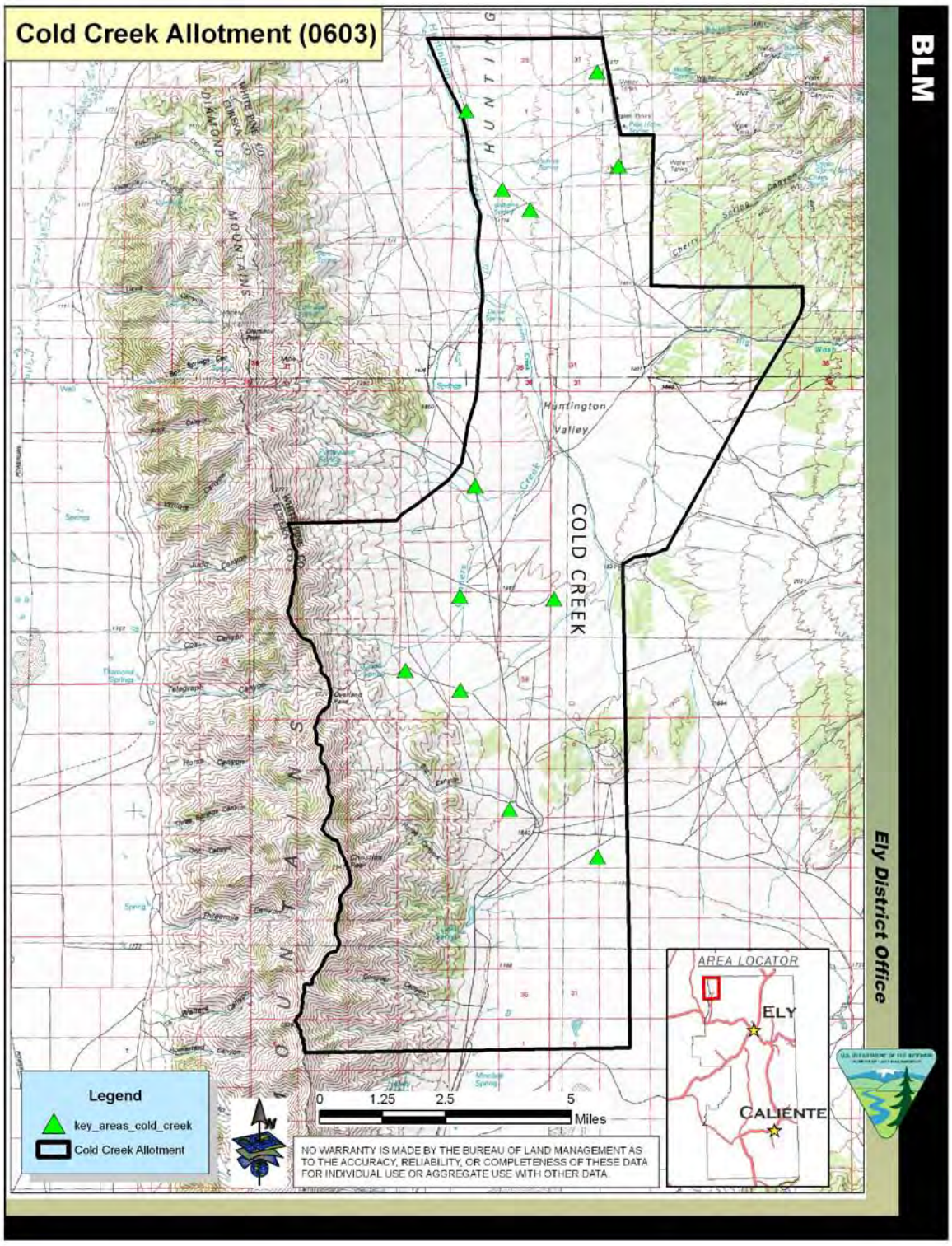
Map I. Location of Warm Springs, Cold Creek, and Dry Mountain and Warm Springs Trail Allotments.



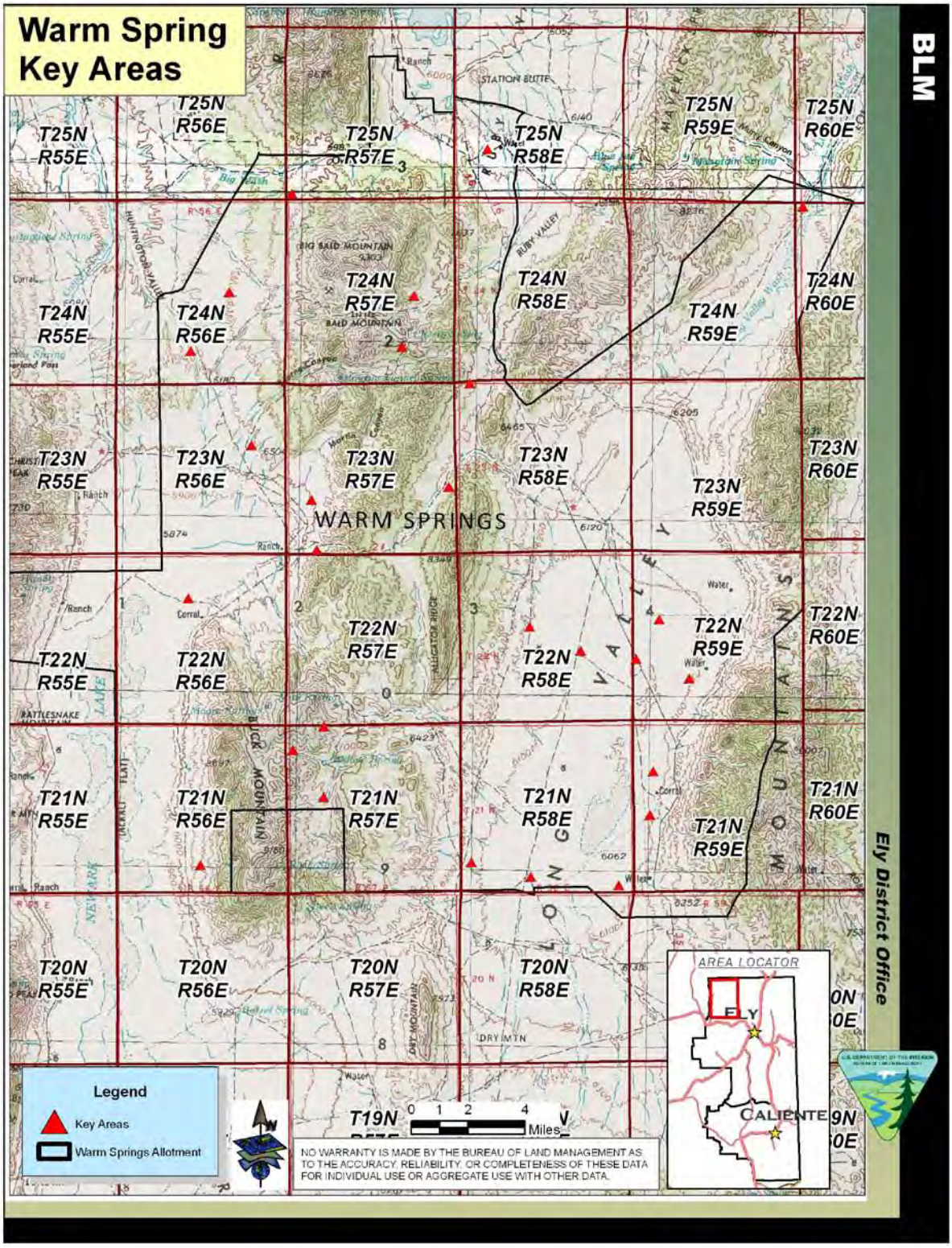
Map II. The five Use Areas of Cold Creek Allotment.



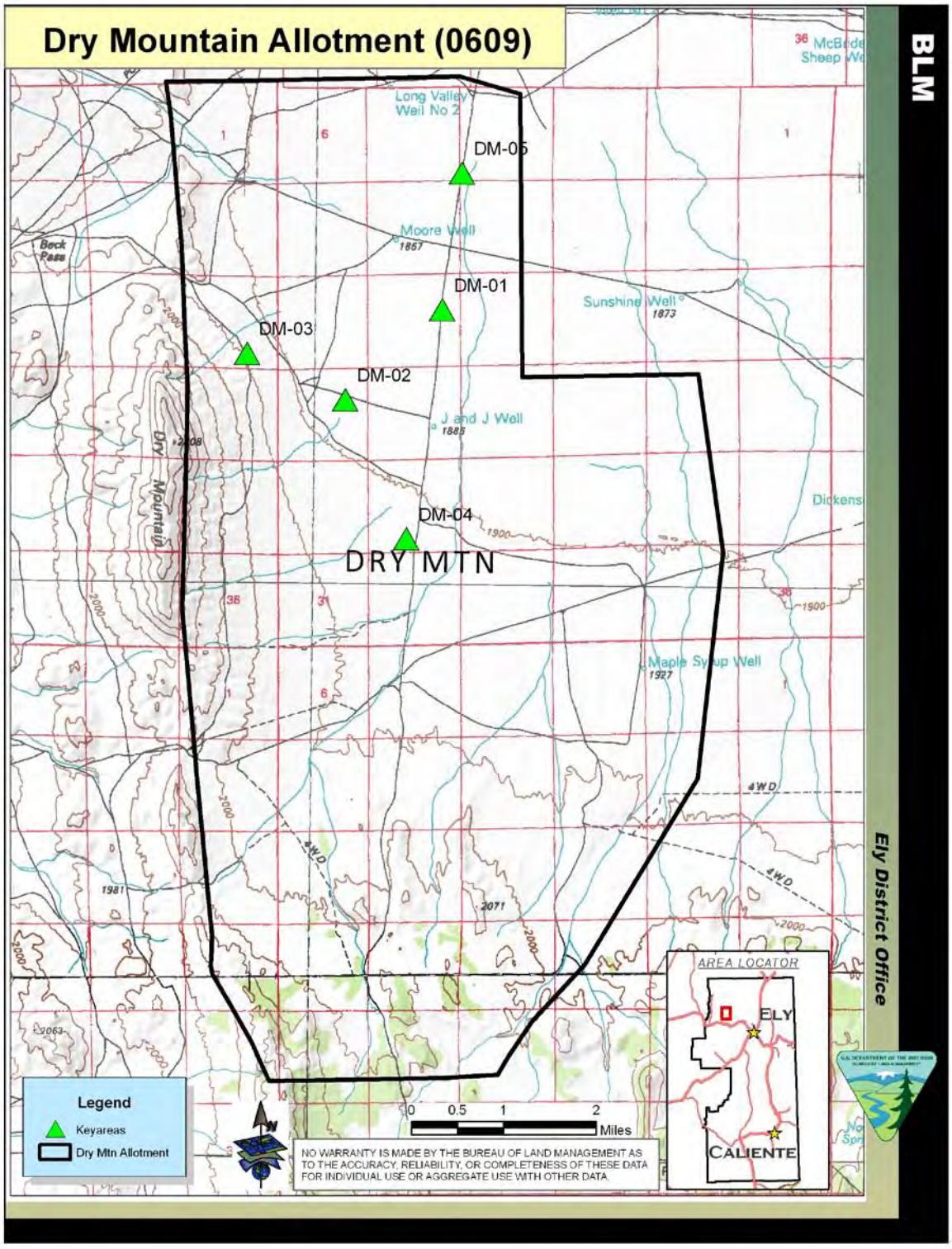
Map III. Warm Springs Allotment, divided into eight use areas.



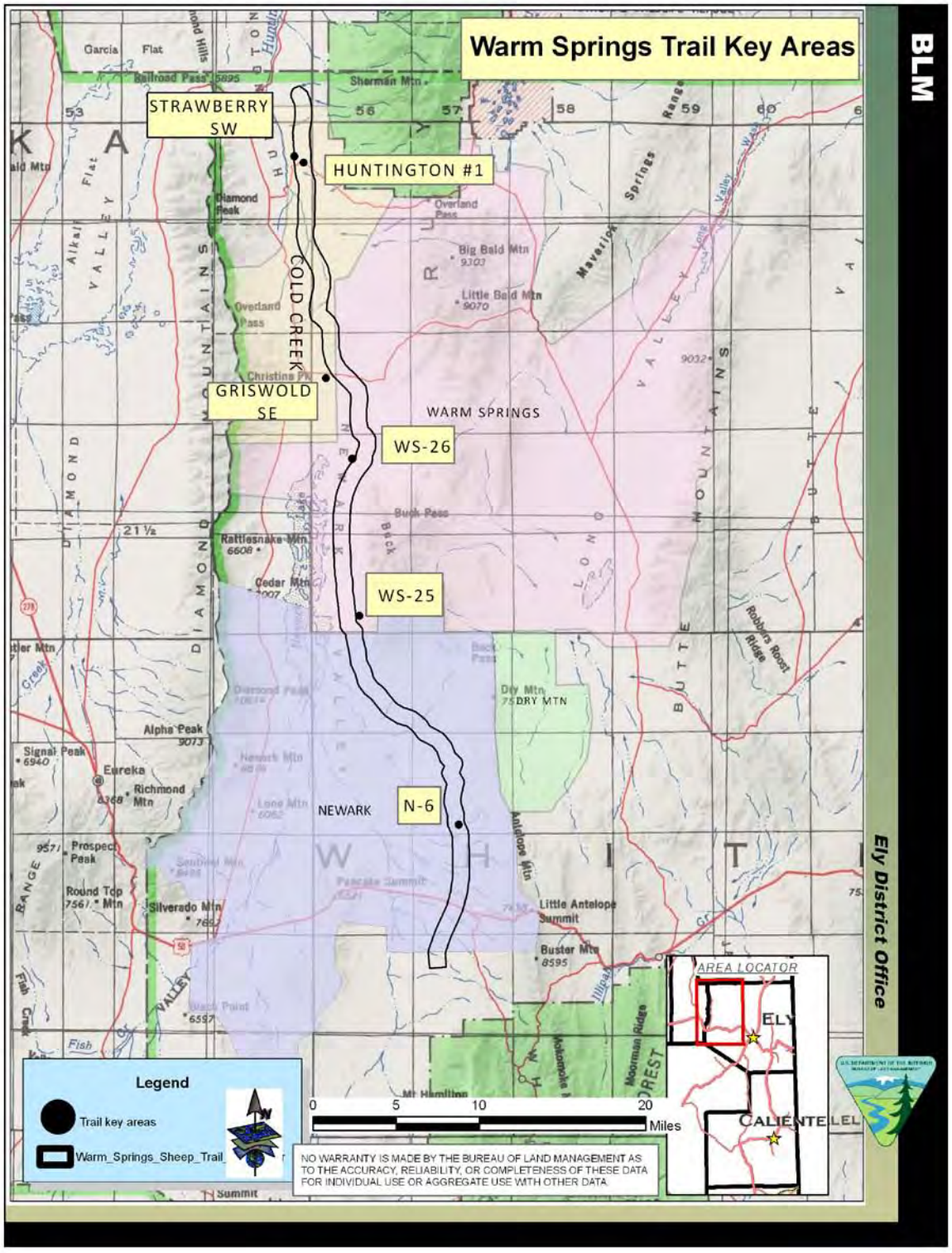
Map IV. Locations of Cold Creek Allotment Key areas.



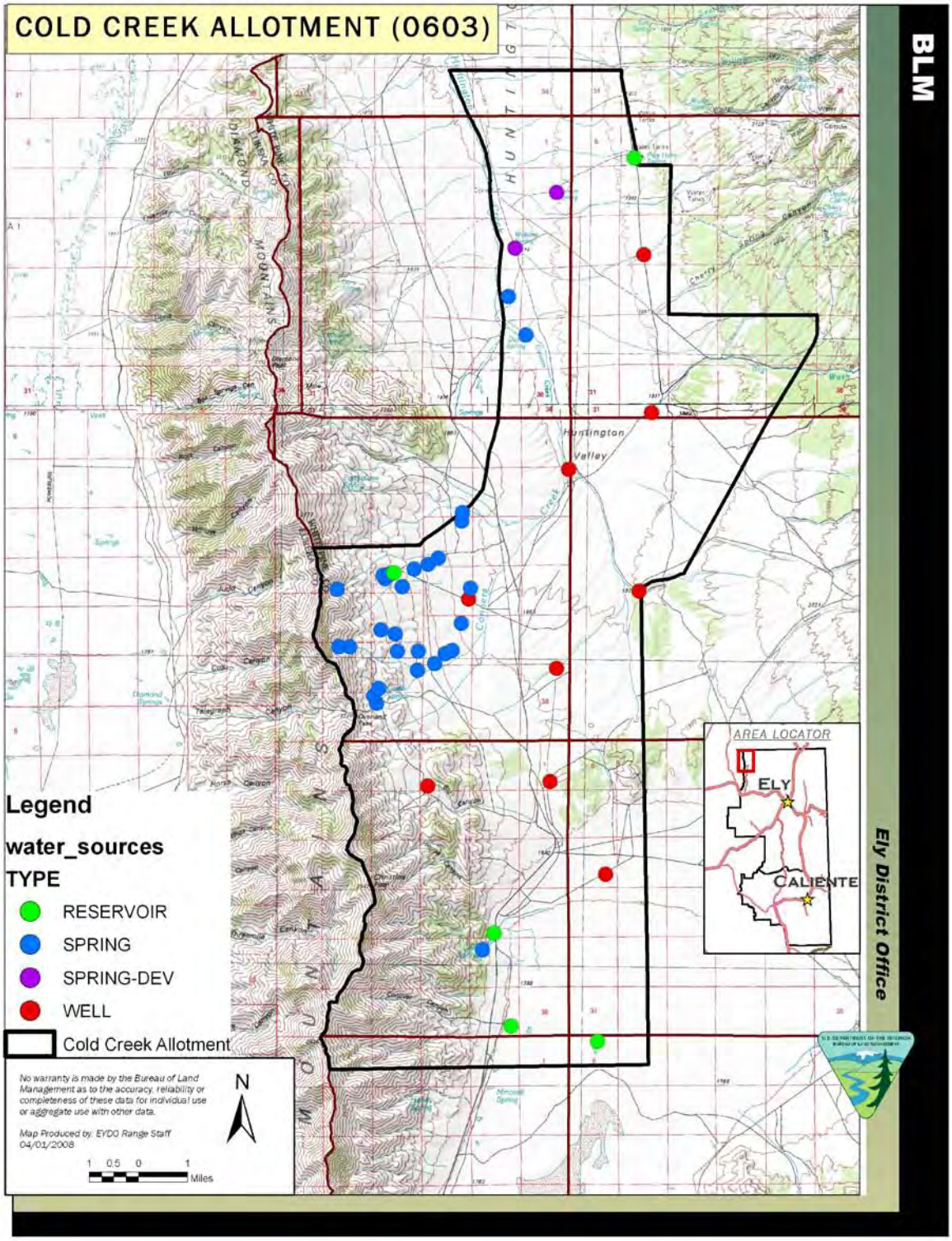
Map V. Location of Key areas on the Warm Springs Allotment**.**



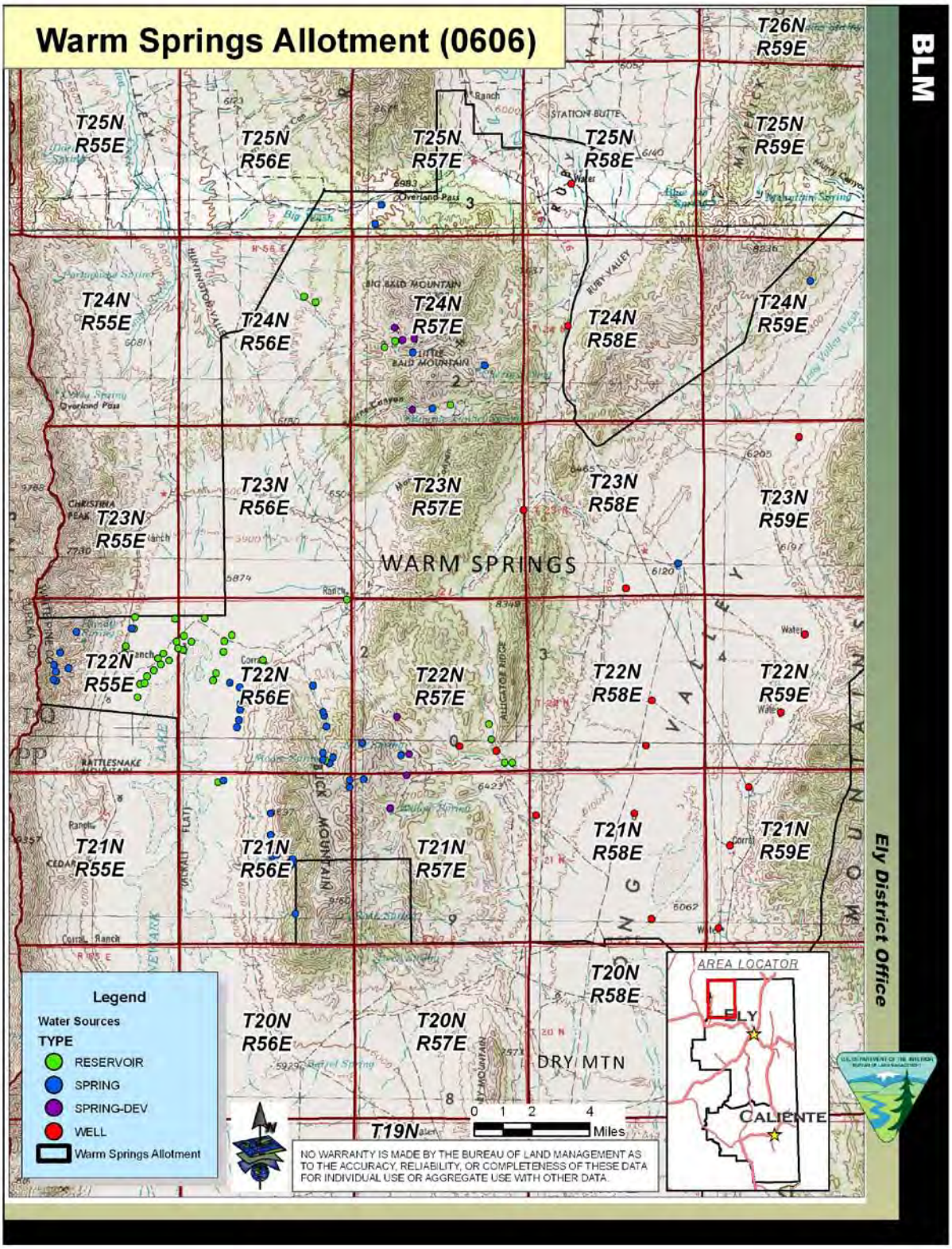
Map VI. Location of Dry Mountain Key areas.



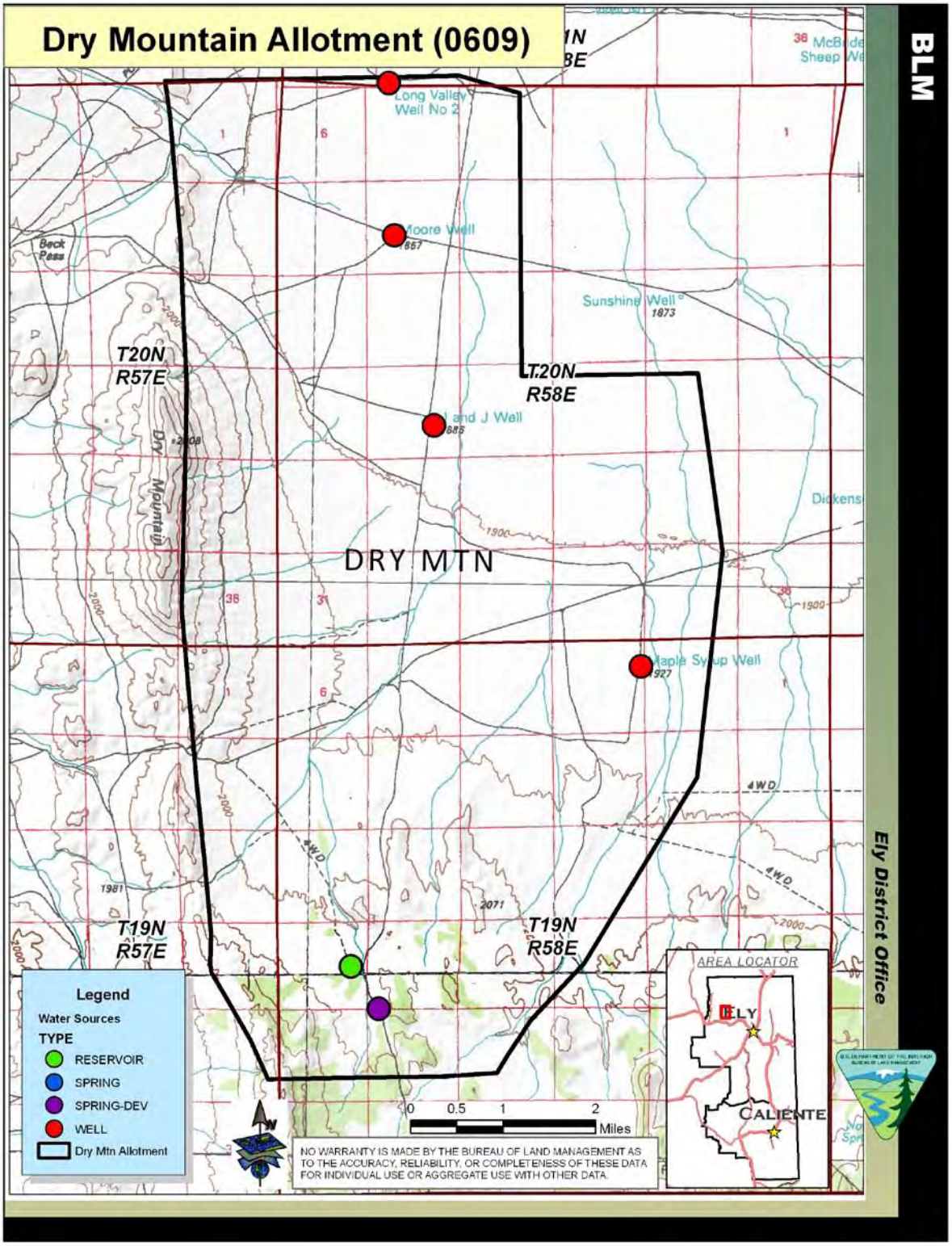
Map VII. Location of Key Areas on Warm Springs Trail.



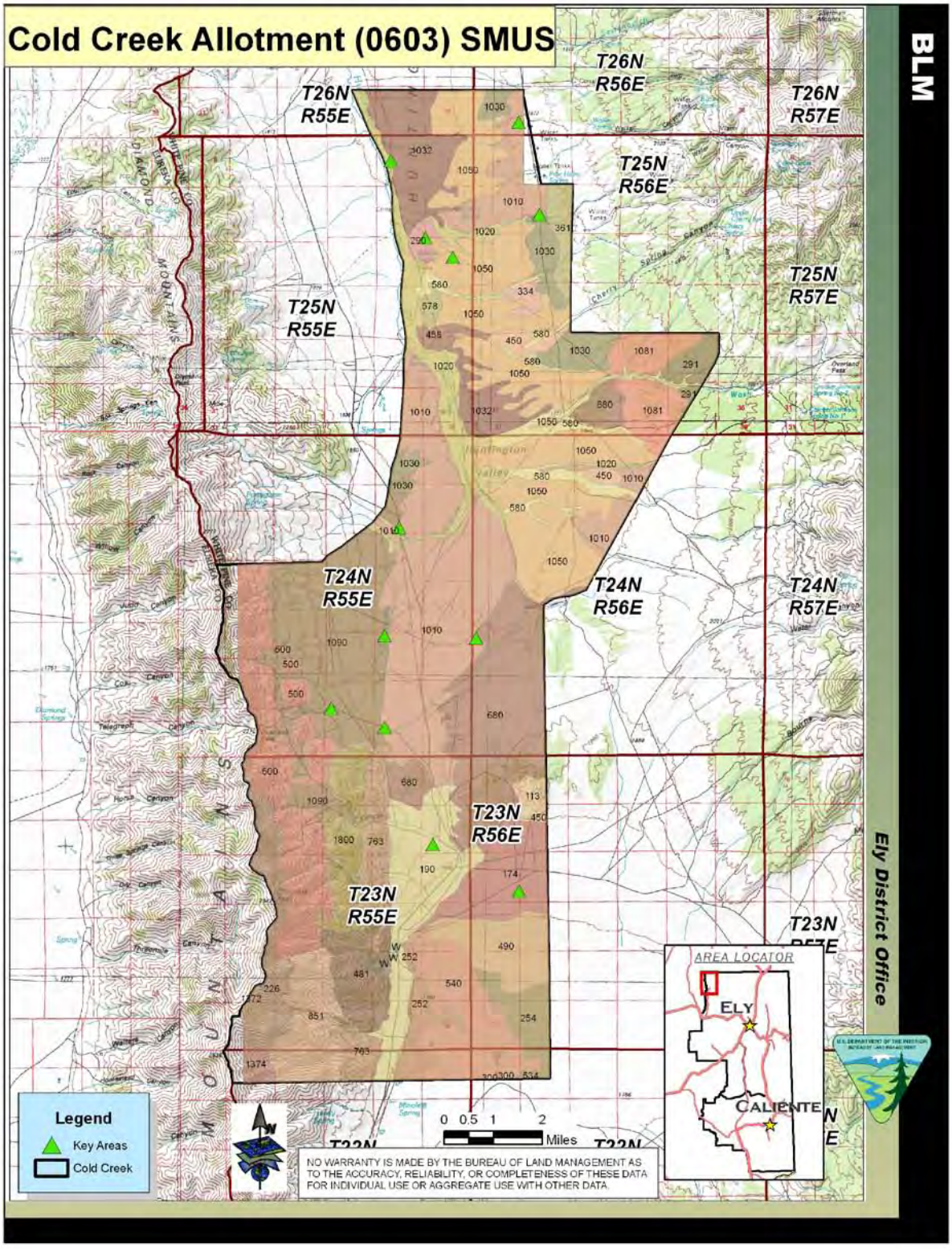
Map VIII. Water sources identified within the Cold Creek Allotment.



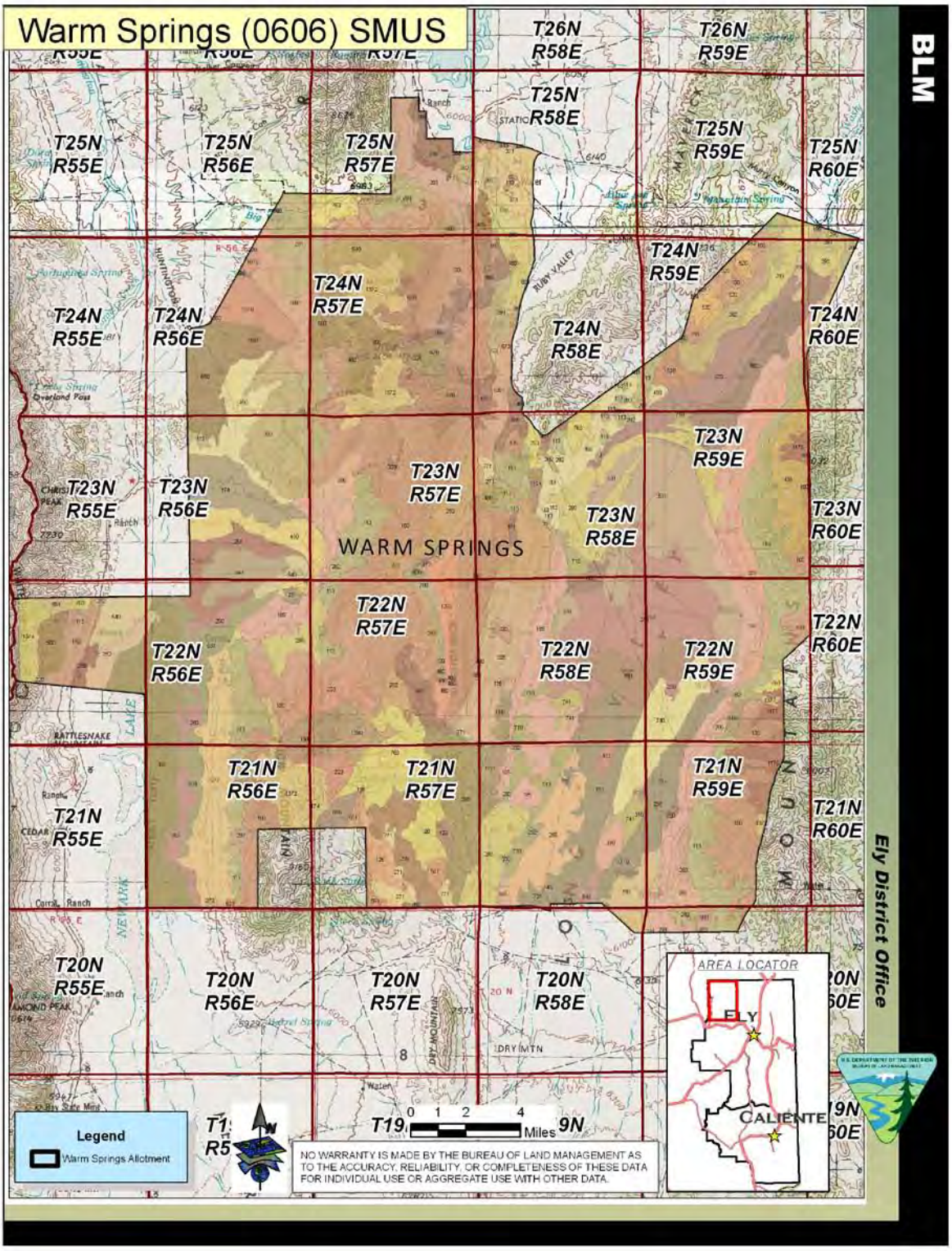
Map IX. Water sources identified within the Warm Springs Allotment**.**



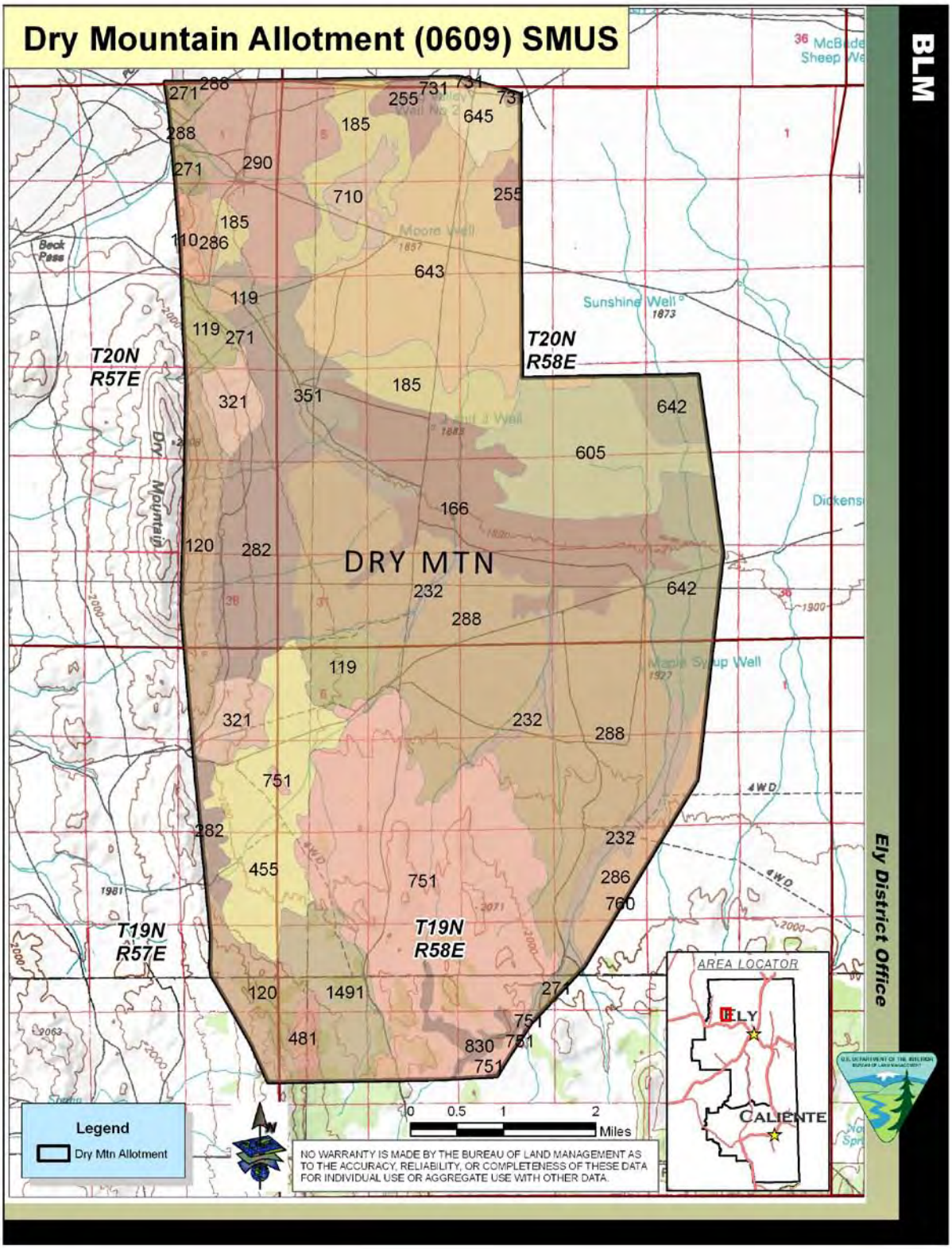
Map X . Water sources identified within the Dry Mountain Allotment**.**



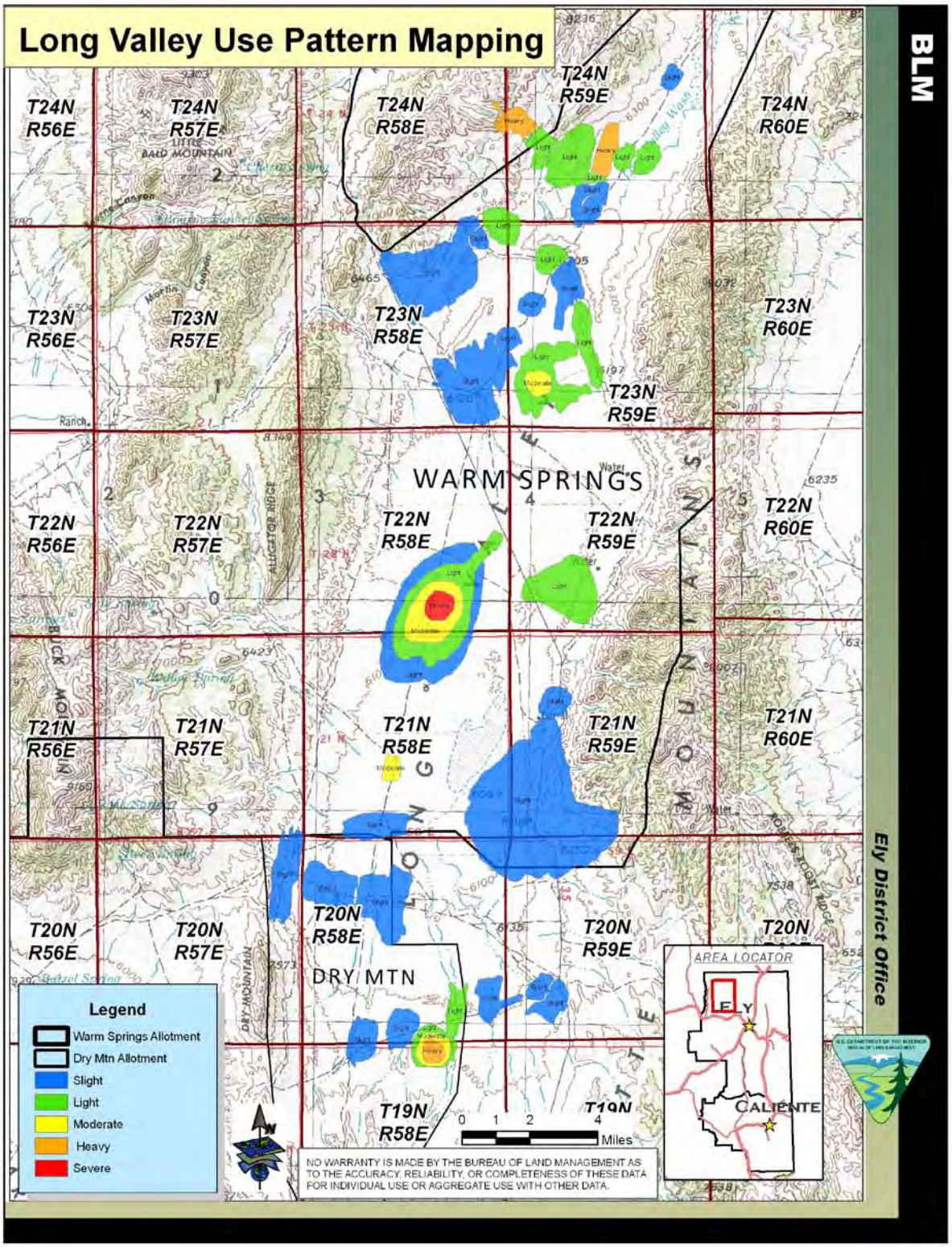
Map XI. Soil Mapping Units (SMUs) identified within the Cold Creek Allotment**.**



Map XII. Soil Mapping Units (SMUs) identified within the Warm Springs Allotment.



Map XIII. Soil Mapping Units (SMUs) identified in the Dry Mountain Allotment**.**



Map XIV. Use pattern mapping in Long Valley within the Warm Springs and Dry Mountain Allotments, collected summer 2007.

Appendix III
Terms and Conditions

TUMBLING JR RANCH

Term Permit for Tumbling JR Ranch (#2702966).

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Cold Creek (00603)	850 Cattle	4/16 - 10/31	100	Active	5561
Dry Mountain (00609)	191 Cattle 500 Sheep	10/01 - 04/01 10/01 - 04/01	100 100	Active Active	1149 602
Warm Springs (00606)	642 Cattle	03/01 - 2/28	100	Active	7704
Warm Springs Trail (00622)	4600 Sheep 4700 Sheep	03/01 - 03/31 11/01 - 11/30	100 100	Active Active	938 927

*% Public Land is the percent of public land for billing purposes.
**AUMs may differ from Active Use due to a rounding difference with the number of livestock and the period of use.

Allotment Summary (AUMs)

Allotment	Active AUMs	Suspended AUMs	Grazing Preference
Cold Creek (00603)	5561	4035	9596
Warm Springs (00606)	7709	16251	23960
Dry Mountain (00609)	1149	1675	2824
Warm Springs Trail (00622)	1865	0	1865

Terms and Conditions
Livestock grazing will be authorized in accordance with the Livestock Grazing Management Agreement for the Tumbling JR Ranch dated April 2009**.**

Utilization levels will not exceed 50% of current year growth during winter use on key perennial species and will not exceed 45% of current year growth during summer use on key perennial species on all allotments unless otherwise noted.

- 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.

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.

Place salt and supplements at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc. Place salt and mineral supplements at least 1 mile from sage grouse leks.

Warm Springs Allotment:

- Buck and Bald Use Area

Livestock use will continue as spring/summer use with a season of use from 04/01 to 08/01. Permitted use will remain at 2,269 AUMs.
Authorized grazing use in summer use areas will be in accordance with the following use levels:

Utilization levels on key species will not exceed 45% of current year's growth during spring/summer use.

Removal of cattle by 08/01 will continue in order to not exceed proper use levels on the key riparian species

- Ruby Valley Use Area

Livestock use in the Ruby Valley Use area will be either spring/summer fall (4/15-10/15) or winter (10/15-4/15) but not both in the same growing season.

- The Julian and West Bald crested wheatgrass seedings

The Julian and West Bald Seedings will be used and licensed separately for spring/summer/fall cattle use (4/15-10/31). If spring use is made prior to 6/1 it will be alternated between the two seedings from year to year.

- Newark Valley Use Area

The livestock season of use will continue as fall/winter/spring (08/01 to 04/15). Permitted use will continue to be authorized at 357 AUMs.

Authorized grazing use will be in accordance with the following allowable use levels for the Ruby valley Use Area, Julian and West Bald crested wheatgrass seedings and the Newark Valley Use Area: Utilization will not exceed 50% of current year growth during winter use on winterfat and the key perennial species and will not exceed 45% of current year growth during summer use on bitterbrush and the key perennial species.

Dry Mountain Allotment - Warm Springs Allotment

Permitted use for the Dry Mountain Allotment will continue at 1,149 AUMs of cattle use, for the period of 10/01 to 04/01. The permitted sheep use will be 602 AUMs for the period 10/01 to 04/01.
Dry Mountain Allotment/Long Valley Use Area /Long Valley Wash Use Area.

The Long Valley Use Area, the Dry Mountain Allotment, the Long Valley Wash Use Area will be combined. Cattle grazing use will continue as fall/winter with the season of use from 10/01 to 04/01 in the Long Valley, Long Valley Wash and Dry Mountain use areas. Permitted use for Long Valley Use Area, the Dry Mountain Allotment and the Long Valley Wash Use Area combined will not exceed 4,615 AUMs (3,088 AUMs Long Valley Use). Flexibility in stocking levels will allow some of the 1,149 AUMs permitted use from Dry Mountain Allotment to be used in the Long Valley Use Area. This will be dependent upon forage availability. Some grazing use must still be made in the Dry Mountain Allotment. Flexibility associated with these use areas will be determined annually by the authorized officer in accordance with Tumbling JR Ranch.

Authorized grazing use in the winter use areas will be in accordance with the following allowable use levels:

Utilization levels will not exceed 50% of current year growth during winter use on winterfat and key perennial species.

In order to maintain animal distribution in the Long Valley Use Area and Dry Mountain Allotment, the following wells will all be pumped during the use period, though not necessarily all at the same time, to distribute use:

Long Valley Well#2 - T21N, R58E, sec. 32, SWSW
Moore Well - T20N, R58E, sec. 8 NESW
J&J Well - T20N, R 58E, sec. 20, SWNE
Maple Syrup Well – T19N, R58E, sec. 3 NENE

Cold Creek Allotment

Active use for the Cold Creek Allotment will continue at 5,561 AUMs cattle use, for the period of 04/16 to 10/31. The pasture rotation system identified in the January 23, 1992 FMUD will be amended as a result of the SDD, (March 2009). The Cold Creek Allotment will be divided into three units; the North Unit, South Unit and the Diamond Unit. The three units include a total of 18 pastures. Refer to the Livestock Grazing Management Agreement for active use AUMs by pasture.

A deferred rest rotation grazing system will be established for the North and South Units. Grazing use will begin in the North Unit on even years. Grazing Use will begin in the South Unit on odd years. When the North Unit is grazed during the spring, grazing will begin on or later than April 16. Cattle will be moved to the South Unit when utilization levels are met and cattle will be removed before or on October 31. Grazing in the South Unit will begin on or later than April 16. Cattle will be moved to the North Unit when utilization levels are met and cattle will be removed on or before October 31.

Within the Northern Unit, the Strawberry Pastures will be rotated annually with the two western pastures used first and then eastern pastures used. The following year the pastures will be switched with the eastern pastures used first and then the western pastures used afterwards.

Movement dates between the North and South Units will be based on annual forage condition and availability. Movement dates in and out of pastures will be based on forage availability, condition and utilization levels. Movement dates may vary each year based on these conditions.

Utilization levels will be established at 60% for the crested wheatgrass seedings and at 50% for the native pastures.

Key riparian areas on Cold Creek Allotment will be utilized in accordance with the deferred rest rotation system. Corta spring is located in the pasture Diamond #3. Abal Springs is located in the Huntinton #4. Unnamed spring is located in Huntington #4. Cold Spring is located in pasture Diamond #1.

Annual stocking levels for the units will not exceed the active AUMS for each unit. The total active use for the Cold Creek Allotment is 5561 AUMS. The total AUMS authorized in the North Unit will not exceed 2019 AUMS. The total AUMS in the South Unit will not exceed 2572 AUMs. Active use AUMS for the pastures within each unit are to be used as guides.

The Diamond Unit contains four pastures. Diamond Pasture #1, #2, #3, will be grazed for 30 days either in fall or spring and alternating from year to year. Diamond #4 will be used every other year.

The aforementioned grazing system will be utilized with flexibility and deviations in livestock numbers, areas of use and period of use. Annual grazing use will not exceed the total 5561 AUMs for Cold Creek Allotment unless authorized. Seasonal basis deviations will be based upon pasture carrying capacity, forage availability and condition, current growing conditions, planned rest periods, and any changes as a result of the previous year's monitoring and achievement of the standards. Deviations warranted annually would not prevent attainment of shared goals, the multiple-use objectives and the standards for grazing administration.

Warm Springs Trail

Permitted use for the Warm Springs Trail Allotment will continue at 938 AUMs with a season of use from 03/01 to 03/31, and 927 AUMs with a season of use from 11/01 to 11/30. Sheep are the kind of livestock.

PARIS LIVESTOCK

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
Cold Creek 00603	1182 Sheep 1200 Sheep	04/15 to 04/30 11/01 to 11/15	100 100	Active Active	124 118
Warm Springs Trail 00622	2750 Sheep 2754 Sheep	4/15 to 05/01 11/15 to 12/01	100 100	Active Active	307 308

*% 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
Cold Creek	242	0	242
Warm Springs Trail	615	0	615

Terms and Conditions Cold Creek Allotment (00603):

1. The pasture rotation system identified in the Final Multiple Use Decision dated January 23, 1992 will be amended as a result of the SDD, (March 2009).
2. On the Cold Creek Allotment, sheep preference will remain at 242 AUMs tied to the Diamond #3 and Diamond #4 Pastures. Flexibility in sheep numbers will be allowed up to a maximum of 6,600 head, not to exceed the maximum active AUMS. Flexibility in period of use will be allowed from 3/1 to 11/31.
3. Maximum allowable use levels will be established as follows:
    a. Perennial native grasses: 50% current year's growth
    b. Perennial shrubs and half-shrubs: 50% use on current annual production.
    c. Perennial non-native seedings: 65% current year's growth
    d. Livestock will be moved to another authorized pasture or removed from the allotment before utilization objectives are met or no later than 5 days after meeting the utilization objectives. Any deviation in livestock movement will require authorization from the authorized officer.

Additional Terms and Conditions Common to All Grazing Allotments and Permits:

10. 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.

11. 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.

12. The authorized officer is requiring that an actual use report (form 4130-5) be submitted within 15 days after completing your annual grazing use.

13. 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.

14. 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.

15. 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.

16. 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.

17. The permittee is responsible for all maintenance of assigned range improvements including wildlife escape ramps for both permanent and temporary water troughs.

18. 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.

Appendix IV
Livestock Grazing Management Agreement
Tumbling JR Ranch
Egan Field Office

I. Introduction
Silver State Ranches (Now Tumbling JR Ranch) and BLM first entered into a Livestock Grazing Management Agreement for the five year period 2002-2007. On March 17, 2006, the Livestock Grazing Agreement was amended to change the term of the agreement to 05/19/2014.

During 2009, a Standard Determination Document was completed for the Warm Springs Allotment, Cold Creek Allotment, Dry Mountain Allotment, and Warm Springs Trail. This agreement authorizes grazing use in accordance with the findings for achievement of the Northeastern Great Basin RAC Standards (1997).

The purpose of this agreement is to document livestock grazing management for Tumbling JR Ranch on the Warm Springs Allotment, Dry Mountain Allotment, Cold Creek Allotment, and Warm Springs Trail for the five year period 03/30/2009 – 03/30/2014. This agreement will recognize and identify livestock practices and management procedures for Tumbling JR Ranch and the Bureau of Land Management Egan Field Office (CFR 4120). Management practices presented in this agreement will serve to maintain or achieve the Northeastern Great Basin Area Standards for Grazing Administration which is specifically related to authorize grazing use.

This agreement was prepared in consultation, coordination, and cooperation with Tumbling JR Ranch, ranch manager Ben Patterson.

II. Existing Livestock Management Practices
Since 1999 annual meetings have been held to discuss and develop livestock management practices, grazing schedules and an annual grazing plan. Since 1999, flexibility in stocking levels, periods of use, and trail routes have been granted. The primary purpose of allowing flexibility has been to establish a long-term stable grazing operation and grazing rotation system. The stocking levels, periods of use and trail routes have been based upon pasture carrying capacity, forage availability and condition, current growing conditions, planned rest periods, and any changes as a result of the previous year's monitoring and achievement of the standards.

Final Multiple Use Decisions (FMUDs) were issued for the Warm Springs Allotment on March 14, 1994, for the Dry Mountain Allotment on July 12, 1990, and for the Cold Creek Allotment on January 23, 1992.

III. Grazing System
A. Warm Springs Allotment
Permitted use for the Warm Springs Allotment will continue at 7,744 AUMs cattle use, subdivided into six use areas (Buck and Bald Use Area/Diamond Mts., Ruby Valley Use Area, Julian and West Bald seedings Use Area, Newark Valley Use Area, Long Valley Use Area, and Long Valley Wash Use Area.) The cattle operation on this allotment has been year-round, with Newark and Long Valley used as

winter/spring range, and the Diamond and Buck/Bald Mountains for spring/summer use. The Julian and West Bald crested wheatgrass seedings and the Ruby Valley Use Area also provide summer forage.

- Buck and Bald Use Area

Livestock use will continue as spring/summer use with a season of use from 04/01 to 08/01. Permitted use will remain at 2,269 AUMs.

Authorized grazing use in summer use areas will be in accordance with the following use levels:

Utilization levels on key species will not exceed 45% of current year's growth during spring/summer use.
Removal of cattle by 08/01 will continue in order to not exceed proper use levels on the key riparian species

- Ruby Valley Use Area

Livestock use in the Ruby Valley Use area will be either spring/summer fall (4/15-10/15) or winter (10/15-4/15) but not both in the same growing season.

- The Julian and West Bald crested wheatgrass seedings

The Julian and West Bald Seedings will be used and licensed separately for spring/summer/fall cattle use (4/15-10/31). If spring use is made prior to 6/1 it will be alternated between the two seedings from year to year.

- Newark Valley Use Area

The livestock season of use will continue as fall/winter/spring (08/01 to 04/15). Permitted use will continue to be authorized at 357 AUMs.

B. Dry Mountain Allotment - Warm Springs Allotment

Permitted use for the Dry Mountain Allotment will continue at 1,149 AUMs of cattle use, for the period of 10/01 to 04/01. The permitted sheep use will be 602 AUMs for the period 10/01 to 04/01.

Dry Mountain Allotment/Long Valley Use Area /Long Valley Wash Use Area

The Long Valley Use Area, the Dry Mountain Allotment, the Long Valley Wash Use Area will be combined. Cattle grazing use will continue as fall/winter with the season of use from 10/01 to 04/01 in the Long Valley, Long Valley Wash and Dry Mountain use areas. Permitted use for Long Valley Use Area, the Dry Mountain Allotment and the Long Valley Wash Use Area combined will not exceed 4,615 AUMs (3,088 AUMs Long Valley Use). Flexibility in stocking levels will allow some of the 1,149 AUMs permitted use from Dry Mountain Allotment to be used in the Long Valley Use Area. This will be dependent upon forage availability. Some grazing use must still be made in the Dry Mountain Allotment. Flexibility associated with these use areas will be determined annually by the authorized officer in accordance with Tumbling JR Ranch.

Authorized grazing use in the winter use areas will be in accordance with the following allowable use levels:

Utilization levels will not exceed 50% of current year growth during winter use on winterfat and key perennial species.

In order to maintain animal distribution in the Long Valley Use Area and Dry Mountain Allotment, the following wells will all be pumped during the use period, though not necessarily all at the same time, to distribute use:

Long Valley Well#2 - T21N, R58E, sec. 32, SWSW
Moore Well - T20N, R58E, sec. 8 NESW
J&J Well - T20N, R 58E, sec. 20, SWNE
Maple Syrup Well – T19N, R58E, sec. 3 NENE

C. Cold Creek Allotment

Permitted use for the Cold Creek Allotment will continue at 5,561 AUMs cattle use, for the period of 04/16 to 10/31. The pasture rotation system identified in the January 23, 1992 FMUD will be amended as a result of the SDD, (March 2009). The Cold Creek Allotment will be divided into three units; the North Unit, South Unit and the Diamond Unit. The three units include a total of 18 pastures.

The grazing system for each unit is described as follows:

Cold Creek Allotment	
NORTHERN UNIT	
UNIT/ PASTURE INCLUDED	**ACTIVE USE (AUMS)**
Strawberry NW (seeding)	**526**
Strawberry SW (seeding)	**345**
Strawberry NE(seeding)	**263**
Strawberry SE (seeding)	**466**
Huntington #1(native)	**321**
Huntington #2 (native	**98**
Total AUMs	**2019**

Cold Creek Allotment	
SOUTHERN UNIT	
UNIT/ PASTURE INCLUDED	**ACTIVE USE (AUMS)**
Griswold NW (seeding)	321
Griswold SW (seeding)	338
Griswold NE(seeding)	300
Griswold SE (seeding)	370
Huntington #4 (native)	442
Huntington #3 (native)	318
Newark #1 (seeding)	319
Newark #2 (native)	164
Total AUMs	**2572**

A differed rest rotation grazing system will be established for the North and South Units. Grazing use will begin in the North Unit on even years. Grazing Use will begin in the South Unit on odd years. When the North Unit is grazed during the spring, grazing will begin on or later than April 16. Cattle will be moved to the South Unit when utilization levels are met and cattle will be removed before or on October 31. Grazing in the South Unit will begin on or later than April 16. Cattle will be moved to the North Unit when utilization levels are met and cattle will be removed on or before October 31.

Within the Northern Unit, the Strawberry Pastures will be rotated annually with the two western pastures used first and then eastern pastures used. The following year the pastures will be switched with the eastern pastures used first and then the western pastures used afterwards.

Movement dates between the North and South Units will be based on annual forage condition and availability. Movement dates in and out of pastures will be based on forage availability, condition and utilization levels. Movement dates may vary each year based on these conditions.

> Utilization levels will be established at 60% for the crested wheatgrass seedings and at 50% for the native pastures.

Key riparian areas on Cold Creek Allotment will be utilized in accordance with the differed rest rotation system. Corta spring is located in the pasture Diamond #3. Abal Springs is located in the Huntinton #4. Unnamed spring is located in Huntington #4. Cold Spring is located in pasture Diamond #1.

Annual stocking levels for the units will not exceed the active AUMS for each unit. The total active use for the Cold Creek Allotment is 5561 AUMS. The total AUMS authorized in the North Unit will not exceed 2019 AUMS. The total AUMS in the South Unit will not exceed 2572 AUMs. Active use AUMS for the pastures within each unit are to be used as guides.

Cold Creek Allotment	
DIAMOND UNIT	
UNIT/ PASTURE INCLUDED	**ACTIVE USE (AUMS)**
Diamond #1	193
Diamond #2	219
Diamond #3	323
Diamond #4	235
Total AUMs	**970**

The Diamond Unit contains four pastures. Diamond Pasture #1, #2, #3, will be grazed for 30 days either in fall or spring and alternating from year to year. Diamond #4 will be used every other year.

The aforementioned grazing system will be utilized with flexibility and deviations in livestock numbers, areas of use and period of use. Annual grazing use will not exceed the total 5561 AUMs for Cold Creek Allotment unless authorized. Seasonal basis deviations will be based upon pasture carrying capacity, forage availability and condition, current growing conditions, planned rest periods, and any changes as a result of the previous year's monitoring and achievement of the standards. Deviations warranted annually would not prevent attainment of shared goals, the multiple-use objectives and the standards for grazing administration.

D. Warm Springs Trail

Permitted use for the Warm Springs Trail Allotment will continue at 938 AUMs with a season of use from 03/01 to 03/31, and 927 AUMs with a season of use from 11/01 to 11/30. Sheep are the kind of livestock.

IV. Monitoring/Evaluation

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 management actions, will contribute to the selection of prescribed burn treatments or other types of treatments based on attainment of resource objectives. (p.88)"

Grazing use and stocking levels will also be evaluated after the five year period of the agreement. The evaluation will determine consistency with and achievement of the standards for grazing administration and the allotment specific objectives and shared goals of Tumbling JR Ranch and the Egan Field Office. Following the five year period, a new agreement will be issued. Adjustments may include changes to period-of-use, stocking levels, areas-of-use or other grazing management practices. If adjustments are needed a new term permit will be issued.

V. Other Conditions

In addition to the stipulations in the term permit the following stipulations will apply;

1. 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.

2. The permittee is responsible for all maintenance of assigned range improvements including wildlife escape ramps for both permanent and temporary water troughs.

3. Utilization levels will not exceed 50% of current year growth during winter use on key perennial species and will not exceed 45% of current year growth during summer use on key perennial species on all allotments unless otherwise noted.

- 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.

4. 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.

5. Place salt and supplements at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc. Place salt and mineral supplements at least 1 mile from sage grouse leks.

VI. Agreement

I, the undersigned, do hereby agree to and accept this agreement. I understand that the grazing privileges so authorized herein are subject to the provisions of the Code of Federal Regulations (43 CFR 4100 through 4170) which deal with grazing use on public lands. I also agree that the terms and conditions of this agreement are binding upon the permittee(s), his respective heirs, executors administrators, successors in interest of assignors with such modification as approved or required by the authorized officer.

/s/ *Ben Patterson* — *3/30/09*
Ben Patterson — Date
Tumbling JR Ranch Manager

/s/ *Jeffrey A. Weeks* — *4/10/09*
Jeffrey A. Weeks — Date
Egan Field Manager

Appendix V

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

Term Grazing Permit Renewal for Tumbling JR Ranch
Cold Creek, Warm Springs, Dry Mountain Allotments & Warm Springs Trail
White Pine County, Nevada

On March 10th, 2008 a Noxious & Invasive Weed Risk Assessment was completed for the term grazing permit renewal for the Tumbling JR Ranch on the Cold Creek, Warm Springs, Dry Mountain, and Warm Springs Trail allotments in White Pine County, NV. The current term permit has been issued for the period 09/28/2006 to 05/19/2014. The permit authorizes 5,561 AUMs of cattle use on the Cold Creek Allotment with a use period starting 4/16 to 10/31; 1,149 AUM's for Dry Mountain Allotment with a use period of 10/1 to 4/1 and 7,704 AUM's for Warm Springs Allotment with a use period of 3/1 to 2/28; . Cattle are the approved kind of livestock. The grazing permit area occurs entirely within White Pine County, and is situated in the north east portion of the Ely District BLM. The Warm Springs allotment consists of 306,971 acres of public land the majority of which is located in the Long Valley watershed. The northern part of the Warm Springs allotment is included in the Ruby Valley watershed and the west portion includes the Newark watershed. Small portions of the Warm Springs allotment are included in Huntington and North Butte watersheds. This allotment is made up of 8 large pastures. The Cold Creek allotment consists of 62,103 acres of public land with the north half in the Huntington watershed and the southern portion in the Newark watershed. This allotment is made up of 19 fenced pastures to assist in a rest-rotation grazing system. The Dry Mountain allotment is one large pasture covering 27,552 acres of public land which is nestled entirely in the Long Valley Watershed. The permit would be for a ten year period.

No field weed surveys were completed for this project. Instead the Ely District weed inventory data was consulted. The following species are found within the boundaries of the Cold Creek allotment:

Carduus nutans	Musk thistle
Cirsium vulgare	Bull thistle
Hyscoamus niger	Black henbane
Lepidium draba	Hoary cress
Lepidium latifolium	Tall whitetop
Onopordum acanthium	Scotch thistle

The following species are found within the boundaries of the Warm Springs allotment:

Acroptilon repens	Russian knapweed
Carduus nutans	Musk thistle
Centaurea stoebe	Spotted knapweed
Cirsium arvense	Canada thistle
Cirsium vulgare	Bull thistle
Hyoscyamus niger	Black henbane
Lepidium draba	Hoary cress
Lepidium latifolium	Tall whitetop

Onopordum acanthium	Scotch thistle
Tamarix spp.	Salt cedar

The following species are found within the boundaries of the Dry Mountain allotment:

Lepidium draba	Hoary cress

The following species are found along roads and drainages leading to all three allotments:

Acroptilon repens	Russian knapweed
Carduus nutans	Musk thistle
Centaurea stoebe	Spotted knapweed
Cicuta maculate	Water hemlock
Cirsium arvense	Canada thistle
Cirsium vulgare	Bull thistle
Conium maculatum	Poison hemlock
Euphorbia esula	Leafy spurge
Hyscoamus niger	Black henbane
Lepidium draba	Hoary cress
Onopordum acanthium	Scotch thistle
Tamarix spp.	Salt cedar

All three allotments were last inventoried for noxious weeds in 2002. It should be noted that the Cold Creek and Warm Springs allotments border the BLM Battle Mountain Field Office and no weed inventory data for the BLM Battle Mountain Field Office is available. While not officially documented the following non-native invasive weeds probably occur in or around the allotment: cheatgrass (*Bromus tectorum*), halogeton (*Halogeton glomerus*), 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 (6) at the present time. Since there are currently so many weed infestations within these allotments the proposed action could increase the populations of the noxious and invasive weeds already within the allotment and could aid in the introduction of weeds from surrounding areas. Within the allotment, watering and salt block sites are of particular concern of new weed infestations due to the concentration of livestock around those sites and the amount of ground disturbance associated with that.

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 High (8) at the present time. If new weed infestations establish within the allotment this could have an adverse impact those native plant communities since the allotment is currently considered to be mostly weed-free. Also, any 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.

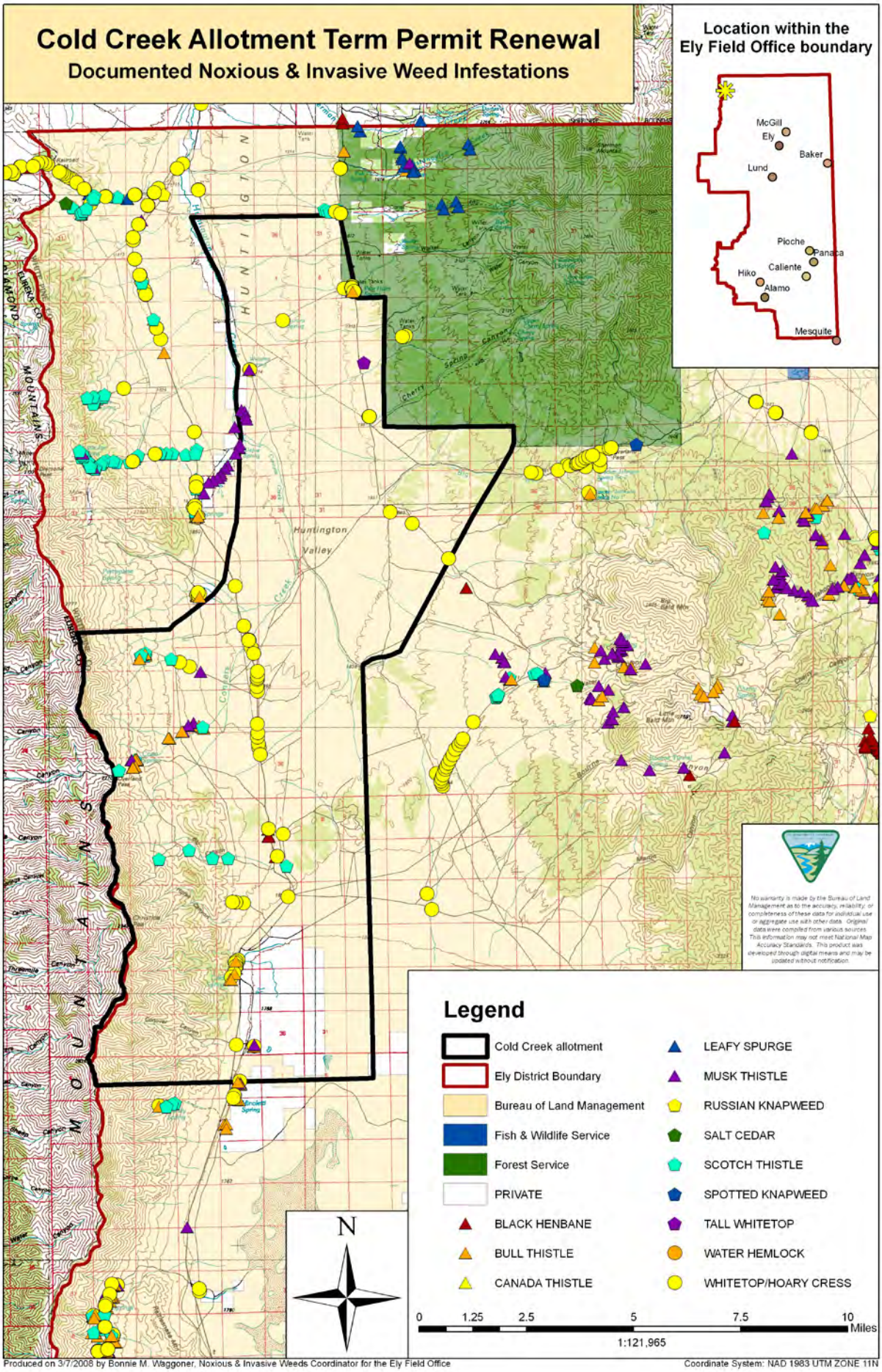
For this project, the Risk Rating is Moderate (48). This indicates that the project can proceed as planned as long as the following measures are followed:

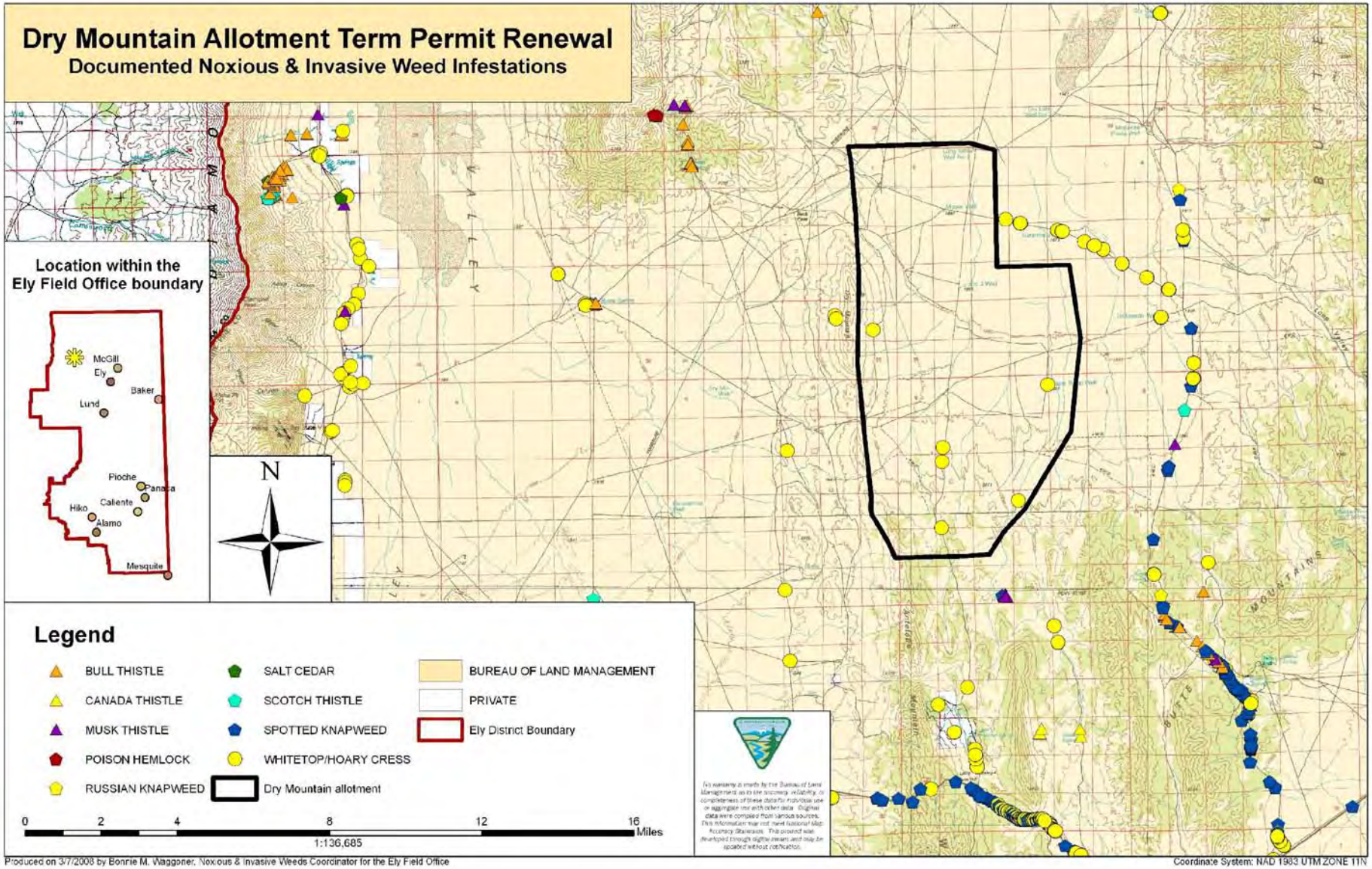
- Prior to entering public lands, the BLM will provide information regarding noxious weed management and identification to the permit holders affiliated with the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will 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.
- 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 Field Office.
- 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.

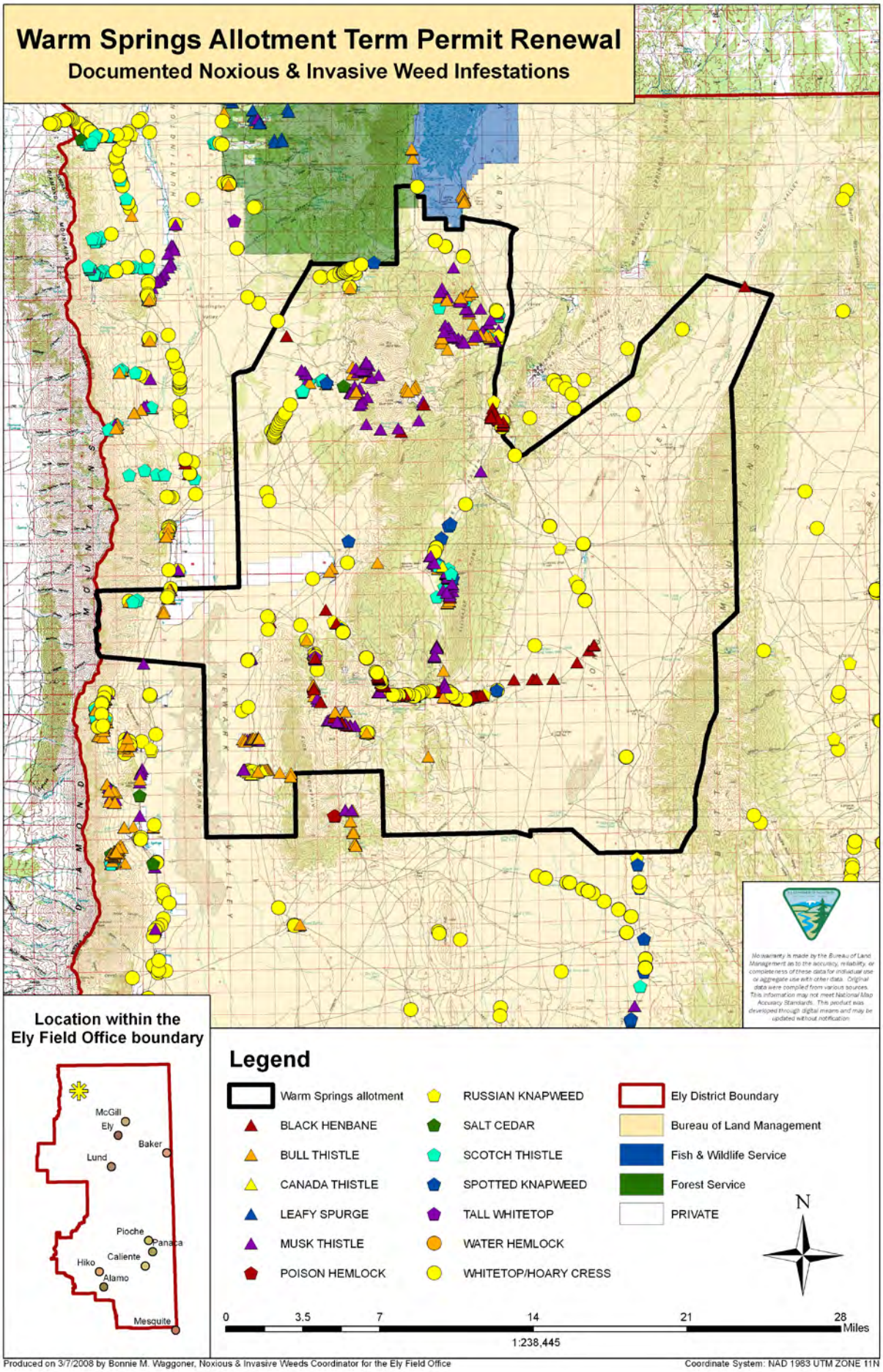
- Any newly established populations of noxious/invasive weeds discovered will be communicated to the Ely District Noxious and Invasive Weeds Coordinator for treatment.

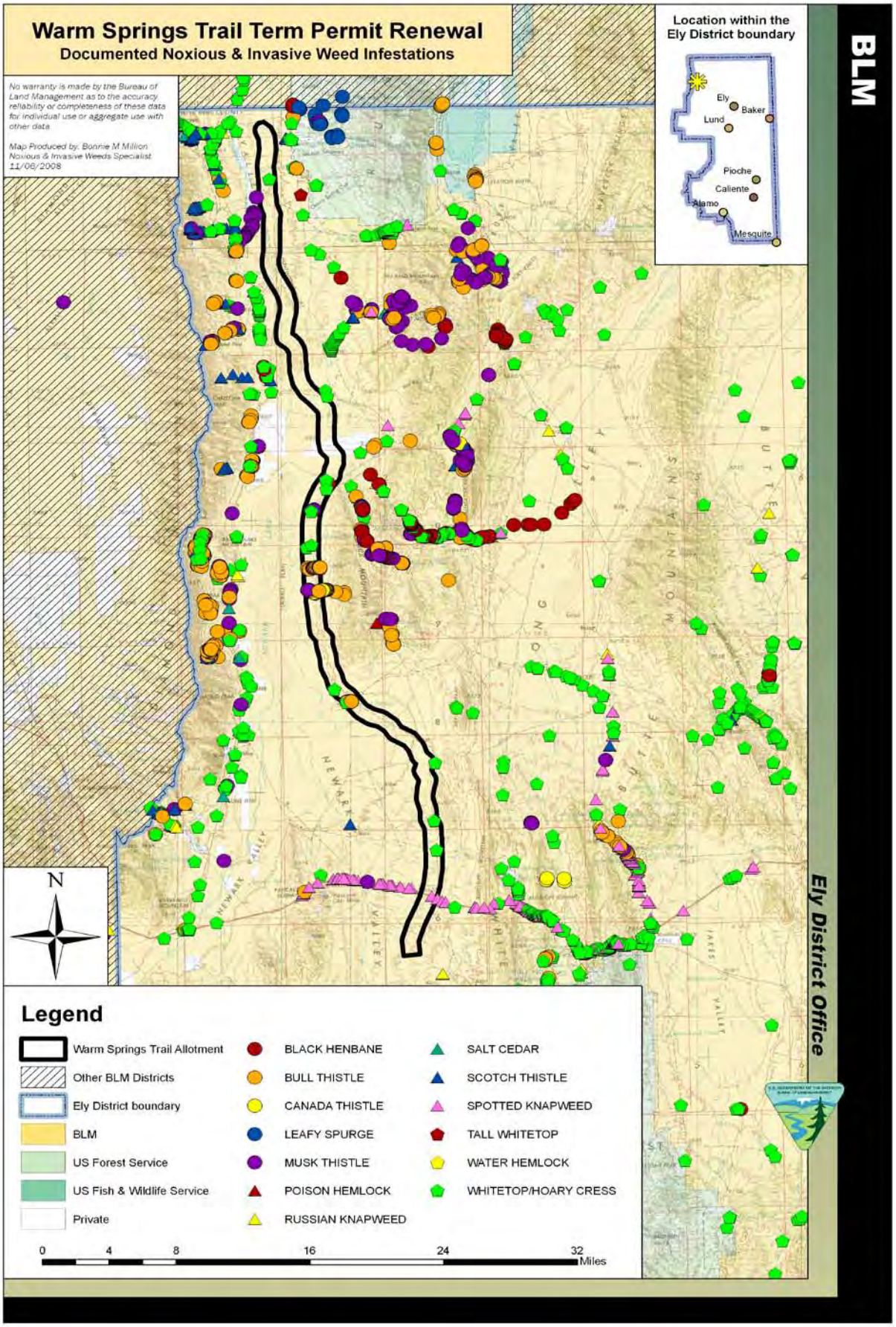
Reviewed by: /s/ *Bonnie Million* 3/10/2008

Bonnie Million Date
Ely District Noxious & Invasive Weeds Coordinator


Cold Creek Allotment Term Permit Renewal
Documented Noxious & Invasive Weed Infestations
Location within the Ely Field Office boundary
McGill
Ely
Baker
Lund
Ploche
Panaca
Caliente
Hiko
Alamo
Mesquite
HUNTINGTON
DIAMOND MOUNTAINS
SNAKE RANGE
Huntington Valley
Legend
Cold Creek allotment
Ely District Boundary
Bureau of Land Management
Fish & Wildlife Service
Forest Service
PRIVATE
BLACK HENBANE
BULL THISTLE
CANADA THISTLE
LEAFY SPURGE
MUSK THISTLE
RUSSIAN KNAPWEED
SALT CEDAR
SCOTCH THISTLE
SPOTTED KNAPWEED
TALL WHITETOP
WATER HEMLOCK
WHITETOP/HOARY CRESS
N
0 1.25 2.5 5 7.5 10 Miles
1:121,965
Produced on 3/7/2008 by Bonnie M. Waggoner, Noxious & Invasive Weeds Coordinator for the Ely Field Office
Coordinate System: NAD 1983 UTM ZONE 11N


Dry Mountain Allotment Term Permit Renewal
Documented Noxious & Invasive Weed Infestations
Location within the Ely Field Office boundary
McGill
Ely
Baker
Lund
Pioche
Panaca
Caliente
Hiko
Alamo
Mesquite
N
Legend
BULL THISTLE
CANADA THISTLE
MUSK THISTLE
POISON HEMLOCK
RUSSIAN KNAPWEED
SALT CEDAR
SCOTCH THISTLE
SPOTTED KNAPWEED
WHITETOP/HOARY CRESS
Dry Mountain allotment
BUREAU OF LAND MANAGEMENT
PRIVATE
Ely District Boundary
0 2 4 8 12 16 Miles
1:136,685
Produced on 3/7/2008 by Bonnie M. Waggoner, Noxious & Invasive Weeds Coordinator for the Ely Field Office
Coordinate System: NAD 1983 UTM ZONE 11N


Warm Springs Allotment Term Permit Renewal
Documented Noxious & Invasive Weed Infestations
Location within the Ely Field Office boundary
McGill
Ely
Baker
Lund
Pioche
Panaca
Caliente
Hiko
Alamo
Mesquite
Legend
Warm Springs allotment
BLACK HENBANE
BULL THISTLE
CANADA THISTLE
LEAFY SPURGE
MUSK THISTLE
POISON HEMLOCK
RUSSIAN KNAPWEED
SALT CEDAR
SCOTCH THISTLE
SPOTTED KNAPWEED
TALL WHITETOP
WATER HEMLOCK
WHITETOP/HOARY CRESS
Ely District Boundary
Bureau of Land Management
Fish & Wildlife Service
Forest Service
PRIVATE
N
0 3.5 7 14 21 28 Miles
1:238,445
Produced on 3/7/2008 by Bonnie M. Waggoner, Noxious & Invasive Weeds Coordinator for the Ely Field Office
Coordinate System: NAD 1983 UTM ZONE 11N


Warm Springs Trail Term Permit Renewal
Documented Noxious & Invasive Weed Infestations
No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual use or aggregate use with other data.
Map Produced by: Bonnie M Million
Noxious & Invasive Weeds Specialist
11/06/2008
Location within the Ely District boundary
Ely
Baker
Lund
Pioche
Caliente
Alamo
Mesquite
BLM
Ely District Office
N
Legend
Warm Springs Trail Allotment
Other BLM Districts
Ely District boundary
BLM
US Forest Service
US Fish & Wildlife Service
Private
BLACK HENBANE
BULL THISTLE
CANADA THISTLE
LEAFY SPURGE
MUSK THISTLE
POISON HEMLOCK
RUSSIAN KNAPWEED
SALT CEDAR
SCOTCH THISTLE
SPOTTED KNAPWEED
TALL WHITETOP
WATER HEMLOCK
WHITETOP/HOARY CRESS
0
4
8
16
24
32
Miles

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

Term Grazing Permit Renewal for Paris Livestock
Cold Creek, Corta, Duckwater, Newark, Railroad Pass, Sand Springs, South Pancake, & Warm Springs Trail Allotments
Nye & White Pine County, Nevada

On November 6th, 2008 a Noxious & Invasive Weed Risk Assessment was completed for the term grazing permit renewal for Paris Livestock for the Cold Creek, Corta, Duckwater, Newark, Railroad Pass, Sand Springs, South Pancake, and Warm Springs Trail Allotments in Nye and White Pine Counties, NV. The current term permit is issued for the period 10/15/2006 to 10/14/2016. The following table outlines what the current term permit authorizes.

Allotment/Pasture	Number & Kind of Livestock	Use Period	AUMS
Sand Springs	934 Sheep	11/01 to 03/31	927
	1198 Sheep	11/01 to 03/31	1190
Railroad Pass	467 Sheep	04/05 to 11/15	691
Cold Creek	1182 Sheep	04/15 to 4/30	124
	1200 Sheep	11/01 to 11/15	118
Newark	1642 Sheep	04/01 to 04/30	324
	1642 Sheep	11/01 to 11/30	324
South Pancake	2268 Sheep	03/15 to 04/30	701
	1114 Sheep	11/15 to 01/15	454
Warm Springs Trail	2750 Sheep	04/15 to 05/01	307
	2754 Sheep	11/15 to 12/01	308
Duckwater	1572 Sheep	12/15 to 03/31	1106
	1122 Sheep	01/01 to 03/31	664
Corta	4850 Sheep	05/01 to 05/04	128
Railroad Pass/Corta Seeding	365 Sheep	04/05 to 11/15	540

Within the Duckwater Allotment the following use areas would be used: Bull Corner/Poison Patch, Little Smokey Valley, North Sand Springs Valley, Pancake East Bench/Duckwater Valley, Pogues Station, and South Sand Springs Valley. The issuance of the new term grazing permit could be for a period up to ten years. An evaluation of the range monitoring data and rangeland health will be conducted for the Cold Creek, Corta, Duckwater, Newark, Railroad Pass, Sand Springs, South Pancake, and Warm Springs Trail Allotments.

No field weed surveys were completed for this project. Instead the Ely District weed inventory data was consulted. The following species are found within the boundaries of the Cold Creek Allotment:

Carduus nutans	Musk thistle
Cirsium vulgare	Bull thistle
Hyoscyamus niger	Black henbane
Lepidium draba	Hoary cress
Lepidium latifolium	Tall whitetop
Onopordum acanthium	Scotch thistle

The following species are found within the boundaries of the use areas for this permit in the Duckwater Allotment:

Acroptilon repens	Russian knapweed
Carduus nutans	Musk thistle
Cirsium vulgare	Bull thistle
Lepidium draba	Hoary cress
Lepidium latifolium	Tall whitetop
Onopordum acanthium	Scotch thistle
Tamarix spp.	Salt cedar

The following species are found within the boundaries of the Newark Allotment:

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

The following species are found within the boundaries of the Railroad Pass Allotment:

Acroptilon repens	Russian knapweed
Carduus nutans	Musk thistle
Centaurea stoebe	Spotted knapweed
Cicuta maculata	Water hemlock
Cirsium arvense	Canada thistle
Cirsium vulgare	Bull thistle
Euphorbia esula	Leafy spurge
Lepidium draba	Hoary cress
Onopordum acanthium	Scotch thistle
Tamarix spp.	Salt cedar

The following species is found within the boundaries of the South Pancake Allotment:

Lepidium draba	Hoary cress

The following species are found along the Warm Springs Trail Allotment:

Acroptilon repens	Russian knapweed
Carduus nutans	Musk thistle
Centaurea stoebe	Spotted knapweed
Cirsium arvense	Canada thistle
Cirsium vulgare	Bull thistle
Hyoscyamus niger	Black henbane
Lepidium draba	Hoary cress

The following species are found along roads and drainages leading to all allotments:

Acroptilon repens	Russian knapweed
Carduus nutans	Musk thistle
Centaurea stoebe	Spotted knapweed
Cicuta maculate	Water hemlock
Cirsium arvense	Canada thistle
Cirsium vulgare	Bull thistle
Conium maculatum	Poison hemlock
Euphorbia esula	Leafy spurge
Hyoscyamus niger	Black henbane
Lepidium draba	Hoary cress
Lepidium latifolium	Tall whitetop
Onopordum acanthium	Scotch thistle
Tamarix spp.	Salt cedar

These areas were last inventoried for noxious weeds in 2002, 2003 and 2005. It should be noted that these allotments border the BLM Battle Mountain or Elko Districts or, in the case of the Corta and Sand Springs Allotments, are entirely within them. No weed inventory data for these Districts is currently available. While not officially documented the following non-native invasive weeds probably occur in or around both allotments: cheatgrass (*Bromus tectorum*), field bindweed (*Convolvulus arvensis*), Russian olive (*Elaeagnus angustifolia*), 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. The proposed action could increase the populations of the noxious and invasive weeds already within the allotments and could aid in the introduction of weeds from surrounding areas. Within the allotments, watering and salt block sites are of particular concern of new weed infestations due to the concentration of livestock around those sites and the amount of ground disturbance associated with that.

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 (7) at the present time. If new weed infestations establish within the allotments this could have an adverse impact those native plant communities however, since there are many weed infestations currently within the allotments, those impacts would be limited. Also, any 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.

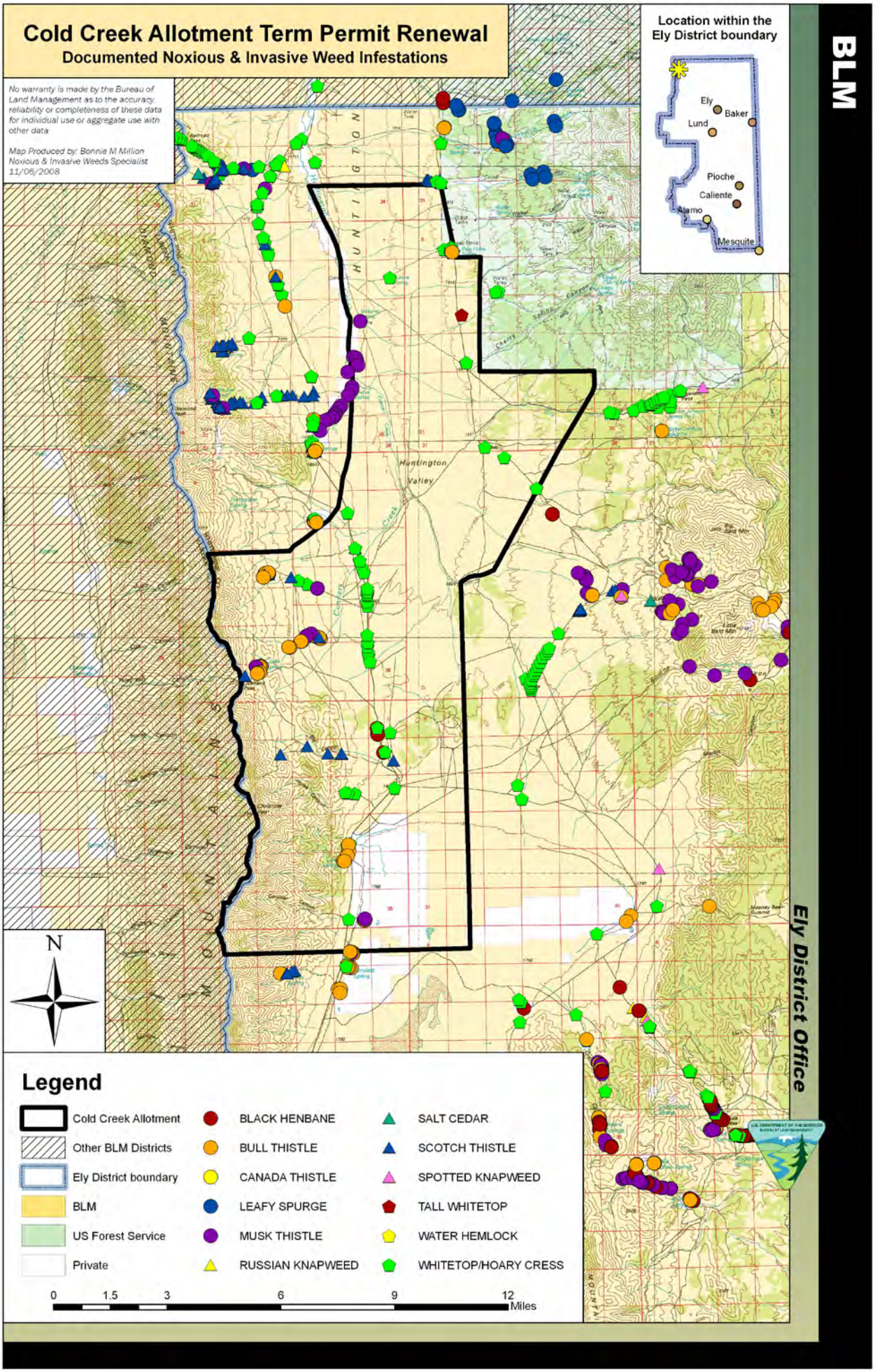
For this project, the Risk Rating is Moderate (32). This indicates that the project can proceed as planned as long as the following measures are followed:

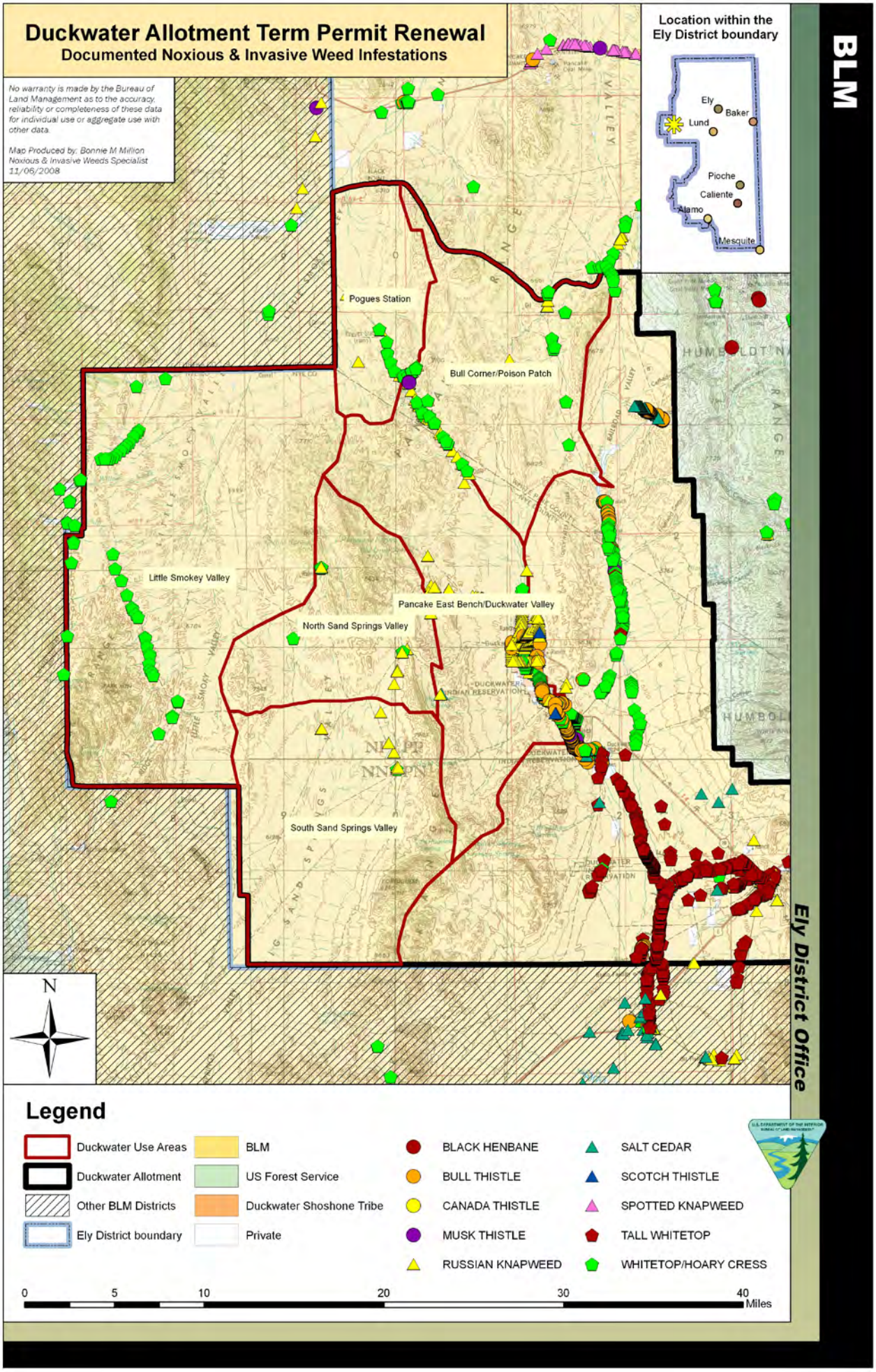
- To eliminate the introduction of noxious weed seeds, roots, or rhizomes all interim and final seed mixes, hay, straw, hay/straw, or other organic products used for feed or bedding will be certified free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM Ely 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.
- 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.

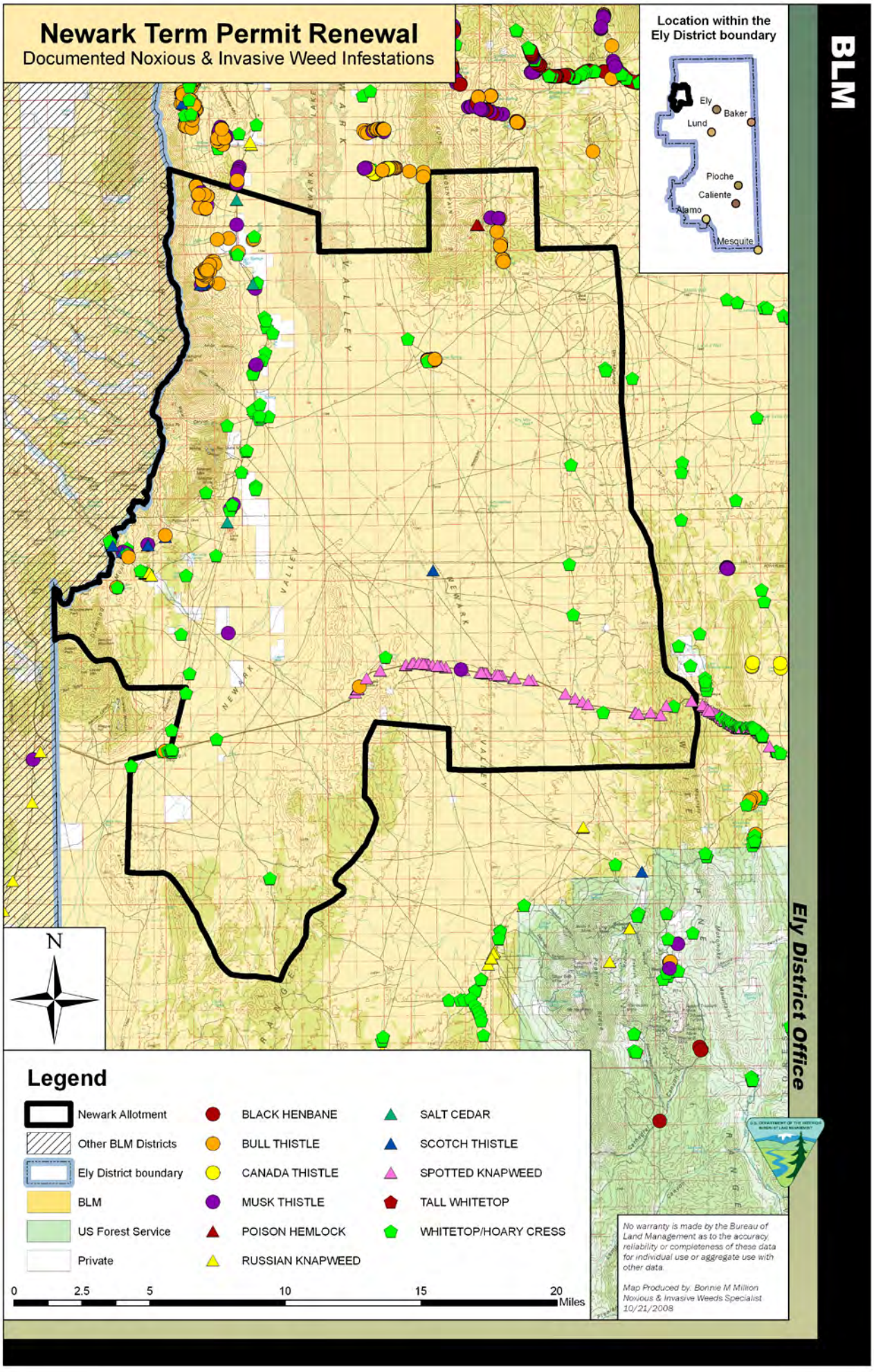
- Any newly established populations of noxious/invasive weeds discovered will be communicated to the Ely District Noxious and Invasive Weeds Coordinator for treatment.

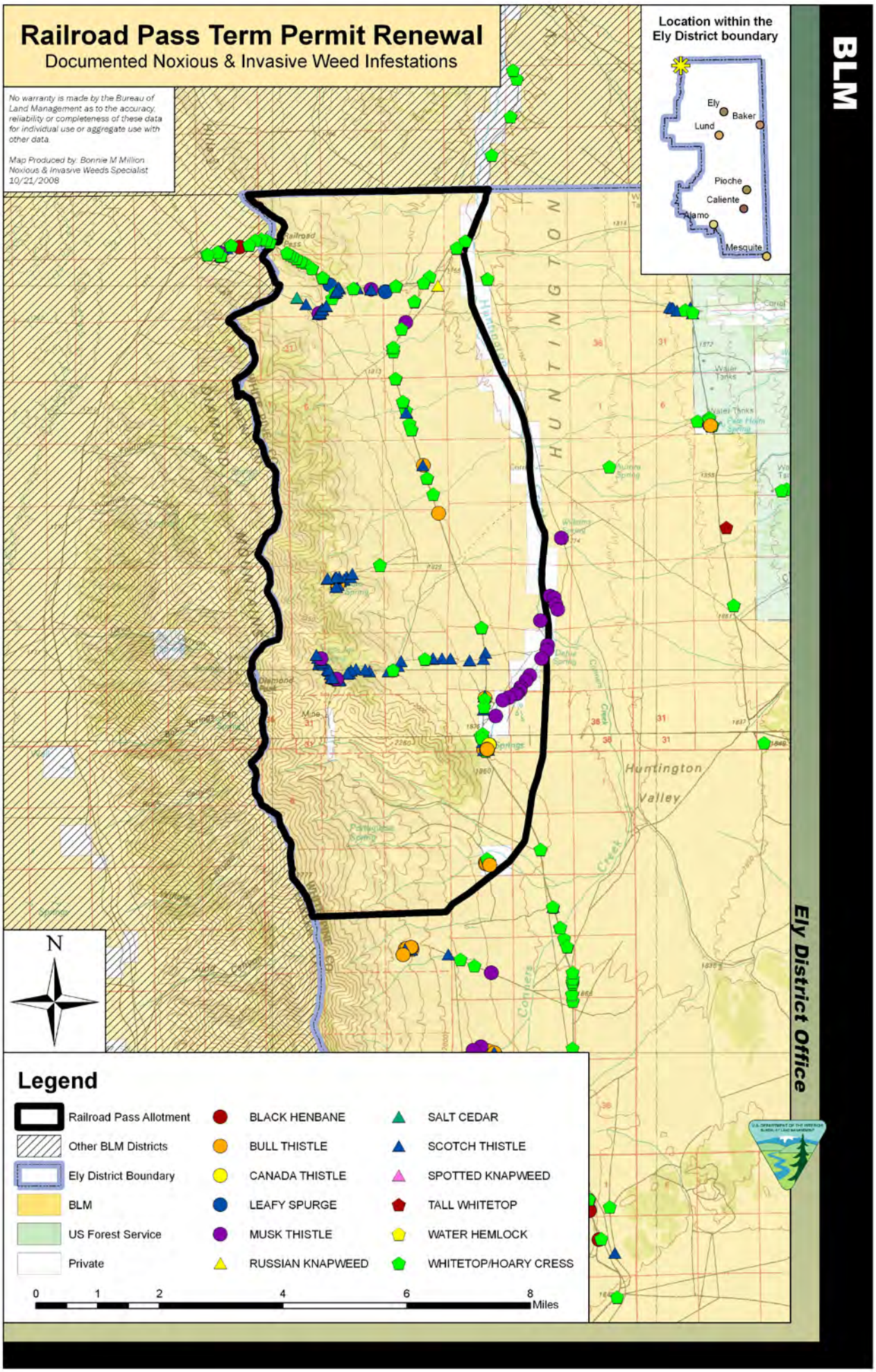
Reviewed by: */s/ Bonnie Million* 11/6/2008

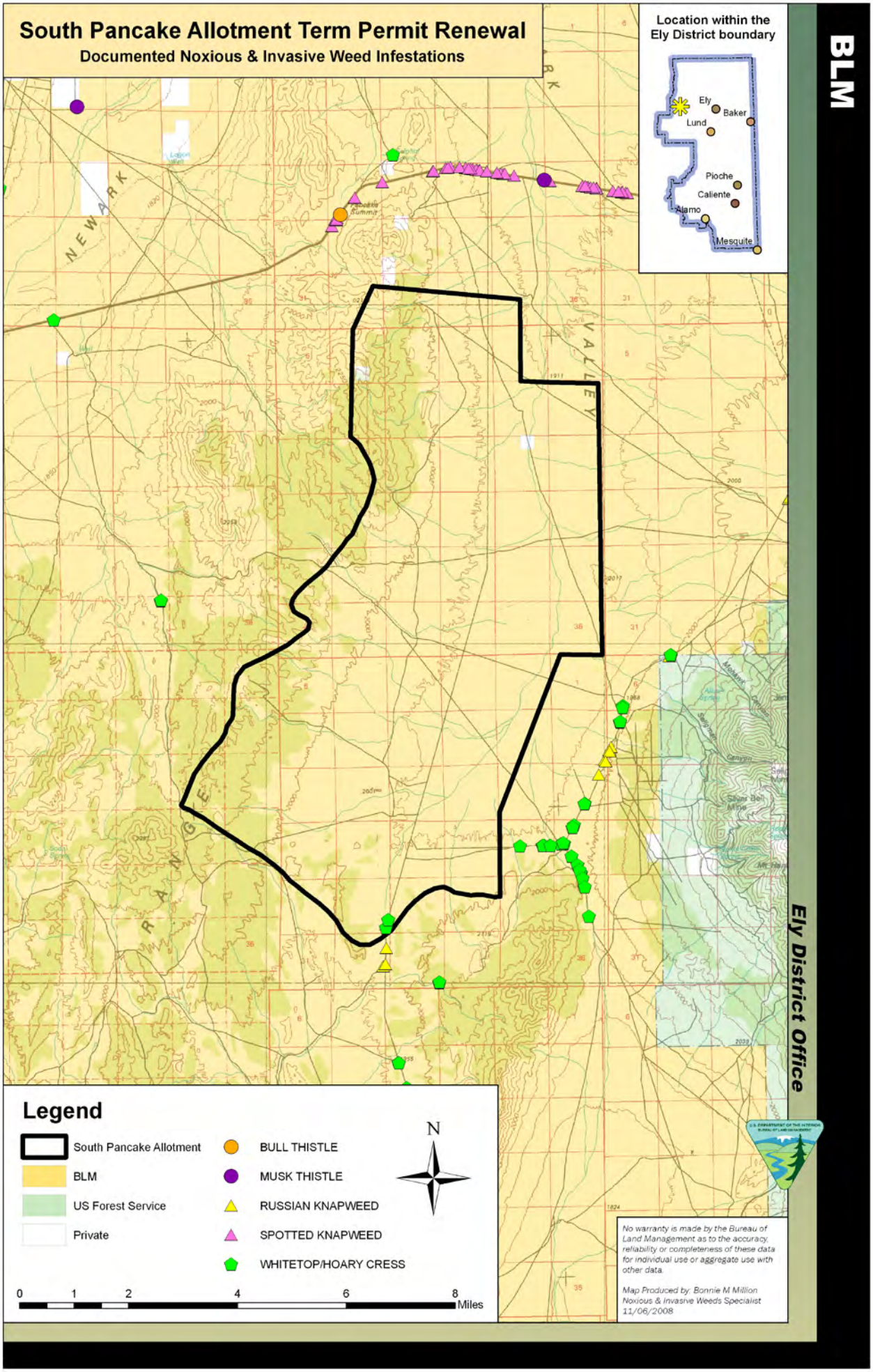
Bonnie M. Million Date
Ely District Noxious & Invasive Weeds Coordinator

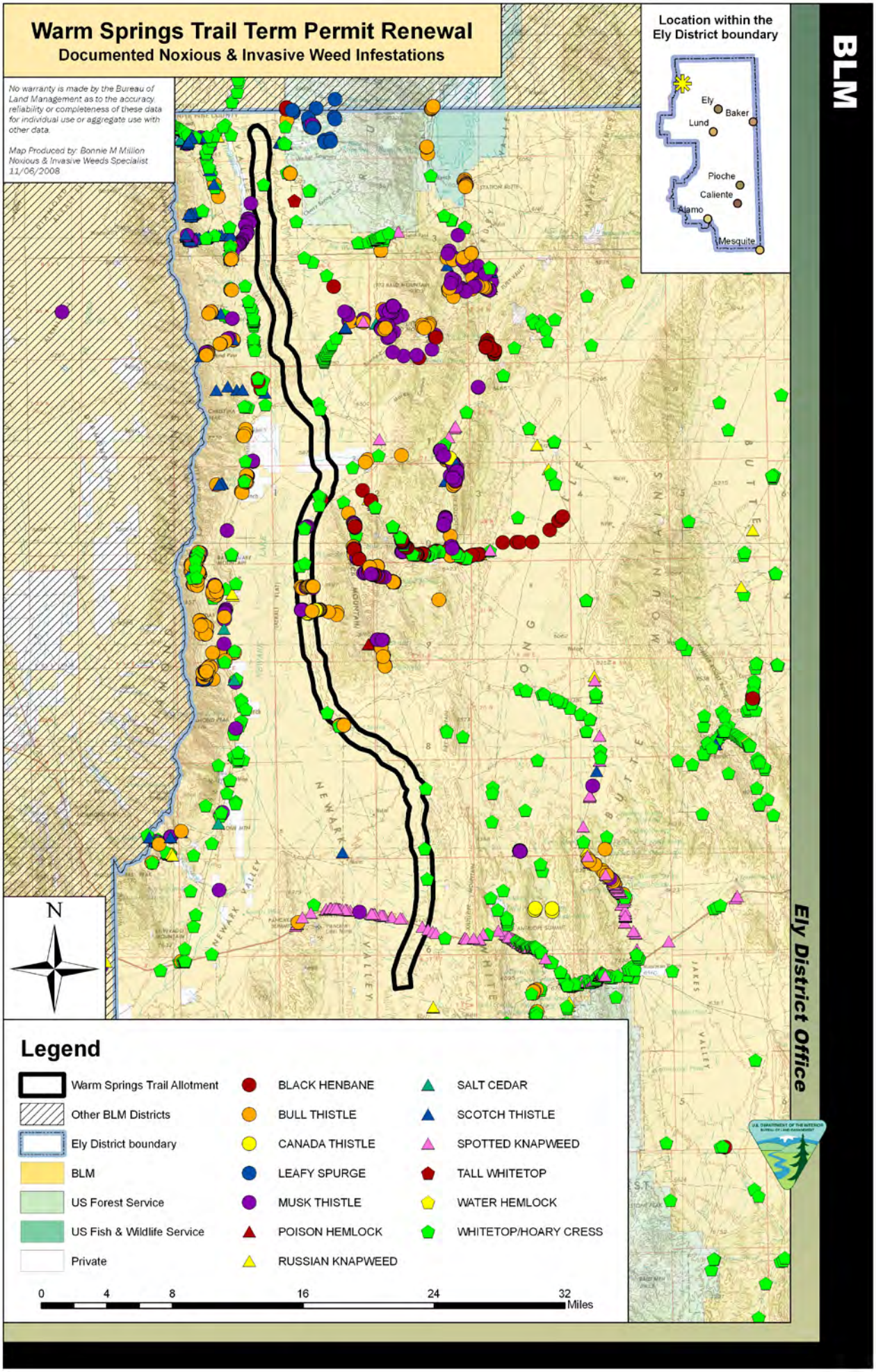

Cold Creek Allotment Term Permit Renewal
Documented Noxious & Invasive Weed Infestations
No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual use or aggregate use with other data
Map Produced by: Bonnie M Million
Noxious & Invasive Weeds Specialist
11/06/2008
Location within the Ely District boundary
Ely
Baker
Lund
Pioche
Caliente
Alamo
Mesquite
BLM
Ely District Office
HUNTINGTON
Huntington Valley
SNAKE MOUNTAINS
N
Legend
Cold Creek Allotment
Other BLM Districts
Ely District boundary
BLM
US Forest Service
Private
BLACK HENBANE
BULL THISTLE
CANADA THISTLE
LEAFY SPURGE
MUSK THISTLE
RUSSIAN KNAPWEED
SALT CEDAR
SCOTCH THISTLE
SPOTTED KNAPWEED
TALL WHITETOP
WATER HEMLOCK
WHITETOP/HOARY CRESS
0
1.5
3
6
9
12
Miles


Duckwater Allotment Term Permit Renewal
Documented Noxious & Invasive Weed Infestations
No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual use or aggregate use with other data.
Map Produced by: Bonnie M Million
Noxious & Invasive Weeds Specialist
11/06/2008
Location within the Ely District boundary
Ely
Baker
Lund
Pioche
Caliente
Alamo
Mesquite
BLM
Pogues Station
Bull Corner/Poison Patch
Little Smokey Valley
Pancake East Bench/Duckwater Valley
North Sand Springs Valley
South Sand Springs Valley
Ely District Office
N
Legend
Duckwater Use Areas
Duckwater Allotment
Other BLM Districts
Ely District boundary
BLM
US Forest Service
Duckwater Shoshone Tribe
Private
BLACK HENBANE
BULL THISTLE
CANADA THISTLE
MUSK THISTLE
RUSSIAN KNAPWEED
SALT CEDAR
SCOTCH THISTLE
SPOTTED KNAPWEED
TALL WHITETOP
WHITETOP/HOARY CRESS
0
5
10
20
30
40
Miles


Newark Term Permit Renewal
Documented Noxious & Invasive Weed Infestations
Location within the Ely District boundary
Ely
Baker
Lund
Pioche
Caliente
Alamo
Mesquite
BLM
Ely District Office
N
Legend
Newark Allotment
Other BLM Districts
Ely District boundary
BLM
US Forest Service
Private
BLACK HENBANE
BULL THISTLE
CANADA THISTLE
MUSK THISTLE
POISON HEMLOCK
RUSSIAN KNAPWEED
SALT CEDAR
SCOTCH THISTLE
SPOTTED KNAPWEED
TALL WHITETOP
WHITETOP/HOARY CRESS
0 2.5 5 10 15 20 Miles
No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual use or aggregate use with other data.
Map Produced by: Bonnie M Million
Noxious & Invasive Weeds Specialist
10/21/2008


Railroad Pass Term Permit Renewal
Documented Noxious & Invasive Weed Infestations
No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual use or aggregate use with other data.
Map Produced by: Bonnie M Million
Noxious & Invasive Weeds Specialist
10/21/2008
Location within the Ely District boundary
Ely
Baker
Lund
Pioche
Caliente
Alamo
Mesquite
BLM
Ely District Office
HUNTINGTON
DIAMOND
MOUNTAINS
Huntington Valley
Railroad Pass
Diamond Peak
Water Tanks
N
Legend
Railroad Pass Allotment
Other BLM Districts
Ely District Boundary
BLM
US Forest Service
Private
BLACK HENBANE
BULL THISTLE
CANADA THISTLE
LEAFY SPURGE
MUSK THISTLE
RUSSIAN KNAPWEED
SALT CEDAR
SCOTCH THISTLE
SPOTTED KNAPWEED
TALL WHITETOP
WATER HEMLOCK
WHITETOP/HOARY CRESS
0 1 2 4 6 8 Miles


South Pancake Allotment Term Permit Renewal
Documented Noxious & Invasive Weed Infestations
Location within the Ely District boundary
Ely
Baker
Lund
Pioche
Caliente
Alamo
Mesquite
BLM
Ely District Office
NEWARK
VALLEY
RANGE
Legend
South Pancake Allotment
BLM
US Forest Service
Private
BULL THISTLE
MUSK THISTLE
RUSSIAN KNAPWEED
SPOTTED KNAPWEED
WHITETOP/HOARY CRESS
N
0 1 2 4 6 8 Miles
No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual use or aggregate use with other data.
Map Produced by: Bonnie M Million
Noxious & Invasive Weeds Specialist
11/06/2008


Warm Springs Trail Term Permit Renewal
Documented Noxious & Invasive Weed Infestations
No warranty is made by the Bureau of Land Management as to the accuracy reliability or completeness of these data for individual use or aggregate use with other data.
Map Produced by: Bonnie M Million Noxious & Invasive Weeds Specialist 11/06/2008
Location within the Ely District boundary
Ely
Baker
Lund
Pioche
Caliente
Alamo
Mesquite
BLM
Ely District Office
N
Legend
Warm Springs Trail Allotment
Other BLM Districts
Ely District boundary
BLM
US Forest Service
US Fish & Wildlife Service
Private
BLACK HENBANE
BULL THISTLE
CANADA THISTLE
LEAFY SPURGE
MUSK THISTLE
POISON HEMLOCK
RUSSIAN KNAPWEED
SALT CEDAR
SCOTCH THISTLE
SPOTTED KNAPWEED
TALL WHITETOP
WATER HEMLOCK
WHITETOP/HOARY CRESS
0 4 8 16 24 32
Miles

Appendix III
Livestock Grazing Management Agreement
Tumbling JR Ranch
Egan Field Office

I. Introduction
Silver State Ranches (Now Tumbling JR Ranch) and BLM first entered into a Livestock Grazing Management Agreement for the five year period 2002-2007. On March 17, 2006, the Livestock Grazing Agreement was amended to change the term of the agreement to 05/19/2014.

During 2009, a Standard Determination Document was completed for the Warm Springs Allotment, Cold Creek Allotment, Dry Mountain Allotment, and Warm Springs Trail. This agreement authorizes grazing use in accordance with the findings for achievement of the Northeastern Great Basin RAC Standards (1997).

The purpose of this agreement is to document livestock grazing management for Tumbling JR Ranch on the Warm Springs Allotment, Dry Mountain Allotment, Cold Creek Allotment, and Warm Springs Trail for the five year period 03/20/2009 – 03/20/2014. This agreement will recognize and identify livestock practices and management procedures for Tumbling JR Ranch and the Bureau of Land Management, Egan Field Office (CFR 4120). Management practices presented in this agreement will serve to maintain or achieve the Northeastern Great Basin Area Standards for Grazing Administration which is specifically related to authorize grazing use.

This agreement was prepared in consultation, coordination, and cooperation with Tumbling JR Ranch, ranch manager Ben Patterson.

II. Existing Livestock Management Practices
Since 1999 annual meetings have been held to discuss and develop livestock management practices, grazing schedules and an annual grazing plan. Since 1999, flexibility in stocking levels, periods of use, and trail routes have been granted. The primary purpose of allowing flexibility has been to establish a long-term stable grazing operation and grazing rotation system. The stocking levels, periods of use and trail routes have been based upon pasture carrying capacity, forage availability and condition, current growing conditions, planned rest periods, and any changes as a result of the previous year's monitoring and achievement of the standards.

Final Multiple Use Decisions (FMUDs) were issued for the Warm Springs Allotment on March 14, 1994, for the Dry Mountain Allotment on July 12, 1990, and for the Cold Creek Allotment on January 23, 1992.

III. Grazing System

A. Warm Springs Allotment

Permitted use for the Warm Springs Allotment will continue at 7,744 AUMs cattle use, subdivided into six use areas (Buck and Bald Use Area, Ruby Valley Use Area, Julian and West Bald seedings Use Area, Newark Valley Use Area, Long Valley Use Area, Long Valley Wash Use Area.) The cattle operation on this allotment has been year-round, with Newark and Long Valley used as winter/spring range, and the Diamond and Buck/Bald Mountains for spring/summer use. The Julian and West Bald crested wheatgrass seedings and the Ruby Valley Use Area also provide summer forage.

- Buck and Bald Use Area

Livestock use will continue as spring/summer use with a season of use from 04/01 to 08/01. Permitted use will remain at 2,269 AUMs.

Authorized grazing use in summer use areas will be in accordance with the following use levels:

Utilization levels on key species will not exceed 45% of current year's growth during spring/summer use.

Removal of cattle by 08/01 will continue in order to not exceed proper use levels on the key riparian species

- Ruby Valley Use Area

Livestock use in the Ruby Valley Use area will be either spring/summer fall (4/15-10/15) or winter (10/15-4/15) but not both in the same growing season.

- The Julian and West Bald crested wheatgrass seedings

The Julian and West Bald Seedings will be used and licensed separately for spring/summer/fall cattle use (4/15-10/31). If spring use is made prior to 6/1 it will be alternated between the two seedings from year to year.

- Newark Valley Use Area

The livestock season of use will continue as fall/winter/spring (08/01 to 04/15). Permitted use will continue to be authorized at 357 AUMs.

B. Dry Mountain Allotment - Warm Springs Allotment

Permitted use for the Dry Mountain Allotment will continue at 1149 AUMs of cattle use, for the period of 10/01 to 04/01. The permitted sheep use will be 602 AUMs for the period 10/01 to 04/01.

Dry Mountain Allotment/Long Valley Use Area /Long Valley Wash Use Area

The Long Valley Use Area, the Dry Mountain Allotment, the Long Valley Wash Use Area will be combined. Cattle grazing use will continue as fall/winter with the season of

use from 10/01 to 04/01 in the Long Valley, Long Valley Wash and Dry Mountain use areas. Permitted use for Long Valley Use Area, the Dry Mountain Allotment and the Long Valley Wash Use Area combined will not exceed 4,615 AUMs (3,088 AUMs Long Valley Use). Flexibility in stocking levels will allow some of the 1,149 AUMs permitted use from Dry Mountain Allotment to be used in the Long Valley Use Area. This will be dependent upon forage availability. Some grazing use must still be made in the Dry Mountain Allotment. Flexibility associated with these use areas will be determined annually by the authorized officer in accordance with Tumbling JR Ranch.

Authorized grazing use in the winter use areas will be in accordance with the following allowable use levels:

> Utilization levels will not exceed 50% of current year growth during winter use on winterfat and key perennial species.

In order to maintain animal distribution in the Long Valley Use Area and Dry Mountain Allotment, the following wells will all be pumped during the use period, though not necessarily all at the same time, to distribute use:

> Long Valley Well#2 - T21N, R58E, sec. 32, SWSW
> Moore Well - T20N, R58E, sec. 8 NESW
> J&J Well - T20N, R 58E, sec. 20, SWNE
> Maple Syrup Well – T19N, R58E, sec. 3 NENE

C. Cold Creek Allotment

Permitted use for the Cold Creek Allotment will continue at 5,561 AUMs cattle use, for the period of 04/16 to 10/31. The pasture rotation system identified in the January 23, 1992 FMUD will be amended as a result of the SDD (March 2009). The Cold Creek Allotment will be divided into three units; the North Unit, South Unit and the Diamond Unit. The three units include a total of 18 pastures.

The grazing system for each unit is described as follows:

Cold Creek Allotment	
NORTHERN UNIT	
UNIT/ PASTURE INCLUDED	**ACTIVE USE (AUMS)**
Strawberry NW (seeding)	526
Strawberry SW (seeding)	345
Strawberry NE(seeding)	263
Strawberry SE (seeding)	466
Huntington #1(native)	321
Huntington #2 (native	98
Total AUMs	**2019**

Cold Creek Allotment	
SOUTHERN UNIT	
UNIT/ PASTURE INCLUDED	**ACTIVE USE (AUMS)**
Griswold NW (seeding)	321
Griswold SW (seeding)	338
Griswold NE(seeding)	300
Griswold SE (seeding)	370
Huntington #4 (native)	442
Huntington #3 (native)	318
Newark #1 (seeding)	319
Newark #2 (native)	164
Total AUMs	**2572**

A differed rest rotation grazing system will be established for the North and South Units. Grazing use will begin in the North Unit on even years. Grazing Use will begin in the South Unit on odd years. When the North Unit is grazed during the spring, grazing will begin on or later than April 16. Cattle will be moved to the South Unit when utilization levels are met and cattle will be removed before or on October 31. When the South Unit is grazed during the spring, grazing will begin on or later than April 16. Cattle will be moved to the North Unit when utilization levels are met and cattle will be removed on or before October 31.

Within the Northern Unit, the Strawberry Pastures will be rotated annually with the two western pastures used first and then eastern pastures used. The following year the pastures will be switched with the eastern pastures used first and then the western pastures used afterwards.

Movement dates between the North and South Units will be based on annual forage condition and availability. Movement dates in and out of pastures will be based on forage availability, condition, and utilization levels. Movement dates may vary each year based on these conditions.

> Utilization levels will be established at 60% for the crested wheatgrass seedings and at 50% for the native pastures.

Key riparian areas on Cold Creek Allotment will be utilized in accordance with the differed rest rotation system. Corta spring is located in the pasture Diamond #3. Abal Springs is located in the Huntinton #4. Unnamed spring is located in Huntington #4. Cold Spring is located in pasture Diamond #1.

Annual stocking levels for the units will not exceed the active AUMS for each unit. The total active use for the Cold Creek Allotment is 5561 AUMS. The total AUMS authorized in the North Unit will not exceed 2019 AUMS. The total AUMS in the South

Unit will not exceed 2572 AUMs. Active use AUMS for the pastures within each unit are to be used as guides.

Cold Creek Allotment	
DIAMOND UNIT	
UNIT/ PASTURE INCLUDED	**ACTIVE USE (AUMS)**
Diamond #1	193
Diamond #2	219
Diamond #3	323
Diamond #4	235
Total AUMs	**970**

The Diamond Unit contains four pastures. Diamond Pasture #1, #2, #3, will be grazed for 30 days either in fall or spring and alternating from year to year. Diamond #4 will be used every other year.

The aforementioned grazing system will be utilized with flexibility and deviations in livestock numbers, areas of use and period of use. Annual grazing use will not exceed the total 5561 AUMs for Cold Creek Allotment unless authorized. Seasonal basis deviations will be based upon pasture carrying capacity, forage availability and condition, current growing conditions, planned rest periods, and any changes as a result of the previous year's monitoring and achievement of the standards. Deviations warranted annually would not prevent attainment of shared goals, the multiple-use objectives and the standards for grazing administration.

D. Warm Springs Trail

Permitted use for the Warm Springs Trail Allotment will continue at 938 AUMs with a season of use from 03/01 to 03/31, and 927 AUMs with a season of use from 11/01to 11/30. These AUMs are only for trailing sheep.

IV. Monitoring/Evaluation

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 area, and will contribute to the selection of prescribed burn treatments or other types of treatments based on attainment of resource objectives. (p.88)"

Grazing use and stocking levels will also be evaluated after the five year period of the agreement. The evaluation will determine consistency with and achievement of the standards for grazing administration and the allotment specific objectives and shared goals of Tumbling JR Ranch and the Egan Field Office. Following the five year period, a new agreement will be issued. Adjustments may include changes to period-of-use, stocking levels, areas-of-use or other grazing management practices. If adjustments are needed a new term permit may be issued.

V. Other Conditions

In addition to the stipulations in the term permit, the following stipulations apply:

1. 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.

2. The permittee is responsible for all maintenance of assigned range improvements including wildlife escape ramps for both permanent and temporary water troughs.

3. Utilization levels will not exceed 50% of current year growth during winter use on key perennial species and will not exceed 45% of current year growth during summer use on key perennial species on all allotments unless otherwise noted.

- 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.

4. 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.

5. Place salt and supplements at least 0.5 mile away from winterfat dominated sites. Base placement on site-specific assessment and characteristics such as riparian, topography, cultural, special status species, etc. Place salt and mineral supplements at least 1 mile from sage grouse leks.

VI. Agreement

I, the undersigned, do hereby agree to and accept this agreement. I understand that the grazing privileges so authorized herein are subject to the provisions of the Code of Federal Regulations (43 CFR 4100 through 4170) which deal with grazing use on public lands. I also agree that the terms and conditions of this agreement are binding upon the permittee(s), his respective heirs, executors administrators, successors in interest of assignors with such modification as approved or required by the authorized officer.

/s/ *Ben Patterson* 3-30-2009

Ben Patterson Date
Tumbling JR Ranch Manager

/s/ *Jeffrey Weeks* 4-10-2009

Jeffrey A. Weeks Date
Egan Field Manager

Appendix IV
Migratory Birds Species

The following data reflect survey blocks and/or incidental sightings of bird species within the allotments boundaries from the Atlas of the Breeding Birds of Nevada (Floyd et al. 2007). These data represent birds that were confirmed, probably, or possibly breeding within or near the allotment boundaries. These data are not comprehensive, and additional species not listed here may be present within the allotment boundary.

American kestrel *(Falco sparverius)*
American robin *(Turdus migratorius)*
Audubon's warbler *(Dendroica c. auduboni)*
black-billed magpie *(Pica hudsonia)*
black-chinned hummingbird *(Archilochus alexandri)*
blue-gray gnatcatcher *(Polioptila caerulea)*
brown-headed cowbird *(Molothrus ater)*
black-headed grosbeak *(Pheucticus melanocephalus)*
Brewer's blackbird *(Euphagus cyanocephalus)*
Brewer's sparrow *(*Spizella breweri*)*
black-throated gray warbler *(Dendroica nigrescens)*
black-throated sparrow *(Amphispiza bilineata)*
Bullock's oriole *(Icterus bullockii)*
Bushtit *(Psaltriparus minimus)*
Cassin's finch *(Carpodacus cassinii)*
chipping sparrow *(Spizella passerine)*
common poorwill *(Phalaenoptilus nuttallii)*
common raven *(Corvus corax)*
golden eagle *(Aquila chrysaetos)*
green-tailed towhee *(Pipilo chlorurus)*
house finch *(Carpodacus mexicanus)*
house wren *(Troglodytes aedon)*
killdeer *(Charadrius vociferous)*
lazuli bunting *(Passerina amoena)*
lesser goldfinch *(Carduelis psaltria)*
mallard *(Anas platyrhynchos)*
MacGillivray's warbler *(Oporornis tolmiei)*
mountain bluebird *(Sialia currucoides)*
mountain chickadee *(Poecile gambeli)*
mourning dove *(Zenaida macroura)*
northern flicker *(Colaptes auratus)*
northern harrier *(Circus cyaneus)*
peregrine falcon *(Falco peregrines)*
phainopepla *(Phainopepla nitens)*
plumbeous vireo *(Vireo plumbeus)*
rock wren *(Salpinctes obsoletus)*
red-tailed hawk *(Buteo jamaicensis)*

sage thrasher *(Oreoscoptes montanus)*
Scott's oriole *(Icterus parisorum)*
song sparrow *(Melospiza melodia)*
spotted towhee *(Pipilo maculatus)*
vesper sparrow *(Pooecetes gramineus)*
violet-green swallow *(Tachycineta thalassina)*
Virginia's warbler *(Vermivora virginiae)*
white-breasted nuthatch *(Sitta carolinensis)*
western kingbird *(Tyrannus verticalis)*
western scrub jay *(Aphelocoma californica)*
western tanager *(Piranga ludoviciana)*
white-throated swift *(Aeronautes saxatalis)*
yellow-breasted chat *(Icteria virens)*
yellow warbler *(Dendroica petechia)*