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

STANDARDS AND DETERMINATION DOCUMENT
July 30, 2008

Sam and Clelia Henriod (Operator No. 2704544)
Term Permit Renewal
South Butte Allotment (00504) and
South Butte Seeding Allotment (00506)

Location: Ely, Nevada
Applicant/Address:

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Standards and Guidelines Assessment

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

This Standards and Determination Document evaluates and assesses livestock grazing management achievement of the Standards and conformance with the Guidelines for the South Butte Allotment and South Butte Seeding Allotment in the Ely BLM District. This document does not evaluate or assess achievement of the wild horse and burro or the off highway vehicle Standards or conformance to their respective Guidelines.

The Standards were assessed for the South Butte Allotment and South Butte Seeding Allotment by a BLM interdisciplinary team consisting of rangeland management specialists, wildlife biologist, weeds specialist, and watershed specialist. 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, Interpreting Indicators of Rangeland Health (USDI-BLM et al. 2000), Sampling Vegetation Attributes (USDI-BLM et al. 1996) and the National Range and Pasture Handbook (USDA-NRCS 1997). A complete list of references is included at the end of this document. All are available for public review in the Ely BLM District Office. The interdisciplinary team used rangeland monitoring data, professional observations, and photographs to assess achievement of the Standards and conformance with the Guidelines.

The South Butte Allotment and the South Butte Seeding Allotment encompasses approximately 26,081 public land acres and 968 public land acres, respectively. The grazing permit area occurs entirely within White Pine County, and is situated approximately 18 miles northwest of Ely, Nevada. The permit area occurs within the Butte Watershed (041). Most of the South Butte Allotment is within the Butte Wild Horse Herd Management Area. Both allotments are located within the Butte sage grouse population unit. The permitted area occurs within the Nevada Department of Wildlife hunting management areas #10 and #12. No wilderness occurs within the permitted area. The nearest wilderness is the Bristlecone Peak Wilderness, which is approximately two miles away is.

The South Butte Allotment and the South Butte Seeding Allotment have one permittee, Sam and Clelia Henriod. The current term permit for Sam and Clelia Henriod is issued for the period 03/01/2008 to 02/28/2018. These are both cattle allotments with a total

grazing preference of 508 Animal Unit Months (AUMs) for South Butte Allotment and 342 AUMs for the South Butte Seeding Allotment. For the South Butte Allotment, 396 AUMs are active and 112 AUMs are suspended nonuse, with the current term permit authorizing approximately 37 head of cattle with a season of use from 04/15 to 02/28. For the South Butte Seeding Allotment, 245 AUMs are active and 97 AUMs are suspended nonuse, with the current term permit authorizing approximately 40 head of cattle with a season of use from 05/01 to 10/31.

Final Multiple Use Decisions were issue for the South Butte Allotment on December 24, 1992 and for the South Butte Seeding Allotment on January 27, 1992. Each decision was reviewed and included in the analysis of existing data. These Final Multiple Use Decisions were based upon the evaluation of monitoring data, recommendations from district staff, and input received through consultation, coordination, and cooperation from the permittee and public interest groups to determine progress in meeting management objectives for each allotment. Based on these decisions range management actions were implemented to the meet the land use plan objectives as stipulated in the Egan Resource Area Record of Decision.

Four key areas have been established over the past twenty years on the South Butte Allotment and two key areas have been established for the South Butte Seeding Allotment. The establishment of these key areas is based on accessibility and general use by livestock, vegetation, and ecological range sites. Key areas for the South Butte Allotment were monitored and utilization data collected from 1994 to 2007 was included in this assessment. Key forage species include Indian ricegrass, needle and thread, and winter fat. Key areas for the South Butte Seeding Allotment were established to collect utilization data of the crested wheatgrass, which is the key forage for this allotment. A summary of monitoring data for both allotments is located in Appendix I of this document.

PART 1. STANDARD CONFORMANCE REVIEW

South Butte Allotment Standards Review

Standard 1. Upland Sites
Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate and land form.

As indicated by:

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

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

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

Conclusion: Standard Achieved

UPLANDS Sites: Rangeland monitoring and professional observation indicates that overall soil condition is currently being maintained on the native range. Soils are stable and productive and the topsoil is holding in place. Line intercept cover data collected on the allotment shows the majority of the South Butte Allotment is meeting the standard. Vegetative cover registered within the appropriate ground cover percentage for three of the four key areas where data was collected (see Appendix I).

Key Area SB-1 occurs in the Heist soil type, 353 soil mapping unit – (silty loam, 0-4% slopes). The ecological site for Key Area SB-1 is an 8-10" P.Z. – 028BY013 – winterfat/Indian ricegrass. The approximate potential ground cover (basal and crown) according to the range site is 10-20%. Cover measured at the key area is 11%. The level of vegetative cover is appropriate for the site which is dominated by winterfat. The soil surface is silty and the topography ranges from flat to slight slopes. According to the Ecological Site Description, the soil permeability is moderate to moderately rapid with moderate to high available water holding capacity. Potential for sheet and rill erosion is slight; however, this soil has a potential for formation of gullies, especially in areas near shallow drainages. Utilization at this key area has been slight to light, with moderate use only recorded in 2002. There are no obvious signs of erosion, such as gullies, rills, and minimal pedestalling of plants. All indications are that the site is stable and functioning according to potential of the site.

Key Area SB-2 occurs in the Alley soil type, 1251 soil mapping unit – (loamy, 2-8% slopes). This soil mapping unit occurs on over 50% of the allotment. The ecological site for Key Area SB-2 is an 8-10" P.Z. – 028BY010 – Wyoming big sagebrush/Indian ricegrass. The approximate potential ground cover (basal and crown) according to the range site is 10-20%. Cover measured at the key area is 26%. The level of vegetative cover is appropriate for the site which is dominated by needle and thread grass. This key area occurs within an area that had a fire in 1986. The soil surface is gravelly sandy loam and the topography is dominated by fan piedmonts and low rolling hills. According to the Ecological Site Description, the water holding capacity of the soil varies, ranging from low to moderate. Potential for sheet and rill erosion is moderate to high depending on slope. Utilization at this key area has been predominately moderate to heavy. Although utilization has been above the moderate level recommended in the Final Multiple Use Decision, cover has increased from 8% to 26%. Even with the potential for increased erosion following the fire, the site does not demonstrate signs of erosion, such

as gullies, rills, or pedestalling. All indications are that the site is stable and functioning according to potential of the site.

Key Area SB-3 also occurs in the Alley soil type, 1251 soil mapping unit – (loamy, 2-8% slopes). The ecological site for Key Area SB-3 is an 8-10" P.Z. – 028BY010 – Wyoming big sagebrush/Indian ricegrass. The approximate potential ground cover (basal and crown) according to the range site is 10-20%. Cover measured at the key area is 10%. The level of vegetative cover is appropriate for the site which is dominated by needle and thread grass. This key area also occurs within the area that was burned in 1986. The soil surface is gravelly sandy loam and the topography is dominated by fan piedmonts and low rolling hills. According to the Ecological Site Description, the water holding capacity of the soil varies, ranging from low to moderate. Potential for sheet and rill erosion is moderate to high depending on slope. Utilization at this key area has been predominately moderate to heavy. Although utilization has been above the moderate level recommended in the Final Multiple Use Decision, cover is within the range of approximate potential ground cover for this range site. Even with the potential for increased erosion following the fire, the site does not demonstrate signs of erosion, such as gullies, rills, or pedestalling. All indications are that the site is stable and functioning according to potential of the site.

Key Area SB-4 occurs in the Hessing soil type, 1511 soil mapping unit – (coarse gravelly loam, 0-2% slopes). The ecological site for Key Area SB-4 is a 6-8" P.Z. – 028BY075 – shadscale/Indian ricegrass. The approximate potential ground cover (basal and crown) according to the range site is 15-25%. Cover measured at the key area is 7%. The level of vegetative cover is not appropriate for the site. However, due to the soil and topography characteristics of this site, the potential for sheet and rill erosion is slight to moderate. The soil surface is loamy surface with subsoils loamy to sandy in texture. Gravelly sandy loam and the topography is flat with slight sloping. According to the Ecological Site Description, these soils have moderately rapid permeability and are well drained. Utilization at this key area has been slight to light. The site does not demonstrate signs of erosion, such as gullies, rills, or pedestalling. Although vegetative cover is less than what is appropriate for this site, all other indications are that the site is stable and functioning according to potential of the site.

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

As indicated by:

- Stream side riparian areas are functioning properly when adequate vegetation, large woody debris, or rock is present to dissipate stream energy associated with high water flows. Elements indicating proper functioning condition such as avoiding accelerating erosion, capturing sediment, and providing for groundwater recharge and release are determined by the following measurements as appropriate to the site characteristics:

- Width/Depth ratio; Channel roughness; Sinuosity of stream channel; Bank stability; Vegetative cover (amount, spacing, life form); and other cover (large woody debris, rock).
- Natural springs, seeps, and marsh areas are functioning properly when adequate vegetation is present to facilitate water retention, filtering, and release as indicated by plant species and cover appropriate to the site characteristics.
- Chemical, physical and biological water constituents are not exceeding the state water quality standards.

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

Determination:
X Achieving the Standard
□ Not Achieving the Standard, but making significant progress towards
□ 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:
X In conformance with the Guidelines
□ Not in conformance with the Guidelines

Conclusion: Standard Achieved
Riparian: There are six springs on the South Butte Allotment on public land. Five of these springs are located at high elevations in steep terrain that is not accessed by cattle. The sixth spring is a developed water source that has been piped and considered non-functional due to development. Due to this development this spring is no longer considered a riparian area. This piped water source is located at approximately 6,650 feet elevation and developed for stock water use. Dense high sage brush and rabbit brush around the developed water source were observed in 2007, but no water is visible at the spring source. The remaining springs located within this allotment are located on private land. Bothwick Creek is also within the allotment. Flow of this creek occurs on private land, but flow dissipates before reaching public land. Water for this creek may reach public lands during high flow years, but it does not flow frequently enough to support a riparian area with riparian characteristics. See Appendix II, Figure IV for a map of water sources for this allotment.

Standard 3. Habitat:
Habitats exhibit a healthy, productive, and diverse population of native and/or desirable plant species, appropriate to the site characteristics, to provide suitable feed, water, cover and living space for animal species and maintain ecological processes. Habitat conditions meet the life cycle requirements of threatened and endangered species.

As indicated by:

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

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

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

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

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

Rangeland monitoring (including frequency trend, composition, use pattern mapping, and key forage plant utilization) show habitat conditions overall exhibit a healthy, productive, and diverse plant community that is progressing toward providing suitable habitat for wildlife and maintaining ecological processes over the majority of the allotment. Vegetative structure and distribution are appropriate for the allotment as determined by ecological site descriptions, monitoring data, range observations and professional judgment.

Within the South Butte Allotment current vegetation communities are not meeting the standard, however since the Final Multiple Use Decision issued in 1992 they are progressing toward the standard. Utilization studies conducted on the allotment showed livestock grazing to be within proper use levels. Vegetative composition is appropriate for the potential of the site and the site characteristics. Sagebrush communities exhibit a healthy herbaceous understory. Percent composition for the shrub component is higher than what is appropriate at some sites. Vegetation distribution with respect to patchiness, is present, this is due to natural wildfires that occurred within the community types. The winterfat site is demonstrating a declining frequency trend that is not attributed to livestock grazing since utilization has been slight to light most years. Below is a summary of each key area from Appendix I.

Key Area SB-1: Utilization of winterfat at Key Area SB-1 have been primarily in the slight to light range, with 2002 being the only year utilization reached the moderate range. Due to the decrease in halogeton along with winterfat, the description for the decline of ecological condition does not explain why the trend at this area is declining. Precipitation data since 1981 does show an overall decline in precipitation, but whether this is a factor in why this area has a declining trend has not been determine. It has been determined that this declining trend is not attributed to current livestock grazing since utilization levels are primarily in the slight to light range.

Key Area SB-2: Plant community dynamics for this ecological range site include as ecological condition declines, Wyoming big sagebrush and Douglas' rabbitbrush increase, while Indian ricegrass and needle and thread decrease.

This site is in the mid seral range. This key area and SB-3 both occur within an area that had a fire disturbance in 1986. This key area is dominated by needle and thread grass, with Indian rice grass also present. Although shrubs are present in the area, none were recorded in the transect. Ecological condition of this site is on an upturn with increased grasses and shrubs not currently outcompeting these grasses.

Key Area SB-3: See plant community dynamics described above for key area SB-2. This site is in the early seral range. This key area and SB-2 both occur within an area that had a fire disturbance in 1986. This key area is dominated by needle and thread grass, with a small amount of Sandberg's bluegrass present. Douglas rabbitbrush is beginning to increase in the area, however ecological condition of this site is stable with a good grass component and the shrubs are not currently outcompeting grasses.

Key Area SB-4: Plant community dynamics for this range site include as ecological condition declines, shadscale and Douglas' rabbitbrush will increase in density, while Indian ricegrass composition will be reduced. With further degradation, shadscale may become dominant to the extent of a nearly pure stand. After a major disturbance such as a fire, Douglas' rabbitbrush may become dominant on this site.

This site is in a mid seral range. This key area is dominated by bottlebrush squirreltail and shadscale. There are traces of halogeton present. Although shadscale is increasing, this site still has a good grass component and the ecological condition is stable.

South Butte Seeding Allotment Standards Review

Standard 1. Upland Sites

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

As indicated by:

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

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

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

Conclusion: Standard Achieved

UPLANDS Sites: Rangeland monitoring and professional observation indicates that overall soil condition is currently being maintained on the native range. Soils are stable and productive and the topsoil is holding in place.

Key Areas SBS-1 and SBS-2 both occur in the Alley soil type, 1251 soil mapping unit – (loamy, 2-8% slopes). This soil mapping unit occurs on over 50% of the allotment. The ecological site for these key areas is an 8-10" P.Z. – 028BY010 – Both key areas have crested wheatgrass as the dominate vegetation. The soil surface is gravelly sandy loam and the topography is dominated by fan piedmonts and low rolling hills. According to the Ecological Site Description, the water holding capacity of the soil varies, ranging from low to moderate. Potential for sheet and rill erosion is moderate to high depending on slope. Utilization at these key areas has ranged from moderate to severe. Although utilization has been above the 65% level recommended in the Final Multiple Use Decision, neither key area shows visible signs of erosion, such as gullies, rills, or pedestalling. All indications are that these areas are stable and functioning according to potential of the site.

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

As indicated by:

- Stream side riparian areas are functioning properly when adequate vegetation, large woody debris, or rock is present to dissipate stream energy associated with high water flows. Elements indicating proper functioning condition such as avoiding accelerating erosion, capturing sediment, and providing for groundwater recharge and release are determined by the following measurements as appropriate to the site characteristics:
    - Width/Depth ratio; Channel roughness; Sinuosity of stream channel; Bank

stability; Vegetative cover (amount, spacing, life form); and other cover (large woody debris, rock).

- Natural springs, seeps, and marsh areas are functioning properly when adequate vegetation is present to facilitate water retention, filtering, and release as indicated by plant species and cover appropriate to the site characteristics.
- Chemical, physical and biological water constituents are not exceeding the state water quality standards.

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

Determination:
X Achieving the Standard
□ Not Achieving the Standard, but making significant progress towards
□ 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:
X In conformance with the Guidelines
□ Not in conformance with the Guidelines

Conclusion: Standard Achieved
Riparian: No natural water sources are located in the South Butte Seeding Allotment. See Appendix II, Figure IV for a map of water sources on this allotment.

Standard 3. Habitat:
Habitats exhibit a healthy, productive, and diverse population of native and/or desirable plant species, appropriate to the site characteristics, to provide suitable feed, water, cover and living space for animal species and maintain ecological processes. Habitat conditions meet the life cycle requirements of threatened and endangered species.

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

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

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

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

Conclusion: Standard Achieved.

Rangeland monitoring (including professional observations and key forage plant utilization) show habitat conditions overall exhibit a healthy, and productive, plant community that is progressing toward providing suitable habitat for wildlife and maintaining ecological processes over the majority of the allotment. Vegetative structure and distribution is appropriate for this crested wheat seeding allotment as determined by ecological site descriptions, monitoring data, range observations and professional judgment.

Key Areas SBS-1 and SBS-2: Both key areas occur in same ecological range site, 028BY010. The plant community dynamics for this ecological range site would normally include as ecological condition declines, Wyoming big sagebrush and Douglas' rabbitbrush increase, while Indian ricegrass and needle and thread decrease.

However, since this allotment is a crested wheat seeding, the plant community dynamics have been altered. Although shrub densities are increasing within the South Butte Seeding Allotment, the crested wheatgrass is maintaining good vigor and this grass species is able to handle the grazing pressure, especially during the critical growing season.

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

South Butte Allotment Standards Summary Review

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

Standard #2: Riparian and Wetlands
The Standard is being achieved.

Standard #3: Habitat
The Standard is not being achieved. Livestock are not a contributing factor to not achieving the Standard. Utilization of winterfat at Key Area SB-1 have been primarily in the slight to light range, with 2002 being the only year utilization reached the moderate

range. Due to the decrease in halogeton along with winterfat, the description for the decline of ecological condition does not explain why the trend at this area is declining. Precipitation data since 1981 does show an overall decline in precipitation, but whether this is a factor in why this area has a declining trend has not been determine. It has been determined that this declining trend is not attributed to current livestock grazing since utilization levels are primarily in the slight to light range.

South Butte Seeding Allotment Standards Summary Review

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

Standard #2: Riparian and Wetlands
The Standard is being achieved.

Standard #3: Habitat
The Standard is being achieved.

PART 3. GUIDELINE CONFORMANCE REVIEW AND SUMMARY

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

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

Discussion:
Current management practices implemented since the Final Multiple Use Decisions were issue for the South Butte Allotment on December 24, 1992 and for the South Butte Seeding Allotment on January 27, 1992 are helping these allotments to achieve standards.

Recommendations:
Continue all desirable livestock management practices currently being implemented as established in the Final Multiple Use Decisions for these allotments and identified below. Use levels will also be carried forward from the Multiple Use Decisions as identified below. Continue rangeland monitoring of these allotments for livestock in compliance with proper allowable use levels established in the Final Multiple Use Decisions for these allotments.

1. The seasons of use are recommended to remain April 15 to February 28 on the South Butte Allotment and May 1 to October 31 on the South Butte Seeding Allotment
2. The Active AUMs are recommended to remain at 396 Active AUMs on the South Butte Allotment and 245 Active AUMs on the South Butte Seeding Allotment.
2. Salt and/or mineral supplements for livestock shall be located no closer than ¼ mile from water sources. Supplements are to be placed ½ mile from existing waters.

3. Utilization levels should remain as follows:
   South Butte Allotment maximum utilization on native key species at 50%
   South Butte Seeding Allotment allowable use for crested wheatgrass at 65%
4. Wildlife escape ramps would be installed and maintained by the permittee at each trough used on the allotment (permanent or temporary).

REFERENCES

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Reviewed by:

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Benjamin Noyes Wild horses and burros	Date
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Melanie Peterson Hazardous and solid wastes	Date
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Gary Medlyn Watershed assessment	Date

I concur:

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APPENDIX I
DATA ANALYSIS
South Butte Allotment and South Butte Seeding Allotment

1. Review of Final Multiple Use Decisions
Final Multiple Use Decisions were issue for the South Butte Allotment on December 24, 1992 and for the South Butte Seeding Allotment on January 27, 1992. These were reviewed and included in the analysis of existing data.

2. Key Areas and Ecological Sites
A key area is a relatively small portion of a unit selected as a point for monitoring change in vegetation or soil and the impacts of management. Key areas, if properly located, reflect the current management over similar important areas in the unit. Key areas represent range conditions, trends, seasonal degrees of use, and resource production and values. Table 2-1 and Table 2-2 depict key areas and their location within each allotment as well as the ecological site number associated with the key area.

Ecological Sites are interpretive units into which landscapes of native vegetation are separated for study, evaluation, and management. An ecological site, as defined for rangeland, 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). The ecological site of a key area is determined based several factors including soil mapping unit, topography, and plant community.

Table 2-1.

South Butte Allotment Key Areas				
Key Area	**Location**	**Ecological Site**	**Major Plant Community Common to this Ecological Site**	**Soil Type**
SB-1	T20N, R62E, sec 31, SE1/4,SE1/4	028BYO013NV	winterfat/Indian ricegrass	silty 8-10”
SB-2	T19N, R62E, sec 17, SE1/4,NW1/4	028BYO010NV	Wyoming big sagebrush/Indian ricegrass/needle and thread grass	loamy 8-10”
SB-3	T19N, R62E, sec 19, NW1/4,NE1/4	028BYO010NV	Wyoming big sagebrush/Indian ricegrass/needle and thread grass	loamy 8-10”
SB-4	T20N, R61E, sec 36, SW1/4, SW1/4	028BYO075NV	shadscale/Indian ricegrass	coarse gravelly loam 6-10”

Table 2-2.

South Butte Seeding Allotment Key Areas				
Key Area	**Location**	**Ecological Site**	**Major Plant Community**	**Soil Type**
SBS-1	T20N, R62E, sec 31, SE1/4,SE1/4	028BYO010NV	crested wheat	loamy 8-10"
SBS-2	T19N, R62E, sec 17, SE1/4,NW1/4	028BYO010NV	crested wheat	loamy 8-10"

3. Licensed Livestock Use

Over the last nine grazing seasons from 1999 to 2007, livestock licensed actual use on the South Butte Allotment has varied only a small degree with a high of 396 AUMS in 2000 and 2007, and a low of 313 AUMs in 2003. During this same time period livestock licensed actual use on the South Butte Seeding Allotment ranged from a high of 215 AUMs in 2005 to a low of 75 AUMs in 1999. Livestock use on both allotments has varied dependent on growing conditions, available forage, and management objectives of the permittee and the BLM. Table 3-1 included licensed actual use and percentage of licensed actual use compared to total active AUMs permitted by allotment. Active AUMs permitted for the South Butte Allotment are 396, and active AUMs permitted for the South Butte Seeding Allotment are 245.

Table 3-1.

	South Butte Allotment		South Butte Seeding Allotment	
grazing year	Licensed Actual Use (AUMs)	% Licensed Actual Use of Permitted Use (AUMs)	Licensed Actual Use (AUMs)	% Licensed Actual Use of Permitted Use (AUMs)
1999	0	0%	75	31%
2000	396	100%	124	51%
2001	394	99%	155	63%
2002	395	100%	141	58%
2003	313	79%	168	69%
2004	395	100%	110	45%
2005	375	95%	215	88%
2006	322	81%	168	69%
2007	396	100%	166	68%

4. Utilization

The following is a summary of the livestock utilization data collected on the South Butte Allotment and the South Butte Seeding Allotment. The South Butte Allotment Final Multiple Use Decision sets maximum utilization on native key species at 50%, and the South Butte Seeding Allotment Final Multiple Use Decision sets allowable use for

crested wheatgrass at 65%. The general utilization objective for all allotments in the former Egan Resource Area of the Ely Field Office Area according to the Egan Resources Management Plan and Final Environmental Impact Statement (RMP/FEIS – September, 1984) and Record of Decision (ROD – February, 1987) is to "Establish utilization limits to maintain watershed cover, plant vigor and soil fertility in consideration of plant phenology, physiology, terrain, water availability, wildlife needs, grazing systems and aesthetic values." (Egan ROD, p. 44). The Nevada Rangeland Monitoring Handbook gives recommendations as to the proper use levels by plant category (grass, forbs, shrubs) and by grazing season (spring, summer, fall, winter, yearlong). Proper use levels for all allotments are also implied by the Standards and Guidelines for Rangeland Health and Grazing Administration (February 1997).

Key forage plant utilization method (KFPM) was used to collect utilization data at the key areas. There are four key areas established on the South Butte Allotment and two key areas established on the South Butte Seeding Allotment. Utilization for each of these areas is summarized in Table 4-1 and Table 4-2. Average utilization for the South Butte Allotment key areas from 1994 to 2004 is 40%. Average utilization for the South Butte Seeding Allotment key areas from 2002 to 2003 is 70%.

Table 4-1. South Butte Allotment Utilization

Key Area	Key Species	Grazing Year	Utilization	Total
SB-1	winter fat	1994	light	22%
		1996	slight	10%
		1997	slight	14%
		1998	light	24%
		1999	slight	14%
		2001	light	24%
		2002	moderate	42%
		2003	slight	18%
		2004	slight	20%
SB-2	needle and thread	1994	heavy	60%
		1996	light	24%
		1997	moderate	46%
		1998	moderate	44%
		1999	severe	90%
		2001	heavy	80%
		2002	heavy	70%
		2003	heavy	70%
		2004	heavy	62%
SB-3	needle and thread	1994	heavy	66%
		1996	light	22%
		1997	heavy	60%
		1998	moderate	44%

		1999	severe	82%
		2001	heavy	72%
		2002	moderate	54%
		2003	moderate	52%
		2004	heavy	62%
SB-4	bottlebrush squirreltail	1997	slight	16%
		1998	light	28%
		1999	light	12%
		2001	light	26%
		2002	slight	10%
		2003	slight	10%
		2004	light	34%
Additional sites utilization data was collected.				
T19N, R61E, S36, NESE	needle and thread	1996	heavy	64%
	needle and thread	1997	moderate	58%
UPPER Bradley Canyon				
	needle and thread	1999	heavy	80%

Table 4-2. South Butte Seeding Allotment Utilization

Key Area	Key Species	Grazing Year	Utilization	Total
SBS-1	crested wheatgrass	2002	heavy	70%
		2003	severe	90%
SBS-2	crested wheatgrass	2002	moderate	56%
		2003	heavy	62%

Use pattern mapping has also been completed for the primary areas used by cattle of the South Butte Allotment. These primary areas received the majority of use in the light to moderate range for 1995, and slight to light range in 1999. Heavy use does occur near water sources within the allotment, but as seen in the maps in Figure II and Figure III of Appendix II, this use decreases away from the water sources. The table below depicts acres of use that were mapped and percent of use based on total acres mapped each year. Use pattern mapping data was not collected for the remainder of the allotment. Also, use pattern mapping data was not collected for the South Butte Seeding Allotment.

Table 4-3. South Butte Allotment Use Pattern Mapping

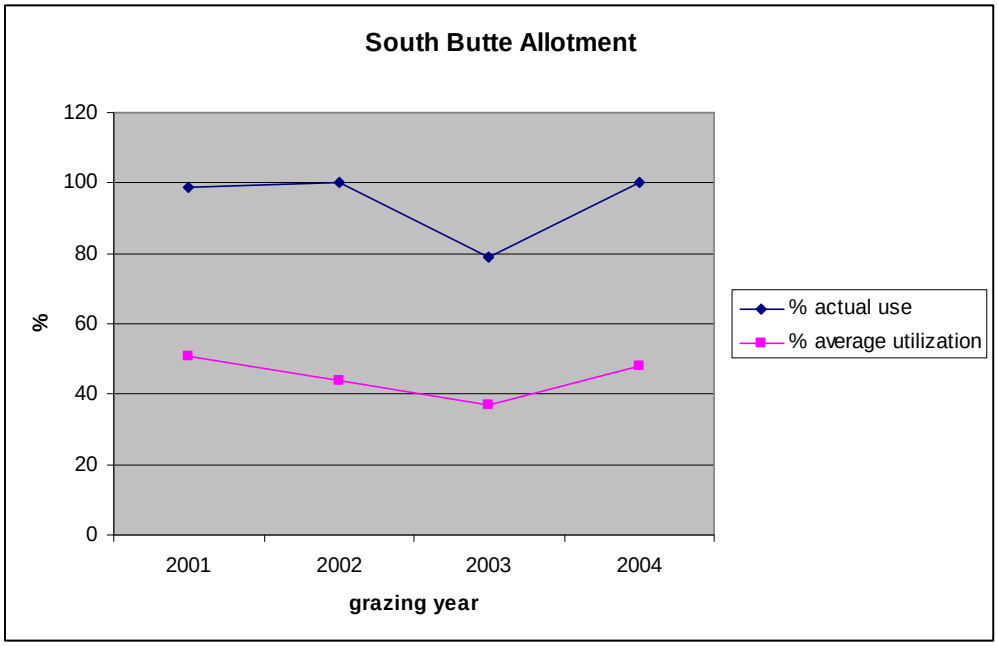
Year	Type of Use	Acres	Percent of Use Based on Total Acres Mapped Each Year
1995	No Use	405	9%

	Slight	0	0%
	Light	2525	53%
	Moderate	1070	22%
	Heavy	764	16%
1999	No Use	294	15%
	Slight	951	48%
	Light	489	25%
	Moderate	138	7%
	Heavy	**100**	**5%**

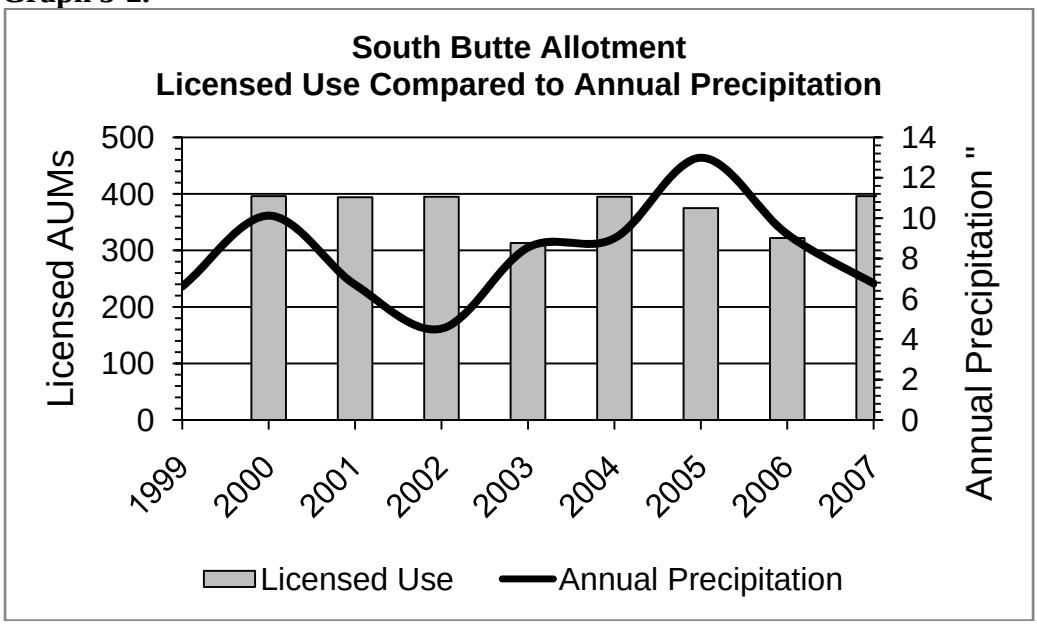
5. Analysis of Licensed Livestock Use Compared to Utilization and Precipitation

A comparison of licensed actual use to utilization and a comparison of licensed actual use to annual precipitation based on data available for each grazing year is shown in the following graphs. Utilization in the South Butte Allotment was moderate for most years with all or almost all AUMs for this allotment being activated. Utilization in the South Butte Seeding Allotment was heavy with an average of over 60% of the AUMS for this allotment being activated. Licensed use on the South Butte Allotment was relatively constant with the amount of precipitation impacting available forage only to a small extent. This is attributed to the changes implemented from the final multiple use decision and the implementation of improved grazing practices for better livestock distribution on this allotment. The South Butte Seeding Allotment, however, has been impacted by the available precipitation, with licensed use varying greatly due to the lack of forage availability. Utilization has also been above the moderate range due to lack of precipitation, even with the permittee reducing grazing in this allotment.

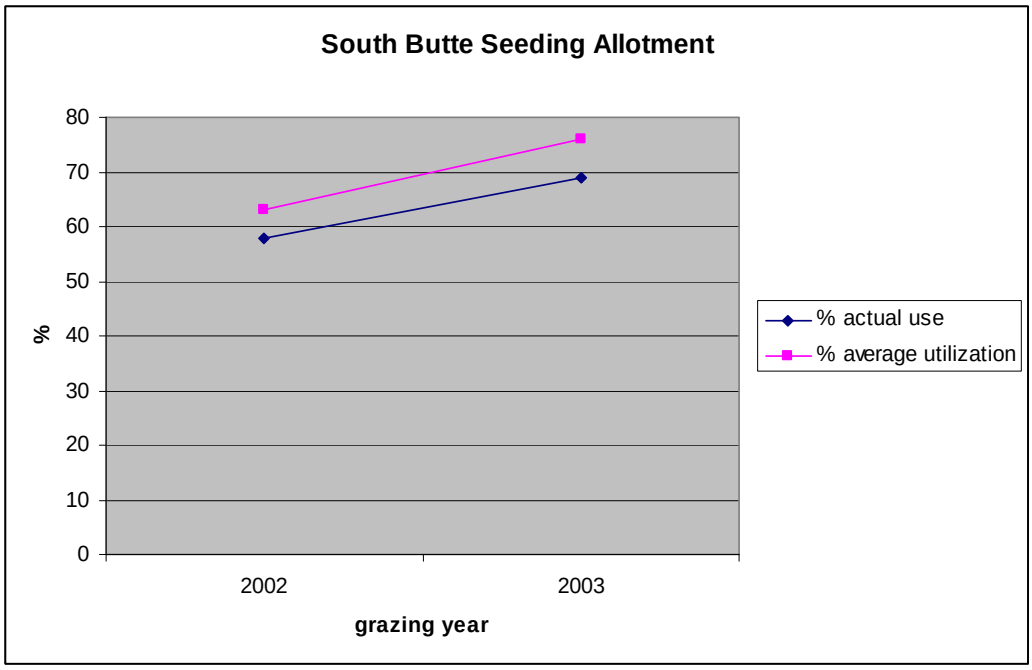
Graph 5-1.



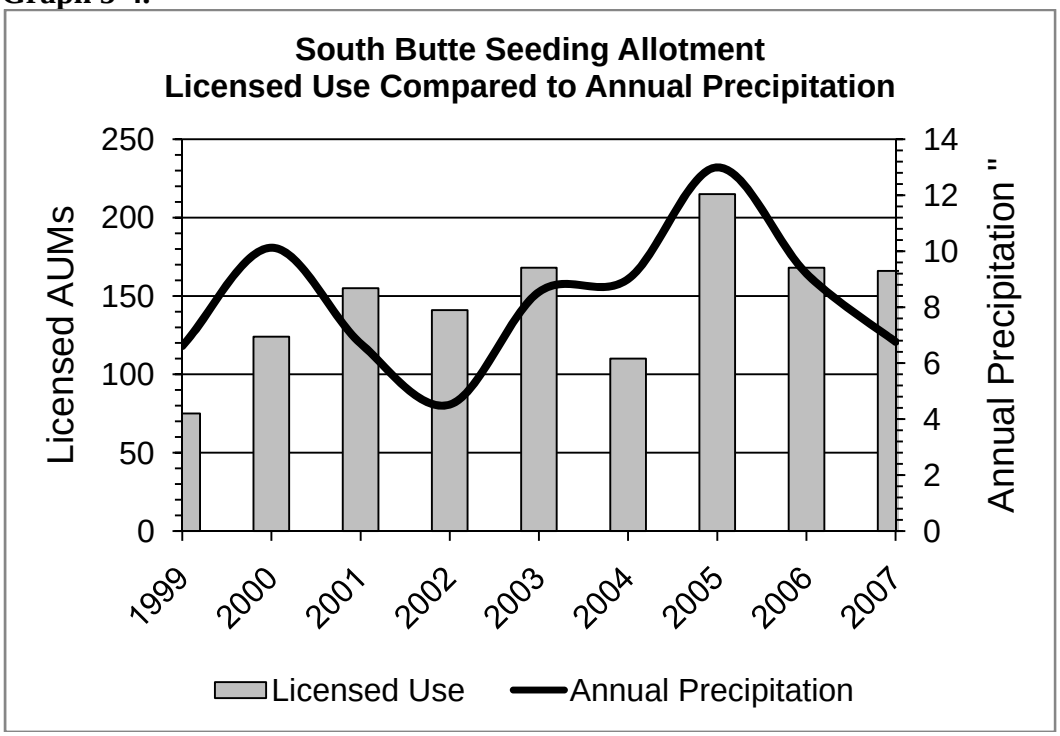
Graph 5-2.



Graph 5-3.



Graph 5-4.



6. Line Intercept Cover Studies

The Line Intercept Cover Study is a commonly used method of estimating the relative percent live foliar 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 appropriate cover for each range site as indicated by the Natural Resources Conservation Service (NRCS) range site guides. Results are also compared to what is known about healthy rangelands in general.

Line intercept cover studies have been conducted at the four key areas on the South Butte Allotment. The table below demonstrates data collect at these four key areas and the range site potential for each site. Line intercept cover studies have not been done for South Butte Seeding Allotment.

Table 6-1.

South Butte Allotment Cover Data				
Date	**Key Area**	**Range Site**	**Existing Cover (%)**	**Potential Cover (%)**
6/3/2003	SB-1	028BYO013NV	11%	10% to 20%
6/4/2003	SB-2	028BYO010NV	8%	10% to 20%
9/25/2007	SB-2	028BYO010NV	26%	10% to 20%
6/4/2003	SB-3	028BYO010NV	10%	10% to 20%
6/4/2003	SB-4	028BYO075NV	7%	15% to 25%

7. Frequency Trend Studies

Frequency trend studies have been established on four native key grazing areas in the South Butte Allotment. The study at Key Area SB-1 was established and read on June 18, 1993 and read again on June 3, 2003 (10 year difference). The trend studies for SB-2, SB-3, and SB-4 were established and read in June of 2003. However, these three key areas have no additional data, so trend has not been determined. The table and photos below show that Key Area SB-1 is demonstrating a declining trend.

Utilization of winterfat at Key Area SB-1 have been primarily in the slight to light range, with 2002 being the only year utilization reached the moderate range. The ecological site description for this area states that "As ecological condition declines, bottlebrush squirreltail and shadscale increase as winterfat and Indian ricegrass decrease. With further site deterioration, cheatgrass, halogeton and annual mustards invade the interspace areas between shrub species. On heavily disturbed sites, these annual species, particularly halogeton, become dominant." Due to the decrease in halogeton along with winterfat, the description for the decline of ecological condition does not explain why the trend at this area is declining. Precipitation data since 1981 as seen in Graph 7-1, does show an overall decline in precipitation, but whether this is a factor in why this area has a declining trend has not been determine. It has been determined that this declining trend is not attributed to current livestock grazing since utilization levels are primarily in the slight to light range.

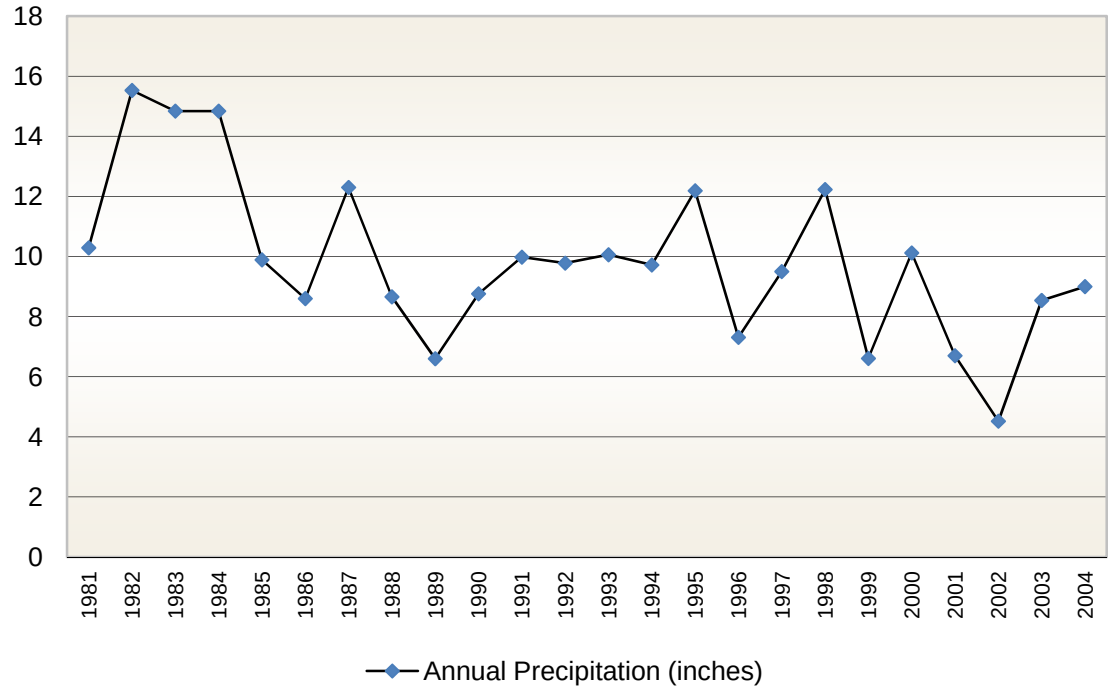
Table 7-1.

Key Area	Years Read	Changes
SB-1	1993/2003	less winter fat less halogeton

Figure 7-1 Comparison of Frequency Trend Photos

6/18/1993 6/03/2003

Chart 7-1



8. Similarity Index of Ecological Site Inventory

The Integrated Vegetation Management Handbook H-1740-2 describes the similarity index of Ecological Site Inventory to assess vegetation condition. The similarity index is a calculation based on a comparison of the plant species composition of a presently existing plant community to the plant species composition of a reference condition (potential natural community or climax). When the similarity index is computed, a successional status category is derived that signals how far away or how close the presently existing plant community is successionally to the historic climax plant community or the potential natural community for that ecological site. A similarity index of 0 to 25% represents an early seral plant community. A similarity index of 26 to 50% represents a mid-seral plant community. A similarity index of 51 to 75% represents a late seral plant community. A similarity index of 76 to 100% represents the potential natural community.

It should be understood that vegetation objectives that are developed using successional status (seral status) categories are not always focused on achieving the reference condition(s). Another way of saying this is that the potential natural community or the historic climax plant community is not always the target endpoint of vegetation management. The reference indicators are the range in production (pounds per acre) of each plant species' annual aboveground production (air-dry weight), or less frequently, cover, for the potential natural community or the historic climax plant community. Sometimes the range in production or range in cover is also converted to a range in percent of plant species composition. Existing plant species composition is compared against the reference indicators to estimate successional or seral status.

It should also be noted that BLM no longer links the seral status categories of potential natural community, late seral, mid-seral, and early seral, to range condition categories of excellent, good, fair, and poor. The range condition categories of excellent, good, fair, and poor were developed to connote forage condition of the rangeland for livestock types (for example cattle and sheep). Instead this technique in conjunction with other data ascertains livestock forage condition, assesses the relative value of vegetation communities for wildlife and their habitat, and ascertains the achievement of health standards in relation to vegetation.

The following table summarizes data collected at four key areas by the similarity index and composition for the South Butte Allotment.

Table 8-1. Similarity Index/Seral Stages and Composition of South Butte Allotment Key Areas

Key Area: SB-1
Date: 7/24/2003
Range Site: 028BY013NV

Plant Common Name	% Composition	* Percent Composition by Weight	% Composition Allowed from Data to Calculate Seral Stage
winterfat	100	20-30	30

The ecological site description describes the plant community dynamics for this key area stating that as ecological condition declines, bottlebrush squirreltail and shadscale increase as winterfat and Indian ricegrass decrease. With further site degradation, cheatgrass, halogeton and annual mustards invade the interspace areas between shrub species. On heavily disturbed sites, annual species, particularly halogeton, become dominant. Soils of this site are easily eroded and gullies often form, interrupting the overland flow patterns.

This site is in the mid seral range. This site is dominated by winterfat, Indian rice grass is not present at the key area. Halogeton is also present at the key area. Soils are stable at this site.

Key Area: SB-2
Date: 7/29/2003
Range Site: 028BY010NV

Plant Common Name	% Composition	* Percent Composition by Weight	% Composition Allowed from Data to Calculate Seral Stage
needle and thread	93	10-20	20
Indian ricegrass	7	20-30	7
bottlebrush squirreltail		2-8	
Sandberg's bluegrass		2-5	

Plant community dynamics for this range site include as ecological condition declines, Wyoming big sagebrush and Douglas' rabbitbrush increase, while Indian ricegrass and needle and thread decrease. Various annual species are likely to invade this site. Utah juniper readily invades this site where it occurs adjacent to this woodland. When Utah juniper occupies this site it competes with other species for available light, moisture, and nutrients. If Utah juniper canopies are allowed to close, they can eliminate all understory vegetation.

This site is in the mid seral range. This key area and SB-3 both occur within an area that had a fire disturbance in 1986. This key area is dominated by needle and thread grass, with Indian rice grass also present. Although shrubs are present in the area, none were found in the transect. Ecological condition of this site is on an upturn with increased grasses and shrubs not currently outcompeting these grasses.

Key Area: SB-3
Date: 7/30/2003
Range Site: 028BY010NV

Plant Common Name	% Composition	* Percent Composition by Weight	% Composition Allowed from Data to Calculate Seral Stage
needle and thread	16	10-20	16
Sandberg's bluegrass	1	2-5	1
Douglas' rabbitbrush	83	3	3
cheatgrass	N/A		

See plant community dynamics described above for key area SB-2.

This site is in the early seral range. This key area and SB-2 both occur within an area that had a fire disturbance in 1986. This key area is dominated by needle and thread grass, with a small amount of Sandberg's bluegrass present. Douglas rabbitbrush is beginning to increase in the area, Ecological condition of this site is stable with a good grass component and the shrubs not currently outcompeting grasses.

Key Area: SB-4
Date: 7/30/2003
Range Site: 028BY075NV

Plant Common Name	% Composition	* Percent Composition by Weight	% Composition Allowed from Data to Calculate Seral Stage
bottlebrush squirreltail	47	2-5	5
shadscale	53	25-35	35
halogeton	trace		

Plant community dynamics for this range site include as ecological condition declines, shadscale and Douglas' rabbitbrush will increase in density, while Indian ricegrass composition will be reduced. With further degradation, shadscale may become dominant to the extent of a nearly pure stand. After a major disturbance such as a fire, Douglas' rabbitbrush may become dominant on this site. Cheatgrass, halogeton and mustards are the likely species to invade this site.

This site is in a mid seral range. This key area is dominated by bottlebrush squirreltail and shadscale. There are traces of halogeton present. Although shadscale is increasing, this site still has a grass component and the ecological condition is stable.

9. Precipitation data

Historical climate data from the Western Regional Climate Center in Ely, Nevada is being used for this assessment. The table below includes data annual precipitation data collected since 1981.

Table 9-1

YEAR	ANNUAL PRECIPITATION	YEAR	ANNUAL PRECIPITATION	YEAR	ANNUAL PRECIPITATION
1981	10.29	1991	9.98	2001	6.7
1982	15.53	1992	9.78	2002	4.52
1983	14.84	1993	10.06	2003	8.54
1984	14.84	1994	9.72	2004	9
1985	9.89	1995	12.19	2005	12.99
1986	8.6	1996	7.31	2006	9.2
1987	12.3	1997	9.5	2007	6.76
1988	8.66	1998	12.23		
1989	6.6	1999	6.61		
1990	8.76	2000	10.12		

Appendix II
Maps

Figure I.

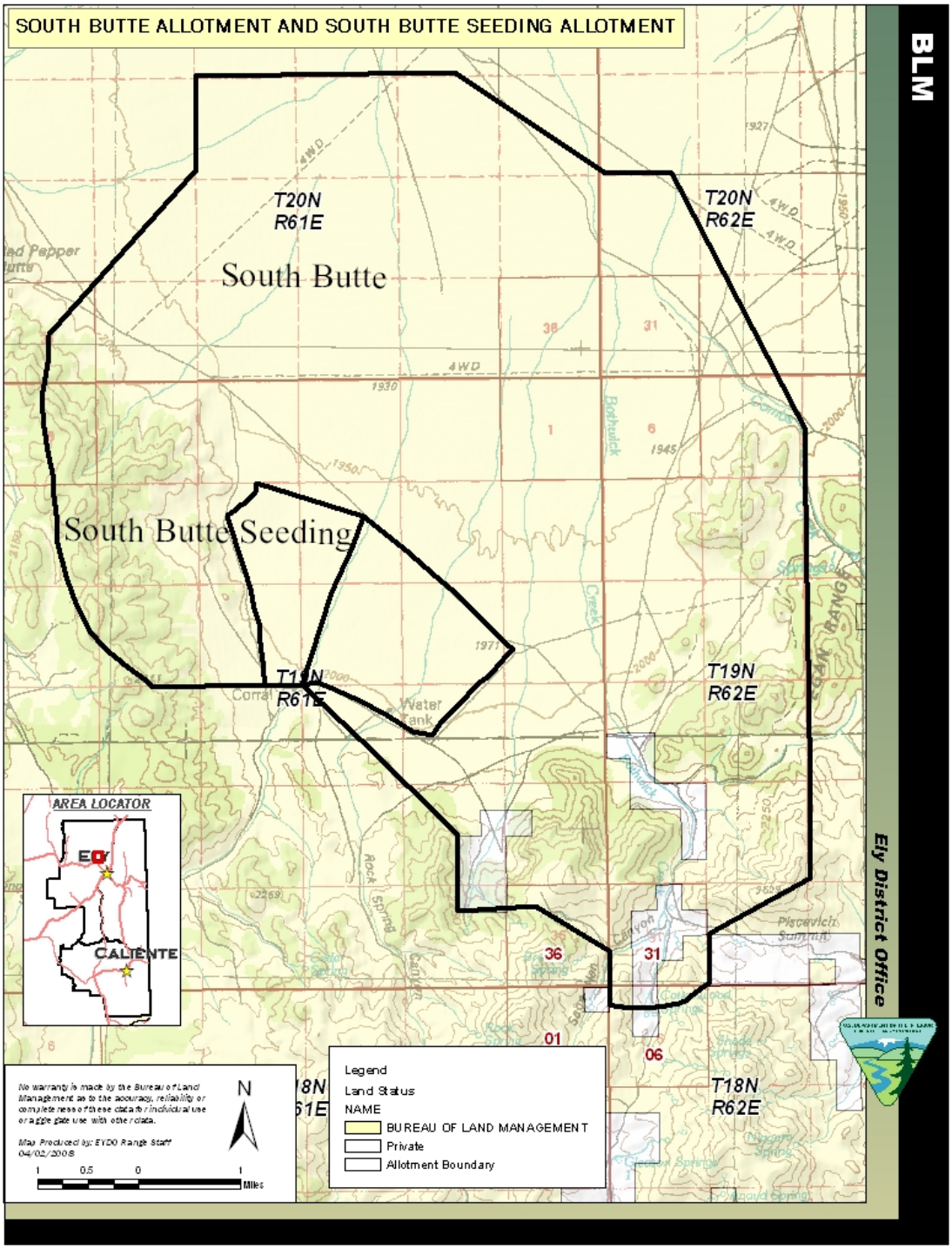


Figure II.

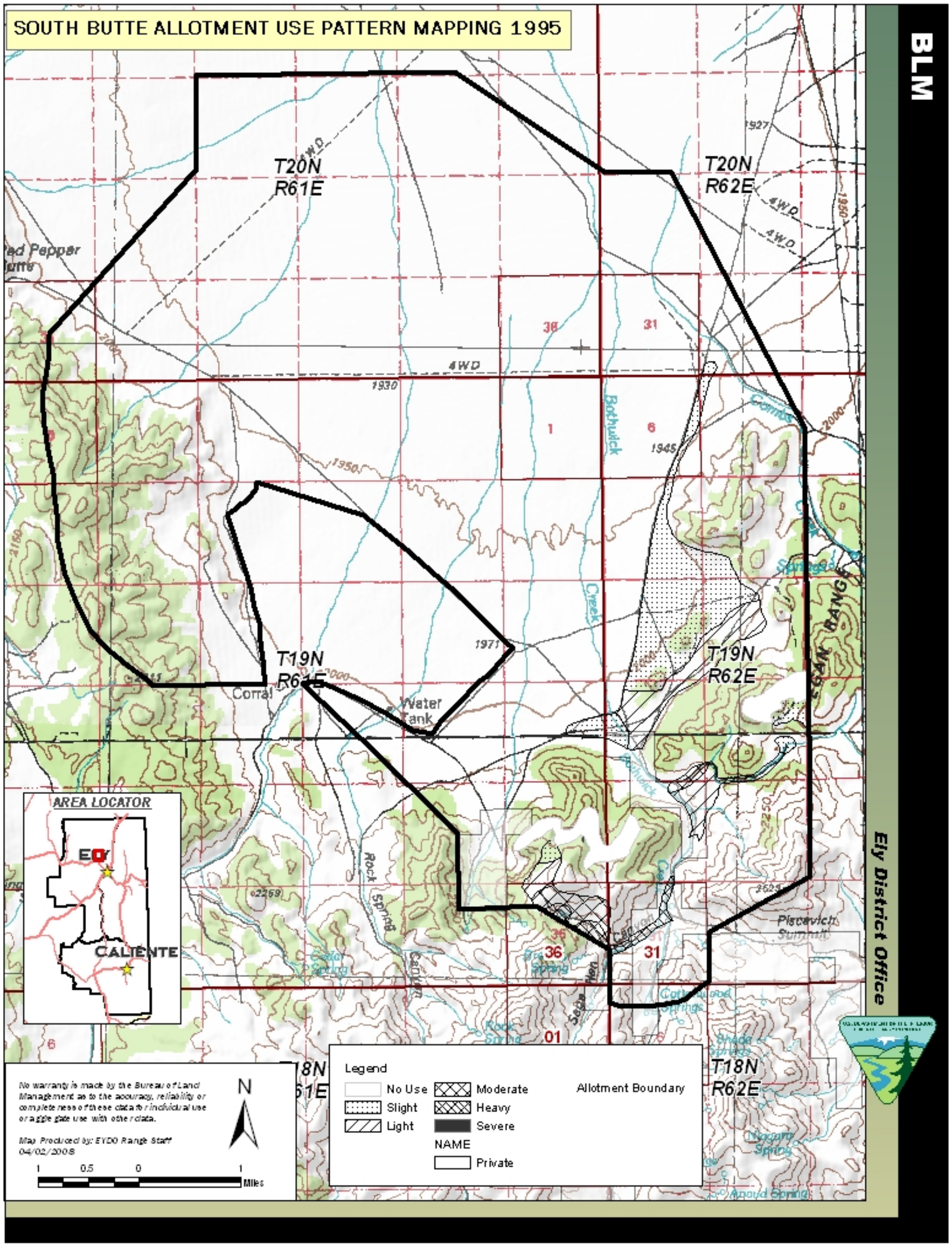

SOUTH BUTTE ALLOTMENT USE PATTERN MAPPING 1995
BLM
Ely District Office
T20N
R61E
T20N
R62E
T19N
R61E
T19N
R62E
T18N
R62E
4WD
Corral
Water
Tank
AREA LOCATOR
ELY
CALIENTE
No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual use or aggregate use with other data.
Map Produced by: EYDO Range Staff
04/02/2008
Miles
Legend
No Use
Slight
Light
Moderate
Heavy
Severe
NAME
Private
Allotment Boundary

Figure III.

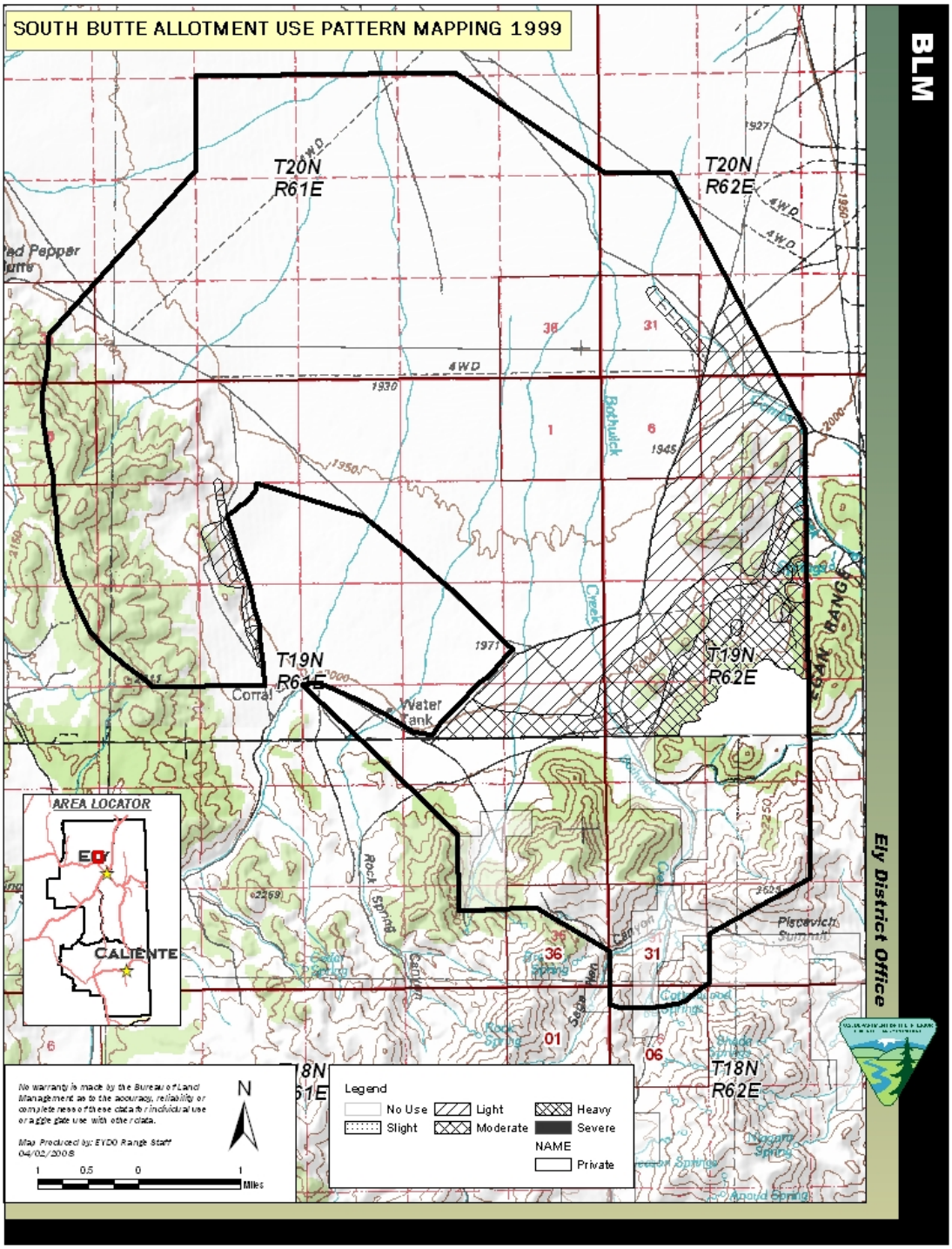
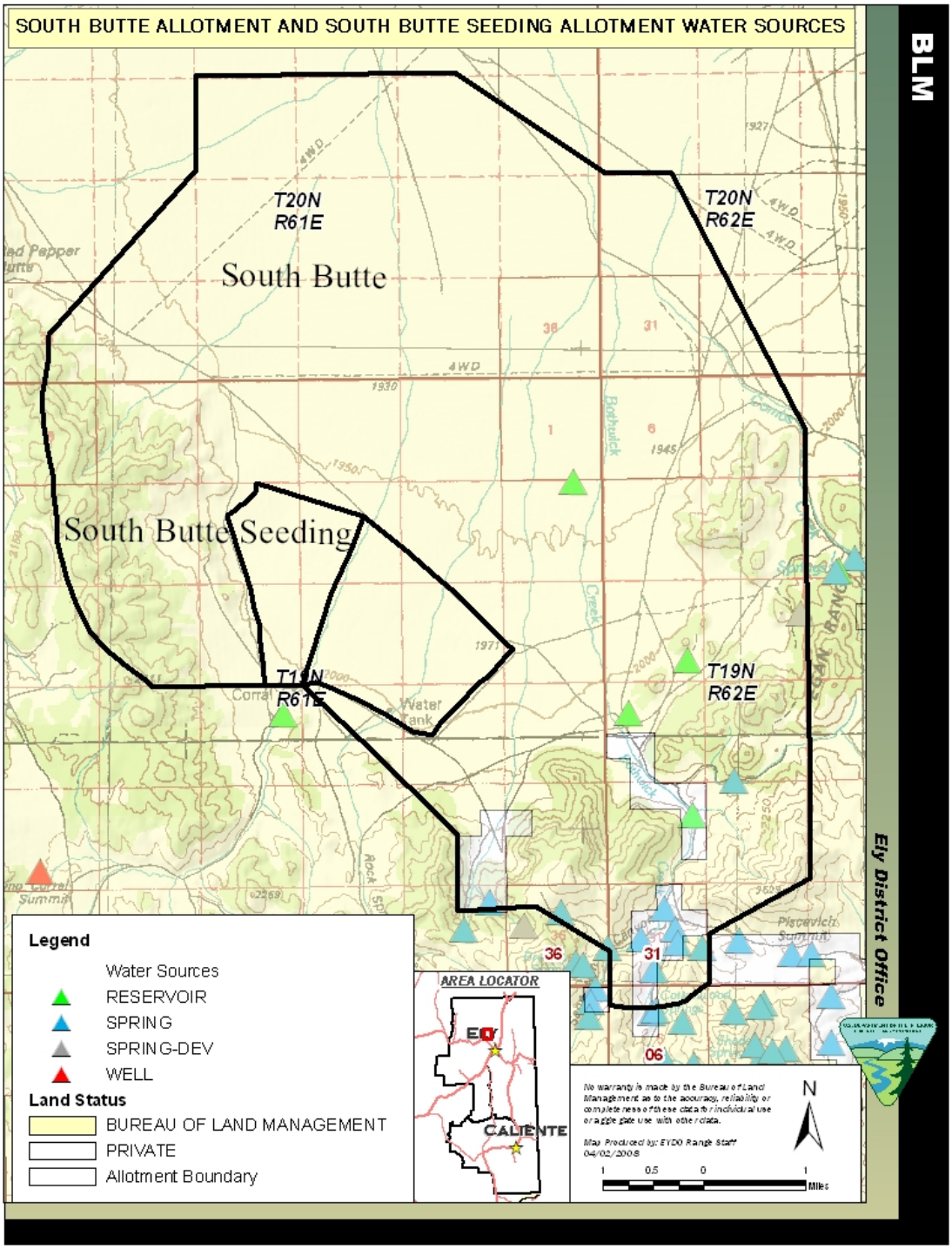

SOUTH BUTTE ALLOTMENT USE PATTERN MAPPING 1999
BLM
Ely District Office
T20N
R61E
T20N
R62E
T19N
R61E
T19N
R62E
T18N
R62E
Corral
Water Tank
Bothwick
Rock Spring
Piscevich Summit
AREA LOCATOR
ELY
CALIENTE
Legend
No Use
Slight
Light
Moderate
Heavy
Severe
NAME
Private
N
Miles
No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual use or aggregate use with other data.
Map Produced by: EYDO Range Staff
04/02/2008

Figure IV.


SOUTH BUTTE ALLOTMENT AND SOUTH BUTTE SEEDING ALLOTMENT WATER SOURCES
BLM
T20N R61E
T20N R62E
South Butte
South Butte Seeding
T19N R61E
T19N R62E
Ely District Office
Legend
Water Sources
RESERVOIR
SPRING
SPRING-DEV
WELL
Land Status
BUREAU OF LAND MANAGEMENT
PRIVATE
Allotment Boundary
AREA LOCATOR
EO
CALIENTE
N
Miles

Appendix III

GRAZING PERMIT TERMS AND CONDITIONS FOR SAM AND CLELIA HENRIOD FOR THE SOUTH BUTTE ALLOTMENT AND SOUTH BUTTE SEEDING ALLOTMENT

Allotment Name and Number	Livestock Number/Kind	Grazing Period Begin End	% Public Land*	Type Use	AUMs**
South Butte #00504	37 Cattle	04/15 to 02/28	100	Active	389
South Butte Seeding #00506	40 Cattle	05/01 to 10/31	100	Active	242

*% 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
South Butte	396	112	508
South Butte Seeding	245	97	342

Livestock Management Practices - Terms and Conditions
In accordance with 43 CFR §4130.3 and §4130.3-2 the following terms and conditions shall be included in the term grazing permit for Sam and Clelia Henriod for the South Butte Allotment and the South Butte Seeding Allotment:

South Butte Allotment (00504):

1. The total number of AUMS that can be licensed form 4/15 to 6/15 is 10% of the active preference to prevent over-utilization of key forage species during the critical growing season.
2. Grazing use will be in accordance with the Northeastern Great Basin Area Standards and Guidelines, and with the Final Multiple Use Decision dated December 24, 1992 and Settled on May 27, 1994. All other terms and conditions agreed upon by the BLM and Warren Robinson in settling the appeal on the South Butte Allotment (Appeal NV-04-93-6) are made binding on this permit.
3. Water hauling is required for proper livestock distribution. The location of water hauling sites will be determined by the authorized officer in cooperation with the livestock permittee.
4. Maximum allowable use levels will be established as follows:

- Perennial grasses: 50% current year's growth
  This use level is necessary to allow desirable key herbaceous species to 1) develop above ground biomass for protection of soils, 2) to contribute to litter cover, and 3) develop roots to improve carbohydrate storage for vigor, reproduction, and improve/increase desirable perennial cover.

- Perennial shrubs and half-shrubs: 50% use on current annual production.
  This use level is necessary to allow desirable perennial key browse species to develop branchlets and woody stature able to withstand the pressure of grazing use. Use would be read in April or prior to the spring re-growth. Use during spring contributes to following season's use level.

South Butte Seeding Allotment (00506):

1. Grazing use will be in accordance with the Northeastern Great Basin Area Standards and Guidelines, and with the Final Multiple Use Decision dated January 27, 1992.
2. Maximum allowable use levels will be established as follows:

- Crested wheat grass: 65% current year's growth
  This use level is necessary to allow desirable key herbaceous species to 1) develop above ground biomass for protection of soils, 2) to contribute to litter cover, and 3) develop roots to improve carbohydrate storage for vigor, reproduction, and improve/increase desirable cover.

Both Allotments:

1. Salt and/or mineral supplements for livestock will be located no closer than ¼ mile from water sources. Use of nutritional supplements (not forage) is encouraged to improve the ability of cattle to utilize forage in the winter months and to improve livestock distribution across the allotment.
2. Wildlife escape ramps are required to be installed and maintained by the permittee at each trough (permanent or temporary) used on the allotment.

Additional Stipulations Common to All Grazing Allotments:

1. "Livestock numbers identified in the Term Grazing Permit are a function of seasons of use and permitted use. Deviations from those livestock numbers and seasons of use may be authorized on an annual basis where such deviations would not prevent attainment of the multiple-use objectives for the allotment."

2. "Deviations from specified grazing use dates will be allowed when consistent with multiple-use objectives. Such deviations will require an application and written authorization from the authorized officer prior to grazing use."

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

4. The payment of your grazing fees is due on or before the date specified in the grazing bill. This date is generally the opening date of your allotment. If payment is not received within 15 days of the due date, you will be charged a late fee assessment of $25 or 10 percent of the grazing bill, whichever is greater, not to exceed $250. Payment with Visa, MasterCard or American Express is accepted. Failure to make payment within 30 days of the due date may result in trespass action.

5. Pursuant to 43 CFR 10.4 (G) the holder of this authorization must notify the authorized officer by telephone, with written confirmation, immediately upon discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined at 43 CFR 10.2).

Further, pursuant to 43 CFR 10.4 (C) and (D), you must stop activities in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the authorized officer.

6. Grazing use in White Pine County will be in accordance with the Northeastern Great Basin Area Standards and Guidelines for Grazing Administration. The Standards and Guidelines have been developed by the respective Resource Advisory Council and approved by the Secretary of the Interior on February 12, 1997. Grazing use will also be in accordance with 43 CFR Subpart 4180 - Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration.

7. If future monitoring data indicates that Standards and Guidelines for Grazing Administration are not being met, the permit will be reissued subject to revised terms and conditions.

Appendix IV

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

Term Grazing Permit Renewal for Sam & Clelia Henriod
South Butte & South Butte Seeding Allotments
White Pine County, Nevada

On March 10th, 2008 a Noxious & Invasive Weed Risk Assessment was completed for the term grazing permit renewal for Sam and Clelia Henriod on the South Butte and South Butte Seeding allotments in White Pine County, NV. Butte and South Butte Seeding are cattle allotments with a total grazing preference of 850 AUMs. Of these, 641 AUMs are active and 209 AUMS are suspended nonuse. The current season of use is from April 15 to February 28. The term permit would be issued for a period of ten years. The South Butte allotment encompasses 26,081 acres and the South Butte Seeding allotment encompasses 968 acres of BLM administered public lands.

No field weed surveys were completed for this project. Instead the Ely District weed inventory data was consulted. There are currently no mapped weed infestations within the South Butte Seeding allotment. The following species are found within the boundaries of the South Butte allotment:

Carduus nutans	Musk thistle
Cirsium vulgare	Bull thistle
Lepidium draba	Hoary cress
Onopordum acanthium	Scotch thistle

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

Acroptilon repens	Russian knapweed
Carduus nutans	Musk thistle
Centaurea stoebe	Spotted knapweed
Cicuta maculata	Water hemlock
Cirsium vulgare	Bull thistle
Hyoscyamus niger	Black henbane
Lepidium draba	Hoary cress
Onopordum acanthium	Scotch thistle
Sorghum halepense	Johnsongrass

Both allotments were last inventoried for noxious weeds in 2006. 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*), bur buttercup (*Ranunculus testiculatus*), 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 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 (32). 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: _____ _____

Bonnie Waggoner — Date

Ely District Noxious & Invasive Weeds Coordinator

South Butte & South Butte Seeding Allotment Term Permit Renewal
Documented Noxious & Invasive Weed Infestations
Location within the Ely Field Office boundary
McGill
Ely
Baker
Lund
Pioche
Panaca
Caliente
Hiko
Alamo
Mesquite
Legend
BLACK HENBANE
BULL THISTLE
JOHNSON GRASS
MUSK THISTLE
RUSSIAN KNAPWEED
SCOTCH THISTLE
SPOTTED KNAPWEED
WATER HEMLOCK
WHITETOP/HOARY CRESS
South Butte allotment
South Butte Seeding allotment
BLM
PRIVATE
0 1.25 2.5 5 7.5 10 Miles
1:100,897
Produced on 3/10/2008 by Bonnie M. Waggoner, Noxious & Invasive Weeds Coordinator for the Ely Field Office
Coordinate System: NAD 1983 UTM ZONE 11N
N
VALLEY
RANGE