

**NORTHEASTERN GREAT BASIN STANDARDS
AND GUIDELINES ASSESSMENT 2013
REVISED DRAFT DETERMINATION**

Badlands and Goshute Mountain Allotments



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Cover photo Hoodoo in the Badlands Allotment taken by Bruce W.C. Thompson, Wild Horse Specialist

**NORTHEASTERN GREAT BASIN STANDARDS AND GUIDELINES ASSESSMENT
2013
FINAL DETERMINATIONS**

BADLANDS AND GOSHUTE MOUNTAIN ALLOTMENTS

Wells and Schell Field Offices

I. Introduction

In accordance with 43 CFR 4180, the Wells Field Office is required to complete standards and guidelines assessments on grazing allotments in order to determine whether or not existing grazing management practices are resulting in the attainment of the standards for rangeland health and are in conformance with the guidelines. The following assessment is based on an evaluation of monitoring data obtained between 1989 and 2012. This assessment is in accordance with BLM Manual 4180-1, Rangeland Health Standards, approved on January 19, 2001. The Nevada Northeastern Great Basin Resource Advisory Council (RAC 1997) provided the approved standards for rangeland health that will be evaluated in this assessment:

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

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

Not applicable in the Badlands and Goshute Mountain Allotments as there are no perennial waters or riparian areas.

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 life cycle requirements of threatened and endangered species.

Standard 4. Cultural Resources: Land use plans will recognize cultural resources within the context of multiple use.

This Standards Determination Document evaluates and assesses livestock grazing management achievement of the Standards and conformance with the Guidelines for the Badlands and Goshute Mountain Allotments. This document does not evaluate or assess achievement of the Wild Horse and Burro Standard.

II. Description of the Allotments

The Badlands Allotment is located in extreme southeastern Elko County, Nevada, east of Alternate Highway 93, south of the Ibapah Road and approximately 45 miles south of Wendover, Nevada (Appendix 1; Figure 1). The north boundary of the allotment borders the Utah/Nevada South Allotment, and the White Pine County Line and the Goshute Mountain Allotment serve as the southern boundary. The Utah State Line lies to the east and Antelope Valley Allotment to the west.

The Goshute Mountain Allotment is directly south of the White Pine County Line and west of the Utah State Line, bordering the south boundary of the Badlands Allotment. The allotment lies within the Ely District.

The Badlands Allotment encompasses 18,022 public acres. The Goshute Mountain Allotment has a total of 5,771 public acres. Both allotments are licensed at 100 percent public land (Appendix 1; Figure 2).

The elevation of the two allotments ranges from 5,547 to over 6,700 feet. The topography consists of rolling hills and valley floors. Most of the allotments are dominated by black sagebrush (*Artemisia nova*) communities with scattered pinyon (*Pinus monophylla*) and juniper (*Juniperus osteosperma*) trees throughout the allotments (Figure 1 and 2). However, the eastern portion of the Badlands is dominated by white sagebrush (*Krascheninnikovia lanata*) communities. Precipitation in the allotments normally ranges from 5-7 inches. Most of the precipitation comes during the winter months in the form of snow occurring primarily in the winter and spring with the summers being quite dry.



Figure 1. Badlands Allotment



Figure 2. Western portion of the Badlands Allotment.

An administrative agreement signed in 1983 between the Ely and Elko District Offices states that grazing administration for the Goshute Mountain Allotment will be the responsibility of the Elko District Office. Grazing administration includes the responsibility of grazing supervision, conducting range studies, project development and the determination of grazing capacity.

An allotment evaluation was completed for the allotments on July 21, 1997 and it was determined that Standard 1 (Upland Sites) and 3 (Habitat) were not being met in the Badlands and Goshute Mountain Allotments. However progress was being made toward attainment of these Standards for Rangeland Health. Livestock grazing was determined to be a causal factor in the non-attainment of both the Upland and Habitat standard for the Badlands and Goshute Mountain Allotments.

The Elko District Office issued a Final Multiple Use Decision (FMUD) for the Badlands and Goshute Mountain Allotments on June 18, 1998, implementing the management actions identified in the evaluation (available for review at the Wells Field Office). The FMUD reduced the carrying capacity of the Badlands Allotment from 2,647 Animal Unit Months (AUMs) to 1,018 AUMs (a reduction of 62%).

The Badlands/Goshute Mountains FMUD established the following Key Area objectives in Table 1 below:

Table 1. Key Area Objectives.

Key Area	Allowable Use %
BA-01	ACHY – 60% KRLA5– 50%

Key Area	Allowable Use %
BA-02	ACHY – 60% ARNO – 50%
KA-01	ACHY – 60% ARNO – 50%
BA – Badlands Allotment KA – Goshute Mountain Allotment Indian ricegrass – ACHY White sage – KRLA Black sagebrush – ARNO	

Key area BA-01 is dominated by white sage, while key areas BA-02 and KA-01 are dominated by black sagebrush (Figures 5-7).



Figure 5. Key Area BA-01 2010



Figure 6. Key Area BA-02 2010



Figure 7. Key Area KA-01 2010

Wild Horses

The Badlands Allotment is within the Antelope Valley Herd Management Area (HMA). The Goshute Mountain Allotment is within the Antelope Herd Management Area. Inventory data has shown that less than 1% of the Antelope Valley wild horse herd uses the Badlands Allotment during the winter months. Wild horse use in the Goshute Mountain Allotment is considered to be incidental, and an appropriate management level (AML) of zero was established for the Goshute Mountain Allotment. The AML for the Badlands Allotment established in the FMUD is 5 AUMs. The AML of 5 AUMs established for the Badlands

Allotment would accommodate incidental use in the adjacent Goshute Mountain Allotment (the allotment boundaries are unfenced).

In 2007 the Nevada Department of Transportation fenced Alternate US Highway 93 which prevented wild horses from moving from the eastern portion of the Antelope Valley HMA to the western portion of Antelope Valley HMA (Appendix 1; Figure 1). There are no fences to restrict the movement of wild horses between Alternate Hwy 93 and the Badlands and Goshute Mountain Allotments.

In the fall of 2007 an inventory flight found 14 wild horses in the Badlands Allotment. The AML for the allotment is 3 horses for approximately 5 months or incidental use by wild horses. The 2007 gather removed 413 horses from the eastern portion of the Antelope Valley HMA. The AML for that portion of the Antelope Valley HMA east of Alternate Highway 93 is 38 head.

In the fall of 2010 an inventory flight found 21 wild horses in the Badlands Allotment. The AML for the allotment is 3 horses for approximately 5 months or incidental use by wild horses. In January-February 2011 the Antelope Complex Gather removed 172 wild horses from the eastern portion of the Antelope Valley HMA. In March 2012 an inventory flight found 13 wild horses in the Badlands Allotment. The AML for that portion of the Antelope Valley HMA east of Alternate Highway 93 is 38 head.

There are no streams or springs on the Badlands and Goshute Mountain Allotments.

There have been no recent impacts by fire in the Badlands and Goshute Mountain Allotments.

1. Actual Use Summary 1997 through 2013.

The season of use in the Badlands and Goshute Mountain Allotments is 11/1 to 3/31. Total permitted use on the Badlands Allotment is 1,018 AUMs and on the Goshute Mountain Allotment is 465 AUMs for a total of 1,483 AUMs. Actual use data provided by the permittee is presented in Table 2. The permittee hauls water into the allotment for the livestock operation. Water haul sites used are along the road (Appendix 1; Figure 2). No water is hauled into the Goshute Mountain Allotment as the sheep use existing snow cover for water.

Table 2 Actual use from the Badlands and Goshute Mountain Allotments.

Actual Use (AUMs)			
Year	Badlands Allotment	Goshute Mountain Allotment	Total Badlands/Goshute Mountain Allotment ¹
1997-1998	735	474	1,209
1998-1999	648	286	834
1999-2000	538	379	917
2000-2001	744	339	1,083
2001-2002	n/a	n/a	570 ²
2002-2003	1,162	77	1,239
2003-2004	867	269	1,136

2004-2005	282	121	404
2005-2006	1,054	216	1,270
2006-2007	730	281	1,011
2007-2008	Non-use	Non-Use	Non-Use
2008-2009	663	403	1,066
2009-2010	736	312	1,048
2010-2011	911	348	1,259
2011-2012	1,000	302	1,302
2012-2013			1,189 ²
Average	719	272	1,036

¹Actual use is not shown by grazing fee year (March 1 to Feb 28). Use is shown by season of use Nov 1 through March 31. Actual use shown covers two grazing fee years.

² Actual use not broken out by Allotment.

³ Use from grazing bill. Actual use was not submitted in the spring of 2003.

2. Utilization Summary

LIVESTOCK/WILD HORSES/WILDLIFE

Table 3 Utilization data at key area BA-01 for key species Indian ricegrass and white sage, 1997-2012

Utilization: BA-01			
Key Species: Indian ricegrass (ACHY)			
White sage (KRLA)			
Allowable Use: 60% on ACHY 50% on KRLA			
Year	Average Utilization¹		Livestock Actual Use² Badlands Allotment
	ACHY	KRLA	
1997-1998	39%	36%	735
1998-1999	61%	65%	648 High use on the east side of the Badlands Allotment attributed to cattle drift from UT.
1999-2000	Not recorded	Not recorded	538
2000-2001	Not recorded	Not recorded	1,083
2001-2002	Not recorded	Not recorded	Actual Use not broken out by Allotment.
2002-2003	Not recorded	Not recorded	1,239 ³
2003-2004	Not recorded	Not recorded	1,136 Snow conditions limited use to the western portions of the allotment.
2004-2005	Not recorded	Not recorded	404
2005-2006	23%	13%	1,270
2006-2007	11%	7%	1,011
2007-2008	Not recorded	Not recorded	Non-Use
2008-2009	Not recorded	Not recorded	663
2009-2010	Not recorded	Not recorded	736
2010-2011	7%	21%	892
2011-2012	43%	23%	1,000
Average	31%	28%	

¹Utilization is combined use by wild horses, livestock, and wildlife.
²Actual use is not shown by grazing fee year (March 1 to Feb 28). Use is shown by season of use Nov1 through March 31.
³Use from grazing bill. Actual use was not submitted in the spring of 2003.

Table 4. Utilization data at key area BA-02 for key species Indian ricegrass and white sage, 1997-2012

Utilization: BA-02			
Key Species: Indian ricegrass – ACHY Black sagebrush – ARNO)			
Allowable Use: 60% on ACHY 50% on ARNO			
Year	Average Utilization		Livestock Actual Use^{2,3} Badlands Allotment
	ACHY	ARNO¹	
1997-1998	16%	18%	735
1998-1999	31%	62%	648 High use on the east side of the Badlands Allotment attributed to cattle drift from UT.
1999-2000	Not recorded	Not recorded	538
2000-2001	Not recorded	Not recorded	1,083
2001-2002	Not recorded	Not recorded	Actual Use not broken out by Allotment.
2002-2003	Not recorded	Not recorded	1,239 ³
2003-2004	61%	65%	1,136 Snow conditions limited use to the western portions of the allotment.
2004-2005	Not recorded	Not recorded	404
2005-2006	43%	17%	1,270
2006-2007	3%	6%	1,011
2007-2008	Not recorded	Not recorded	Non-Use
2008-2009	Not recorded	Not recorded	663
2009-2010	Not recorded	Not recorded	736
2010-2011	45%	43%	892
2011(Pre-livestock)	17%	Not recorded	Pre-livestock
2011-2012	43%	24%	1,000
Average³	35%	34%	

¹Utilization is combined use by wild horses, livestock, and wildlife.
²Permitted use is not shown by grazing fee year (March 1 to Feb 28). Use is shown by season of use Nov1 through March 31.
³ A Wild Horse amendment to the Wells Resource Management Plan was approved in August 1993. This amendment further outlined the level of management for wild horses within the planning area including the Antelope Valley HMA. The Amendment established wild horse pre-livestock allowable use levels at 10%. (“Utilization of key forage species by wild horses in areas used in common will not exceed an average of 10 percent prior to entry by livestock”). The pre-livestock use was not used to determine the average use.

Table 5. Utilization data at key area KA-01 for key species Indian ricegrass and white sage, 1997-2012

Utilization: KA-01			
Key Species: Indian ricegrass – ACHY Black sagebrush – ARNO			
Desired Use: 60% on ACHY 50% on ARNO			
Year	Average Utilization		Livestock Actual Use¹ Goshute Mountain Allotment
	ACHY	ARNO	
1997-1998	Not recorded	Not recorded	474
1998-1999	Not recorded	Not recorded	286
1999-2000	Not recorded	Not recorded	379
2000-2001	Not recorded	Not recorded	339
2001-2002	Not recorded	Not recorded	Actual Use not broken out by Allotment.
2002-2003	Not recorded	Not recorded	77
2003-2004	Not recorded	Not recorded	269
2004-2005	Not recorded	Not recorded	121
2005-2006	26%	3%	216
2006-2007	0%	2%	281
2007-2008	Not recorded	Not recorded	Non-Use
2008-2009	Not recorded	Not recorded	403
2009-2010	Not recorded	Not recorded	312
2010-2011	Not recorded	10%	392
2011-2012	12%	8%	302
Average	13%	6%	
¹ Utilization is combined use by wild horses, livestock, and wildlife. ² Permitted use is not shown by grazing fee year (March 1 to Feb 28). Use is shown by season of use Nov1 through March 31.			

3. Carrying Capacity (Livestock)

All AUMs in the allotments were originally adjudicated for sheep use only.

The season of use for the Badlands and Goshute Mountain Allotments is from 11/1 to 3/31. The active physiological growth period of plants in the allotments normally begins 4/1. The time period of 11/1 to 3/31 is winter dormancy for most plants and occurs outside the critical season of plant growth, therefore there is less potential that the vegetation would be damaged by proper grazing.

Much of the central and western portions of the Badlands allotment are dominated by black sagebrush while the eastern portion is dominated by black sagebrush and white sage. The Goshute Mountain Allotment is dominated by black sagebrush. Both species are considered palatable winter forage for sheep. Shadscale (*Atriplex confertifolia*) and budsage (*Picrothamnus desertorum*) are other shrubs present in the allotments that are utilized by sheep.

Actual use and key area utilization data were compared to the desired utilization level for each allotment. The formula used was taken from Rangeland Monitoring: Analysis, Interpretation, and Evaluation (TR 4400-7).

$$\frac{\text{Actual Use (AUMs)} \times \text{Utilization}}{\text{Measured Utilization}} = \text{Carrying Capacity}$$

Carrying capacity for the Badlands and Goshute Mountains Allotments is summarized below:

Table 6 : Carrying capacity estimates for Badlands and Goshute Mountain allotments

YEAR	ACTUAL USE SHEEP AUMS	PERIODS OF USE	KMA UTILIZATION LIMITING FACTOR	TOTAL CARRYING CAPACITY AUMS (lvst)
1997-1998	1,209	11/17/97 – 3/3/08	KRLA - 36%	1,679
1998-1999	834	1/5/98 – 3/20/98	KRLA – 65%	641
1999-2000	917	1/16/00 – 3/31/00	N/A	N/A
2000-2001	1,083	12/23/00 – 3/31/01	N/A	N/A
2001-2002	570	12/29/01 – 2/28/02	N/A	N/A
2002-2003	1,239	11/7/02 – 2/28/03	N/A	N/A
2003-2004	1,136	12/1/03 – 3/30/04	N/A	N/A
2004-2005	404	12/1/04 – 2/3/05	N/A	N/A
2005-2006	1,270	12/1/05 – 3/16/06	ACHY - 43%	1,772
2006-2007	1,011	12/6/06 – 2/28/07	ACHY - 11%	5,515
2007-2008	Non-Use	Non-Use	N/A	Non-Use
2008-2009	1,066	11/11/08 – 1/31/09	N/A	N/A
2009-2010	1,048	12/10/09 – 2/28/10	N/A	N/A
2010-2011	1,259	12/1/10 – 3/15-11	KRLA – 43%	1,464
2011-2012	1,302	11/8/11 – 2/27/2012	ACHY - 43%	1,812
Average	932		Total estimated carrying capacity	1,682
Desired carrying capacity was determined for each year that utilization data was collected. An average of those years (minus the high and low readings) was used to calculate the carrying capacity for the Badlands and Goshute Mountain Allotments.				
If more than one key area exists within an unfenced allotment/use area, the key area which represents the highest level of significant use was selected to determine the carrying capacity.				

The BLM has standardized the utilization objective for the key grass species at 60% of current year's growth during dormancy (fall and winter). The BLM believes this level of use is compatible with achievement of the land use plan objectives and standards for rangeland health,

and establishes a consistent utilization objective in the Badlands and Goshute Mountain Allotments.

The BLM has established a utilization objective for shrubs at 50% of current year's growth during dormancy (fall and winter).

Utilization data was collected at key areas and included use by livestock, wildlife and wild horses.

The BLM proposes to keep the carrying capacity for the Badlands and Goshute Mountain Allotments at 1,483 AUMs (1,018 AUMs for the Badlands Allotment and 465 AUMs for Goshute Mountain Allotment).

4. Wild Horse Appropriate Management Level (AML)

Inventory data has shown that less than 1% of the Antelope Valley herd uses the Badlands Allotment during the winter months. Wild horse use in the Goshute Mountain Allotment is considered to be incidental.

The 1998 Badlands and Goshute Mountain Allotments FMUD established an AML of 5 AUMs in the Badlands Allotment to accommodate incidental use and an appropriate management level (AML) of zero was established for the Goshute Mountain Allotment (the allotment boundaries are unfenced). Most of the allotments are comprised of Black sagebrush which provides generally palatable, nutritious browse for wildlife and most classes of livestock. Black sagebrush is palatable to pronghorn, mule deer, domestic sheep, and domestic goats and unpalatable to cattle and horses (Sampson and Jespersion 1963). The 1998 FMUD established an AML of 5 AUMs based on available forage and did not consider the availability of water in the allotments.

Monitoring has been conducted to determine if the four essential habitat components (forage, water, cover, and space) are present in sufficient amounts to sustain healthy wild horse populations and healthy rangelands over the long-term. In making this determination, the most limiting factor(s) within the allotments should be considered. In the Badlands and Goshute Mountain Allotments, the most limiting factor is water (the lack of) for wild horse use. There is no perennial water available within the Badlands and Goshute Mountain Allotments.

Sufficient water for wild horses must be available during drought to achieve and maintain a thriving natural ecological balance and multiple use relationship on the public lands. This critical habitat component is lacking in the Badlands and Goshute Mountain Allotments. The AML established in the 1998 Badlands and Goshute Mountain Allotments FMUD should allow for continued incidental use in the Badlands Allotment and incidental to no use in the Goshute Mountain Allotment.

III. Terrestrial Wildlife Species including Migratory Birds and BLM Special Status Species

A. Introduction

The Badlands and Goshute Mountain Allotments in association with the surrounding sagebrush vegetation may provide habitat for approximately 100 bird species, 70 mammal species, and several reptile and amphibian species that potentially inhabit similar sagebrush habitats throughout the northern Nevada. In 2006, the Nevada Department of Wildlife (NDOW) provided a species list to BLM for use in permit renewal evaluations (Appendix 3). This list included species that utilize habitat types that are not within the Badlands and Goshute allotments, but was used as a reference to identify species relevant to the habitat types present in the Badlands and Goshute Mountain allotments. The Nevada Department of Wildlife list included some species that are known to no longer exist in northeastern Nevada or have habitat types not found in northeastern Nevada and were there for removed from consideration in the final species list. An example of such a species is the endangered California condor.

B. Federally Listed and Candidate species

Greater Sage-Grouse

The Badlands Allotment lies within the East Valley Sage Grouse Population Management Unit (PMU) and the Goshute Mountain Allotment lies within the Schell/Antelope PMU. There are no sage-grouse leks (breeding display areas) within the Badlands and Goshute Mountain Allotments, however, the Badlands 1 lek occurs within 1.1 miles of the eastern boundary of the Goshute Mountain Allotment . It was classified as active in 2013 and had a high count of 16 males (C. Baughman, NDOW Game Biologist, per com, 7/2013). The Domingo Well East lek occurs within 0.3 miles of the southeastern corner of the Goshute Mountain boundary. Grouse breeding at the active Badlands 1 lek may use suitable habitat located with the two allotments, but any level of use is expected to be low. Preliminary Priority and General Habitat comprise 0.47 and 4.3% of the Badlands Allotment, respectively, and 67.3 and 0% of the Goshute Mountain Allotment, respectively.

Other Special Status Species – There are numerous designated Nevada BLM Sensitive Species which potentially use this allotment in association with adjacent habitat areas. See Appendix 3 for a list of these species.

The area within and adjacent to the Badlands and Goshute Mountain Allotments provides habitat for the following avian Nevada BLM Sensitive Species on a seasonal or yearlong basis: loggerhead shrike, burrowing owls, golden eagles, Swainson’s hawks, ferruginous hawks, vesper sparrows, short-eared owls, and prairie falcons.

Pygmy rabbits

Pygmy rabbits are a BLM Sensitive Species petitioned for listing as threatened or endangered under the Endangered Species Act of 1973. On May 20, 2005, the U.S. Fish and Wildlife Service announced a 90-Day finding in the Federal Register indicating that, “... the petition does not provide substantial information indicating that listing the pygmy rabbit may be

warranted. The Finding does not downplay the need to conserve, enhance or protect pygmy rabbit habitat. Pygmy rabbits are found in a variety of vegetation types that include big sagebrush that are suitable for creating their burrow system. Though pygmy rabbits have been documented just beyond the western boundary of the Goshute Mountain allotment within an ephemeral drainage and such habitat is present within the Badlands and Goshute Mountain allotments; the majority of these allotments are comprised of black sagebrush communities. The soils associated with this community primarily consist of shallow calcareous, duripans which are not associated with pygmy rabbit habitat. No pygmy rabbits have been documented within the Badlands or Goshute Mountain allotments.

Bats

Thirteen BLM sensitive bat species have been documented in the Elko District with the potential to occur in the Badlands/Goshute Mountains area. These thirteen are: the Pallid Bat, Townsend's Big-eared Bat, Big Brown Bat, Silver Haired Bat, California Myotis, Western Small-footed Myotis, Little Brown Myotis, Long-eared Myotis, Long-legged Myotis, Yuma Myotis, Western Pipistrelle, Brazilian Free-tailed Bat, and the Fringed Myotis (Bradley et al. 2006).

C. Non-game Species

There are approximately 100 bird species, 70 mammalian species, and several reptile species that potentially inhabit the allotment. Many of these species are shown in the Wildlife Species List for the allotment (Appendix 3).

Raptors

Fourteen raptor species are present in the Elko District with the potential to occur in the Badlands/Goshute Mountain area: American kestrel (*Falco sparverius*), bald eagle (*Leucocephalus haliaeetus*), Burrowing owl (*Athene cunicularia*), Cooper's hawk (*Accipiter cooperi*), ferruginous hawk (*Buteo regalis*), golden eagle (*Aquila chrysaetos*), great horned owl (*Bubo virginianus*), northern goshawk (*Accipiter gentilis*), prairie falcon (*Falco mexicanus*), red-tailed hawk (*Buteo jamaicensis*), sharp-shinned hawk (*Accipiter striatus*), rough-legged hawk (*Buteo lagopus*), Swainson's hawk (*Buteo swainsoni*) and long-eared owl (*Asio otus*). Of the fourteen, only the ferruginous hawk has known nesting sites within the allotment boundaries. Although not documented, the Badlands and Goshute Mountain Allotments also provide suitable nesting habitat for Swainson's hawks, prairie falcons, American kestrels, and golden eagles.

Habitat for both long-eared and burrowing owls is present in the Badlands/Goshute Mountain area. Long-eared owls are often associated with caves and cracks in rock canyons, while the burrowing owl occupies dry grassland and sagebrush habitats. Burrowing owls nest in underground burrows often excavated by ground squirrels, badgers, and other mammals. Suitable sagebrush and canyon habitats for burrowing and long-eared owls exist within the allotments.

Although bald eagles are not expected to use the allotments heavily for foraging or other activities, transient foraging could occur during the winter months. Additionally, bald eagles

may use areas surrounding the allotments which contain quality winter foraging areas. Suitable habitat on uplands, irrigated lands and riparian areas is widely dispersed over much of the Elko District.

D. Migratory Birds

On January 11, 2001, President Clinton signed the Migratory Bird Executive Order 13186 titled “Responsibilities of Federal Agencies to Protect Migratory Birds”. It directs executive departments and agencies to take certain actions to further implement the Migratory Bird Treaty Act and to conserve migratory birds. An example of such a conservation action related to a grazing permit renewal is the inclusion of terms and conditions such as restricting placement of mineral supplements to no less than ¼ mile from riparian areas, which are important migratory bird breeding habitat.

According to the BLM Elko Field Office “Bird List”, there are approximately 246 species that could inhabit the Field Office area of jurisdiction on a seasonal or yearlong basis (BLM, 1992). The Badlands and Goshute Mountain Allotments include habitat for some or all of these migratory bird species on a seasonal or yearlong basis. Predominant habitat types within the Goshute/Badlands Allotment include: sagebrush, cliff/ talus, pinyon/juniper, and salt desert scrub. The Nevada Partners in Flight Bird Conservation Plan (1999) identifies the bird species associated with these habitat types (Table 7).

Table 7. Migratory Birds by Ecotype

	Sagebrush	Cliffs/ Talus	Pinyon/ Juniper	Salt Desert Scrub
American Kestrel	X		X	
American Robin	X			
American Goldfinch				X
Black Rosy Finch	X	X*		
Black-throated Gray Warbler			X	
Black-throated Sparrow	X			
Blue-gray gnatcatcher			X	
Brewer’s Sparrow	X			
Brewer’s Blackbird	X			
Burrowing Owl	X			X
Bushtit			X	
Canyon Wren		X		
Calliope Hummingbird	X			

	Sagebrush	Cliffs/ Talus	Pinyon/ Juniper	Salt Desert Scrub
Clark's nutcracker			X	
Cliff Swallow		X		
Common Nighthawk			X	X
Common Raven		X		
Common Poorwill			X	X
Cooper's Hawk	X			
Dark-eyed Junco			X	
Ferruginous Hawk	X	X	X	
Fox Sparrow	X			
Gray Flycatcher	X		X	
Green-tailed Towhee	X			
Golden Eagle		X		
Horned Lark	X			
Juniper Titmouse			X	
Lark Sparrow	X			
Lewis' Woodpecker	X			X
Loggerhead Shrike	X			X
Northern Flicker	X			
Northern Goshawk	X	X		
Orange-Crowned Warbler	X			
Pinyon Jay			X	
Prairie Falcon	X	X*		
Red-naped Sapsucker	X			
Red-shafted Flicker	X			
Rock Wren		X		
Greater Sage Grouse	X*			
Sage Sparrow	X			
Sage Thrasher	X			
Say's Phoebe		X		
Scott's Oriole			X	
Swainson's Hawk	X			
Turkey Vulture	X	X	X	X
Vesper Sparrow	X			
Violet-green Swallow		X		

	Sagebrush	Cliffs/ Talus	Pinyon/ Juniper	Salt Desert Scrub
Virginia's Warbler			X	
Warbling Vireo				
Western Bluebird			X	X
White-throated Swift		X		
Western Meadowlark	X			

* indicates "Obligates" species to the relevant Ecotype

E. Big-game Species

The entire Badlands and Goshute Mountain Allotments are considered pronghorn antelope (*Antilocapra americana*) yearlong range and the western halves of both allotments as antelope crucial winter range. Both allotments are elk (*Cervus elaphus*) winter range, while mule deer (*Odocoileus hemionus*) use is considered to be incidental. The nearest occupied bighorn sheep habitat is 40 miles north in the Leppy Hills.

IV. Conclusions and Determinations

This section draws conclusions and makes determinations regarding:

- A. Progress towards or attainment of the standards for rangeland health, and
- B. Whether livestock management is in conformance with the guidelines, and
- C. Whether existing grazing management or levels of grazing use are significant factors in failing to achieve the standards or conform to the guidelines.

Standard 1. Upland sites

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

As indicated by:

Canopy and ground cover, including litter, live vegetation and rock, appropriate to the potential of the site.

The above indicators are appropriate to the potential of the ecological site.

Determination:

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

Guidelines Conformance:

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

Conclusion

This standard is being met and current livestock grazing management practices are considered to be in conformance with the guidelines.

Rationale:

BA-01

The appropriate ground cover at the site (Ecological Site 028AY030NV) is 5 to 15%. Monitoring in 2013 found 14.7% canopy cover indicating that this key area is meeting the standard. This key area is within the appropriate range for cover as indicated in the ESD.

BA-02

The appropriate ground cover at the site (Ecological Site 028AY004NV) is 5 to 15%. Monitoring in 2013 found 29.4% canopy cover which meets the minimum for this site.

KA-01

The appropriate ground cover at the site (Ecological Site 028AY004NV) is 5 to 15%. Monitoring in 2013 found 32.5% canopy cover which meets the minimum for the site.

Professional observation indicates that infiltration and permeability rates are appropriate for the Badlands and Goshute Mountains Allotments. Vegetation cover values measured in 2013 for the key areas were 14.7, 29.4 and 32.5 percent respectively. Litter, embedded litter, and rocks composed additional ground cover. Additional indicators of infiltration and permeability rates (i.e. rills, gullies, water flow patterns, pedestals, wind scouring, blowouts, depositional features, microbial crust presence, etc.) were appropriate to soil type, climate, and land form based on professional observation.

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, heights, or age classes)
- Vegetation distribution (patchiness, corridors);
- Vegetation productivity; and Vegetation nutritional value.

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

Determination:

	Achieving the Standard
	Not Achieving the Standard, but making significant progress towards achieving
X	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

This standard is not being met. Current livestock grazing management practices are not considered to be a causal factor. Current livestock grazing practices are considered to be in conformance with the guidelines.

Rationale:

BA-01

The potential natural plant community composition at this key area is 30% grasses, 5% forbs and 65% shrubs by dry weight (Ecological Site 028AY030NV). Production data collected in 2013 indicate the community is composed primarily of halogeton (69.2%) and white sage (30.6%), with grass and other species present only in small or trace amounts (Appendix 2; Table 2). In 1994 the composition of halogeton and white sage was 14.6% and 57.5%, respectively, indicating degradation of plant community composition since that time. Likewise, frequency data collected from 1989 to 2013 indicate a significant increase in halogeton (from 28% to 95.5%) and a concomitant decrease (from 61.0% to 25.5%) in white sage (Appendix 2; Figure 1). The presence of a significant halogeton component and lack of native grasses and forbs indicate that habitat for animal species has been degraded and ecological processes are likely at risk. The ESD for the site states:

As ecological condition deteriorates, bottlebrush squirreltail and shadscale increase as Indian ricegrass decreases. 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.

Monitoring data since 1989 indicate that this site was heavily disturbed by livestock grazing in the past, including up to the time AUMs were reduced in the 1998 Final Multiple Use Decision, which allowed halogeton and other annual species to dominate the plant community. The current assemblage of plant species is not appropriate to the ecological site and likely reflects the inappropriate grazing regime of the historic (late 1800's to mid-1900's) and more recent (pre-1998) past. The data also indicate that no progress toward improving conditions has been achieved since monitoring began, and in fact further degradation has occurred; halogeton has increased significantly since 1989 and has come to dominate the innerspaces between white sage

plants, while white sage has significantly decreased in both frequency and production during the same period. Indian ricegrass has remained at a very low level and Nuttall's saltbush declined significantly since 1994. Although site potential is low, forbs have remained nearly non-existent over the monitoring period. It is likely that this and other similar sites represented by this key area within the allotment have transitioned to a less desirable ecological stable state. With excessive future disturbance (e.g., wildfire or improper grazing management) these sites are at risk of being converted to communities dominated by halogeton and other annual invasive species.

BA-02

The potential natural plant community composition at this key area is 40% grasses, 5% forbs, and 55% shrubs (Ecological Site 028AY004NV). Line intercept cover data and professional observations collected in 2013 indicate that current vegetative composition is highly skewed toward the shrub (97%) component and lacks the herbaceous grass (3%) and forb (0%) understory (Appendix 2). The skewed vegetative composition results in degraded habitat conditions for many wildlife species that require or benefit from appropriate grass and forb components during some portion of their life cycle, including greater sage-grouse and pronghorn antelope. Comparing production and frequency data, there was a contradictory trend in grass from 1989-2013; production data indicate that grass composition spiked significantly from 1989-1994, then dropped significantly to 2013, while frequency data indicate no significant change in grass from 1989-1994, followed by a significant decrease in SIHY and concomitant increase in BRTE by 2013. Production data also indicate a significant increase in BRTE composition from 1989-2013.

1994 was a high production year (699 lbs/ac compared to 500 lbs/ac for a favorable year described in the ESD) that resulted from wetter than normal conditions. Individual grass plants produced more biomass that year than normal (as indicated by production data), but did not increase their frequency of occurrence through establishment of new individuals (as indicated by the frequency data).

In summary, the current vegetation composition at BA-02 is not appropriate to the potential of the site and the recent trend has been away from the desired condition described in the ESD. Vegetation composition at BA-02 from 1989-2013 has seen a significant decrease in composition and frequency of native grasses, and a significant increase in composition and frequency of cheatgrass, annual mustard and rabbitbrush, all of which are early seral species indicative of disturbance. Cheatgrass and annual mustard are undesirable species. In particular, cheatgrass provides little value to wildlife and when present in significant amounts can alter ecological processes through changes in fire regime, canopy cover, and soil erosion potential.

KA-01

This site is classified as PPH, however it lacks the herbaceous understory, even though the ESD (028AY004NV) says it is capable of supporting 40% grasses and 5% forbs by weight. Line intercept cover data collected in 2013 indicated that grass composition was only 0.2% of the vegetation community and forbs were completely absent. Likewise, frequency data indicate that grasses and forbs have been little more than a trace component of the vegetation community from 1981-2013. Professional observation and pictures taken at this site (Appendix 2) support

this conclusion. Given this deficiency, and the relatively low stature of black sagebrush, the community represented by this key area is likely not suitable nesting or brood-rearing habitat for sage-grouse (Goodrich 2005) and it is not expected that sage-grouse would use it for these life stages other than incidentally. It is more likely that it could be used as winter habitat (Gullion 1964) particularly given the low snowfall accumulations present during most years, which would allow the relatively low-stature black sagebrush plants to be available for forage and cover above the snow.

Sagebrush canopy cover was 30.4%, exceeding the nesting (15-25%) and brood-rearing (10-25%) ranges recommended by Connelly et al. (2000). The habitat rating here for pronghorn was also Poor, indicative of a lack of forb and grass cover as well as poor vegetation production.

General Conclusion:

The *distribution* of different habitat types is appropriate to a site typical of drier portions of the western Great Basin, but as described in the rationale above, the vegetation *composition* does not provide suitable feed, cover and living space for some species of wildlife, including greater sage-grouse and pronghorn antelope. Although the Standard is not being met, the intensity, timing and kind of livestock use since the 1998 FMUD likely has not been a causal factor in failing to meet this standard.

Standard 4. Cultural Resources:

Land use plans will recognize cultural resources within the context of multiple uses.

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

This standard is being met, and livestock grazing management practices are considered to be in conformance with the guidelines.

Rationale: Based on the evaluation of existing information pertaining to range improvements and grazing, cultural resources are being recognized within the context of multiple use management in the Badlands and Goshute Mountain Allotments.

Standard 5. Healthy Wild Horse and Burro Populations: Wild horses and burros exhibit characteristics of a healthy, productive and diverse population. Age structure and sex ratios are appropriate to maintain the long term viability of the population as a distinct group. Herd

management areas are able to provide suitable feed, water, cover and living space for wild horses and burros and maintain historic pattern of habitat use.

As indicated by:

- Healthy rangelands that provide sufficient quantities and quality of forage and water to sustain the appropriate management level on a year-long basis within a herd management area;
- Wild horses and/or burros managed on a year-long basis for a condition class greater than or equal to five to allow them normal changes for survival in the winter;
- Highly adoptable wild horse and burros that are readily available from herd management areas;
- Wild horse and burro herds that exhibit appropriate age structure and sex ratio for short and long term genetic and reproductive health.

Determination:

	Achieving the Standard
	Not Achieving the Standard, but making significant progress towards achieving
X	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

Rationale: This standard is not being met for the Badlands and Goshute Mountain Allotments. Wild horse characteristics of a healthy, productive and diverse population are considered to be in conformance with this standard in the allotments; however there is a lack of perennial water to sustain a healthy, productive and diverse population. Wild horse numbers above AML are also not in conformance with the standard.

V. Possible Future Management Alternatives

The BLM has developed the following as a list of possible management alternatives connected with the renewal of the Badlands and Goshute Mountain Allotments grazing permit that could be analyzed in a document prepared to comply with the National Environmental Policy Act (NEPA). The BLM is seeking input from the permittee, affected agencies, and members of the public interested in livestock grazing management on the Badlands and Goshute Mountain on these alternatives or in developing additional management strategies and alternatives that are in conformance with the Wells Resource Management Plan (RMP), Ely District RMP and that will make significant progress towards attaining the Standards and Guidelines for Rangeland Health. Comments received through this scoping process will be used in the preparation of a new environmental analysis and disclosure of impacts to be prepared for compliance with the National Environmental Policy Act (NEPA). The process will result in BLM issuing a new grazing permit renewal decision for the Badlands and Goshute Mountain Allotments.

Alternative 1 - Proposed Action

The proposed action would include the same grazing system as the 1998 FMUD Grazing System. (See Table 2 below.) Sheep grazing would continue as outlined below. The terms and conditions on the current permit would be brought forward with the only changes being that 1) The permittee would be billed based on submission of actual use data, and billing would be made after the end of the grazing season. 2) All hay for stock use (use by permittees horses to herd livestock) in and around sheep camps must be certified weed-free hay prior to livestock turnout. 3) Sheep bedding areas would only be located in areas approved by the authorized officer. Sheep may not be bedded in the same location more than seven consecutive days before being moved. Once moved, the next bedding area may not be within 1/2-mile of the last bedding area. Water hauling would continue on all existing roads within the Badlands and Goshute Mountain Allotments to improve livestock distribution.

Grazing System

The currently permitted active livestock grazing preference is for sheep use only.

The active preference for the Badlands and Goshute Mountain Allotments would remain at 1,018 AUMs for the Badlands Allotment and 465 AUMs for the Goshute Mountain Allotment, with use dates from November 1 to March 31. Permitted use would be as outlined in Table 2.

Table 2. Permitted Use as Outlined on the Term Grazing Permit

Allotment	AUMs	Begin	End	Percent Public Land %	Type Use
Badlands	1,065	11/01	3/31	100	Active
Goshute Mountain	468	11/01	3/31	100	Active

Table 3 outlines key area objectives for the Badlands and Goshute Mountains Allotments.

Table 3. Key Area Objectives for the Badlands and Goshute Mountains Allotments

Allotment	Key Area	Allowable Use %
Badlands	BA-01	ACHY – 60% KRLA – 50%
Badlands	BA-02	ACHY – 60% ARNO – 50%
Goshute Mountain	KA-01	ACHY – 60% ARNO – 50%
Indian ricegrass – ACHY White sage – KRLA Black sagebrush - ARNO		

Terms and Conditions

- Flexibility will be allowed on the Badlands and Goshute Mountain Allotments as outlined in the following:
 - ✓ The number of livestock to be grazed will remain flexible according to the needs of the permittee. Livestock numbers listed on this permit are based on the maximum number of AUMs that may be removed from each allotments for the period specified.
 - ✓ An annual operating plan, livestock numbers and periods of use and specific management practices appropriate for maintaining progress towards attainment of multiple use objectives and standards for rangeland health will be approved by the BLM prior to turnout.
 - ✓ Deviations in time and conditions outlined above will be allowed to meet the needs of the permittee as long as these deviations are consistent with the multiple use objectives. Deviations, including any changes in licensed use or adjustments in the terms and conditions outlined above, will require submission of a written application and written authorization from the Authorized Officer.
- No billing or receipt will be issued prior to use. Actual Use must be submitted to the BLM within 15 days after livestock are removed from the allotments. One billing notice based on actual use will be prepared and issued within two weeks after the actual use is received.
- All hay for stock use (domestic horses used by the permittee to herd sheep) must be certified weed free hay prior to livestock turnout.
- Sheep may not bed in the same location more than seven consecutive days before being moved. Once moved, the next bedding area may not be within ½ mile of the last bedding area.
- Water hauling will continue on all existing roads within the Badlands and Goshute Mountain Allotments to improve livestock distribution. Water haul sites may not be within ½ mile from white sage dominated sites.
- Actual use data on all pastures must be submitted to this office within 15 days from the last day of use. A grazing bill will be prepared after the grazing season based on actual use.
- Supplemental feeding is limited to salt, mineral and/or protein supplements in block, granular or liquid form. Such supplements must be placed at least ½ mile from live waters (springs, streams), troughs, wet or dry meadows, white sage-dominated sites and aspen stands.

- Pursuant to 43 CFR 10.4 (G), the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4 (C) and (D), the holder must stop activities in the immediate vicinity of the discovery and protect it from holder's permitted activities for 30 days or until notified to proceed by the authorized officer.
- The Terms and Conditions of the permit may be modified if additional information indicates that revision is necessary to conform to 43 CFR 4180.

Monitoring

BLM would continue to monitor livestock grazing use to insure that the multiple-use objectives are being met. The collection of actual use data is essential to the monitoring and evaluation effort. The permittee would be required to submit an actual use report by pasture/use area to the Wells Field Office annually after livestock use.

Alternative 2

Re-Issue the Existing Permit with No Changes (No Action Alternative)

Under the no action alternative, the BLM would re-issue the permit with the same terms and conditions as outlined on the current permit for the Badlands and Goshute Mountain Allotments. This would not include after the fact billing, a weed-free hay stipulation, or 1/2 mile distance stipulations for sheep bedding grounds, water haul sites, and mineral supplement locations in relation to white sage-dominated sites.

Terms and Conditions

- Grazing would be in accordance with the Final Permit Renewal Decision for the Badlands and Goshute Mountain Allotments dated June 18, 1998.
- Flexibility will be allowed on the Badlands and Goshute Mountain Allotments as outlined in the following:
 - ✓ The number of livestock to be grazed will remain flexible according to the needs of the permittee. Livestock numbers listed on this permit are based on the maximum number of AUMs that may be removed from each allotments for the period specified.
 - ✓ An annual operating plan, livestock numbers and periods of use and specific management practices appropriate for maintaining progress towards attainment of multiple use objectives and standards for rangeland health will be approved by the BLM prior to turnout.

- ✓ Deviations in time and conditions outlined above will be allowed to meet the needs of the permittee as long as these deviations are consistent with the multiple use objectives. Deviations, including any changes in licensed use or adjustments in the terms and conditions outlined above, will require submission of a written application and written authorization from the Authorized Officer.
- Water hauling would continue on all existing roads within the Badlands and Goshute Mountain Allotments to improve livestock distribution. Any new water haul sites would have to be approved by the authorized officer.
- Actual use data on all pastures must be submitted to this office within 15 days from the last day of use.
- Supplemental feeding is limited to salt, mineral and/or protein supplements in block, granular or liquid form. Such supplements must be placed at least ¼ mile from live waters (springs, streams), troughs, wet or dry meadows, and aspen stands.
- Pursuant to 43 CFR 10.4 (G), the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. 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.
- The Terms and Conditions of your permit may be modified if additional information indicates that revision is necessary to conform to 43 CFR 4180.

Alternative 3 No Grazing Alternative

Under this alternative no livestock grazing would be authorized in the Badlands and Goshute Mountain allotments. The current term grazing permit would not be renewed when it expires on 8/4/2018.

Specific alternatives to be analyzed in appropriate NEPA analysis will be further identified and refined in response to comments received during the scoping process.

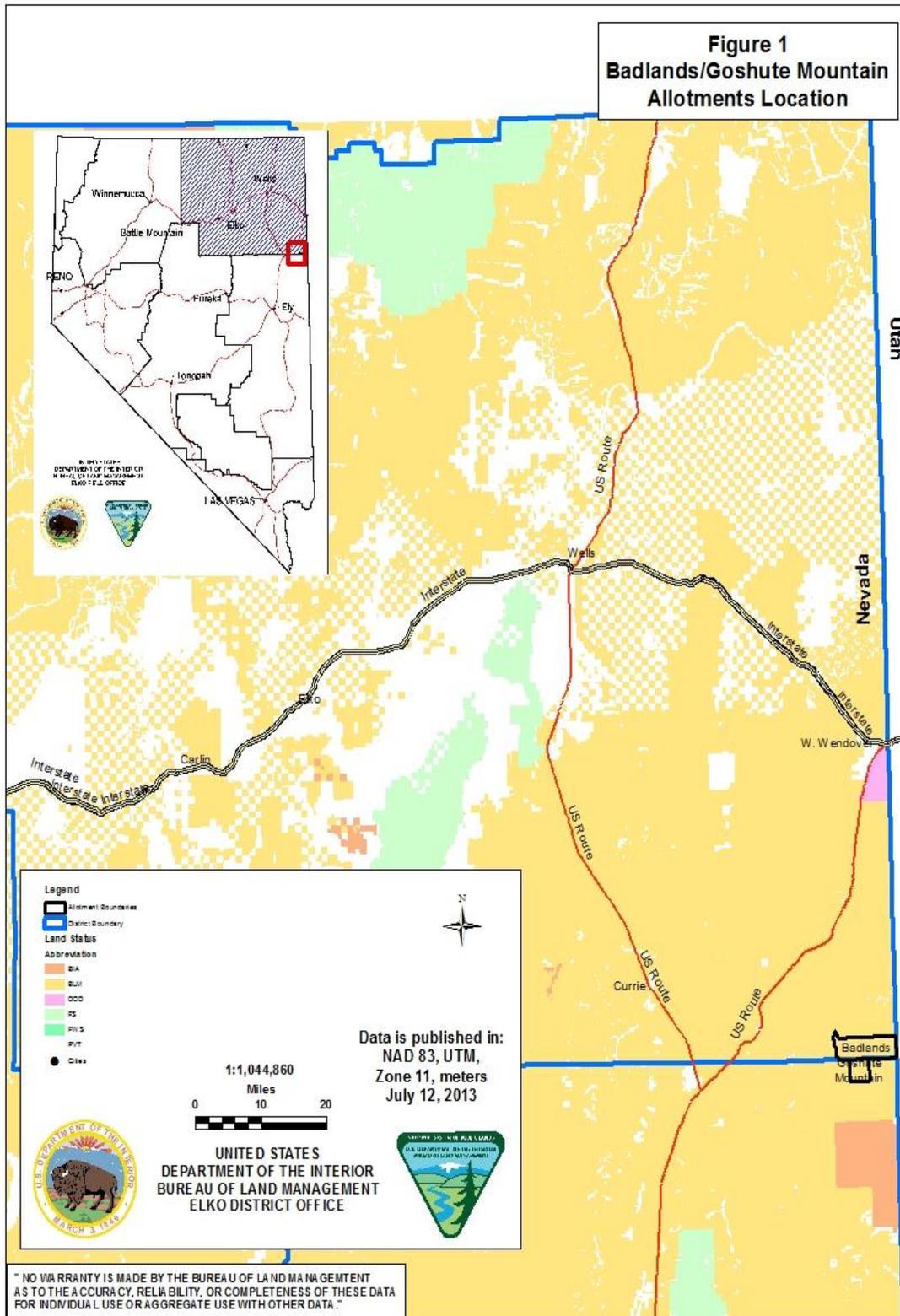
/s/
Bryan K. Fuell
Manager
Wells Field Office

9/13/13
Date

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**APPENDIX 1,
Maps**



- 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. -

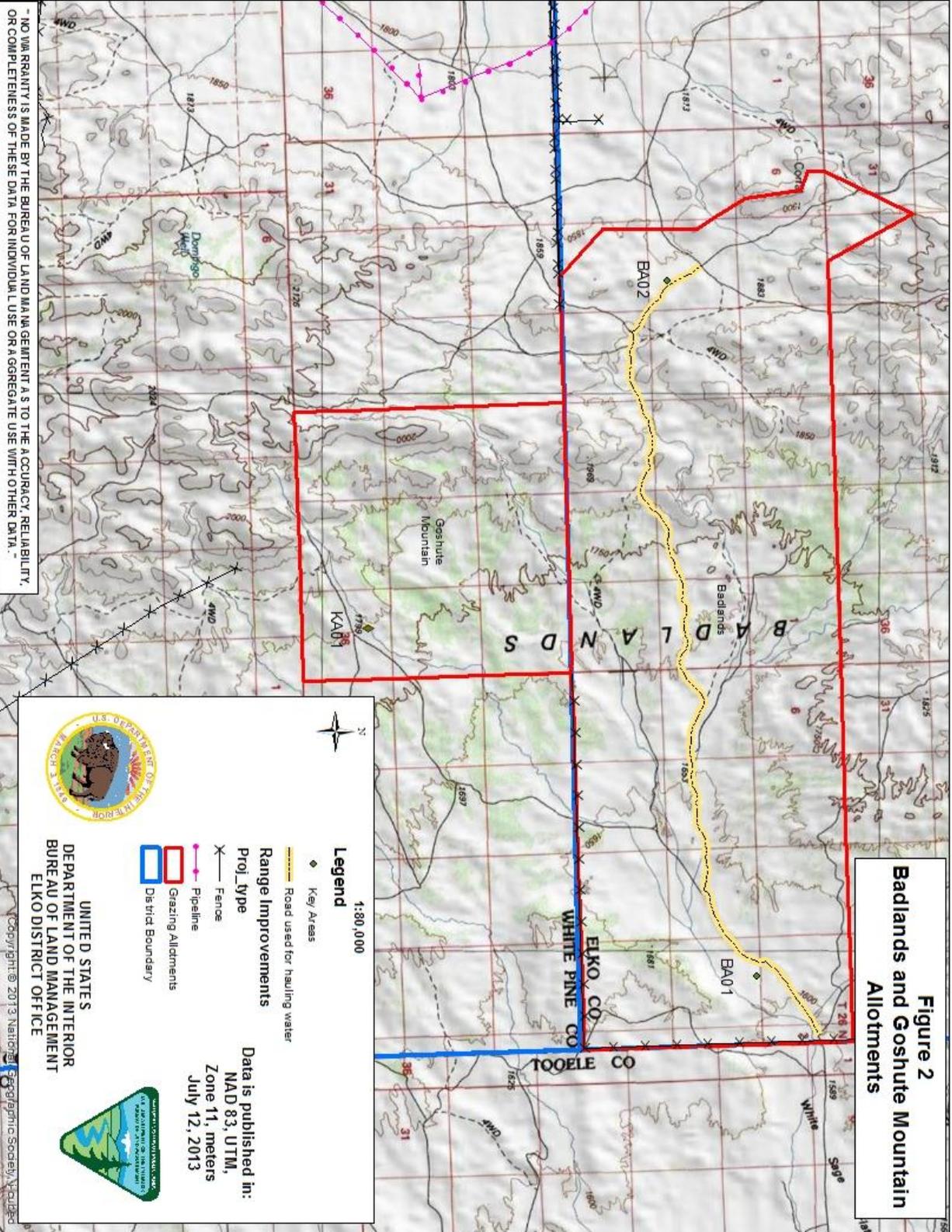


Figure 2
Badlands and Goshute Mountain
Allotments

Legend
 1:80,000

- ◆ Key/ Areas
- Road used for hauling water
- Range Improvements
- Proj_type
- X Fence
- Pipeline
- Grazing Allotments
- District Boundary

Data is published in:
 NAD 83, UTM,
 Zone 11, meters
 July 12, 2013

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 ELKO DISTRICT OFFICE



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APPENDIX 2
Key Area Monitoring Data

Key Area BA-01

Table 1. Percent vegetation composition and cover by vegetation class.

Year	Vegetation Composition (% Dry weight)			Vegetation Cover (% canopy cover)			ESD composition by weight
	Grass	Forb	Shrub	Grass	Forb	Shrub	
							30% grasses, 5% forbs, 65% shrubs (028AY030NV)
1989	NR ¹	NR	NR	NR	NR	NR	
1994	0.2	15.6 ²	84.3	NR	NR	NR	
2013	0.0	69.2 ³	30.6	0.0	2.3	12.4	

¹Not recorded.

²Composed nearly entirely of *Haloxylon glomeratus*. If removed from estimate, vegetation composition was 0.2% grass, 99.8% shrubs.

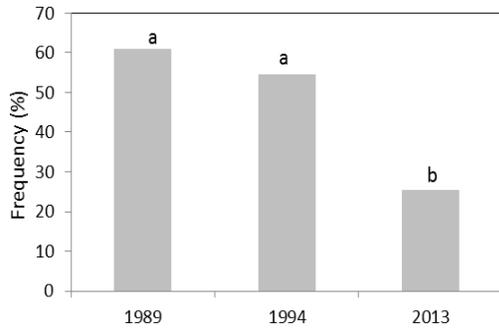
³Composed nearly entirely of *H. glomeratus*. If removed from estimate, vegetation composition was 0.0% grass, 100.0% shrubs.

Table 2. Percent composition by species (dry weight).

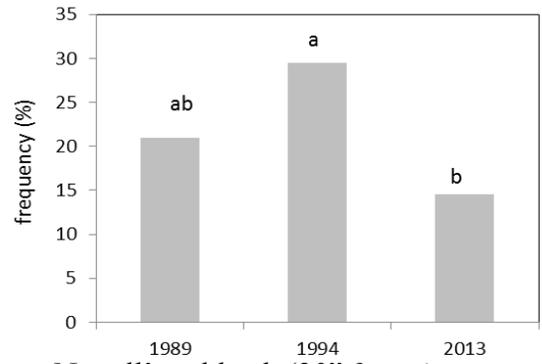
Species	1989	1994 (384 lbs/ac)	2013 (401 lbs/ac)
ORHY	NR ¹	0.0	0.0
BRASS	NR	0.9	T*
HAGL	NR	14.6	69.2
KRLA2	NR	57.5	30.6
ATRIP	NR	26.9	0.0

¹Not recorded

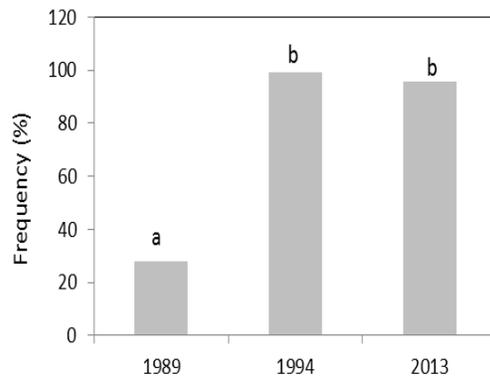
*Trace



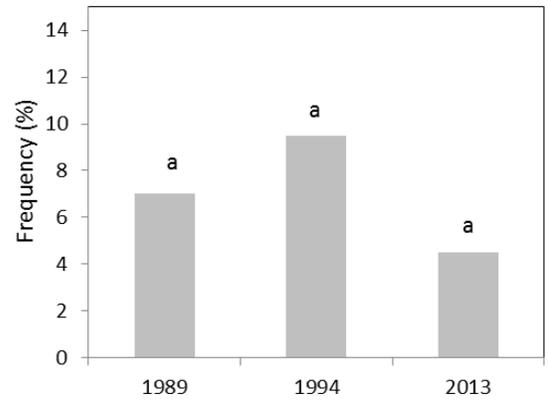
White Sage (10" frame)



Nuttall's saltbush (30" frame)



Halogeton (30" frame)



Indian ricegrass (30" frame)

Figure 1. Frequency of key and other selected species at Key Area BA-01 [years with the same letter indicate no significant difference. Years with different letters indicate a significant ($p \geq 0.05$) difference].



1989



1994



2013

Figure 2. Photos of key area BA-01 in 1989 (top), 1994 (middle), and 2013 (bottom). Note filling of interspaces between white sage plants with halogeton and decrease in white sage density.

Table 3. Pronghorn habitat ratings at Key Area BA-01.

Date: 7/18/2013		
Wildlife Season of Use:		
Big Game Range Name: BA-01		
A. Water Availability Rating:		
Miles to Water (to 1/2 mile)	4	7
B. Vegetation Quality Rating:		
Forbs (to 0.1%):	0.0%	0
Grasses (to 0.1%):	0.0%	0
Shrubs (to 0.1%):	100.0%	0
C. Vegetation Quantity Rating:		
	124	5
D. Vegetation Height Rating:		
	6	5
Total Score:		17
Rating:		Poor
Comment: Vegetation quality from 2013 production data. Vegetation quantity from 2013 production. Vegetation height from 2013 density board.		

Date: 1994		
Wildlife Season of Use:		
Big Game Range Name:		
A. Water Availability Rating:		
Miles to Water (to 1/2 mile)	4	7
B. Vegetation Quality Rating:		
Forbs (to 0.1%):	0.2%	0
Grasses (to 0.1%):	0.0%	0
Shrubs (to 0.1%):	99.8%	1
C. Vegetation Quantity Rating:		
	127	5
D. Vegetation Height Rating:		
	6	5
Total Score:		18
Rating:		Poor
Comment: Vegetation quality from 1994 production. Vegetation quantity from 1994 production. Vegetation height from 1994 pictures.		

Key Area BA-02

Table 4. Percent composition and cover by vegetation class.

Year	Vegetation Composition (% Dry weight)			Vegetation Cover (% canopy)			ESD composition (% dry weight)
	Grass	Forb	Shrub	Grass	Forb	Shrub	
							40% grasses, 5% forbs, 55% shrubs (028AY004NV)
1989	2.2	0.2	97.6	NR ¹	NR	NR	
1994	60.0	0.8	39.2	NR	NR	NR	
2013	37.9 ²	T ³	62.1	0.9	0.0	29.1	

¹Not recorded.

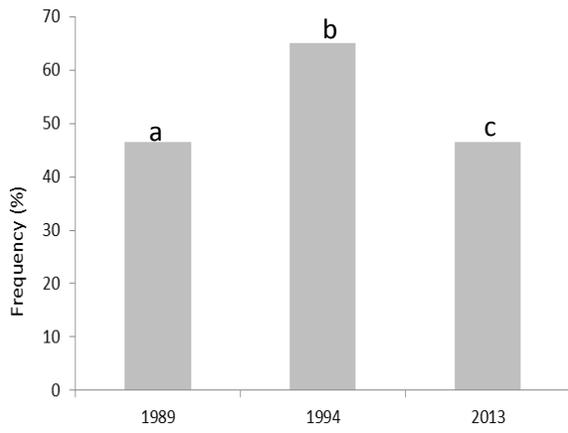
²Including 24.8% cheatgrass. If cheatgrass removed from estimate, composition was 17.4% grass, trace forb, 82.5% shrubs.

³Trace

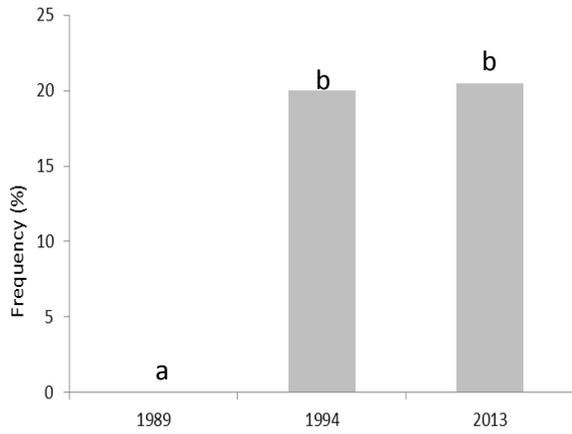
Table 5. Composition by species (dry weight).

Species	1989 (451 lbs/ac)	1994 (699 lbs/ac)	2013 (144 lbs/ac)
ORHY	1.1	31.8	0.8
SIHY	1.1	26.7	6.1
POSE	0.0	1.2	6.0
BRTE	0.0	0.5	24.3
SPCO	0.2	0.4	0.44
ASTRA	T*	0.2	0.44
BRASS	0.0	0.1	0.44
ASTER	0.0	0.1	0.0
ARARN	87.3	29.4	42.0
CHVI8	0.0	6.4	18.9
ATCO	10.3	3.4	0.0

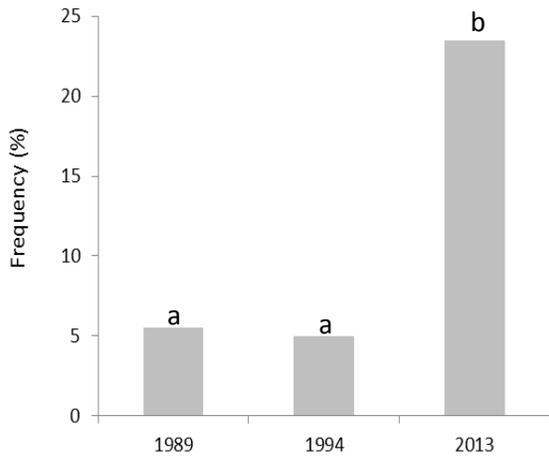
*Trace



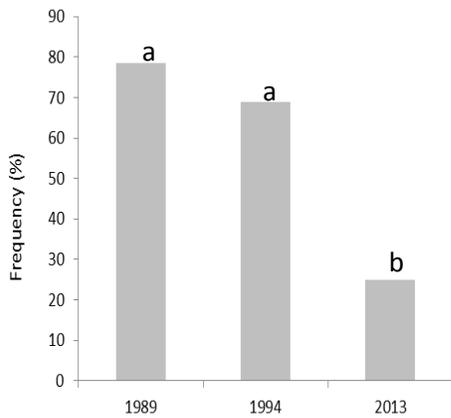
Black sagebrush in 30" frame.



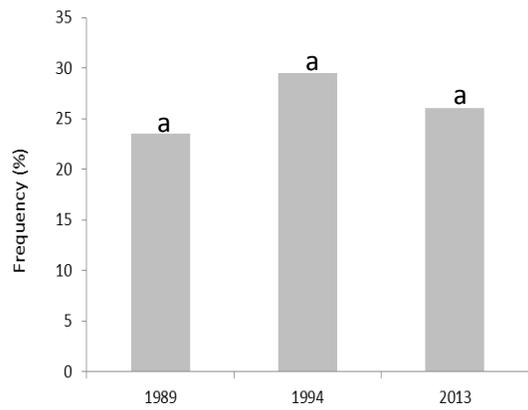
Annual mustard BRASS2 (30'' frame)



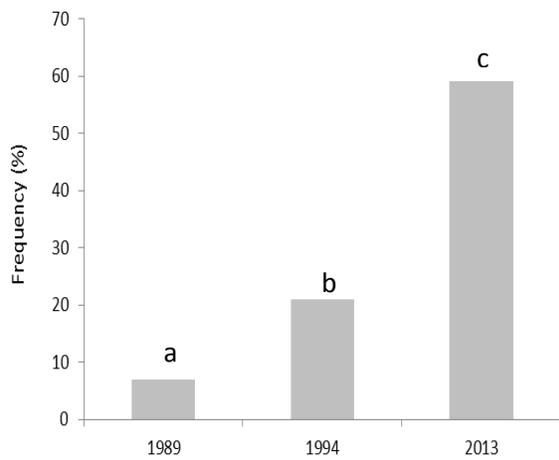
Cheatgrass (30'' frame)



Bottlebrush squirreltail (30'' frame)



Indian ricegrass (30" frame)



Green rabbitbrush (30" frame)

Figure 3. Frequency of key and other selected species [years with the same letter indicate no significant difference. Years with different letters indicate a significant ($p \geq 0.05$) difference].



1989



1994



2013

Figure 3. Photos of key area BA-02, 1989, 1994, and 2013.

Table 6. Pronghorn antelope habitat ratings.

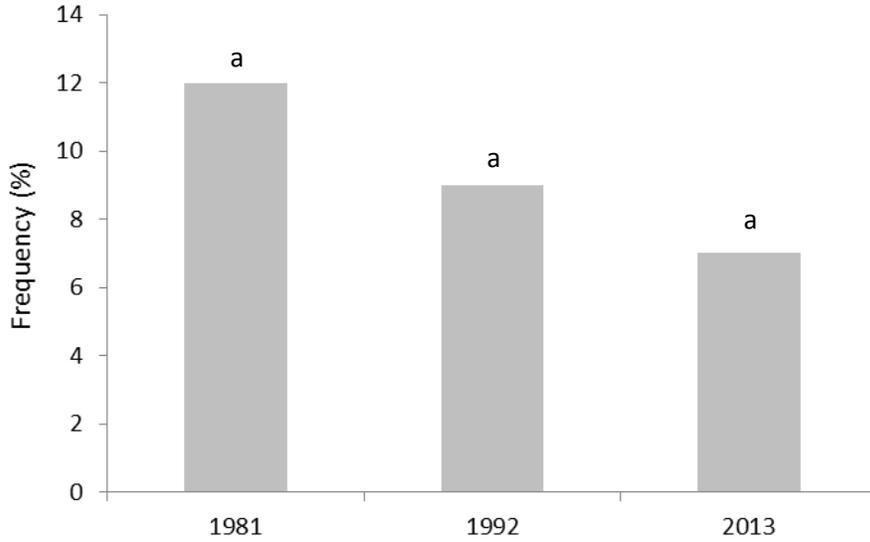
Date: 7/18/2013		
Wildlife Season of Use:		
Big Game Range Name:		
A. Water Availability Rating:		
Miles to Water (to 1/2 mile)	2.5	9
B. Vegetation Quality Rating:		
Forbs (to 0.1%):	0.1%	0
Grasses (to 0.1%):	37.9%	15
Shrubs (to 0.1%):	62.1%	3
C. Vegetation Quantity Rating:		
	141	5
D. Vegetation Height Rating:		
	5	5
Total Score:		37
Rating:		Fair
Comment: Vegetation quality from 2013 production. Vegetation quantity from 2013 production. Vegetation height from 2013 density board.		

Date: 1994		
Wildlife Season of Use:		
Big Game Range Name:		
A. Water Availability Rating:		
Miles to Water (to 1/2 mile)	2.5	9
B. Vegetation Quality Rating:		
Forbs (to 0.1%):	0.8%	0
Grasses (to 0.1%):	60.0%	20
Shrubs (to 0.1%):	39.2%	5
C. Vegetation Quantity Rating:		
	699	10
D. Vegetation Height Rating:		
	8	5
Total Score:		49
Rating:		Fair
Comment: Vegetation quality from 1994 production. Vegetation quantity from 1994 production. Vegetation height from 1994 density board.		

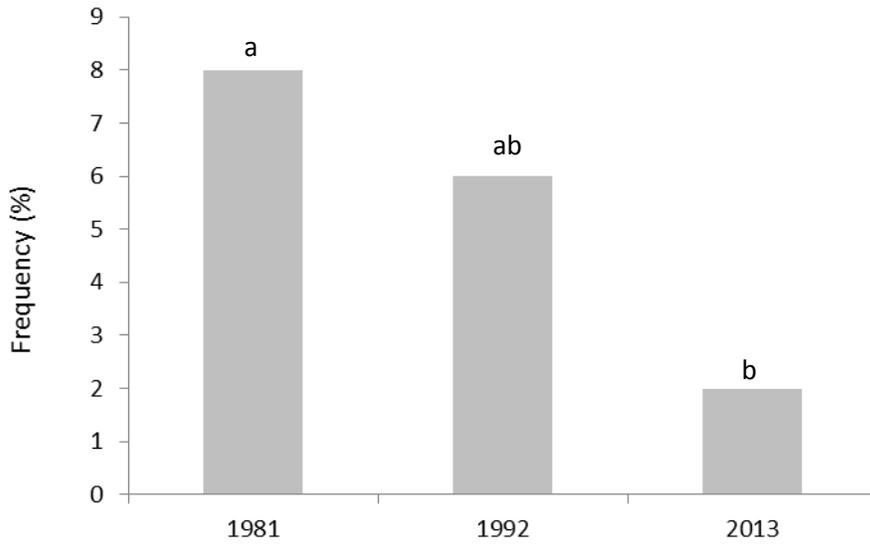
Date: 1989		
Wildlife Season of Use:		
Big Game Range Name:		
A. Water Availability Rating:		
Miles to Water (to 1/2 mile)	2.5	9
B. Vegetation Quality Rating:		
Forbs (to 0.1%):	0.2%	0
Grasses (to 0.1%):	2.2%	1
Shrubs (to 0.1%):	97.6%	1
C. Vegetation Quantity Rating:		
	450	5
D. Vegetation Height Rating:		
	8	5
Total Score:		21
Rating:		Poor
Comment: Vegetation quality from 1989 production. Vegetation quantity from 1989 production. Vegetation height from 1994 pictures.		

Key Area KA-01

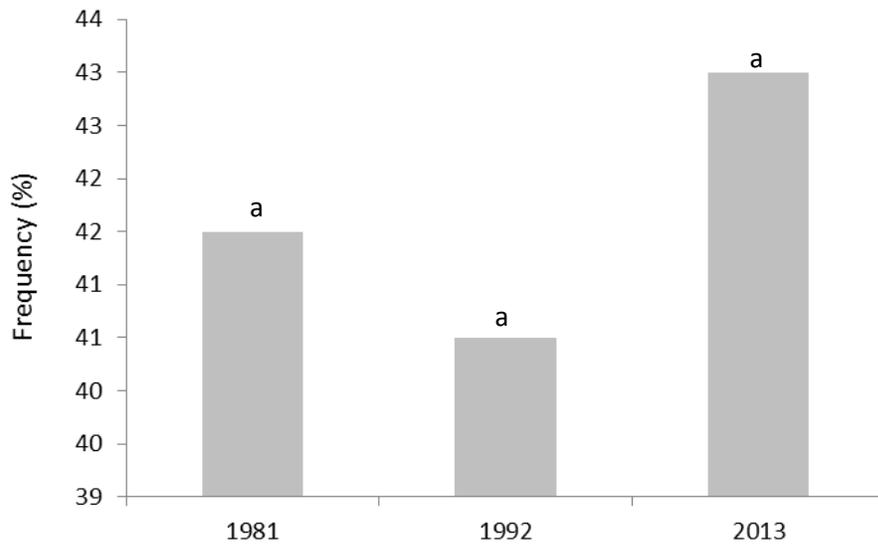
Ecological site (028AY004NV) for this key area is capable of 40% grasses, 5% forbs, 55% shrubs by weight. Canopy cover in 2013 was 32.4% shrubs and no forbs and a trace of grass. (Figure 7 below).



Green rabbitbrush (10" frame)



Shadscale (10" frame)



Black sagebrush (10" frame)

Figure 7. Frequency of key and other selected species [years with the same letter indicate no significant difference. Years with different letters indicate a significant ($p \geq 0.05$) difference].

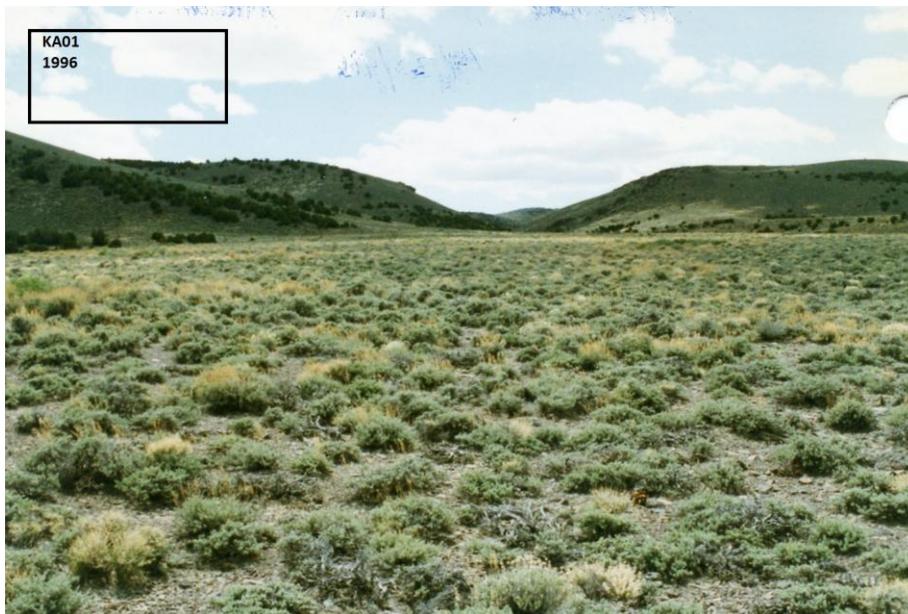


Figure 8 KA01 1996

Goshute Mt. Allotment
Key area KA-01
Line intercept: 0-100'
7/19/2013

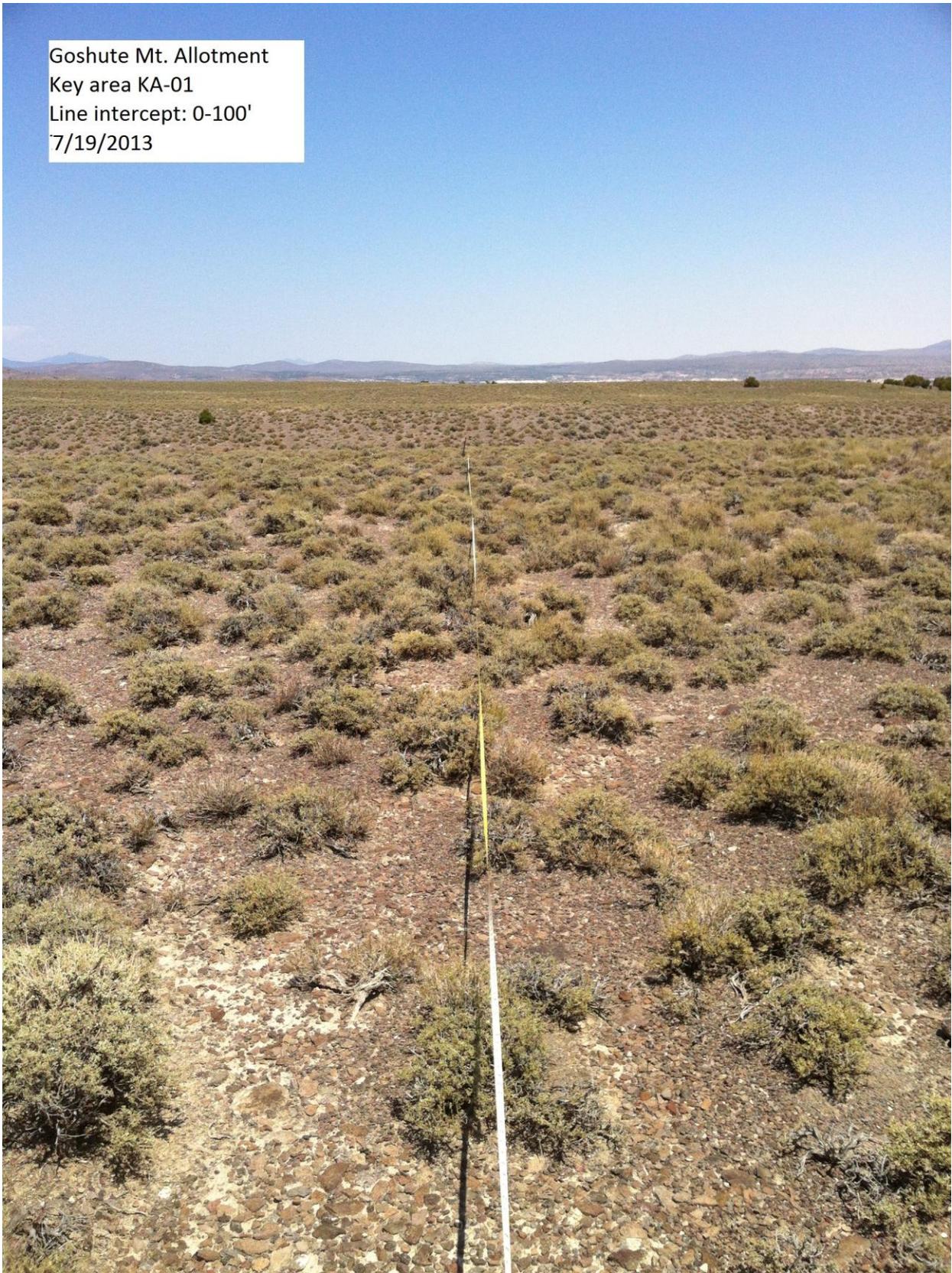




Figure 9. Typical interspace between black sagebrush plants, 2013.

Table 7. Pronghorn antelope habitat rating at KA-01.

Date: 7/19/2013		
Wildlife Season of Use:		
Big Game Range Name:		
A. Water Availability Rating:		
Miles to Water (to 1/2 mile)	2	10
B. Vegetation Quality Rating:		
Forbs (to 0.1%):	0.0%	0
Grasses (to 0.1%):	0.2%	0
Shrubs (to 0.1%):	99.8%	1
C. Vegetation Quantity Rating:	28	5
D. Vegetation Height Rating:	6	5
Total Score:		21
Rating:		Poor
Comment: Vegetation quality from 2013 line intercept. Vegetation quantity from 2013 production. Vegetation height from 2013 density board. Very little production this growing season		

APPENDIX 3

Badlands/Goshute Mountain Wildlife Species List (Compiled from NDOW, NNHP, PIF and known BLM lists)

Birds

Family: *Cathartidae* (New World Vultures)

Turkey Vulture *Cathartes aura*

Order: *Falconiformes* (Diurnal Flesh Eaters)

Family: *Accipitridae* (Hawks, Eagles, Osprey)

Bald Eagle *Haliaeetus leucocephalus*
Sharp-shinned Hawk *Accipiter striatus*
Cooper's Hawk *Accipiter cooperii*
Northern Goshawk *Accipiter gentilis*
Swainson's Hawk *Buteo swainsoni*
Red-tailed Hawk *Buteo jamaicensis*
Ferruginous Hawk *Buteo regalis*
Rough-legged Hawk *Buteo lagopus*
Golden Eagle *Aquila chrysaetos*

Family: *Falconidae* (Falcons)

American Kestrel *Falco sparverius*
Prairie Falcon *Falco mexicanus*

Order: *Galliformes* (Chicken Relatives)

Family: *Phasianidae* (Grouse, Partridge)

Chukar *Alectoris chukar*
Gray Partridge *Perdix perdix*
Greater Sage-Grouse *Centrocercus urophasianus*

Order: *Columbiformes* (Pigeons and Allies)

Family: *Columbidae* (Doves)

Mourning Dove *Zenaida macroura*

Order: *Strigiformes* (Nocturnal Flesh Eaters)

Family: *Strigidae* (Owls)

Great Horned Owl *Bubo virginianus*
Burrowing Owl *Athene cucularia*
Long-eared Owl *Asio otus*

Order: *Caprimulgiformes* (Night Jars)

Family: *Caprimulgidae* (Goatsuckers)

Common Nighthawk *Chordeiles minor*
Common Poorwill *Phalaenoptilus nuttallii*

Order: *Apodiformes* (Small Fast Fliers)

Family: *Apodidae* (Swifts)

White-throated Swift *Aeronautes saxatalis*

Family: *Trochilidae* (Hummingbirds)

Calliope Hummingbird *Stellula calliope*

Order: *Piciformes* (Cavity Builders)

Family: *Picidae* (Woodpeckers)

Lewis' Woodpecker	<i>Melanerpes lewis</i>
Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>
Northern Flicker	<i>Colaptes auratus</i>

Order: *Passeriformes* (Perching Birds)

Family: *Tyrannidae* (Flycatchers)

Gray Flycatcher	<i>Epidonax wrightii</i>
Say's Phoebe	<i>Sayornis saya</i>
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>

Family: *Laniidae* (Shrikes)

Loggerhead Shrike	<i>Lanius ludovicianus</i>
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Family: *Vireonidae* (Vireos)

Warbling Vireo	<i>Vireo gilvus</i>
Gray vireo	<i>Vireo vicinior</i>

Family: *Corvidae* (Jays)

Western Scrub-Jay	<i>Aphelocoma californica</i>
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>
Black-billed Magpie	<i>Pica pica</i>
American Crow	<i>Corvus brachyrhynchos</i>
Common Raven	<i>Corvus corax</i>
Clark's nutcracker	<i>Nucifraga columbiana</i>

Family: *Alaudidae* (Larks)

Horned Lark	<i>Eremophila alpestris</i>
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Family: *Hirundinidae* (Swallows)

Cliff Swallow	<i>Petrochelidon pyrrhonota</i>
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Family: *Paridae* (Chickadees, Titmice)

Juniper Titmouse	<i>Baeolophus griseus</i>
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Family: *Aegithalidae* (Bushtits)

Bushtit	<i>Psaltriparus minimus</i>
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Family: *Troglodytidae* (Wrens)

Rock Wren	<i>Salpinctes obsoletus</i>
Canyon Wren	<i>Catherpes mexicanus</i>

Family: *Sylviidae* (Gnatcatchers)

Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>
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Family: *Turdidae* (Thrushes)

Mountain Bluebird	<i>Sialia currucoides</i>
Townsend's Solitaire	<i>Myadestes townsendi</i>
American Robin	<i>Turdus migratorius</i>
Sage Thrasher	<i>Oreoscoptes montanus</i>

Family: *Bombycillidae* (Waxwings)

Cedar Waxwing	<i>Bombycilla cedrorum</i>
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Family: *Parulidae* (Wood Warblers)

Orange-crowned Warbler	<i>Vermivora celata</i>
Nashville Warbler	<i>Vermivora ruficapilla</i>
Virginia's Warbler	<i>Vermivora virginiae</i>
Yellow Warbler	<i>Dendroica petechia</i>
Black-throated Gray Warbler	<i>Dendroica nigrescens</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Yellow-breasted Chat	<i>Icteria virens</i>

Family: *Thraupidae* (Tanagers)

Western Tanager	<i>Piranga ludoviciana</i>
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Family: *Emberizidae* (Sparrows, Towhees, Juncos)

Green-tailed Towhee	<i>Pipilo chlorurus</i>
Spotted Towhee	<i>Pipilo maculatus</i>
American Tree Sparrow	<i>Spizella arborea</i>
Chipping Sparrow	<i>Spizella passerina</i>

Brewer's Sparrow	<i>Spizella breweri</i>
Vesper Sparrow	<i>Poocetes gramineus</i>
Lark Sparrow	<i>Chondestes grammacus</i>
Black-throated Sparrow	<i>Amphispiza bilineata</i>
Sage Sparrow	<i>Amphispiza belli</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Fox Sparrow	<i>Passerella iliaca schistacea</i>
Song Sparrow	<i>Melospiza melodia</i>
Dark-eyed Junco(Gray-headed)	<i>Junco hyemalis caniceps</i>

Family: Cardinalidae (Grosbeaks, Buntings)

Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>
Lazuli Bunting	<i>Passerina amoena</i>

Family: Icteridae (Blackbirds, Orioles)

Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Western Meadowlark	<i>Sturnella neglecta</i>
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Scott's Oriole	<i>Icterus parisorum</i>

Family: Fringillidae (Finches, Grosbeaks)

Black Rosy-Finch	<i>Leucosticte atrata</i>
House Finch	<i>Carpodacus mexicanus</i>
Lesser Goldfinch	<i>Carduelis psaltria</i>
American Goldfinch	<i>Carduelis tristis</i>

Mammals

Order: Insectivora (Insect Eaters)

Family: Soricidae (Shrews)

Merriam's Shrew	<i>Sorex meriammi</i>
Vagrant Shrew	<i>Sorex vagrans</i>

Order: Chiroptera (Bats)

Family: Vespertilionidae (Plainnose Bats)

California Myotis	<i>Myotis californicus</i>
Western Small-footed Myotis	<i>Myotis ciliolabrum</i>
Long-eared Myotis	<i>Myotis evotis</i>
Little Brown Bat	<i>Myotis lucifugus</i>
Fringed Myotis	<i>Myotis thysanodes</i>
Long-legged Myotis	<i>Myotis volans</i>
Yuma Myotis	<i>Myotis yumanensis</i>
Silver-haired Bat	<i>Lasionycteris noctivagans</i>
Big Brown Bat	<i>Eptesicus fuscus</i>
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>
Spotted Bat	<i>Euderma maculatum</i>
Pallid Bat	<i>Antrozous pallidus</i>

Family: Molossidae (Freetail Bats)

Brazilian Free-tailed Bat	<i>Tadarida brasiliensis</i>
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Order: Lagomorpha (Pikas, Hares, Rabbits)

Family: Leporidae (Hares, Rabbits)

Black-tailed Jackrabbit	<i>Lepus californicus</i>
Desert Cottontail	<i>Sylvilagus audubonii</i>
Pygmy Rabbit	<i>Brachylagus idahoensis</i>

Order: Rodentia (Rodents)

Family: Sciuridae (Squirrels)

Cliff Chipmunk	<i>Tamias dorsalis</i>
White-tailed Antelope Squirrel	<i>Ammospermophilus leucurus</i>
Townsend's Ground Squirrel	<i>Spermophilus townsendii</i>

Wyoming Ground Squirrel *Spermophilus elegans*

Family: *Heteromyidae* (Kangaroo Rodents)

Little Pocket Mouse *Perognathus longimembris*

Great Basin Pocket Mouse *Perognathus parvus*

Dark Kangaroo Mouse *Microdipodops megacephalus*

Ord Kangaroo Rat *Dipodomys ordii*

Family: *Cricetidae* (Mice, Rats, Voles)

Western Harvest Mouse *Reithrodontomys megalotis*

Canyon Mouse *Peromyscus crinitus*

Deer Mouse *Peromyscus maniculatus*

Pinon Mouse *Peromyscus truei*

Northern Grasshopper Mouse *Onychomys leucogaster*

Desert Woodrat *Neotoma lepida*

Bushy-tailed Woodrat *Neotoma cinerea*

Long-tailed Vole *Microtus longicaudus*

Sagebrush Vole *Lemmyscus curtatus*

Family: *Zapodidae* (Jumping Mice)

Western Jumping Mouse *Zapus princeps*

Order: *Carnivora* (Flesh-Eaters)

Family: *Canidae* (Dogs)

Coyote *Canis latrans*

Kit Fox *Vulpes velox*

Family: *Mustelidae* (Weasels and Allies)

American Badger *Taxidea taxus*

Family: *Felidae* (Cats)

Mountain Lion *Puma concolor*

Bobcat *Lynx rufus*

Order: *Artiodactyla* (Hoofed Mammals)

Family: *Cervidae* (Deer)

Rocky Mountain Elk *Cervus elaphus*

Mule Deer *Odocoileus hemionus*

Family: *Antilocapridae* (Pronghorn)

Pronghorn *Antilocapra americana*

Reptiles

Order: *Squamata* (Lizards, Snakes)

Family: *Iguanidae* (Iguanas and Allies)

Western Fence Lizard *Sceloporus occidentalis*

Sagebrush Lizard *Sceloporus graciosus*

Side-blotched Lizard *Uta stansburiana*

Greater Short-horned Lizard *Phrynosoma hernandesi*

Desert Horned Lizard *Phrynosoma platyrhinos*

Family: *Scincidae* (Skinks)

Western Skink *Eumeces skiltonianus*

Family: *Teiidae* (Whiptails)

Western Whiptail *Cnemidophorus tigrus*

Family: *Colubridae* (Solid-toothed Snakes)

Striped Whipsnake *Masticophis taeniatus*

Great Basin Gopher Snake *Pituophis cantenifer deserticola*

Long-nosed Snake *Rhinocheilus lecontei*

Ground Snake *Sonora semiannulata*

Night Snake *Hypsiglena torquata*

Family: *Viperidae* (Vipers)

Great Basin Rattlesnake *Crotalus viridis lutosus*

APPENDIX 3.
Sensitive and Special Status animal and plant species for the Elko District BLM.

Scientific Name	Common Name	USFWS Status ¹	NV Range ²	BLM Criteria ³
Amphibians				
<i>Rana pipiens</i>	northern leopard frog		YR	1,2
<i>Rana luteiventris</i>	Columbia spotted frog (including Toiyabe spotted frog subpopulation)	Candidate	YR	1,2
Birds				
<i>Falco peregrinus</i>	Peregrine Falcon		YR	
<i>Accipiter gentilis</i>	Northern Goshawk		B	1
<i>Aquila chrysaetos</i>	Golden Eagle		YR	2
<i>Haliaeetus leucocephalus</i>	Bald Eagle		YR	1
<i>Buteo regalis</i>	Ferruginous Hawk		B	1,2
<i>Buteo swainsoni</i>	Swainson's Hawk		B	1
<i>Centrocercus urophasianus</i>	Greater Sage-Grouse	Candidate	YR	1
<i>Charadrius alexandrinus nivosus</i>	Western Snowy Plover	T	B	1,2
<i>Lanius ludovicianus</i>	Loggerhead Shrike		YR	1
<i>Leucosticte atrata</i>	Black Rosy-Finch		YR	2
<i>Melanerpes lewis</i>	Lewis' Woodpecker		YR	1
<i>Gymnorhinus cyanocephalus</i>	Pinyon Jay		YR	
<i>Oreoscoptes montanus</i>	Sage Thrasher		B	1
Fish				
<i>Gila bicolor isolata</i>	Independence Valley tui chub		YR	2
<i>Gila bicolor newarkensis</i>	Newark Valley tui chub		YR	2
<i>Lepidomeda copei</i>	Northern leatherside chub		YR	1
<i>Oncorhynchus clarki henshawi</i>	Lahontan cutthroat trout	T	YR	1,2
<i>Oncorhynchus mykiss gairdneri</i>	inland Columbia Basin redband trout		YR	2
<i>Relictus solitarius</i>	relict dace		YR	2
<i>Rhinichthys osculus lethoporus</i>	Independence Valley speckled dace	E	YR	1,2
<i>Rhinichthys osculus oligoporus</i>	Clover Valley speckled dace	E	YR	1,2
<i>Salvelinus confluentus</i>	Bull trout	T	YR	1,2
Mammals				

<i>Antrozous pallidus</i>	pallid bat		YR	2
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat		YR	1,2
<i>Euderma maculatum</i>	spotted bat		YR	1,2
<i>Eptesicus fuscus</i>	big brown bat		YR	2
<i>Lasionycteris noctivagans</i>	silver-haired bat		YR	2
<i>Lasiurus cinereus</i>	hoary bat		B	2
<i>Myotis californicus</i>	California myotis		YR	2
<i>Myotis ciliolabrum</i>	western small-footed myotis		YR	2
<i>Myotis evotis</i>	long-eared myotis		YR	2
<i>Myotis lucifugus</i>	little brown myotis		YR	2
<i>Myotis thysanodes</i>	fringed myotis		YR	2
<i>Myotis yumanensis</i>	Yuma myotis		YR	2
<i>Pipistrellus hesperus</i>	western pipistrelle		YR	2
<i>Tadarida brasiliensis</i>	Brazilian free-tailed bat		YR	2
<i>Brachylagus idahoensis</i>	pygmy rabbit	petitioned	YR	1
<i>Sorex preblei</i>	Preble's shrew		YR	2
<i>Ochotona princeps</i>	pika		YR	1,2
Reptiles				
none				
Insects				
<i>Euphilotes pallescens mattonii</i>	Mattoni's blue butterfly		YR	2
Molluscs				
<i>Anodonta californiensis</i>	California floater		YR	2
<i>Pygulopsis humboldtensis</i>	Humboldt pyrg		YR	2
<i>Pyrgulopsis villacampae</i>	Duckwater Warm Springs pyrg	petitioned 2009	YR	2
<i>Pyrgulopsis vinyardi</i>	Vinyards pyrg		YR	1,2
<i>Tryonia clathrata</i>	Grated tryonia	petitioned 2009	YR	1,2
Plants				
<i>Antennaria arcuata</i>	Meadow pussytoes	Species of Concern		1, 2
<i>Astragalus anserinus</i>	Goose Creek milkvetch	Candidate		1, 2
<i>Boechnera falcifruca</i>	Elko rockcress	Species of Concern		1,2
<i>Collomia renacta</i>	Barren Valley collomia	Species of Concern		1, 2
<i>Erigeron latus</i>	Broad fleabane	Species of Concern		1, 2
<i>Eriogonum beatleyae</i>	Beatley buckwheat			1

<i>Eriogonum lewisii</i>	Lewis buckwheat	Species of Concern	1
<i>Eriogonum nutans</i> var. <i>glabratum</i>	Deeth buckwheat		1
<i>Ivesia rhypara</i> var. <i>rhypara</i>	Grimy mousetails	Former candidate	1
<i>Lathyrus grimesii</i>	Grimes vetchling	Species of Concern	1,2
<i>Lepidium davisii</i>	Davis peppergrass	Species of Concern	1, 2
<i>Leptodactylon glabrum</i>	Owyhee prickly phlox	Species of Concern	2
<i>Mentzelia tiehmii</i>	Tiehm blazingstar		1
<i>Penstemon idahoensis</i>	Idaho beardtongue		2
<i>Phacelia minutissima</i>	Least phacelia	Species of Concern	2
<i>Potentilla cottamii</i>	Cottam cinquefoil	Species of Concern	1
<i>Ranunculus tritermatus</i>	Obscure buttercup		1
<i>Silene nachlingerae</i>	Nachlinger catchfly	Species of Concern	1

¹**Candidate:** Species for which the FWS has sufficient information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act, but for which development of a proposed listing regulation is precluded by other higher priority listing activities.

Petitioned: petitioned for listing as a Threatened or Endangered species.

T: Listed as Threatened.

E: Listed as Endangered.

Species of Concern: An informal term used to refer to species that are declining or appear to be in need of conservation.

²**YR:** Year-round resident

B: Breeding season resident

³**1.** There is information that a species has recently undergone, is undergoing, or is predicted to undergo a downward trend such that the viability of the species or a distinct population segment of the species is at risk across all or a significant portion of the species range, or

2. The species depends on ecological refugia or specialized or unique habitats on BLM-administered lands, and there is evidence that such areas are threatened with alteration such that the continued viability of the species in that area would be at risk (From BLM Manual 6840-Special Status Species Management).