

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

**Standards Determination Document
June 2009**

**Term Permit Renewal
Tumbling JR Ranch (Operator #2702966)
Paris Livestock (Operator #2704538)
Cold Creek Allotment (0603)
Warm Springs Allotment (0606)
Dry Mountain Allotment (0609)
Warm Springs Trail (0622)**

Location: White Pine County, Nevada

U.S. Department of the Interior
Bureau of Land Management
Ely District Office
Egan Field Office
Phone: 775-289-1800
Fax: 775-289-1910



STANDARDS DETERMINATION DOCUMENT

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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 cryptogams 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 Palino 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 Palnor 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
- Not Achieving the Standard, and not making significant progress toward standard**

Causal Factors

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

- Livestock are not a contributing factor to not achieving the standard
- 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: *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. USDO-ILM 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
- 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: *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 three 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 enclosure 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
- 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:

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 shrubs. 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
- 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:

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.

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
- 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: *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
- 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: *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 I) 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, Table 3.3-2, 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	10/01 - 04/01	100	Active	1149
	500 Sheep	10/01 - 04/01	100	Active	602
Warm Springs (00606)	642 Cattle	03/01 - 2/28	100	Active	7704
Warm Springs Trail (00622)	4600 Sheep	03/01 - 03/31	100	Active	938
	4700 Sheep	11/01 - 11/30	100	Active	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	04/15 to 04/30	100	Active	124
	1200 Sheep	11/01 to 11/15	100	Active	118
Warm Springs Trail 00622	2750 Sheep	4/15 to 05/01	100	Active	307
	2754 Sheep	11/15 to 12/01	100	Active	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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Prepared by:

/s/ Gina Jones

Gina Jones
Ecologist

4/24/2009

Date

Reviewed by:

/s/ Mark D'Aversa

Mark D'Aversa
Soil/water/air/floodplains/riparian/wetlands

4/24/2009

Date

/s/ Bonnie Million

Bonnie Million
Noxious and invasive non-native species

4/27/2009

Date

/s/ Ruth Thompson

Ruth Thompson
Wild horses and burros

4/26/2009

Date

/s/ Marian Lichtler

Marian Lichtler
Wildlife/migratory birds/special status
animals/plants

4/24/2009

Date

/s/ Amanda Anderson

Amanda Anderson
Rangeland Management Specialist

4/24/2009

Date

I concur:

/s/ Chris Mayer

Chris Mayer
Supervisory Rangeland Management Specialist
Egan Field Office

6/11/2009

Date

/s/ Jeffrey A. Weeks

Jeffrey A. Weeks
Field Manager
Egan Field Office

6/15/2009

Date

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%
Cold Creek				
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%
Cold Creek				
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
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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-functional 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 hummocking 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%
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%	Bluegrass 33%	Bluegrass 21%	Bluegrass 54%			
	Bluebunch wheatgrasses 50%			Indian ricegrass 52%			
	Antelope bitterbrush 33%	Needlegrass 35%					
WS-12		Antelope bitterbrush 12%	Antelope bitterbrush 21%				
		Bluebunch wheatgrass 40%	Bluebunch wheatgrass 33%				
	No Recent Use	Needlegrass 34%	Needlegrass 37%	No Recent Use			
WS-13	Bluegrass 39%	Bluegrass 57%	Bluegrass 45%	Bluegrass 37%			
	Indian ricegrass 39%	Indian ricegrass 58%		Indian ricegrass 30%	Indian ricegrass 13%		
	Bluebunch wheatgrasses 37%	Antelope bitterbrush 39%	Antelope bitterbrush 17%				
WS-14	Sandbergs bluegrass 32%	Sandbergs bluegrass 51%	Sandbergs bluegrass 45%	Sandbergs bluegrass 40%	Sandbergs bluegrass 36%		
	Western wheatgrasses 27%	Western wheatgrass 57%	Western wheatgrass 38%	Western wheatgrass 32%	Western wheatgrass 34%		
	Indian ricegrass 46%	Needlegrass 51%	Needlegrass 26%	Needlegrass 30%	Needlegrass 32%		
WS-15					Indian ricegrass 40%		
	Bluegrass 25%			Indian ricegrass 35%	Bluebunch wheatgrass 44%		
	Indian ricegrass 22%	No Recent Use	No Recent Use	bluegrass 37%	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%	No Recent Use							
	Bluegrass 18%								
	Squirreltail 20%								
WS-17	Indian ricegrass 29%	Indian Ricegrass 18%	No Recent Use						
	Bluegrass 26%	Western wheatgrass 23%							
WS-18	No Recent Use	No Recent Use							
WS-19	Bluegrass 28%								
	Indian ricegrass 45%	Antelope bitterbrush 19%						Antelope bitterbrush 13%	Sandbergs bluegrass 28%
	Western wheatgrass 45%	Needlegrass 28%						Indian ricegrass 39%	Indian ricegrass 52%
WS-20		Sandbergs bluegrass 25%	Sandbergs bluegrass 21%	No Recent Use	Sandbergs bluegrass 28%				
WS-21	Antelope bitterbrush 15%	Antelope bitterbrush 21%	Antelope bitterbrush 21%	Antelope bitterbrush 17%					
	Indian ricegrass 48%	Indian ricegrass 23%	Indian ricegrass 35%	Basin wildrye 44%	Indian ricegrass 52%				
		Western wheatgrass 20%	Bluebunch wheatgrass 33%	Bluebunch wheatgrass 36%	Sandbergs bluegrass 48%				
WS-22	Antelope bitterbrush 15%		Bluebunch wheatgrass 33%	Basin wildrye 44%					
	Indian ricegrass		Antelope bitterbrush 21%	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 squirreltail	7%	36%	
Total Cover	19%		5% to 10%

Line Intercept Cover			
Date	Pasture	Key Area/UTMs	
7/10/1998	Buck and Bald	WS-11	
Ecological Site			
Mountain Ridge 12-14 Range 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%	
<i>Asteraceae</i>	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%	
Thurbars 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

Ecological 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 Calcareous 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%	13.0%	
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 (%)	Composition (%)	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 Calcareous 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 (%)
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 1.0% winterfat 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 15.0% Indian ricegrass 10.0% Phlox spp. 39.0% winterfat 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 28.0% sickle saltbush 64.0% rabbitbrush spp. 6.0% winterfat 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 12.0% bottlebrush squirreltail 4.0% Indian ricegrass Trace mustard spp. 1.0% phlox spp. 1.0% unknown forb 1.0% buckwheat Trace senecio spp. 1.0% unknown annual forb 2.0 % low sagebrush 44.0% black sagebrush 33.0% rabbitbrush spp. 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%	Mid Seral	Grasses = 10% Forbs = 4% Shrubs = 75%	Grasses = 55% Forbs = 10% Shrubs = 35%		
			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%								
WS-13 (Buck and Bald)	028BY007 NV	ARTR2/ACTH7 –PSSP Loamy 10-12"	bottlebrush squirreltail	7.0%	Late Seral	Grasses = 26% Forbs = 29% Shrubs = 45%	Grasses = 65% Forbs = 10% Shrubs = 25%		
			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%								

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% <i>Tetradymia</i> 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 18.0% bottlebrush squirreltail 6.0% phlox spp. 11.0% buckwheat 5.0% black sagebrush 44.0% rabbitbrush spp. 14.0% Winterfat 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 1.0% greasewood spp. 80.0% sickle saltbush 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 Pasture	705	493	579	1658	921	408

3.3 Utilization

Use Pattern Mapping

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

Table 3.3-1. 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

* 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		
<u>Vegetation</u>	<u>Litter</u>	<u>Cover (%)</u>	<u>Composition (%)</u>	<u>Potential Natural Condition</u>
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
<u>Vegetation</u>	<u>Litter</u>	<u>Cover (%)</u>	<u>Composition (%)</u>	<u>Potential Natural Condition</u>
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				
<u>Vegetation</u>	<u>Litter</u>	<u>Cover (%)</u>	<u>Composition (%)</u>	<u>Potential Natural Condition</u>
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				
<u>Vegetation</u>	<u>Litter</u>	<u>Cover (%)</u>	<u>Composition (%)</u>	<u>Potential Natural Condition</u>
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 NE	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 Calcareous 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	0.0%	1%	
long leaf phlox	0%	Trace	
phlox spp.	0.0%	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

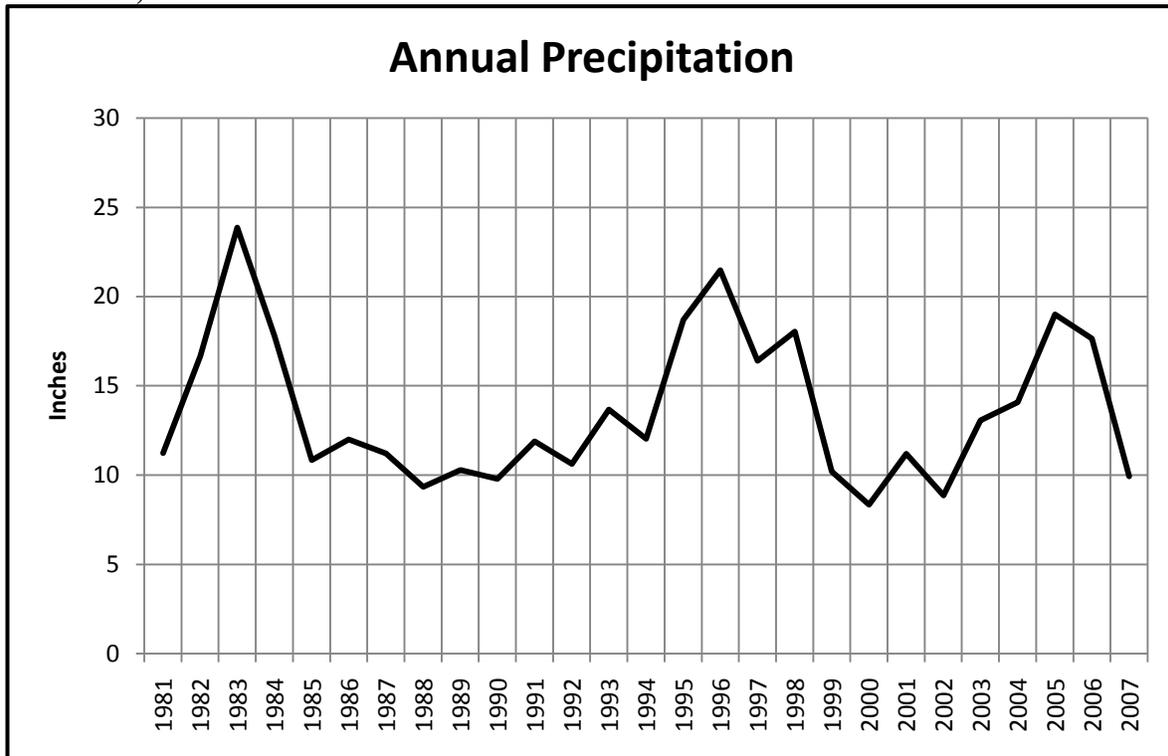
5.0 Precipitation data

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.

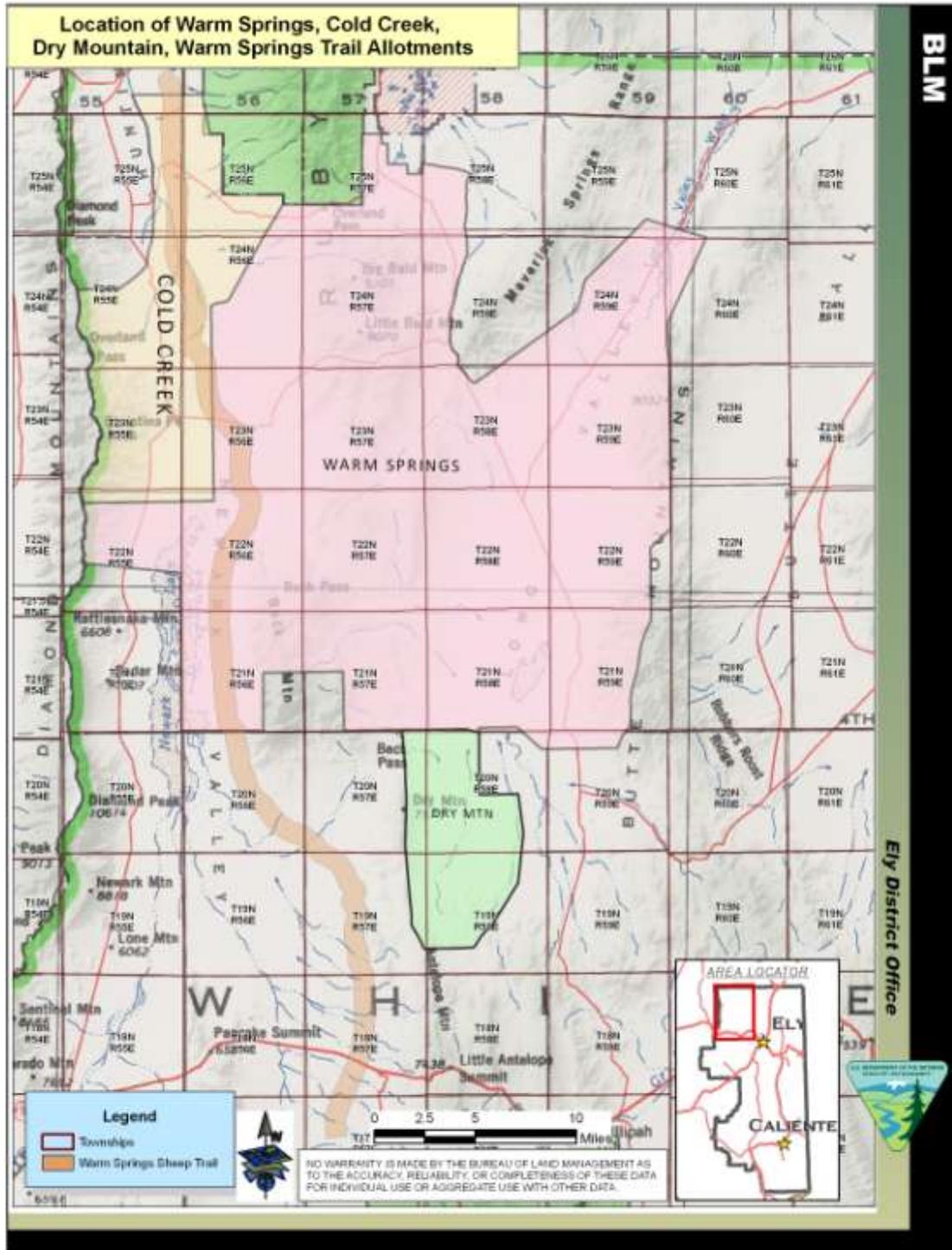
Table 5.1. Western Regional Climate Center Precipitation Data from Ruby Lake, NV

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

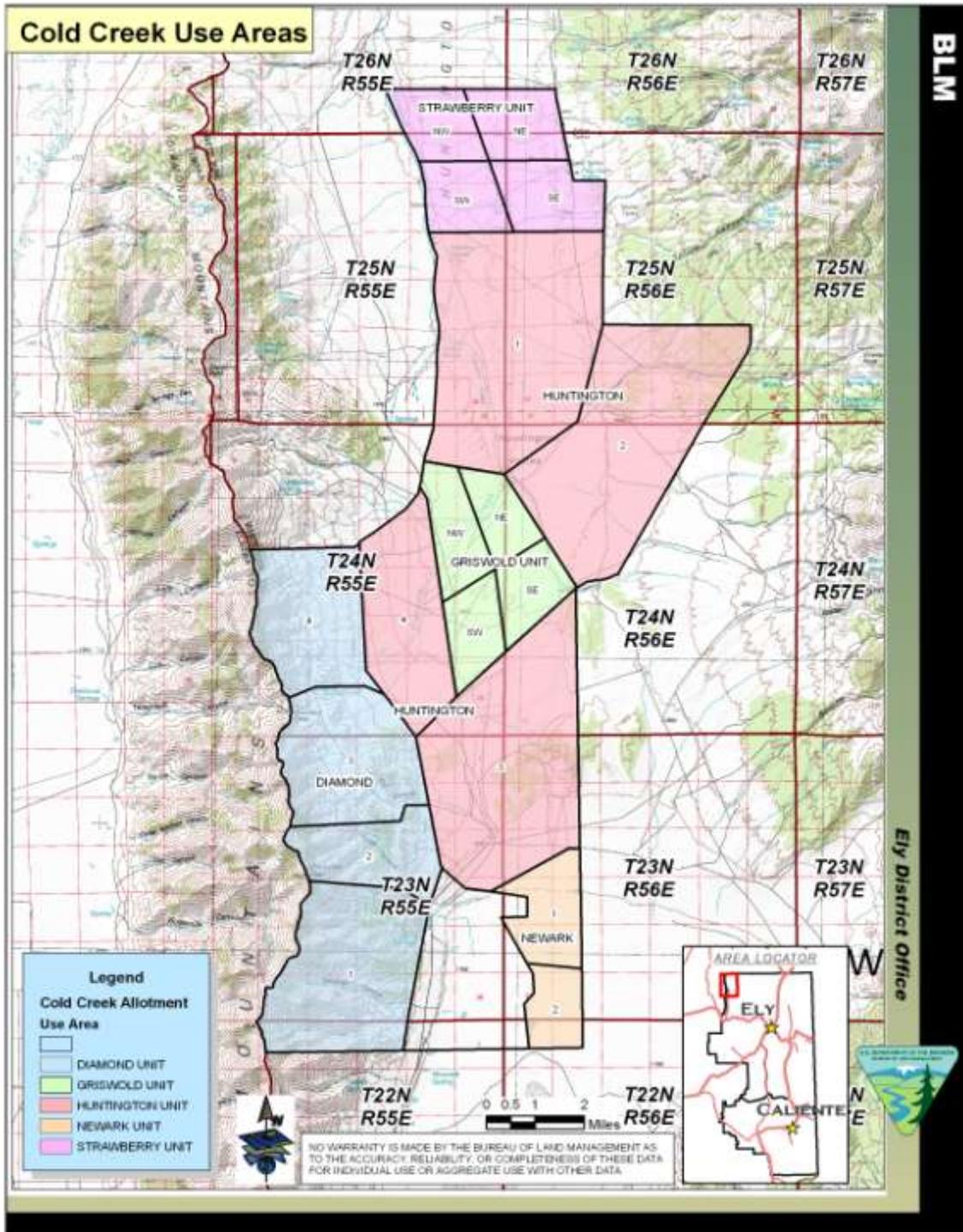
Figure 5.2. Precipitation Data (1981-2007) from Western Regional Climate Center from Ruby Lake, NV



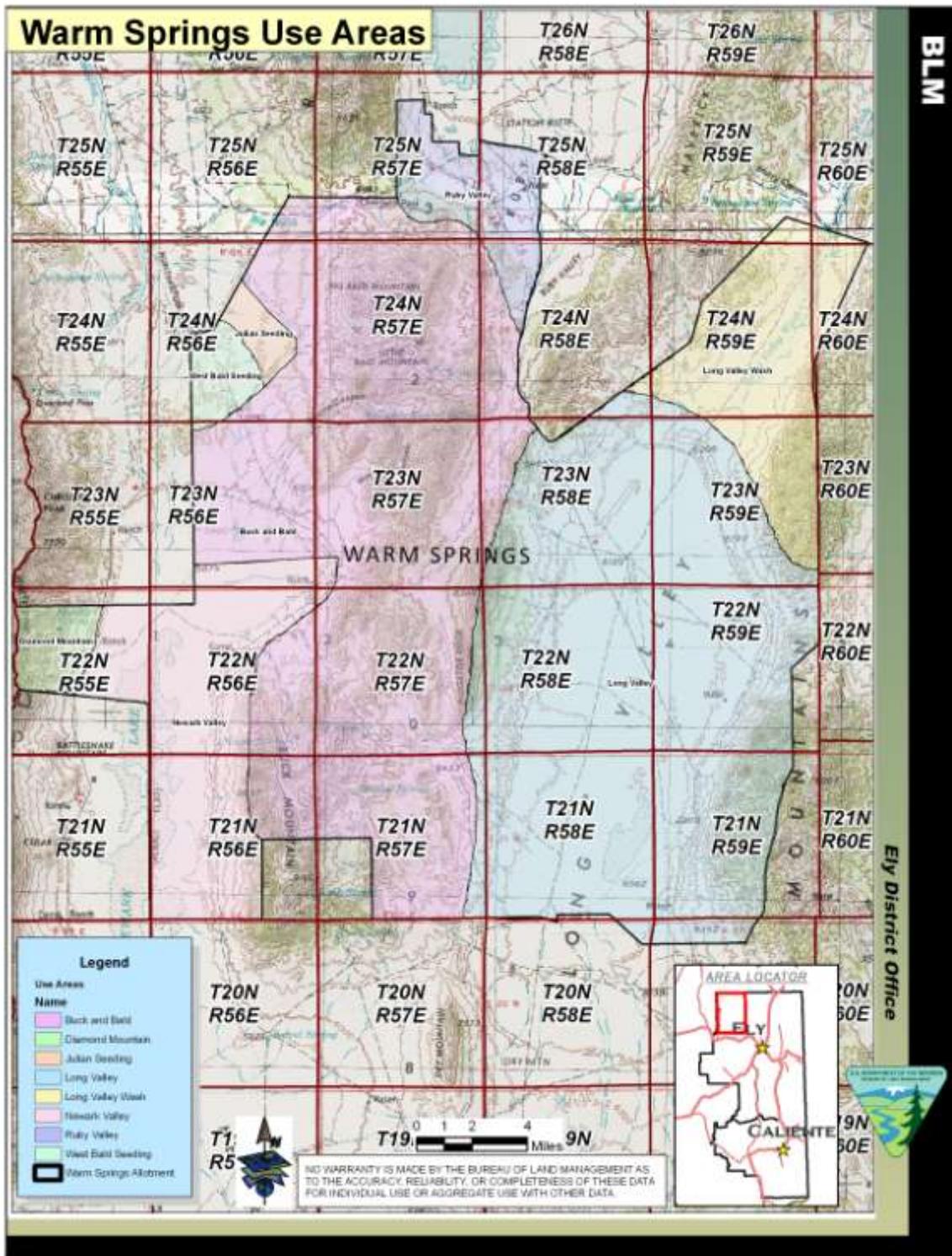
Appendix II - Maps



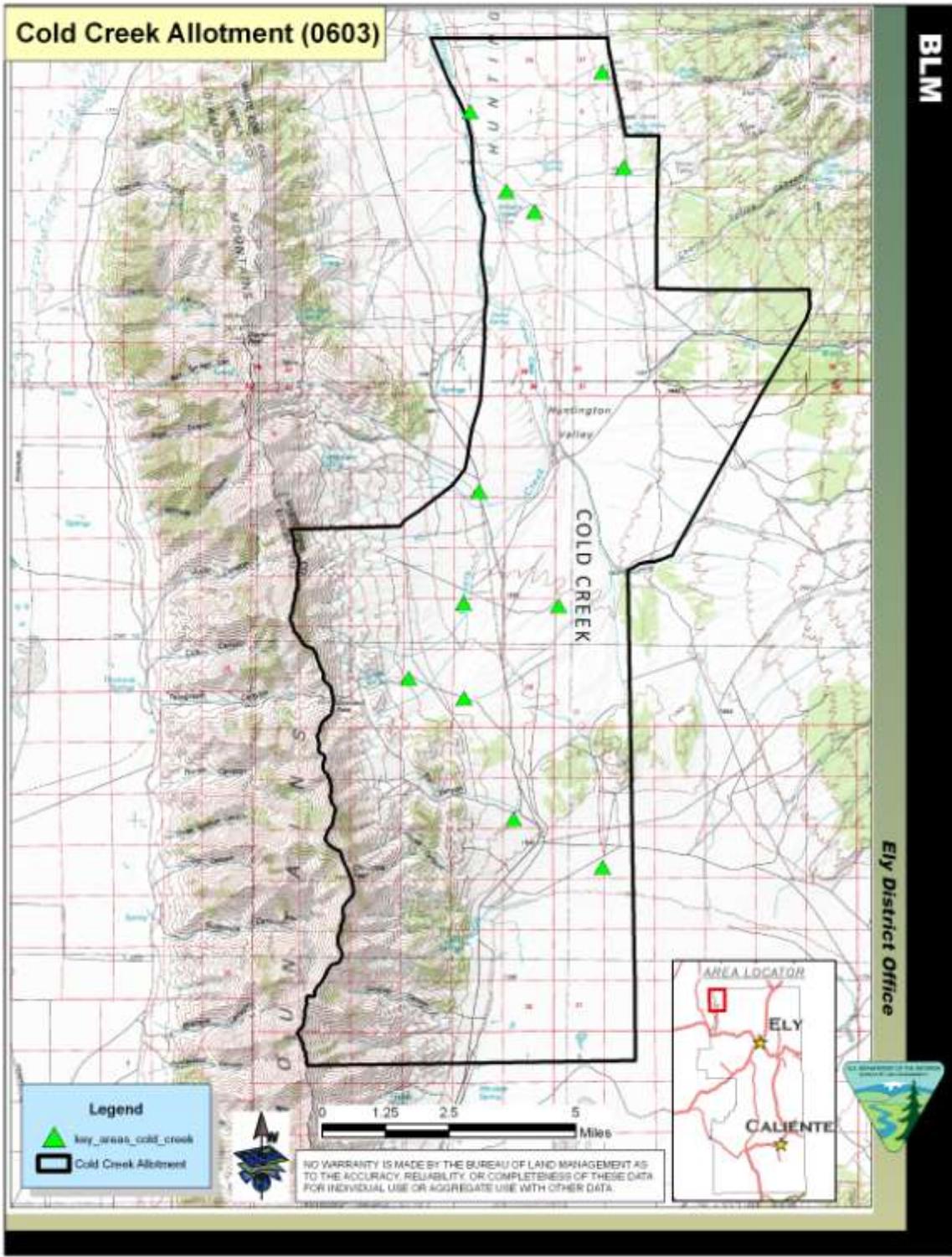
Map I. Location of Warm Springs, Cold Creek, and Dry Mountain and Warm Springs Trail Allotments.



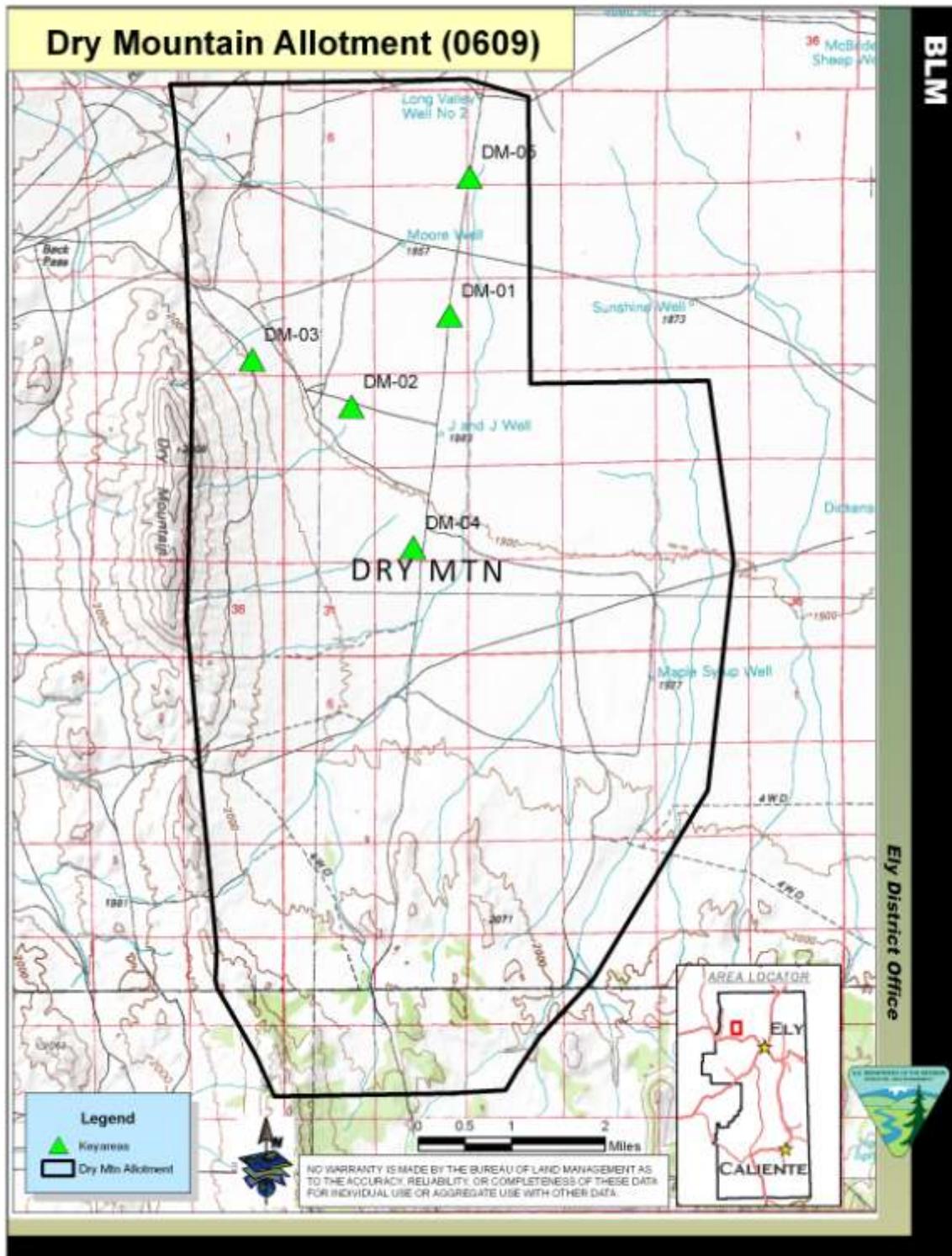
Map II. The five Use Areas of Cold Creek Allotment.



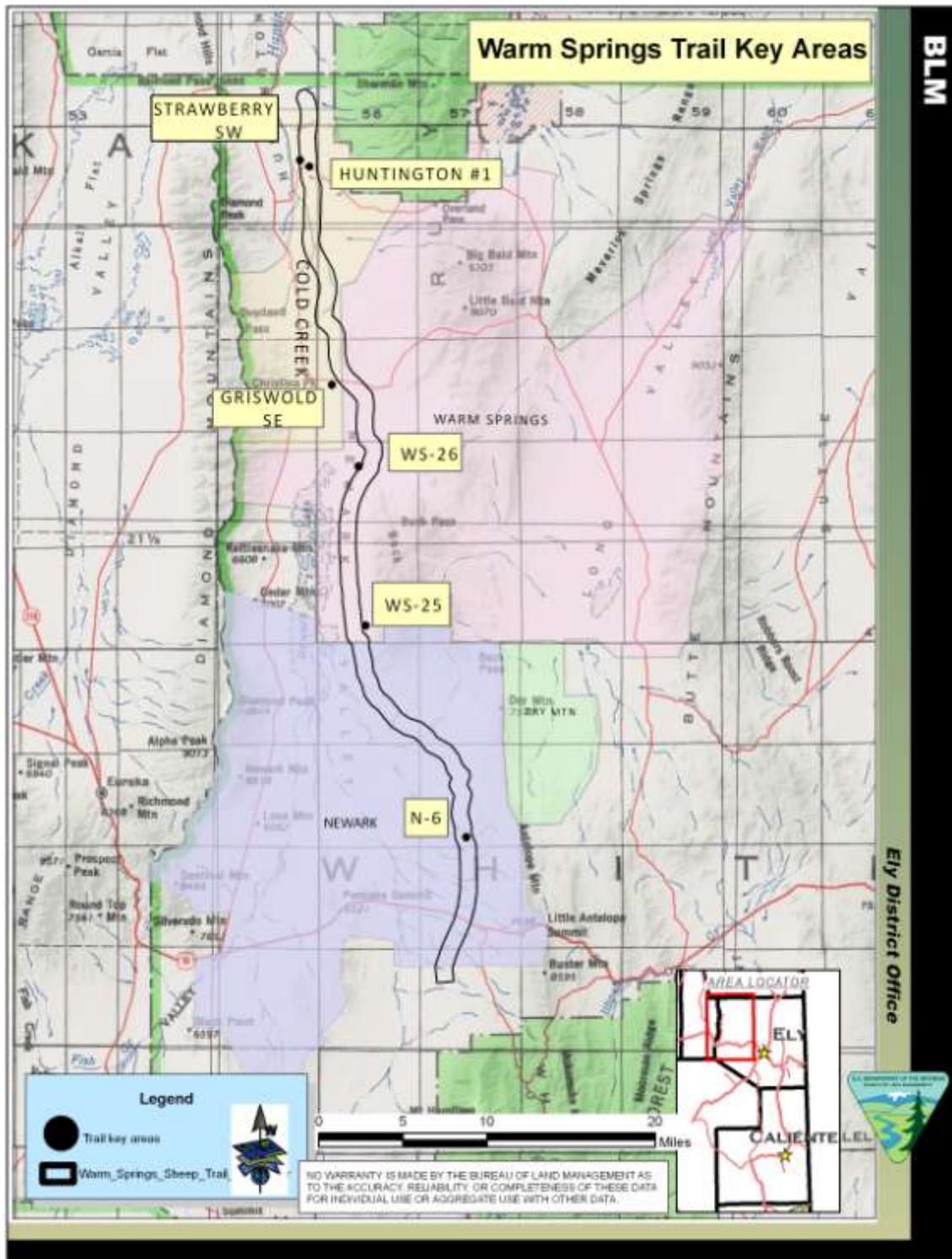
Map III. Warm Springs Allotment, divided into eight use areas.



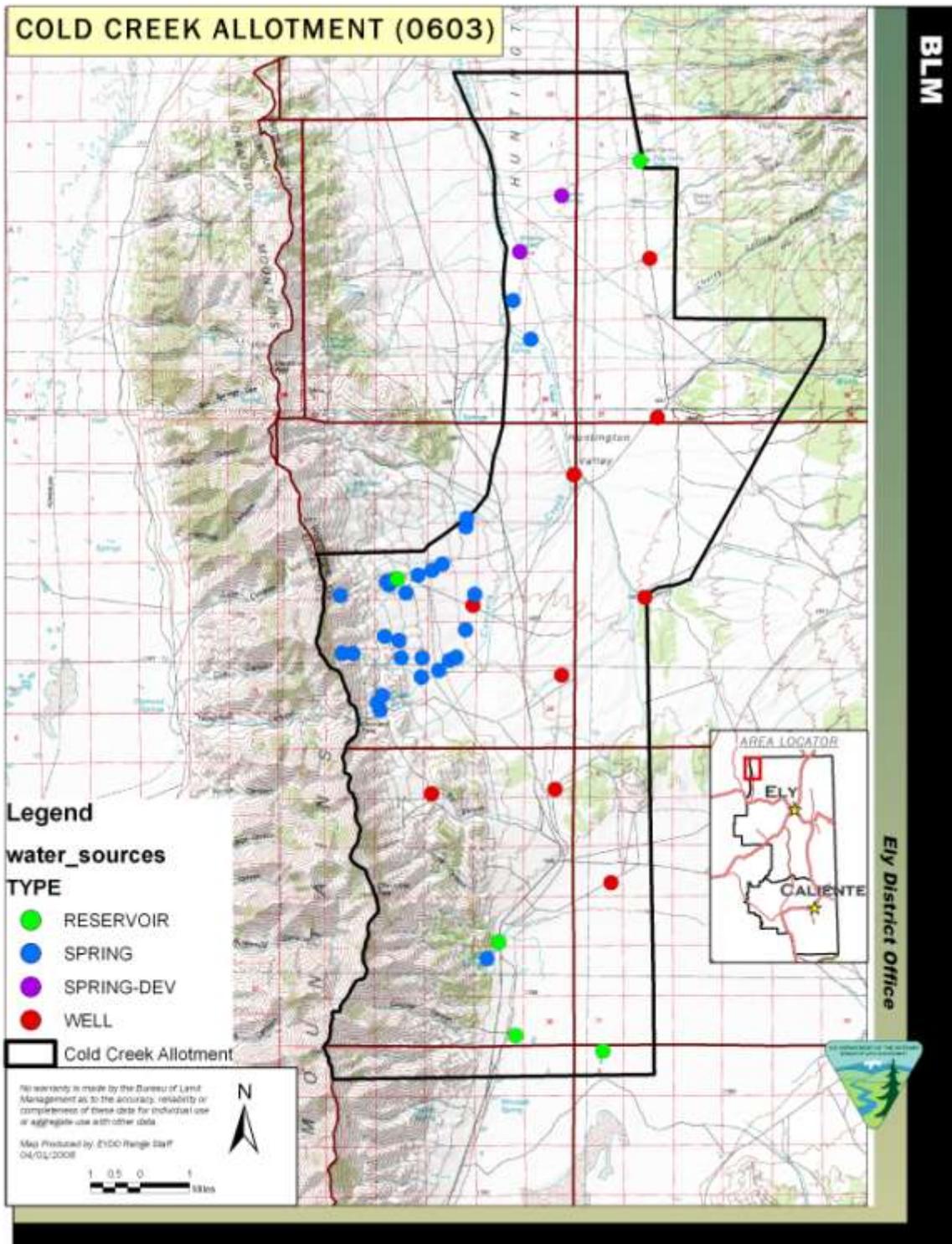
Map IV. Locations of Cold Creek Allotment Key areas.



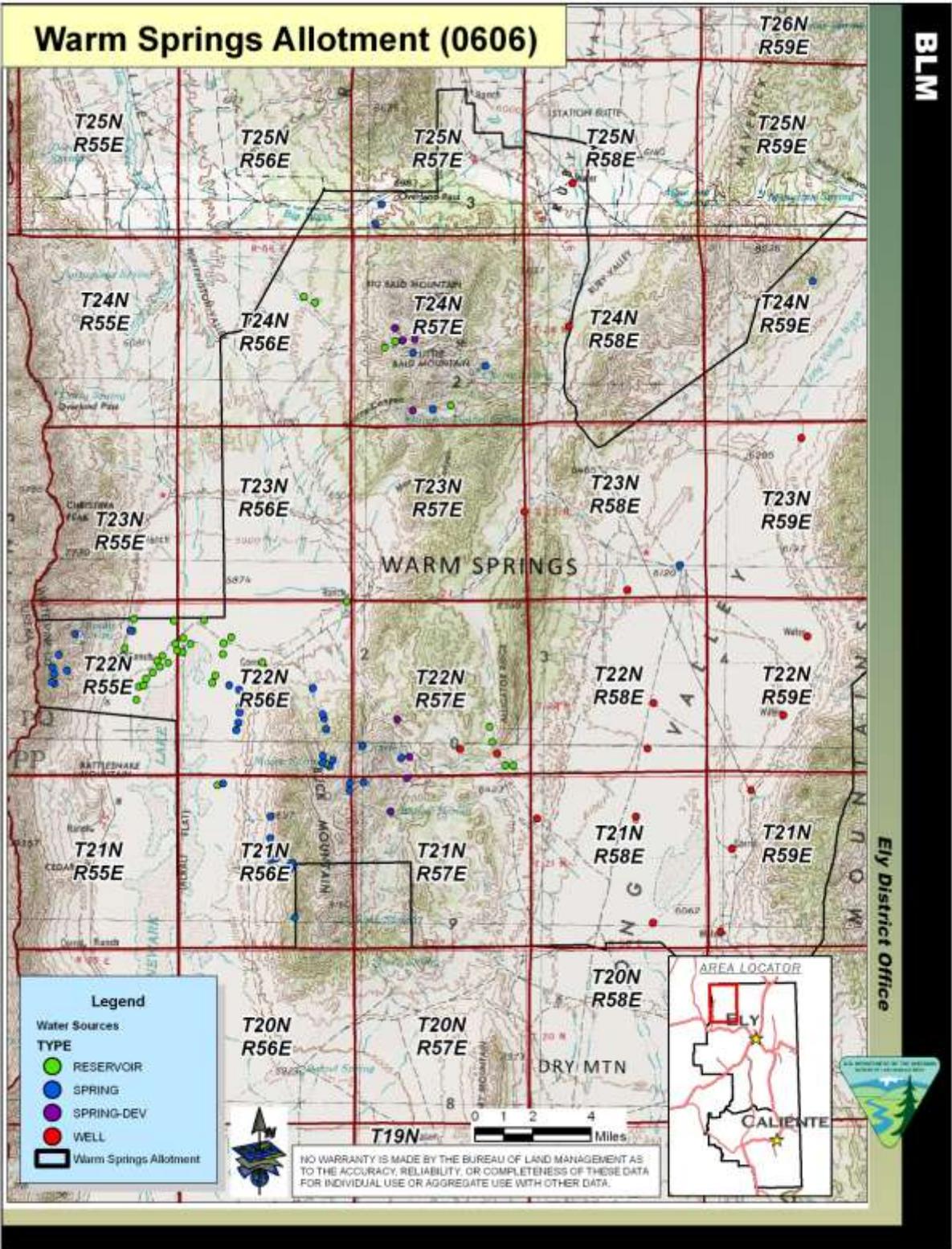
Map VI. Location of Dry Mountain Key areas.



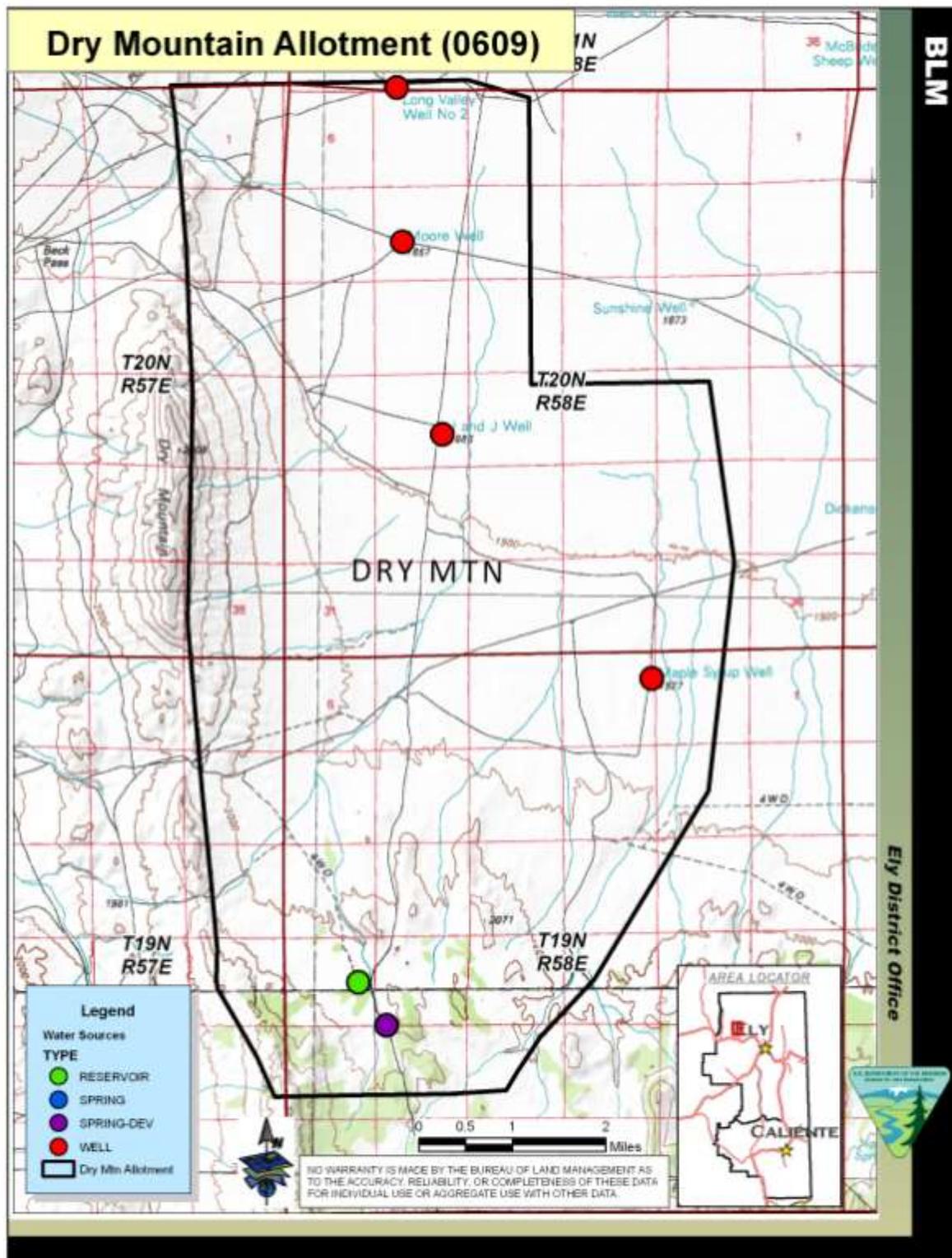
Map VII. Location of Key Areas on Warm Springs Trail.



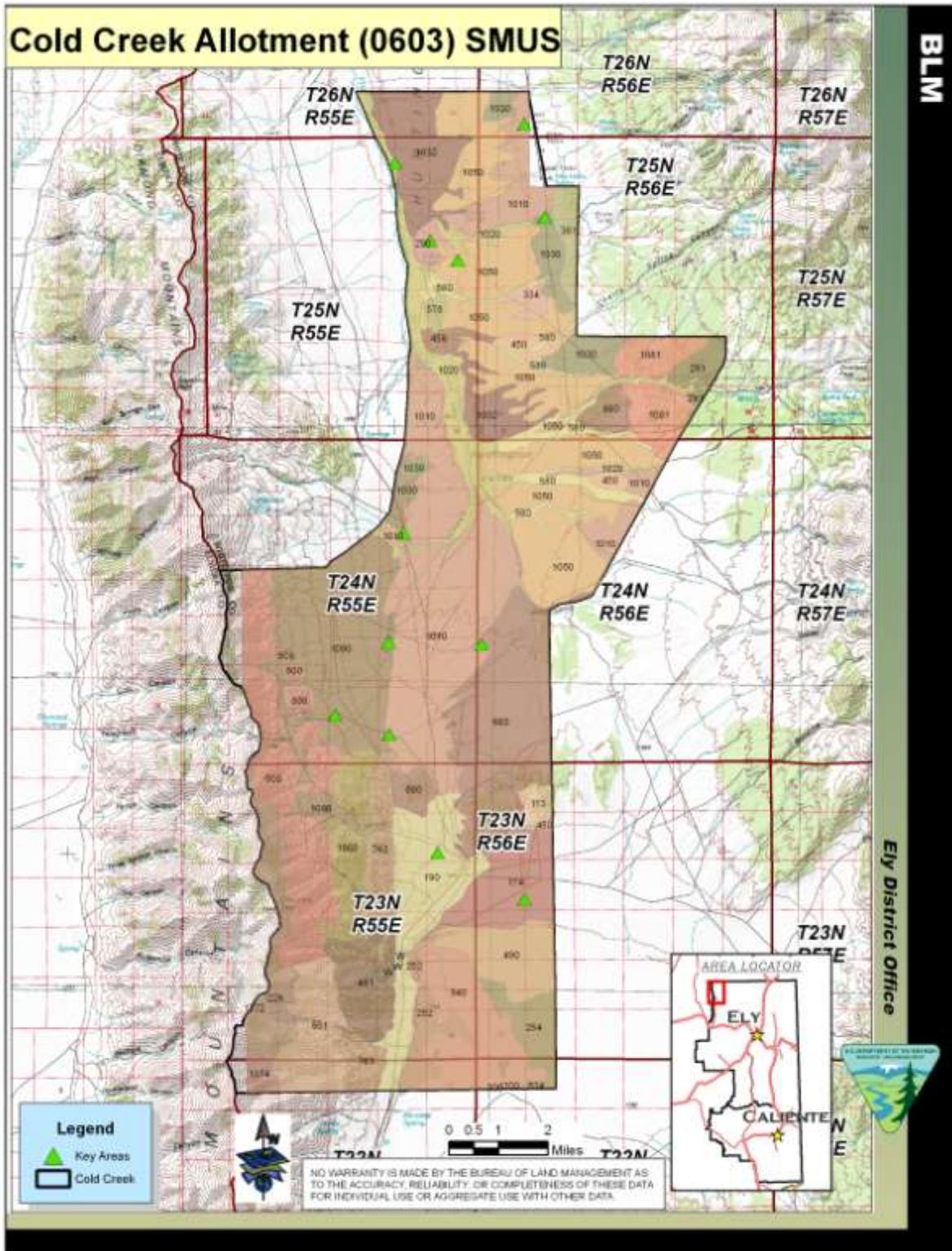
Map VIII. Water sources identified within the Cold Creek Allotment.



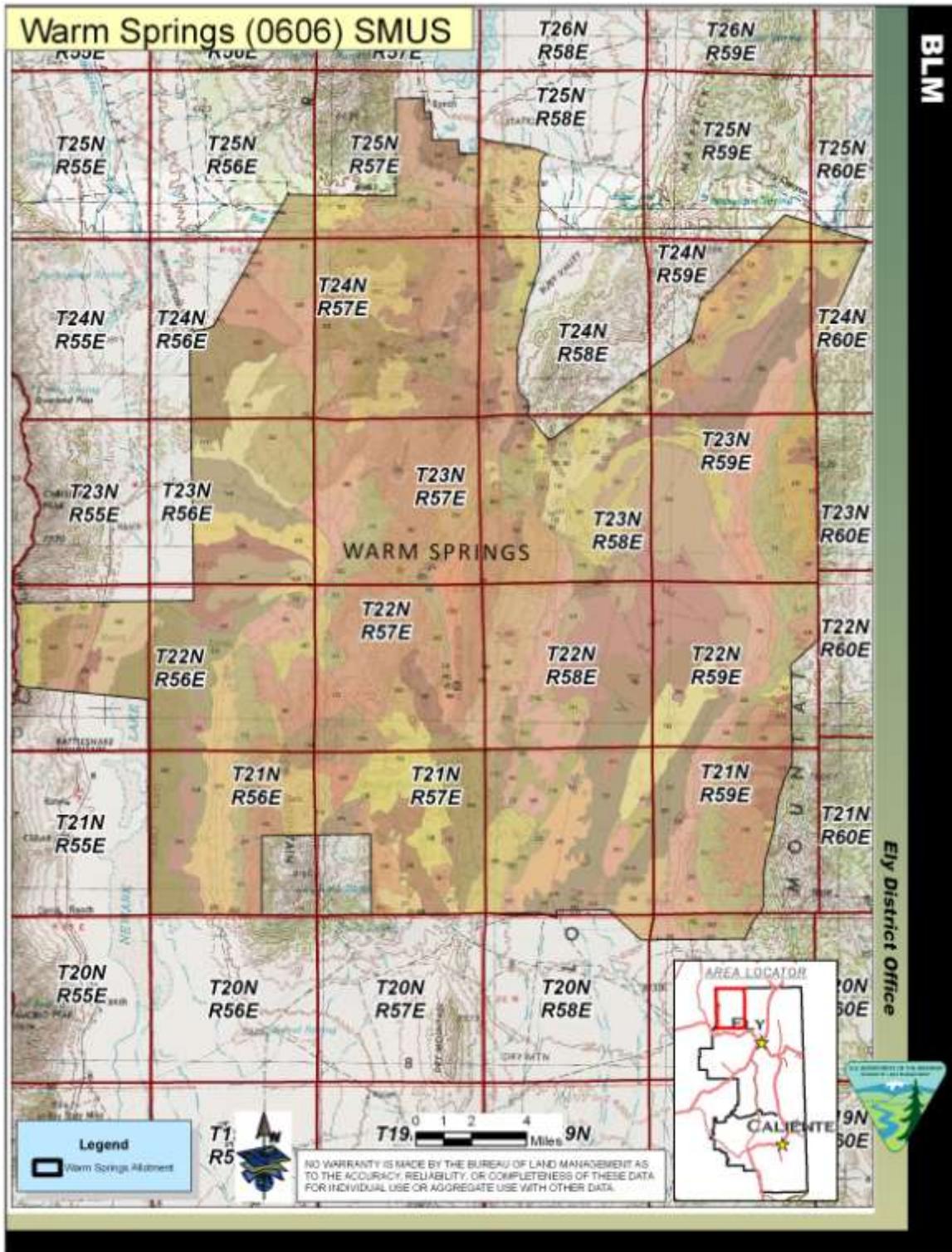
Map IX. Water sources identified within the Warm Springs Allotment.



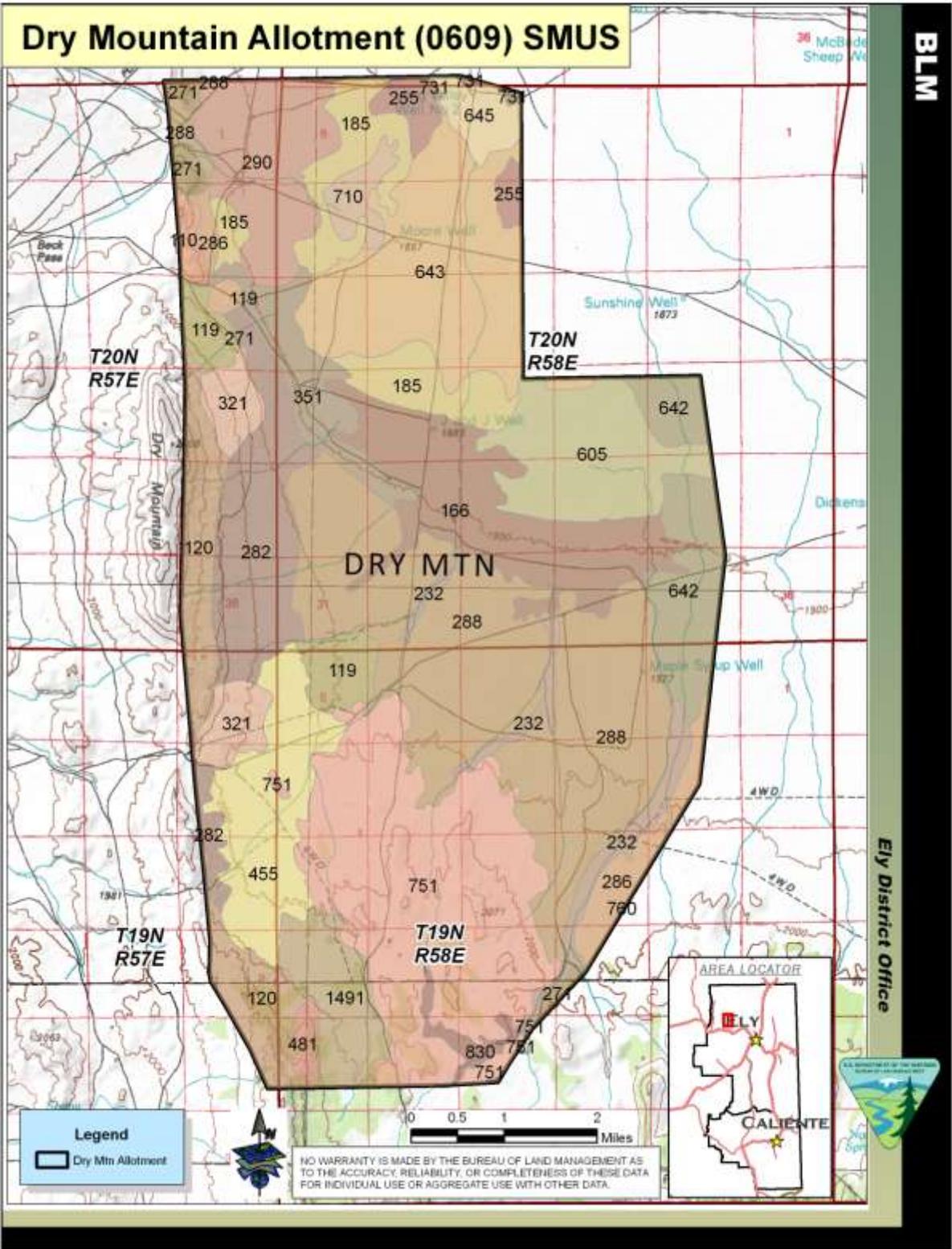
Map X. Water sources identified within the Dry Mountain Allotment.



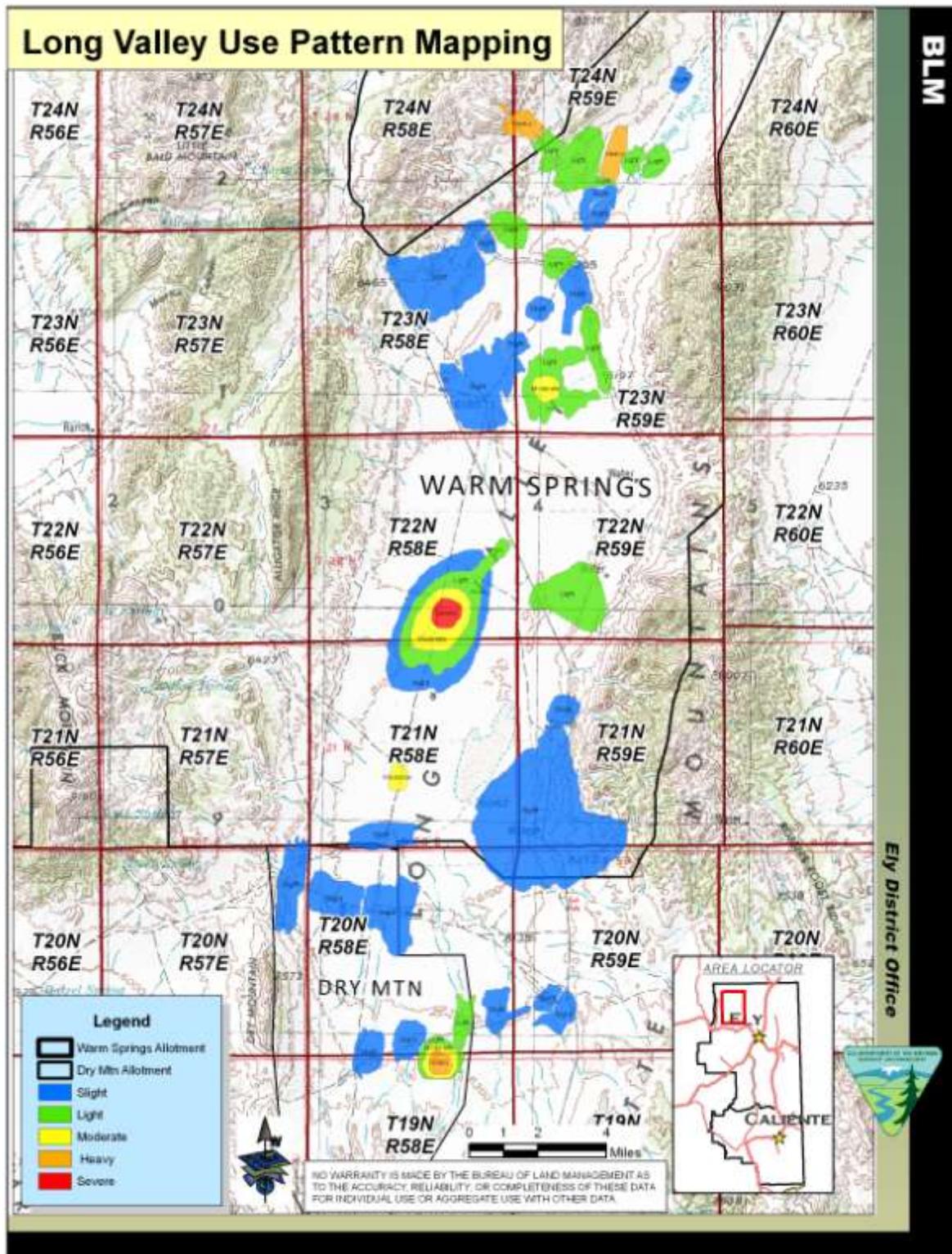
Map XI. Soil Mapping Units (SMUs) identified within the Cold Creek Allotment.



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	10/01 - 04/01	100	Active	1149
	500 Sheep	10/01 - 04/01	100	Active	602
Warm Springs (00606)	642 Cattle	03/01 - 2/28	100	Active	7704
Warm Springs Trail (00622)	4600 Sheep	03/01 - 03/31	100	Active	938
	4700 Sheep	11/01 - 11/30	100	Active	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 Huntington #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	04/15 to 04/30	100	Active	124
	1200 Sheep	11/01 to 11/15	100	Active	118
Warm Springs Trail 00622	2750 Sheep	4/15 to 05/01	100	Active	307
	2754 Sheep	11/15 to 12/01	100	Active	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:

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.

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
Ben Patterson
Tumbling JR Ranch Manager

3/30/09
Date

/s/ Jeffrey A. Weeks
Jeffrey A. Weeks
Egan Field Manager

4/10/09
Date

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:

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

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

<i>Acroptilon repens</i>	Russian knapweed
<i>Carduus nutans</i>	Musk thistle
<i>Centaurea stoebe</i>	Spotted knapweed
<i>Cirsium arvense</i>	Canada thistle
<i>Cirsium vulgare</i>	Bull thistle
<i>Hyoscyamus niger</i>	Black henbane
<i>Lepidium draba</i>	Hoary cress
<i>Lepidium latifolium</i>	Tall whitetop
<i>Onopordum acanthium</i>	Scotch thistle
<i>Tamarix spp.</i>	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:

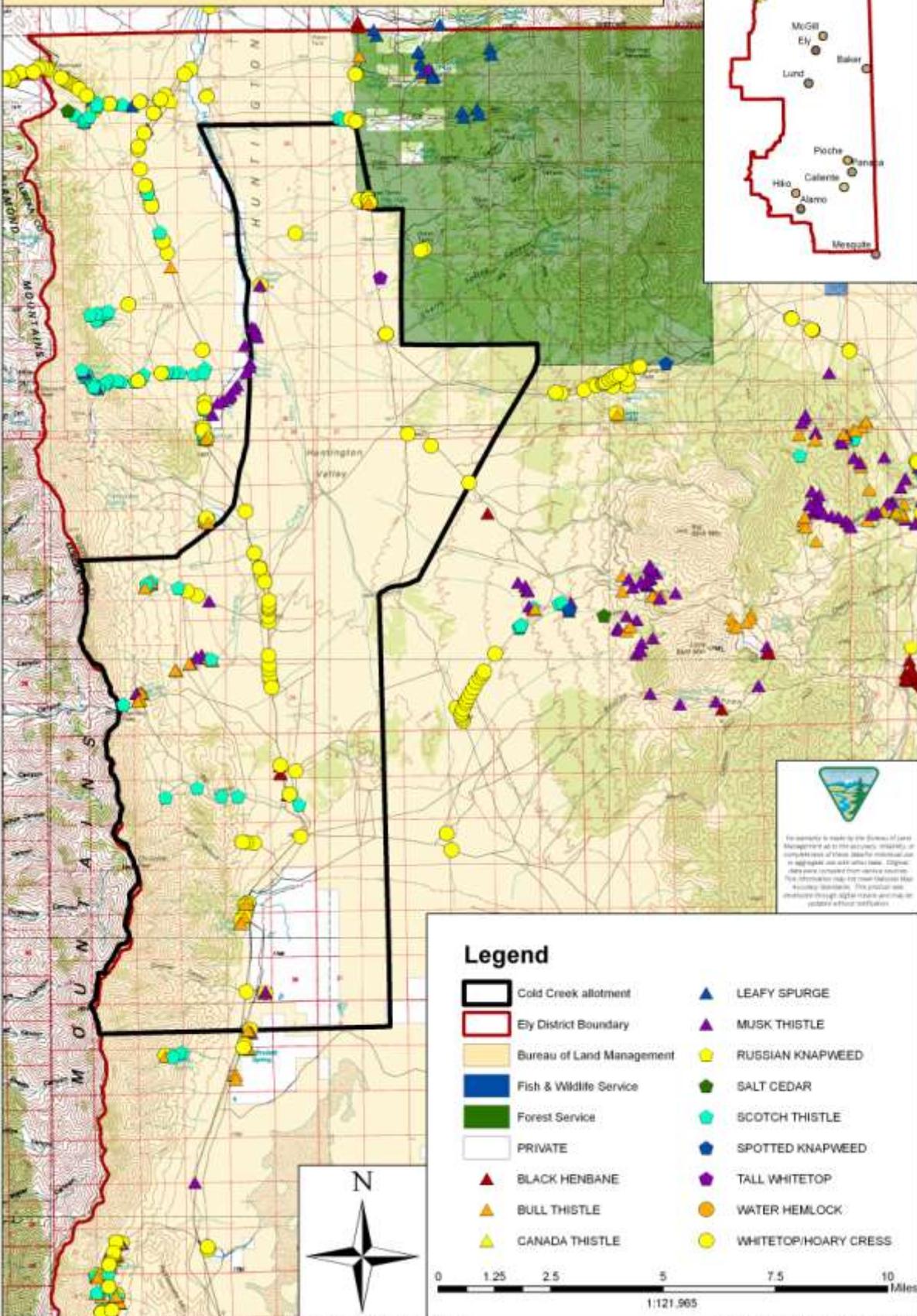
- Prior to entering public lands, the BLM will provide information regarding noxious weed management and identification to the permit holders affiliated with the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will 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
Bonnie Million
Ely District Noxious & Invasive Weeds Coordinator

3/10/2008
Date

Cold Creek Allotment Term Permit Renewal Documented Noxious & Invasive Weed Infestations

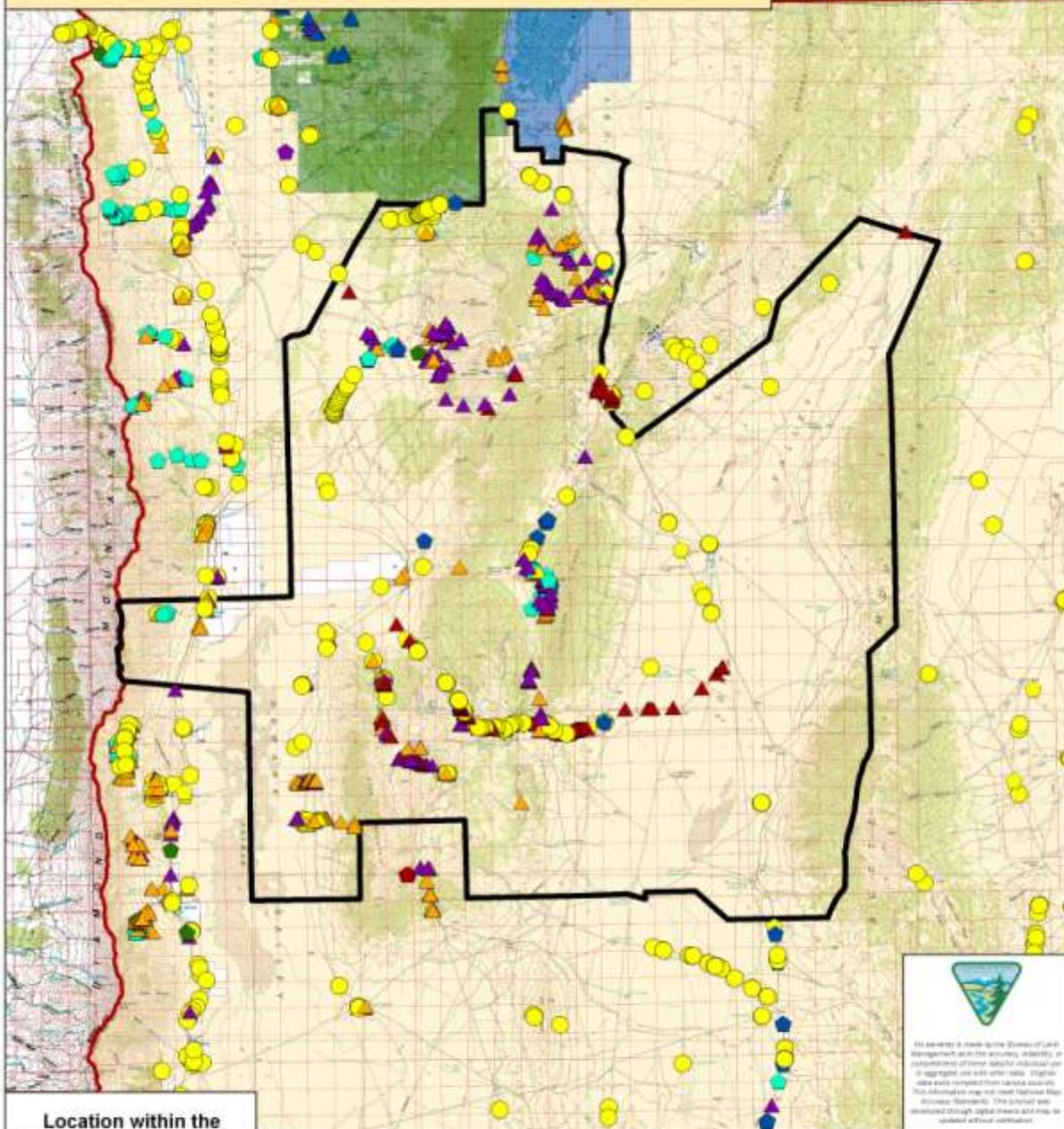
Location within the
Ely Field Office boundary



Produced on 5/7/2009 by Bonnie M. Vaagboner, 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



As required it is the Bureau of Land Management's policy to make available, in accordance with the Freedom of Information Act, all data for individual parcels in digital form and print form. Digital data are available from the BLM website. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

Location within the Ely Field Office boundary



Legend

- | | | |
|------------------------|----------------------|---------------------------|
| Warm Springs allotment | RUSSIAN KNAPWEED | Ely District Boundary |
| BLACK HENBANE | SALT CEDAR | Bureau of Land Management |
| BULL THISTLE | SCOTCH THISTLE | Fish & Wildlife Service |
| CANADA THISTLE | SPOTTED KNAPWEED | Forest Service |
| LEAFY SPURGE | TALL WHITETOP | PRIVATE |
| MUSK THISTLE | WATER HEMLOCK | |
| POISON HEMLOCK | WHITETOP/HOARY CRESS | |

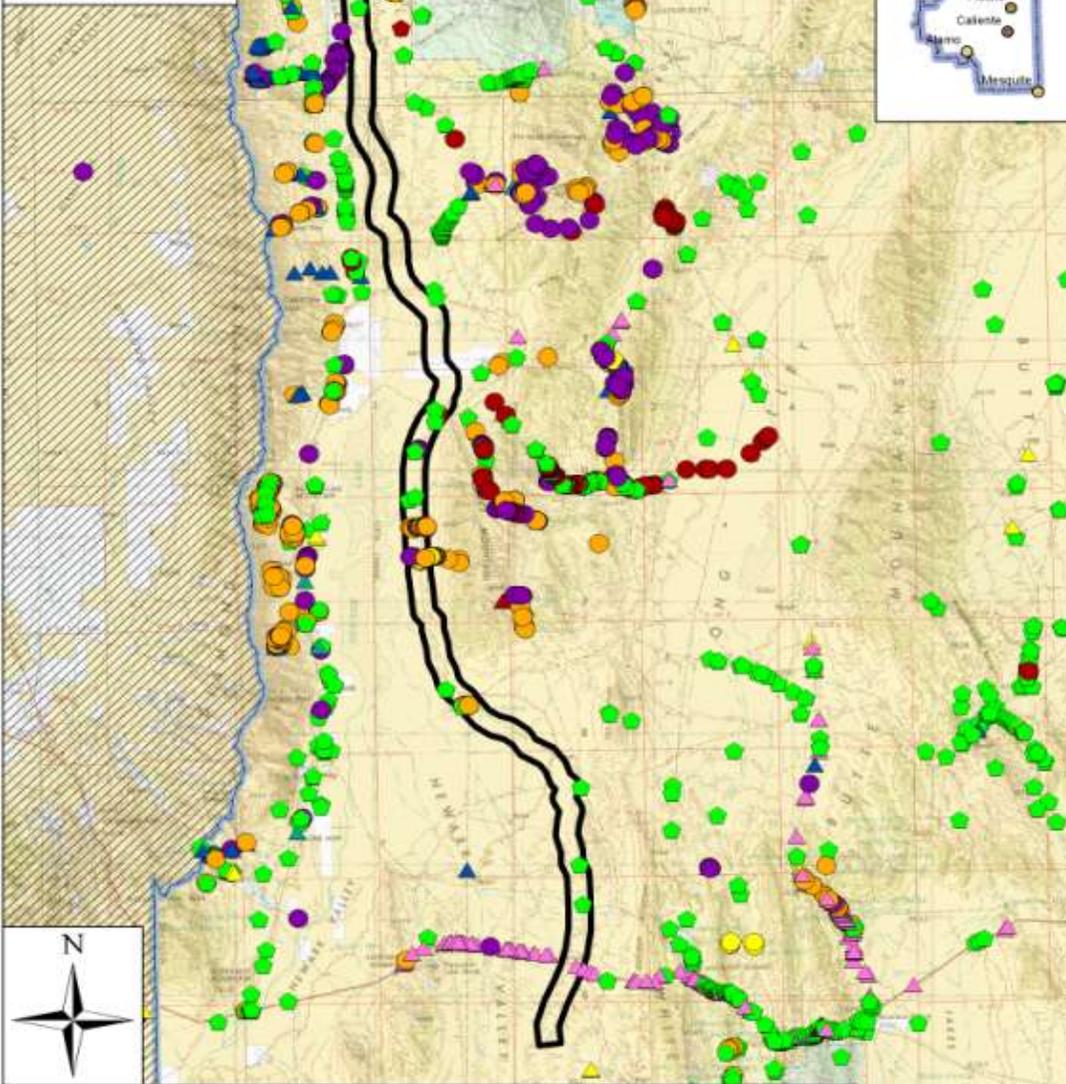


Warm Springs Trail Term Permit Renewal Documented Noxious & Invasive Weed Infestations

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: Sonnie M. Nelson
Noxious & Invasive Weeds Specialist
11/06/2008

Location within the Ely District boundary



Legend

Warm Springs Trail Allotment	BLACK HENBANE	SALT CEDAR
Other BLM Districts	BULL THISTLE	SCOTCH THISTLE
Ely District boundary	CANADA THISTLE	SPOTTED KNAPWEED
BLM	LEAFY SPURGE	TALL WHITETOP
US Forest Service	MUSK THISTLE	WATER HEMLOCK
US Fish & Wildlife Service	POISON HEMLOCK	WHITETOP/HOARY CRESS
Private	RUSSIAN KNAPWEED	



Ely District Office

BLM



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:

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

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

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

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

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

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

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

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

<i>Lepidium draba</i>	Hoary cress
-----------------------	-------------

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

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

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

<i>Acroptilon repens</i>	Russian knapweed
<i>Carduus nutans</i>	Musk thistle
<i>Centaurea stoebe</i>	Spotted knapweed
<i>Cicuta maculate</i>	Water hemlock
<i>Cirsium arvense</i>	Canada thistle
<i>Cirsium vulgare</i>	Bull thistle
<i>Conium maculatum</i>	Poison hemlock
<i>Euphorbia esula</i>	Leafy spurge
<i>Hyoscyamus niger</i>	Black henbane
<i>Lepidium draba</i>	Hoary cress
<i>Lepidium latifolium</i>	Tall whitetop
<i>Onopordum acanthium</i>	Scotch thistle
<i>Tamarix spp.</i>	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*
Bonnie M. Million
Ely District Noxious & Invasive Weeds Coordinator

11/6/2008
Date

Cold Creek Allotment Term Permit Renewal Documented Noxious & Invasive Weed Infestations

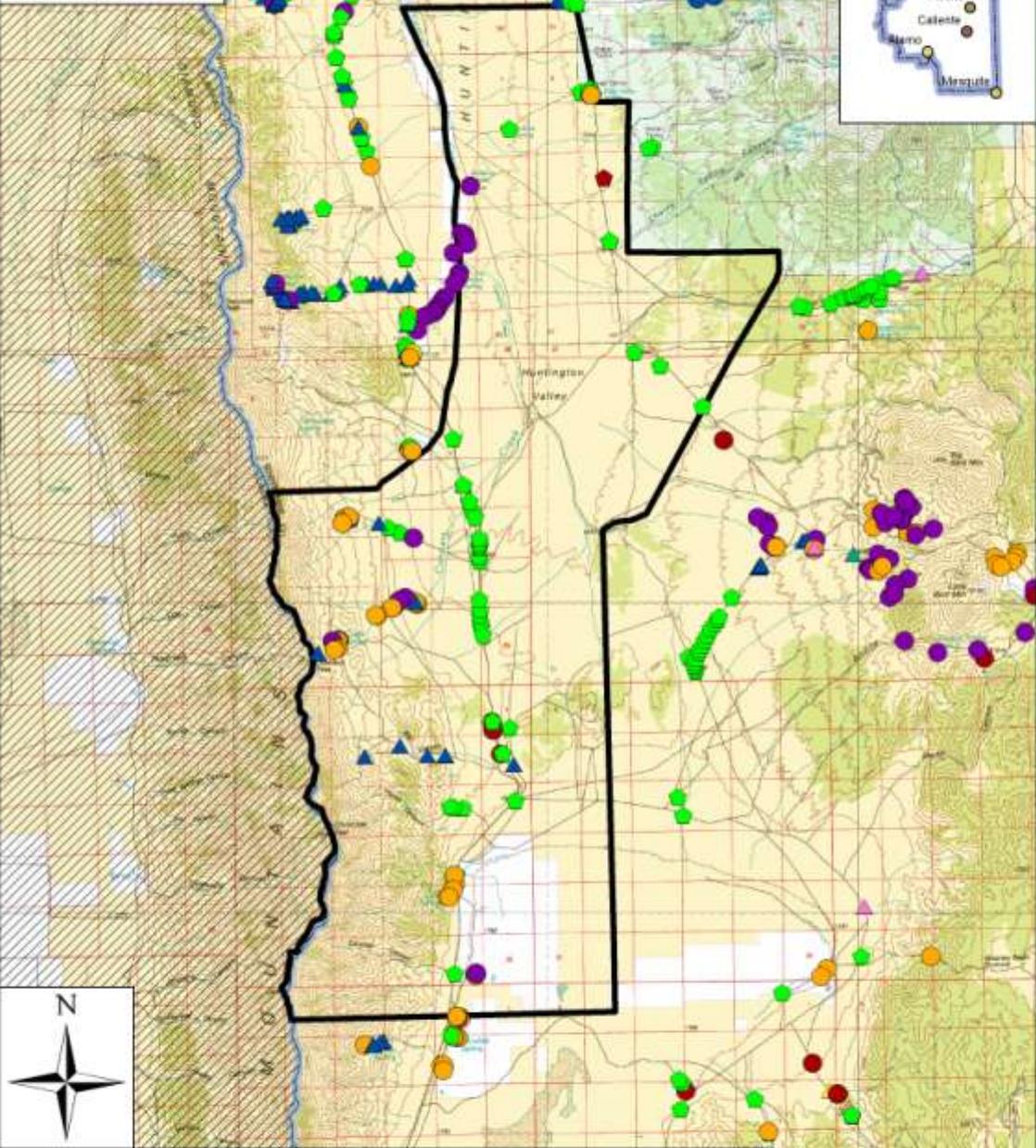
Location within the Ely District boundary

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. Milton
Noxious & Invasive Weeds Specialist
11/06/2008



BLM



Ely District Office

Legend

- | | | |
|-----------------------|------------------|----------------------|
| Cold Creek Allotment | BLACK HENBANE | SALT CEDAR |
| Other BLM Districts | BULL THISTLE | SCOTCH THISTLE |
| Ely District boundary | CANADA THISTLE | SPOTTED KNAPWEED |
| BLM | LEAFY SPURGE | TALL WHITETOP |
| US Forest Service | MUSK THISTLE | WATER HEMLOCK |
| Private | RUSSIAN KNAPWEED | WHITETOP/HOARY CRESS |

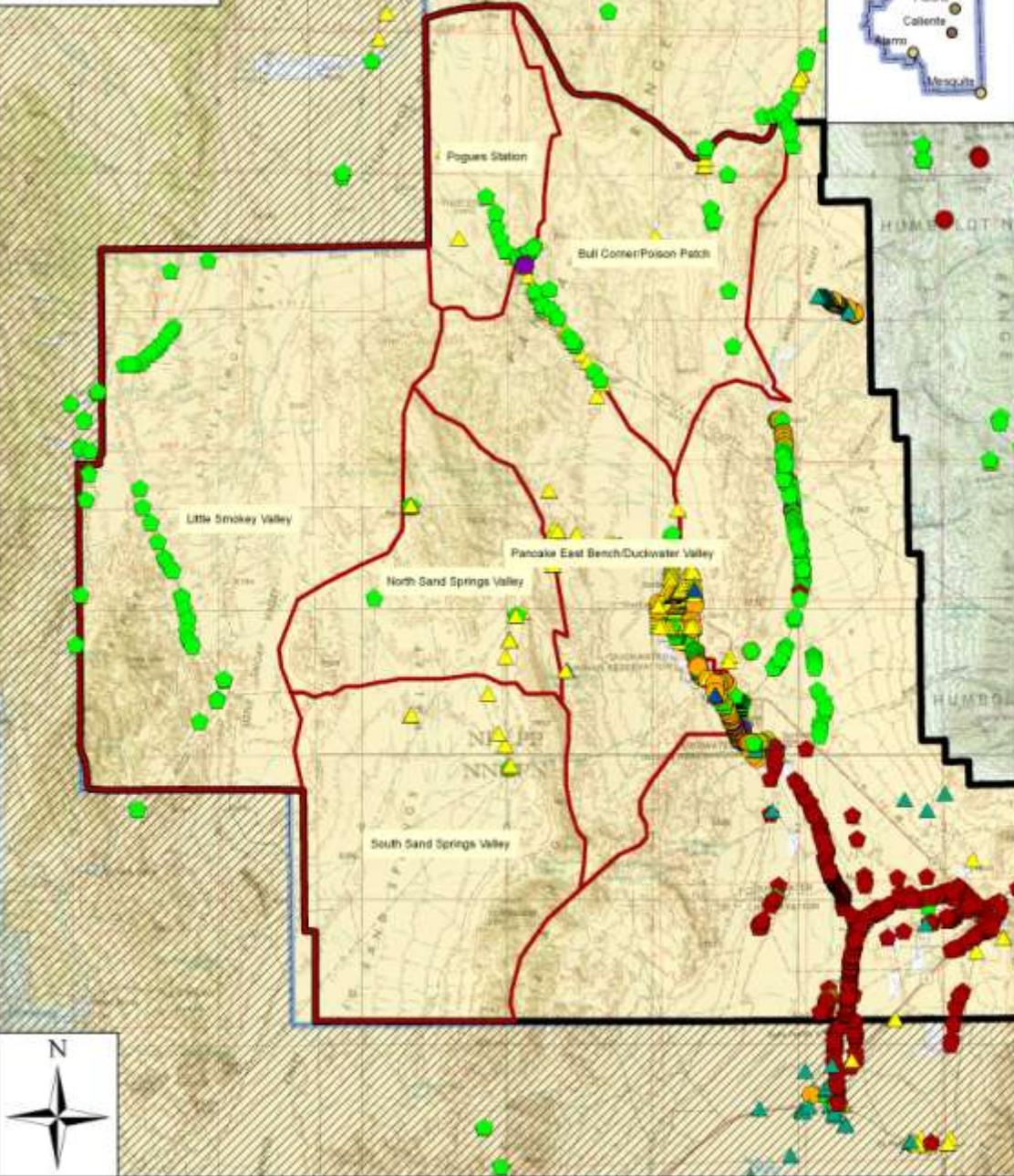


Duckwater Allotment Term Permit Renewal Documented Noxious & Invasive Weed Infestations

Location within the Ely District boundary

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. Milton
Noxious & Invasive Weeds Specialist
11/05/2008



Ely District Office

BLM

Legend

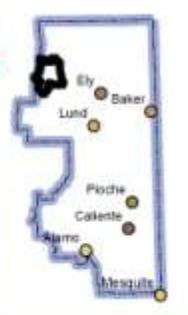
- | | | | |
|-----------------------|--------------------------|------------------|----------------------|
| Duckwater Use Areas | BLM | BLACK HENBANE | SALT CEDAR |
| Duckwater Allotment | US Forest Service | BULL THISTLE | SCOTCH THISTLE |
| Other BLM Districts | Duckwater Shoshone Tribe | CANADA THISTLE | SPOTTED KNAPWEED |
| Ely District boundary | Private | MUSK THISTLE | TALL WHITETOP |
| | | RUSSIAN KNAPWEED | WHITETOP/HOARY CRESS |



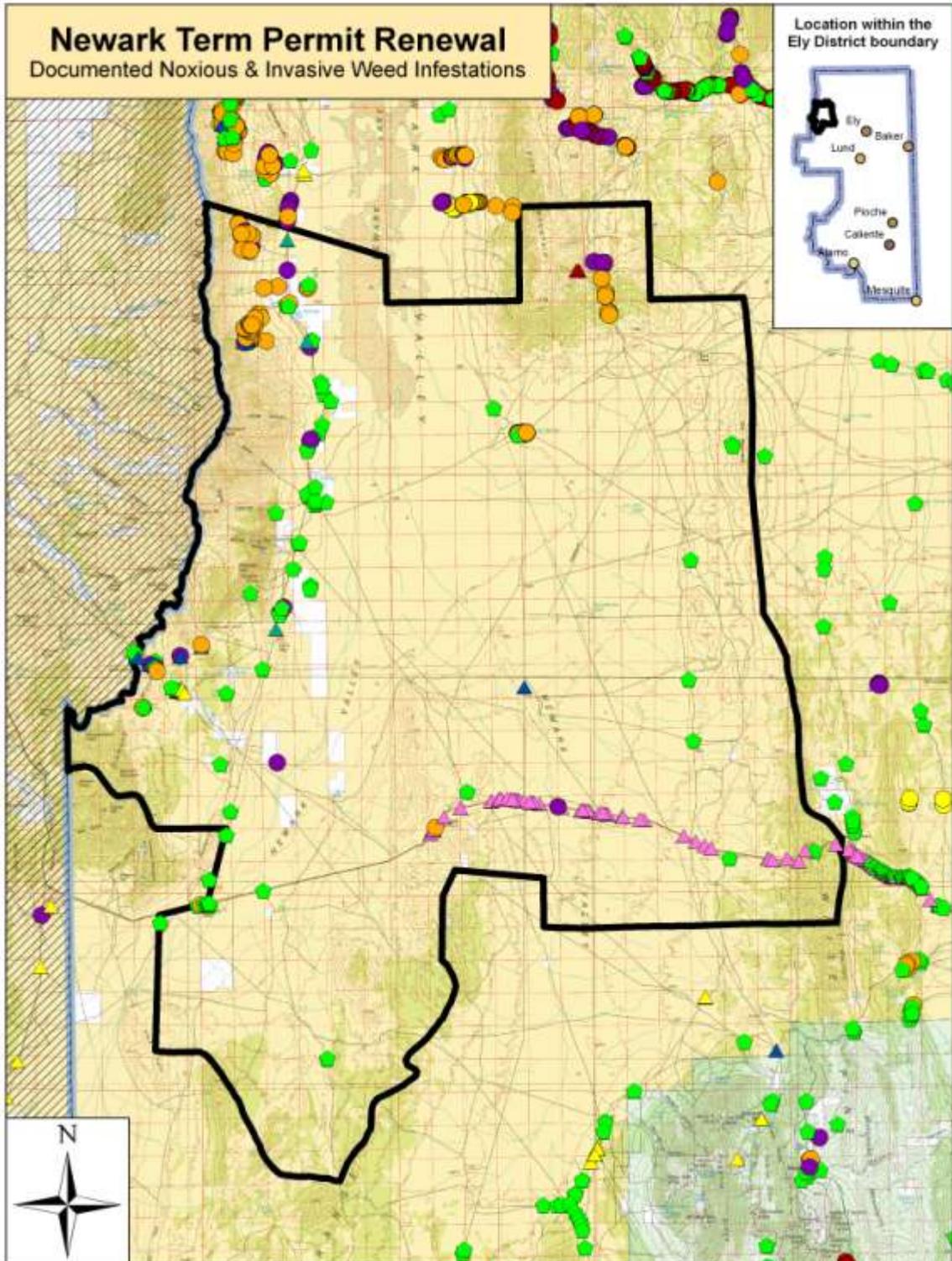
Newark Term Permit Renewal

Documented Noxious & Invasive Weed Infestations

Location within the Ely District boundary



BLM



Ely District Office



Legend

- | | | |
|-----------------------|------------------|----------------------|
| Newark Allotment | BLACK HENBANE | SALT CEDAR |
| Other BLM Districts | BULL THISTLE | SCOTCH THISTLE |
| Ely District boundary | CANADA THISTLE | SPOTTED KNAPWEED |
| BLM | MUSK THISTLE | TALL WHITETOP |
| US Forest Service | POISON HEMLOCK | WHITETOP/HOARY CRESS |
| Private | RUSSIAN KNAPWEED | |

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: Sonnie M. Nelson
Noxious & Invasive Weeds Specialist
10/21/2008



Railroad Pass Term Permit Renewal Documented Noxious & Invasive Weed Infestations

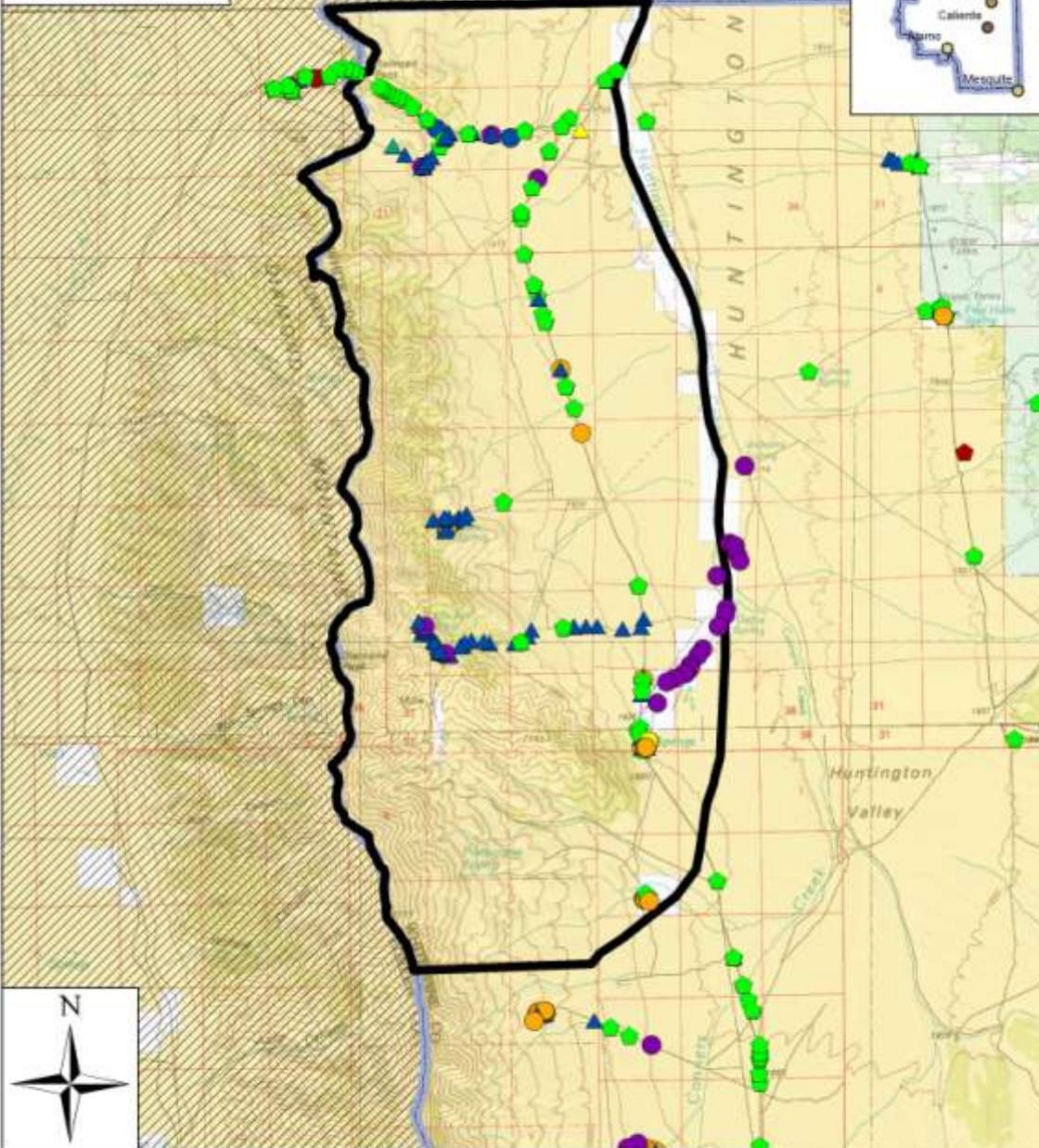
No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual use or aggregate use with other data.

Map Produced by: Bonnie M. Milton
Noxious & Invasive Weeds Specialist
10/21/2008

Location within the
Ely District boundary



BLM



Ely District Office

Legend

- | | | |
|-------------------------|-----------------|----------------------|
| Railroad Pass Allotment | BLACK HENBANE | SALT CEDAR |
| Other BLM Districts | BULL THISTLE | SCOTCH THISTLE |
| Ely District Boundary | CANADA THISTLE | SPOTTED KNPWEED |
| BLM | LEAFY SPURGE | TALL WHITETOP |
| US Forest Service | MUSK THISTLE | WATER HEMLOCK |
| Private | RUSSIAN KNPWEED | WHITETOP/HOARY CRESS |



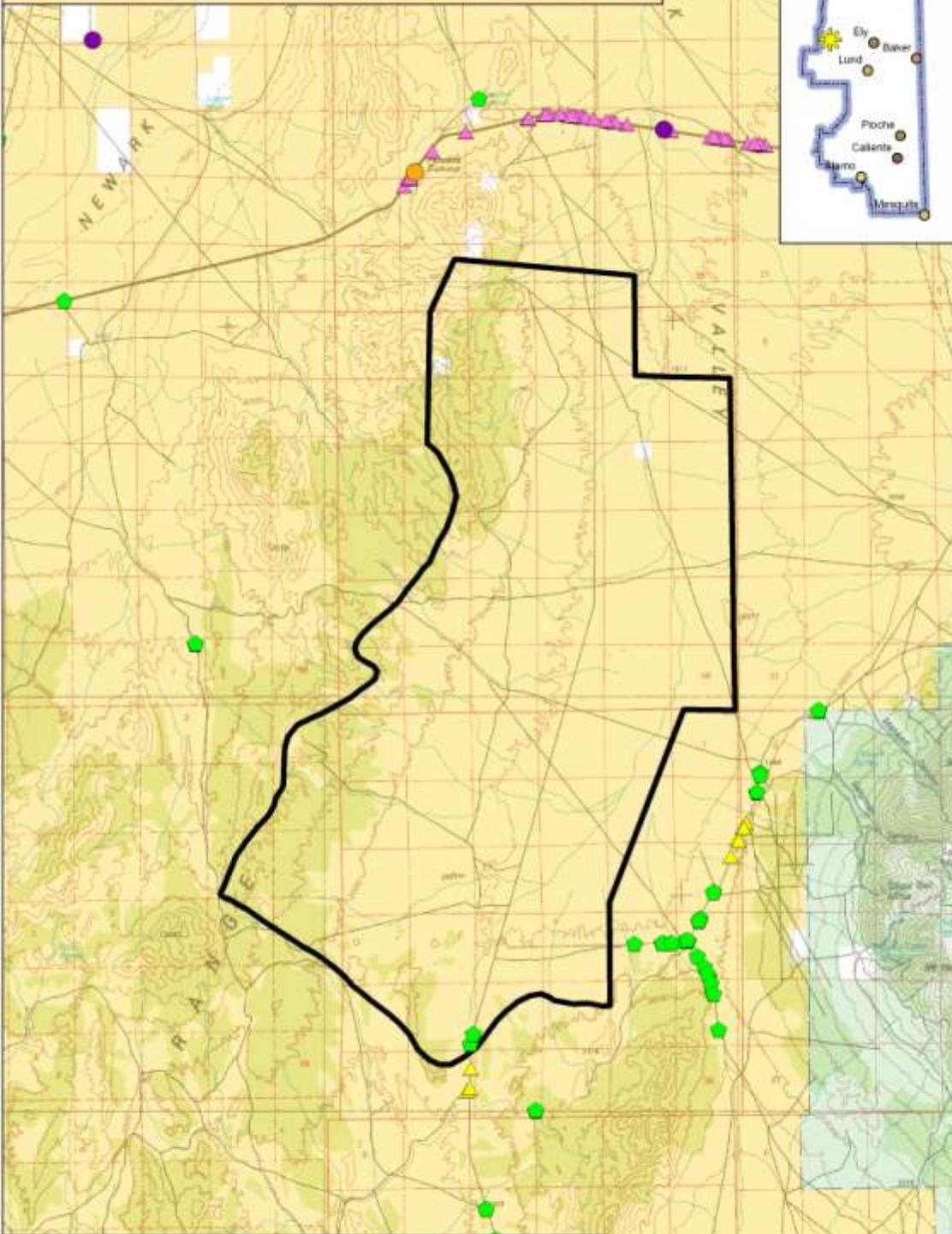
South Pancake Allotment Term Permit Renewal

Documented Noxious & Invasive Weed Infestations

Location within the Ely District boundary



BLM



Ely District Office

Legend

- South Pancake Allotment
- BLM
- US Forest Service
- Private
- BULL THISTLE
- MUSK THISTLE
- RUSSIAN KNAPWEED
- SPOTTED KNAPWEED
- WHITETOP/HOARY CRESS



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: Sonnie M. Milton
Noxious & Invasive Weeds Specialist
11/06/2008



Warm Springs Trail Term Permit Renewal Documented Noxious & Invasive Weed Infestations

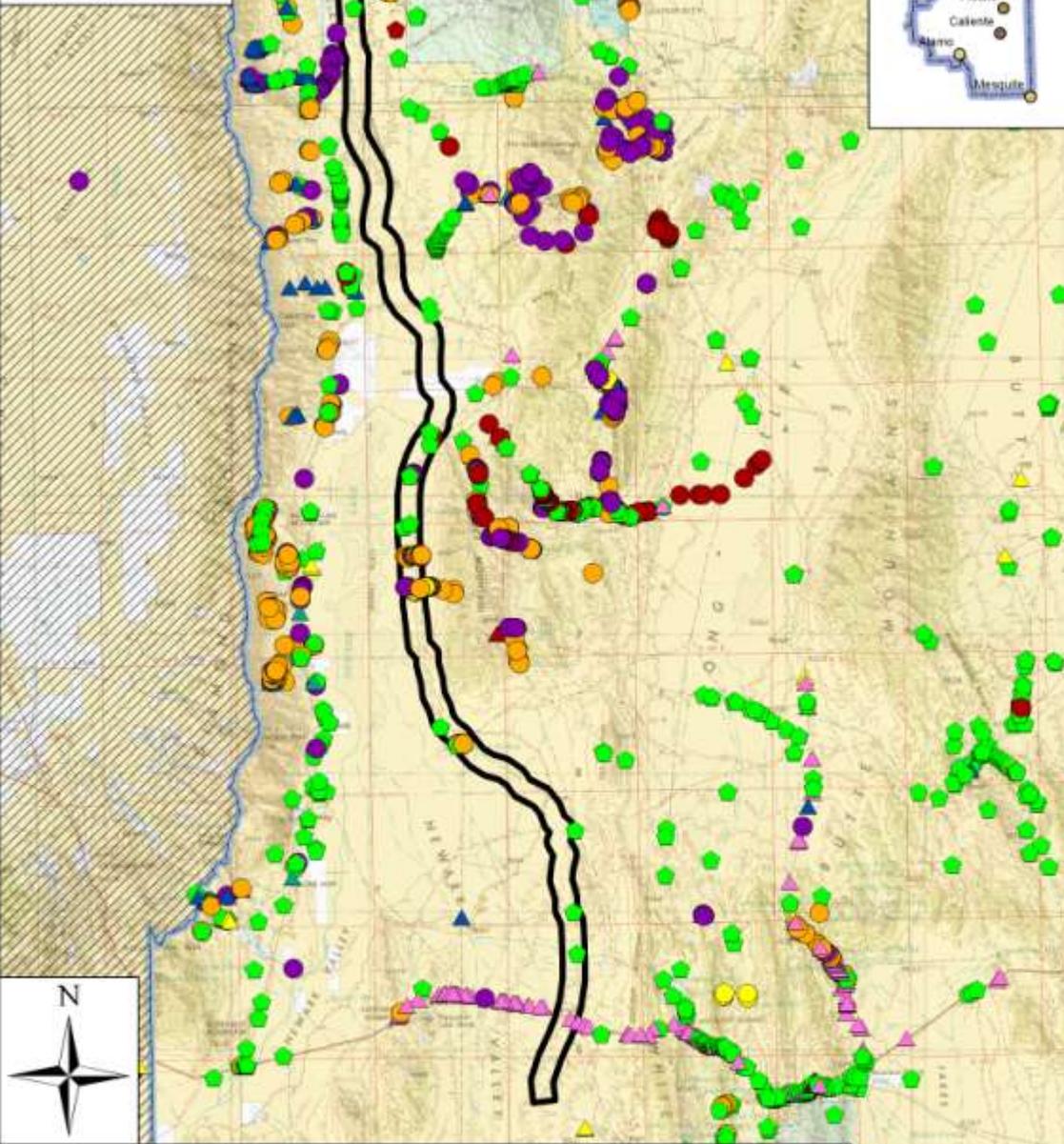
Location within the Ely District boundary



BLM

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: Sonnie M. Wilson
Noxious & Invasive Weeds Specialist
11/06/2008



Ely District Office

Legend

- | | | |
|------------------------------|------------------|----------------------|
| Warm Springs Trail Allotment | BLACK HENBANE | SALT CEDAR |
| Other BLM Districts | BULL THISTLE | SCOTCH THISTLE |
| Ely District boundary | CANADA THISTLE | SPOTTED KNAPWEED |
| BLM | LEAFY SPURGE | TALL WHITETOP |
| US Forest Service | MUSK THISTLE | WATER HEMLOCK |
| US Fish & Wildlife Service | POISON HEMLOCK | WHITETOP/HOARY CRESS |
| Private | RUSSIAN KNAPWEED | |

