Rangeland Health Assessment

North Slope Allotment (01044)

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General Allotment Information

The North Slope Allotment (01044) is located south of State Highway 20, approximately 13.5 miles northeast of Mountain Home, Idaho. The allotment is situated on the west slope of Bennett Mountain, immediately west of the BLM Lookout tower site, and is divided into three pastures which consist of BLM-administered, State, and private lands totaling approximately 5,768 acres (Table 1). These figures represent the most current and accurate estimates acreages, based on existing fence lines.

Table 1. Land status acres by pasture, North Slope Allotment, Elmore County, Idaho.

Pasture	BLM	Private	State	Total
1 - East	704	3,492	160	**4,356**
2 - Southwest	186	317	248	**751**
3 - West	6	655	0	**661**
Total	**896**	**4,464**	**408**	**5,768**

The allotment area is located within U.S. Department of Agriculture Major Land Resource Area B-10, the Central Rocky and Blue Mountain Foothills (USDA, 2006). Elevations in the allotment range from 4,800 feet in the west to 7,000 feet in the east. Major landforms consist of granitic hills, mountains, hill slopes, and ridgelines. The dominant soils here are: Gaib-Elkcreek-Simonton association (25%), Rainey-Van Dusen-Schoolhouse association (25%), Rainey-Van Dusen association (15%), Roanhide-Bauscher-Schoolhouse association (20%), Broad Canyon-Grousecreek association (10%), and small percentages of other soil types. Ecological sites are named by their general soil type and precipitation in inches [actual precipitation at nearby Anderson Dam and Glenns Ferry varied (Figure 1)]. Approximately 40% of the area is comprised of a Loamy 12-16" ecological site, with vegetation dominated by mountain big sagebrush with Idaho fescue and bluebunch wheatgrass. The South slope gravelly 12-16" site accounts for about another 45%, with characteristic vegetation of mountain big sagebrush with

bluebunch wheatgrass. Ten percent of the allotment is timbered (no site designation), and 5% is a Shallow stony loam 8-16" site with low sagebrush and bluebunch wheatgrass.

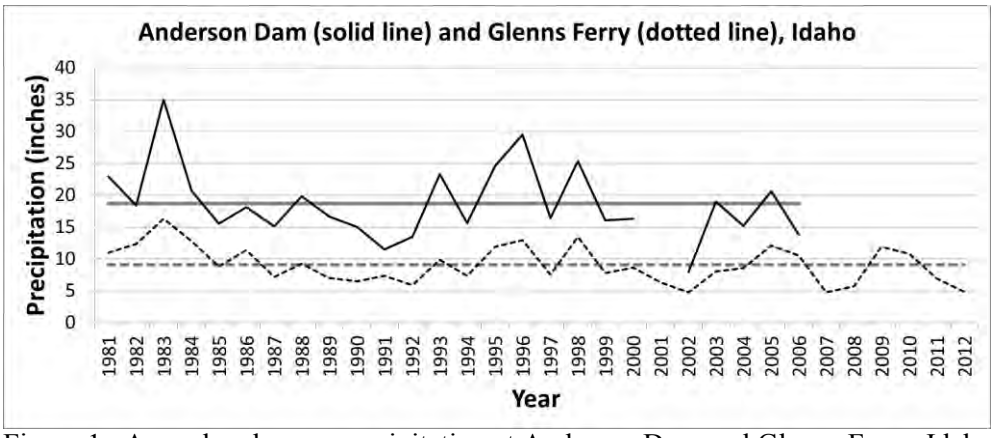


Figure 1. Annual and mean precipitation at Anderson Dam and Glenns Ferry, Idaho (Source: National Climate Data Center).

The 1996 Bennett Mountain Fire and the 2013 Pony Complex fire were the only wildfires within the North Slope allotment since 1957, according to BLM records. The Bennett Mountain Fire burned approximately 965 acres of private, State and Federal lands in the allotment's central portion. It is unlikely that the public lands were seeded post-fire, due to its elevation and associated vegetation. Higher elevation vegetation such as mountain big sagebrush with bluebunch wheatgrass community types generally recover adequately without manipulation. The 2013 Pony Complex burned 400 acres (all State and private lands), 100 of which burned in the Bennett Mountain Fire 17 years earlier.

Livestock Grazing Management

The North Slope Allotment was created in 1988 through an agreement among permittees holding preference in the Bennett Mountain (#01101) Allotment. The current authorized use periods are April 1 through November 30 annually for a total of 233 permitted Animal Unit Months (AUMs) (Table 2).

Table 2. Authorized use summary, North Slope Allotment, Elmore County, Idaho.

Authorization Number	Livestock		Season of Use		% Public Land	Authorized AUMs		
	Kind	Number	Begin	End		Active	Suspended	Permitted
1101879	Cattle	29	04/01	11/30	100	233	0	233

Based on actual use reports submitted by the authorized livestock operator or annual authorizations, annual use ranged from 37 to 233 animal unit months (AUMs) between 1997 and 2013 (Table 3). The current grazing permit allows livestock numbers to vary annually, provided the period of use and AUMs are not exceeded. The allotment is comprised of approximately 16% Federal, 7% State, and 77% private lands.

Table 3. Actual use between 1997 and 2013, North Slope Allotment, Elmore County, Idaho.

Grazing Year	Use Period		AUMs
	On Date	Off Date	
1997	04/01	11/30	Non Use
1998	04/01	11/30	Non Use
1999	04/01	11/30	Non Use
2000	05/01	09/15	73
2001	06/01	09/08	79
2002	05/01	08/14	78
2003	05/10	08/15	51
2004	04/01	11/30	233*
2005	05/01	08/29	68
2006	05/01	08/15	44
2007	06/12	08/17	43
2008	06/03	08/15	52
2009	06/11	08/16	37
2010	06/01	08/15	53
2011	06/01	08/14	50
2012	06/01	08/15	50
2013	05/17	08/06	54

**AUM's based on annual billing, no actual use report on file.*

Idaho Standards for Rangeland Health

In 2004, the BLM conducted two field assessments in the North Slope Allotment using *Interagency Technical Reference 1734-6, Interpreting Indicators of Rangeland Health ver. 3* (Map 1). The Elmore County Soil Survey (USDA-SCS, 1991) was used to identify ecological site descriptions, based on mapped soils and landforms, which were verified with field visits. Natural resources were assessed according to the Idaho Standards for Rangeland Health, as adopted by Idaho BLM in 1997.

Rangeland health field assessments used a variety of indicators to help determine rangeland health. However, no single indicator provided sufficient information to determine rangeland health and only those indicators appropriate to a particular site were used. Therefore, not all indicators were given equal weight from in different locations. For example, indicators #1-Rills and #6-Wind-scoured Blowouts/Deposition would not occur on a site with flat terrain and a gravelly soil surface. These indicators would be rated "none to slight" by default; but, would not be given the same weight as more applicable indicators for that site, e.g. #4-Bare Ground and #10-Plant Community Composition Relative to Infiltration and Runoff, when determining overall attribute ratings for the site. In rangeland health field assessments, "none to slight" and "slight to moderate" categories reflected the normal range of variability expected for the ecological site. However, "moderate", "moderate to extreme", and "extreme" categories reflected a significant departure from expected conditions for the ecological site.

Standard 1: Watershed

Rangeland Health Field Assessments, indicating the state of the rangeland in 2004, and long-term monitoring of the plant community and other watershed health indicators from 1988 to 2011 were used to assess the state and trend of watershed conditions (Map 1). These data sets indicated no major problems. Overall, the native plant community was healthy and was expected to provide excellent protection against erosion and runoff.

Rangeland Health Field Assessments

All four rangeland health field assessments were conducted in native plant communities (Map 1). Nine of the 17 rangeland health indicators (8, 9 and 11-17) relate to biotic integrity (Table 4). The number in the range of departure columns represents the number of assessments with the indicator rating in that category. For example, the indicator for the ability of the soil surface to resist erosion (#8) rated in the "none to slight" range of departure from expected conditions for the ecological site at two sites, etc.

Table 4. Native plant community rangeland health indicators, North Slope Allotment, Elmore County, Idaho.

Indicators of Soil Site Stability and Hydrologic Functioning	Range of Departure				
	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
1-Rills					2
2-Water Flow Patterns					2
3-Pedestals/Terracettes					2
4-Bare Ground					2
5-Gullies					2
6-Wind Scoured blowouts/depositions					2
7-Litter Movement					2
8-Soil Surface Resistance to Erosion					2
9-Soil Surface Loss or Degradation					2
10-Plant Community Composition and Distribution Relative to Infiltration and Runoff					2
11-Compaction Layer					2
14-Litter Amount					2
Total Indicator Units = 24 (12 indicators @ 2 locations)	**0**	**0**	**0**	**0**	**24**

All soil site stability and hydrologic function indicators rated in the "none to slight" range of departure for the expected conditions for the ecological site (Table 4, Appendix 1). Overall, these areas closely represent reference conditions. Some pedestalling and hoof sheering was noted in one location, but overall, the watershed was well protected from degradation.

Long-Term Vegetation Monitoring

Basal cover of persistent vegetation (stems of perennial grasses, perennial forbs, shrubs, and trees) and bare ground were quantified in three locations (02S08E11, 02S08E12, and 02S08E15B; Map 1) in 1988 and 2011 using the point cover method. In all three locations, the area occupied by stems increased (Figure 2). Bare ground between these stems decreased in 02S08E11 and was static in 02S08E12 and 02S08E15B (Figure 3). The result of greater basal area cover and less bare ground between stems, along with healthy trends for key species (see Standard 4: Native Plant Communities) indicate that the watershed was well protected from erosion and excessive runoff.

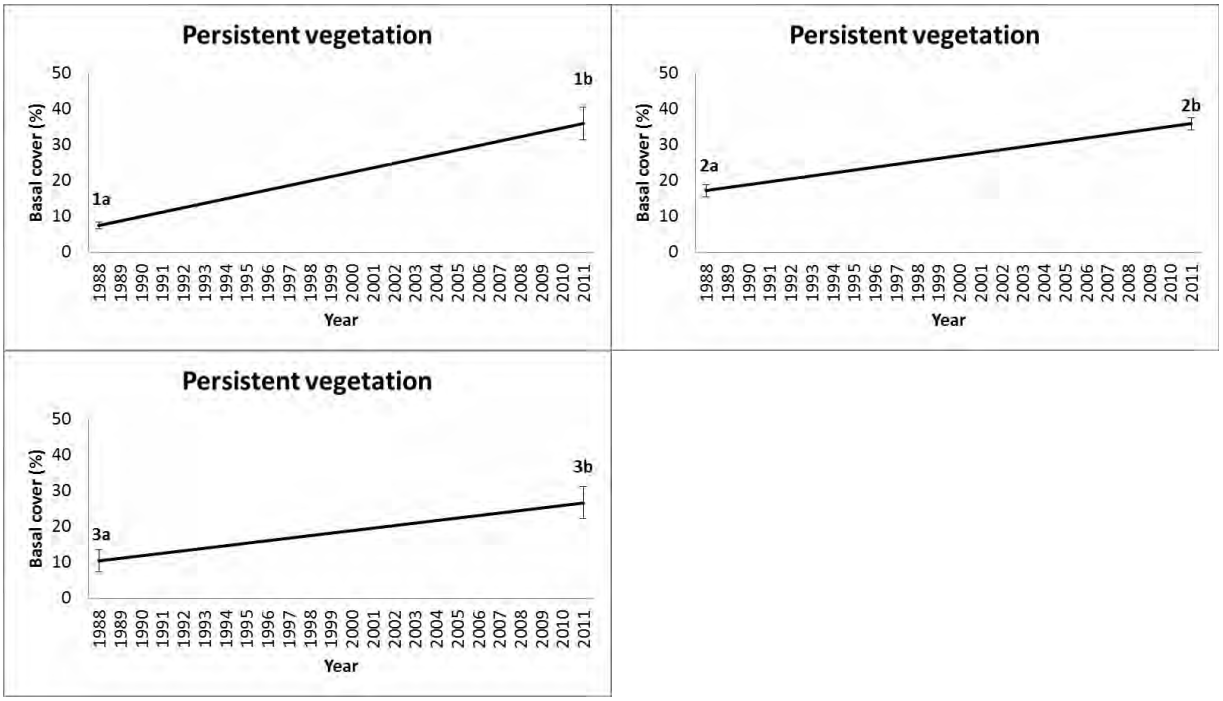


Figure 2. Basal cover of persistent vegetation in the North Slope Allotment, Elmore County, Idaho, in 02S08E11 (1), 02S08E12 (2), and 02S08E15B (3). Different letters above error bars indicate significant differences (P<0.1).

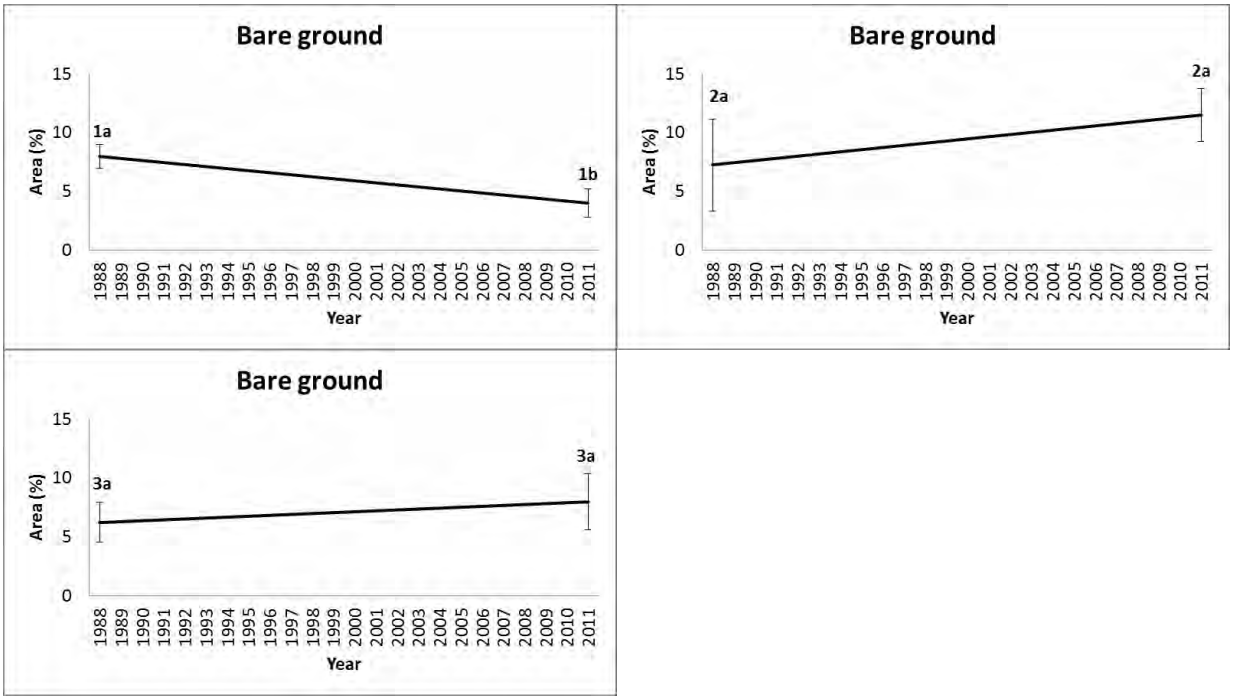


Figure 3. Bare ground in the North Slope Allotment, Elmore County, Idaho, in 02S08E11 (1), 02S08E12 (2), and 02S08E15B (3). Different letters above error bars indicate significant differences (P<0.1).

Standard 2: Riparian Areas and Wetlands/Standard 3: Stream Channel and Floodplains

Perennial stream segments were examined and rated for functioning condition. Ephemeral (flowing naturally only in direct response to precipitation) and intermittent (naturally has a period of zero flow for at least one week during most years) streams are examined to determine if flow regimes validate delineations on National Wetlands Inventory maps (1996). Such streams are rated for functioning condition if obligate hydric vegetation is present. Obligate hydric vegetation are plant species that are dependent on available water, either as standing surface water or saturated soil, and do not persist in environments where substrates become seasonally dry.

Evaluations of Standards 2 and 3 are based on field inventories and examinations of streams and springs from 2009 and 2013. To assess stream and spring health, interagency technical references (TR-1737-15, 1998 and TR-1737-16, 1999) were applied which uses five general categories to rate the biological (plant life) and hydrological (physical) functioning condition of streams (lotic) or wetlands (lentic). Categories include: proper functioning condition (PFC); functioning-at-risk (FAR) with an upward trend; FAR with static trend; FAR with downward trend; and non-functioning (NF). Streams are reported by stream segment identification number, and springs are reported by name.

Elements of Standards 2 (e.g., vegetation that provides stream shading) and 3 (e.g., streambank stability and channel form) directly affect water quality (e.g., water temperature, sedimentation); therefore, Standards 2, 3, and 7 (Water Quality) and presence of redband trout were summarized in one table. Functioning condition ratings of stratified stream segments are discussed in this section. Water quality assessments for each stream are discussed in Standard 7: Water Quality. Fish are discussed in Standard 8: Threatened and Endangered Species.

Stream Conditions

Approximately 0.6 miles of stream were in PFC (Table 5, Map 1). There was no variance in stream functioning condition ratings between Standards 2 and 3 on either segment.

Table 5. Stream name, segment ID, segment length, and functioning condition ratings summaries for streams in the North Slope Allotment, Elmore County, Idaho.

Stream Segment	Segment I.D.	Flow Regime[1]	PFC[2]	FAR[2]	Total Stream Miles	H2O quality met?	Redband Trout Present?[3]
Bennett Creek	BENNE-028.7	P	0.4		0.4	Y	S
Dive Creek	DIVE-001.9	I	0.2			Y	S
Total			**0.3**	**0**	**0.3**		
Percent of Total			**100%**	**0%**	**100%**		

[1] P = perennial flow regime I = intermittent flow regime
[2] PFC (PFC), FAR (functional-at-risk), NF- non-functioning
[3] Y = yes, N = no, S = seasonal occupation only

Bennett Creek

The 0.4 mile segment of Bennett Creek was rated in PFC. This reach was dammed by a series of beaver dams. The stream was well vegetated with Geyer's willow, Wood's rose, golden currant,

and other woody plants. The fine substrates support a good variety of sedges and rushes. The beaver dams were active, stable, and effectively capturing and retaining sediment.

Dive Creek

The 0.2 mile segment of Dive Creek was rated in PFC. Vegetation was composed mostly of mature arroyo willows with sedges/rushes present on suitable sites with finer substrates. Located in a narrow rocky canyon, the stream channel was rock armored and laterally and vertically stable.

Standard 4: Native Plant Communities

Rangeland Health Field Assessments, indicating the state of the rangeland in 2004, and long-term monitoring of the plant community and other watershed health indicators from 1988 to 2011 were used to assess the state and trend of watershed conditions. These data sets indicated no major problems. In one location that burned in 1996, both sagebrush and bluebunch wheatgrass frequencies decreased, but recovery was good. In a second location, the frequencies of bluebunch wheatgrass and needlegrass were low and squirreltail decreased, but Idaho fescue increased. In the third location, there was a high diversity of native grasses and some key medium bunchgrasses increased, while others decreased. Overall, the native plant community was healthy.

Rangeland Health Assessment

Both rangeland health field assessments were conducted in native plant communities (Map 1). Nine of the 17 rangeland health indicators (8, 9 and 11-17) relate to biotic integrity (Table 6). The number in the range of departure columns represents the number of assessments with the indicator rating in that category (see Standard 1 for explanation).

Table 6. Native plant community rangeland health indicators, North Slope Allotment, Elmore County, Idaho.

Indicators of Biotic Integrity	Range of Departure				
	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
8-Soil Surface Resistance to Erosion					2
9-Soil Surface Loss or Degradation					2
11-Compaction Layer					2
12-Functional/Structural Groups					2
13-Plant Mortality/Decadence					2
14-Litter Amount					2
15-Annual Production					2
16-Invasive Plants					2
17-Reproductive Capability of Perennial Plants					2
Total Indicator Units = 18 (9 indicators x 2 locations)	**0**	**0**	**0**	**0**	**18**

All biotic integrity indicators rated in the "none to slight" range of departure for expected conditions for the ecological site. Overall, these assessment locations closely resemble reference conditions for the ecological site (characterized by plant communities composed of mountain big sagebrush with Idaho fescue and bluebunch wheatgrass).

Long-Term Vegetation Monitoring

Three nested plot frequency transects were surveyed in 1988 and 2011. They were located at 5,100 feet elevation in the Loamy 12-16" mountain big sagebrush / Idaho fescue-bluebunch wheatgrass (ARTRV/FEID-PSSPS) ecological site (02S08E15B), 5,200 feet elevation in the South Slope Gravelly 12-16" mountain big sagebrush and bluebunch wheatgrass ecological site (02S08E11), and 6,300 feet elevation, mapped as Shallow Stony Loam 8-16" low sagebrush and bluebunch wheatgrass (but probably really Loamy 12-16" mountain big sagebrush, Idaho fescue, and bluebunch wheatgrass) ecological site (02S08E12) (Map 1). Repeat photographs were taken in 1988 and 2011 at 02S08E15B, 02S08E11, and 02S08E02; in 1987, 1988, and 2011 at 02S08E15A; and in 1989, 2004, and 2011 at 02S08E12.

Mountain big sagebrush, yellow rabbitbrush, and rubber rabbitbrush were the key shrub species. Mountain big sagebrush frequency was static in 02S08E11 (11-23%) and 02S08E12 (15-26%), and decreased in 02S08E15B from 19% to 5% (Figure 4). Yellow rabbitbrush was static at 1% frequency in 02S08E12 and 02S08E15B and it was not detected in 02S08E11. Rubber rabbitbrush was present in 02S08E15B only, and its frequency was static (5-7%) (Figure 5).

Bluebunch wheatgrass was the only large native bunchgrass in the trend plots. Its frequency was static in 02S08E11 (6-9%) and 02S08E12 (65-78%), but decreased in 02S08E15B from 66% to 50% (Figure 6). A large non-native bunchgrass (crested or intermediate wheatgrass) was also detected in 02S08E15B, in 2011 only, with a frequency of 7%.

Several medium grasses and grass-like species were present. All three locations had needlegrass and squirreltail. Location 02S08E12 had Idaho fescue, Junegrass, California brome, and sedge. Needlegrass frequency decreased in 02S08E12 from 80% to 13% and was static in 02S08E11 (1-5%) and 02S08E15B (46-48%) (Figure 7). Squirreltail frequency decreased in 02S08E11 from 89% to 60%, was extirpated in 02S08E12, and was static in 02S08E15B (3-8%) (Figure 8). In 02S08E12, Idaho fescue and Junegrass increased, and California brome and sedge were extirpated (Figure 9).

The small native bunchgrass, Sandberg bluegrass, and the small non-native bunchgrass, bulbous bluegrass, were present in all three locations. There seemed to be confusion differentiating these species; therefore, their trends were not known (Figure 10).

Cheatgrass was detected in just one location (02S08E11), at 3% frequency in 1988 only (Figure 11). Smooth brome was identified in 02S08E12 in 2011 only, at 4% frequency.

Repeat photographs showed little change in vegetation between 1988 and 2011. The most dramatic change was the recovery of shrubs after a fire in the late 1980s in 02S08E02. Bare ground was extensive between vascular plants in 1988 and 2011 in 02S08E15B.

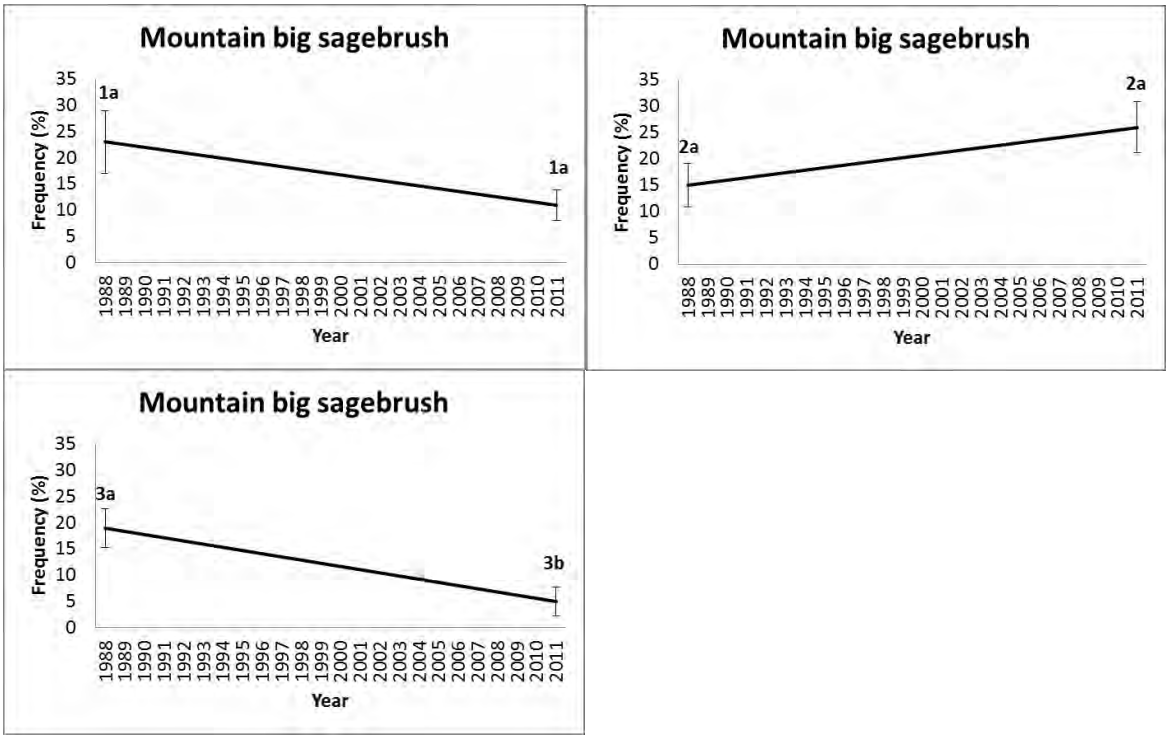


Figure 4. Mountain big sagebrush frequency in the North Slope Allotment, Elmore County, Idaho, in 02S08E11 (1), 02S08E12 (2), and 02S08E15B (3). Different letters above error bars indicate significant differences (P<0.1).

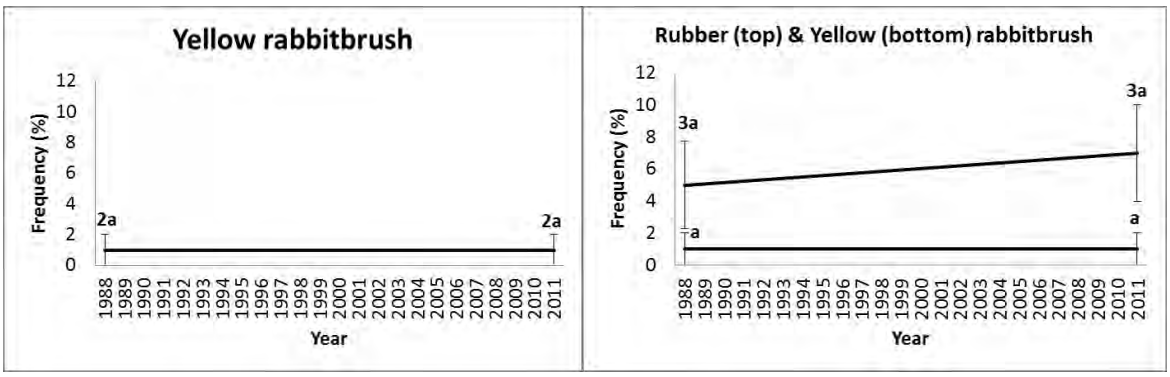


Figure 5. Rabbitbrush frequency in the North Slope Allotment, Elmore County, Idaho, in 02S08E12 (2), and 02S08E15B (3). Rabbitbrush was not detected in 02S08E11. Different letters above error bars indicate significant differences (P<0.1).

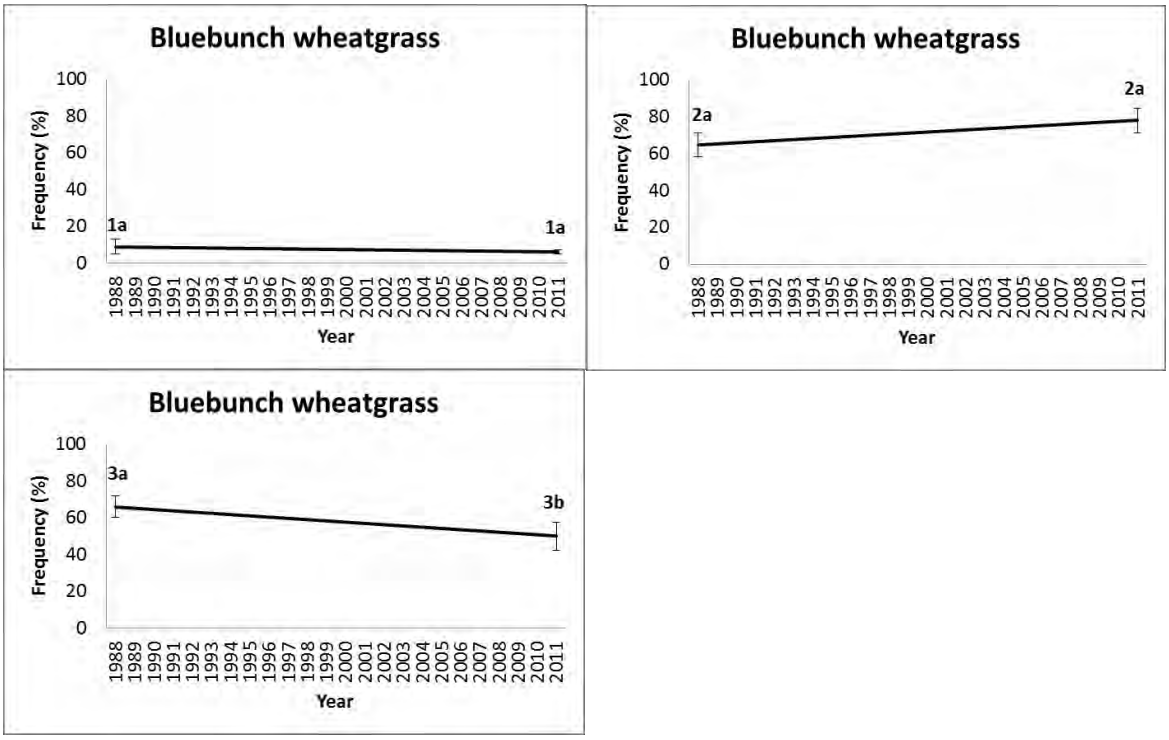


Figure 6. Bluebunch wheatgrass frequency in the North Slope Allotment, Elmore County, Idaho, in 02S08E11 (1), 02S08E12 (2), and 02S08E15B (3). Different letters above error bars indicate significant differences (P<0.1).

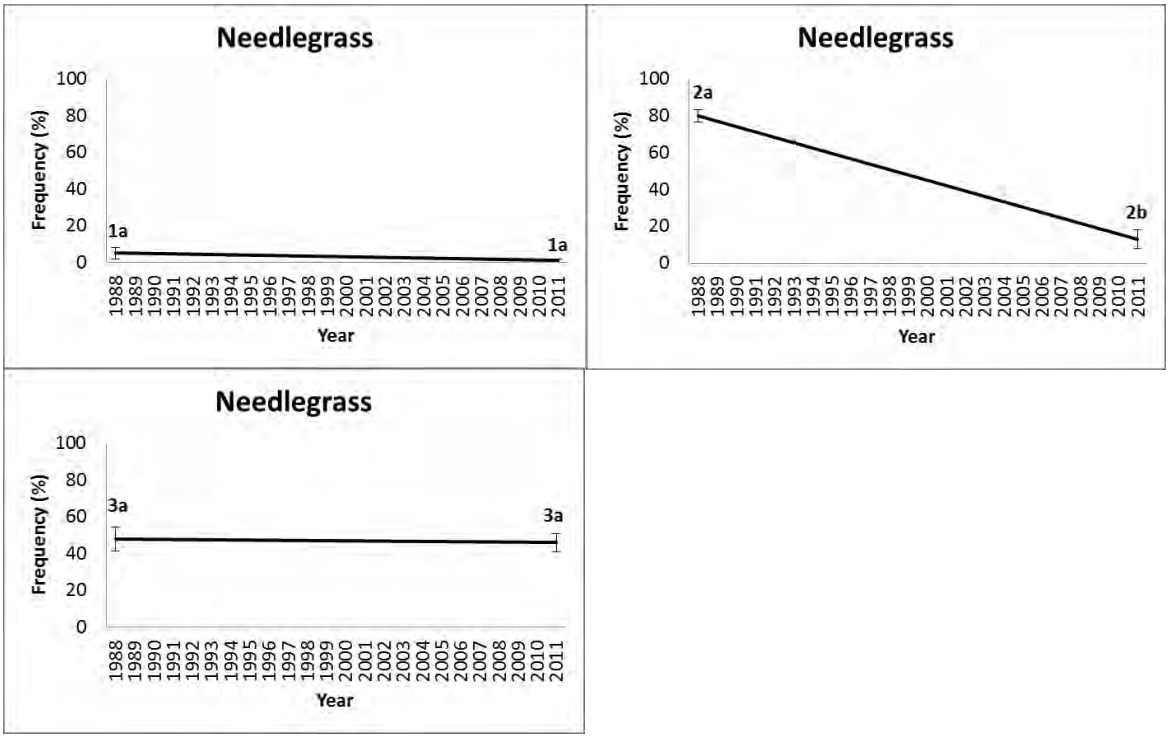


Figure 7. Needlegrass frequency in the North Slope Allotment, Elmore County, Idaho, in 02S08E11 (1), 02S08E12 (2), and 02S08E15B (3). Different letters above error bars indicate significant differences (P<0.1).

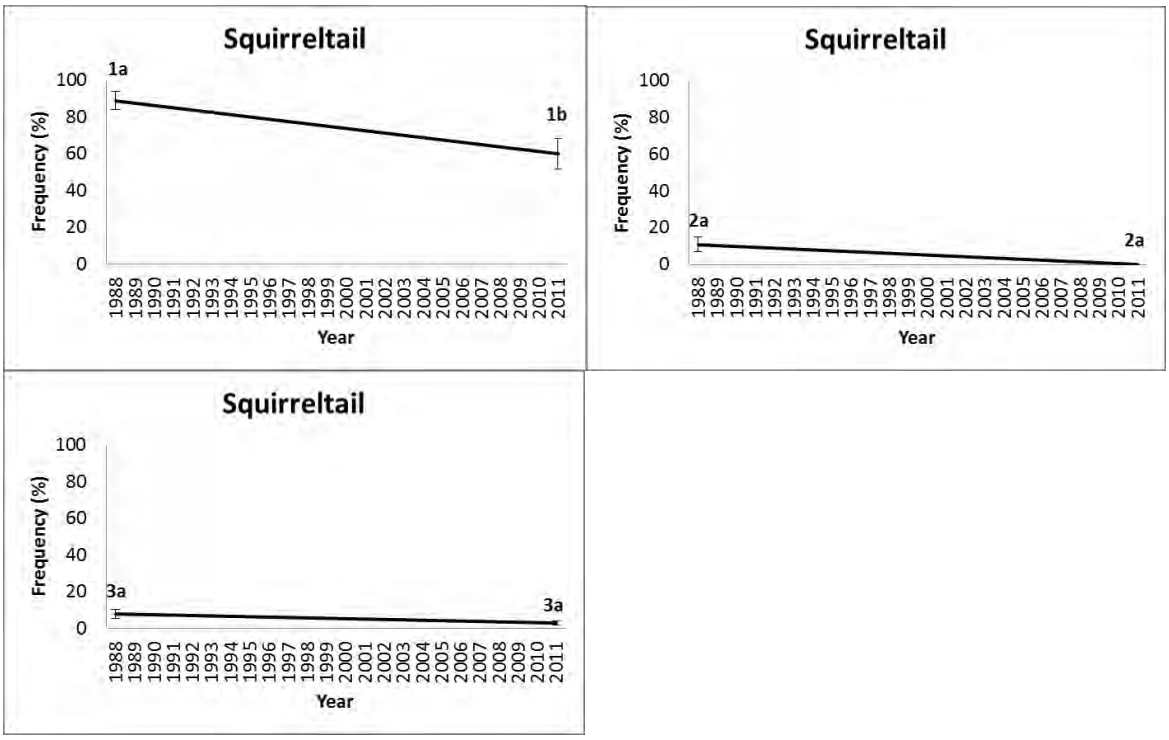


Figure 8. Squirreltail frequency in the North Slope Allotment, Elmore County, Idaho, in 02S08E11 (1), 02S08E12 (2), and 02S08E15B (3). Different letters above error bars indicate significant differences (P<0.1).

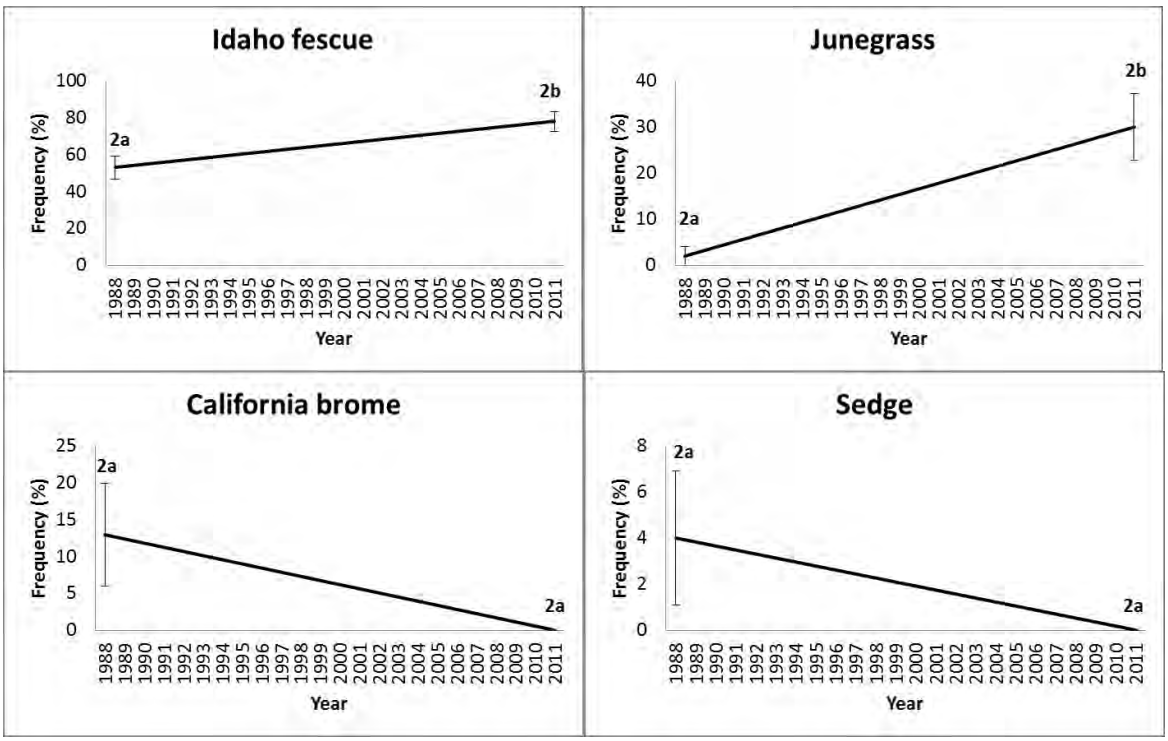


Figure 9. Miscellaneous grass frequencies in the North Slope Allotment, Elmore County, Idaho, in 02S08E12 (2). These species were not detected in 02S08E11 and 02S08E15B. Different letters above error bars indicate significant differences (P<0.1).

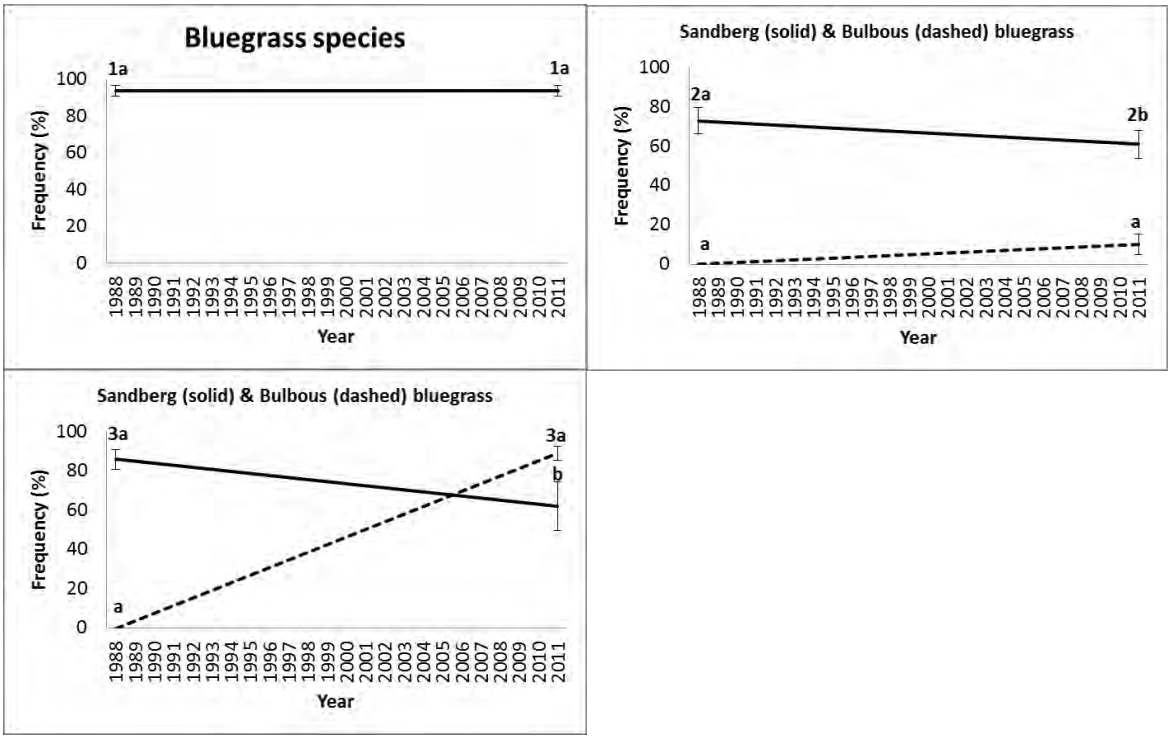


Figure 10. Bluegrass frequencies in the North Slope Allotment, Elmore County, Idaho, in 02S08E11 (1), 02S08E12 (2), and 02S08E15B (3). Different letters above error bars indicate significant differences (P<0.1).

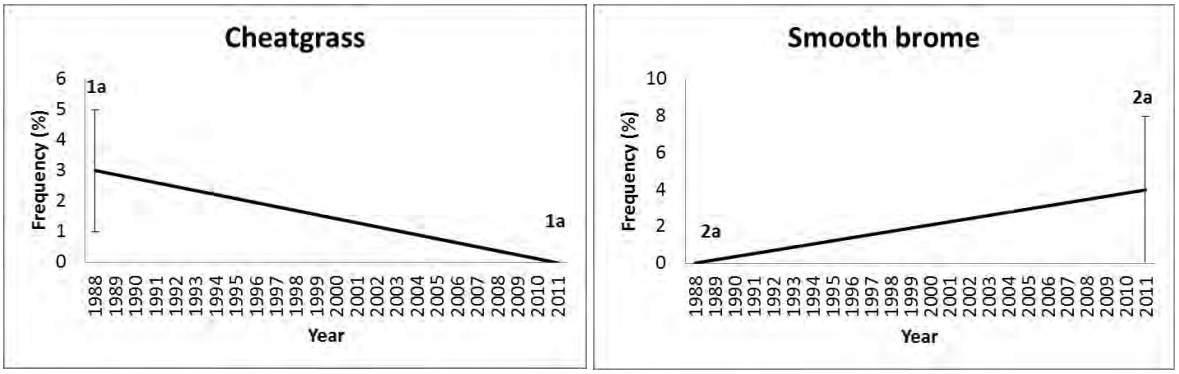


Figure 11. Exotic annual brome frequency in the North Slope Allotment, Elmore County, Idaho, in 02S08E11 (1) and 02S08E12 (2). Exotic annual grasses were not detected in 02S08E15B. Different letters above error bars indicate significant differences (P<0.1).

Standard 5: Seeding

No seedings are known to have occurred on the allotment's public lands; therefore, this standard has not been applied.

Standard 6: Exotic Plant Communities
Although exotic plants occur on the allotment's public lands, native plant communities are dominant; therefore, this standard does not apply.

Standard 7: Water Quality
The 0.4 mile segment of Bennett Creek (BENNE-028.7) was not assessed for water quality. The PFC rating of this segment makes it likely that the stream is at full potential to support applicable water quality standards. Bennett Creek is not on the 303(d) list of water quality impaired streams (IDEQ Integrated Report 2010).

The 0.2-mile section of Dive Creek (DIVE-001.9) was not assessed for water quality. Although no temperature data are available, the condition of this segment makes it likely that water quality is at least at full potential to support applicable standards. Standards for seasonal cold water biota were met. Dive Creek is not on the 303(d) list of water quality impaired streams (IDEQ Integrated Report 2010).

Standard 8: Threatened and Endangered Species

Plants
No federally-listed or BLM Special Status Species are currently known to occur. Approximately 35 acres of public land were surveyed for these species in August 2004, but none were found.

Wildlife
The general health of upland and riparian communities is important for wildlife, including sensitive species. Therefore, habitat was evaluated using riparian information (Standard 2) and native upland plant community information (Standard 4). These assessments provide information regarding abundance, diversity, vigor, cover of plants, structure and trend of plant communities, utilization, and weed presence. Other surveys specific to wildlife are discussed below.

The gray wolf was removed from the Endangered Species list in 2009. However, the species remains a BLM Special Status Species. Wolves have occurred on the upper portions of Bennett Mountain. The northern portion of the allotment contains potential habitat; however, there have been no wolf sightings. Gray wolves preying on livestock in an adjacent allotment to the southeast were removed in 2003.

The majority of public lands support Preliminary Priority Habitat (PPH) for greater sage-grouse (Map 1), a candidate species under the Endangered Species Act. PPH are areas that have been identified as having the highest conservation value (breeding/lekking, nesting, brood-rearing, and winter habitat) to maintaining sage-grouse populations. Aerial surveys for sage-grouse leks were conducted in 2002 and 2004; none were observed. However, a lek occurs approximately 3 miles west of the allotment. The allotment provides potential early and late brood-rearing habitat. Rangeland health assessments and nested plot frequency transects indicated adequate native shrub, grass, and forb diversity to provide suitable nesting and brood-rearing habitat.

Beaver ponds in Bennett Creek provide water and foraging opportunities for bats, including some that are Special Status Species.

The area provides year-long habitat for mule deer and fall and spring elk habitat. Bitterbrush in the area provides forage for mule deer. Riparian areas and uplands provide habitat for neo-tropical birds.

Fish

Bennett Creek (BENNE-028.7) is in PFC for Standards 2 and 3, and is fully capable to provide seasonal habitat for redband trout, a BLM Special Status Species. However, water temperatures become too warm in the summer due to nominal stream flows, and water ponded behind beaver dams, which causes warming of the water column.

Dive Creek (DIVE-001.9) is in PFC condition for Standards 2 and 3. It supports a small population of redband trout. Populations of redband trout are very limited by intermittent stream flows, and likely only use this segment during early spring spawning.

Appendices and Maps

Appendix 1. Indicators of Rangeland Health

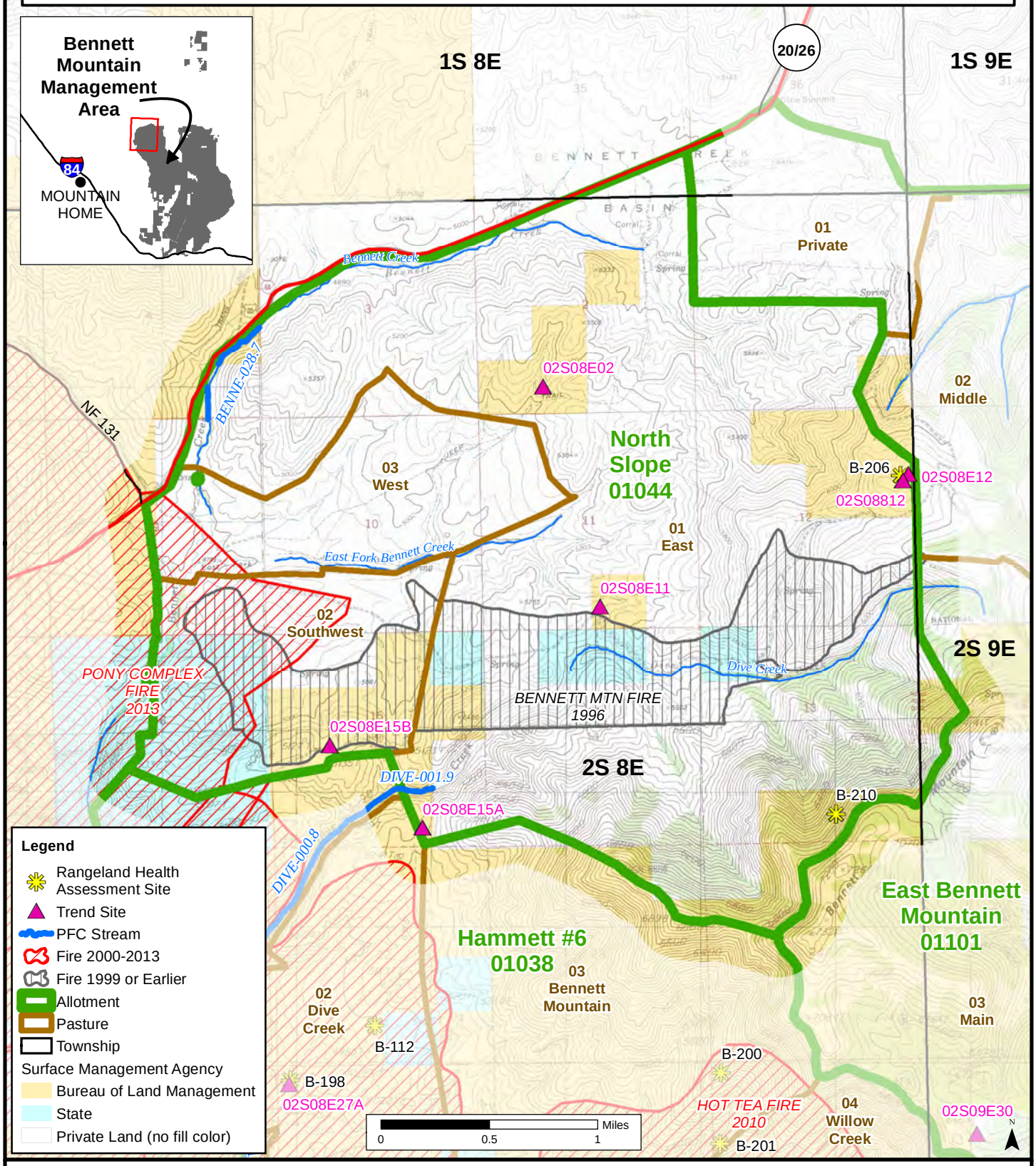
Allotment - Pasture		1044	1044
Identifier		B-206	B-210
Location		02S08E12	02S08E13
Ecological Site		Loamy 12-16	Loamy 12-16
Indicator	Attribute		
1. Rills	S-H	N-S	N-S
2. Water Flow Patterns	S-H	N-S	N-S
3. Pedestals/Terracettes	S-H	N-S	N-S
4. Bare Ground	S-H	N-S	N-S
5. Gullies	S-H	N-S	N-S
6. Wind Scoured, Blowouts and/or Depositions	S-H	N-S	N-S
7. Litter Movement	S-H	N-S	N-S
8. Soil Surface to Erosion	S-H-B	N-S	N-S
9. Soil Surface Loss or Degradation	S-H-B	N-S	N-S
10. Plant Community Composition and Distribution Relative to Infiltration and Runoff	H	N-S	N-S
11. Compaction Layer	S-H-B	N-S	N-S
12. Functional / Structural Groups	B	N-S	N-S
13. Plant Mortality / Decadence	B	N-S	N-S
14. Litter Amount	H-B	N-S	N-S
15. Annual Production	B	N-S	N-S
16. Invasive Plants	B	N-S	N-S
17. Reproductive Capability of Perennial Plants	B	N-S	N-S

S= Soil/Site Stability; **H**= Hydrologic Function; **B**= Biotic Integrity

N-S = None to Slight departure from expected range **S-M** = Slight to Moderate departure from expected range **M** = Moderate departure from expected range **M-E**= Moderate to Extreme departure from expected range **E** = Extreme departure from expected range

Map(s)

North Slope Allotment (01044)
Assessment Map 1: Fire History, Rangeland Health Assessment, Monitoring, and Riparian



U.S. Department of the Interior
Bureau of Land Management, Idaho
Boise District, Four Rivers Field Office
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EVALUATION REPORT

Achieving the Idaho Standards for Rangeland Health

Field Office: IDB010 Four Rivers

Allotment Name and Number: North Slope (01044)

Name of Permittee(s): Tree Top Ranches, LLC. #1101879

Introduction

The North Slope Allotment (#01044) is located south of State Highway 20, approximately 13.5 miles northeast of Mountain Home, Idaho. It is situated on the western slope of Bennett Mountain, immediately west of the BLM lookout tower site. The allotment is divided into three pastures (East, Southwest, and West), which consist of approximately 898 acres of BLM-administered, 408 acres of State, and 4,464 acres of private lands, totaling approximately 5,768 acres.

Standards Applicable

The Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management are used as management goals to maintain or improve resources, protect cultural resources, and sustain productivity of the land. Standards that are appropriate to a particular allotment are used, and provide information which is used to determine the health and condition of public lands. This document is the evaluation of information presented in the allotment rangeland health assessment and whether rangeland health standards are being achieved. The determination of what significant factors or causal agents are involved and whether or not livestock management practices are in conformance with applicable guidelines is presented in the Determination Document**.**

Standards 1 (Watersheds), 2 (Riparian Areas and Wetlands), 3 (Stream Channels and Floodplains), 4 (Native Plant Communities), 7 (Water Quality), and 8 (Threatened and Endangered Plants and Animals) apply to this allotment. Standard 5 (Seeding) was not applied because no rangeland seedings were known occur on the public lands. Standard 6 (Exotic Plant Communities) was not applied because, although exotic plant species are present, they do not occur in sufficient frequencies or densities; therefore, plant communities are assessed under Standard 4 (Native Plant Communities).

EVALUATE STANDARDS

Since the Assessments, Evaluations, and draft Determinations were completed (February 2010), plant frequency and ground cover data were collected at permanent study locations in 2011. Updates have subsequently been made to the Standards these data inform.

Standard 1: Watersheds

Watersheds provide for the proper infiltration, retention, and release of water appropriate to soil type, vegetation, climate and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

Evaluation and Information Sources
Two rangeland health field assessments were conducted in 2004, three long-term trend plots were surveyed in 1988 and 2011 and two additional photo-plots were visited in 1988 and 2011.

Rangeland Health and Long-Term Trends
Rangeland health field assessment, long-term monitoring data and photographs indicate that the watershed is functioning properly. The assessments were rated in near reference condition and the long-term plots showed no signs of degradation. Areas burned by the 1996 Bennett Mountain Fire were recovering well in 2011.

Rangeland Health Changes
Rangeland health assessments and long-term trends indicated excellent watershed protection.

Evaluation Finding – Allotment/watershed is:
_X_ Meeting the Standard
____ Not Meeting the Standard, but making significant progress towards meeting
____ Not Meeting the Standard

Rationale for Evaluation Finding
Health assessments and trend data indicate that proper infiltration, retention, and release of water is taking place to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

Standard 2: Riparian Areas and Wetlands ___ Standard does not apply
Riparian-wetland areas are in properly functioning condition appropriate to soil type, climate, geology, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

Evaluation and Information Sources
Topographic maps, aerial photography, GIS data and imagery, field visits, and functioning condition assessments.

Rangeland Health:
The 0.4-mile-long segment of Bennett Creek (BENNE-028.7) was in proper functioning condition (PFC). The stream was well vegetated with Geyer's willow, Wood's rose, golden currant, and other woody vegetation. The fine substrates were supporting a variety of sedges and rushes.

The 0.2 mile-long segment of Dive Creek (DIVE-001.9) was in PFC. Vegetation was composed mostly of mature willows with deep-rooted sedges/rushes present on suitable sites with finer substrates.

Evaluation Finding – Allotment/watershed is:
_X_ Meeting the Standard
____ Not Meeting the Standard, but making significant progress towards meeting
____ Not Meeting the Standard

Rationale for Evaluation Finding
Both Dive and Bennett Creeks support healthy assemblages of riparian vegetation providing proper nutrient cycling, hydrologic cycling, and energy flow.

Standard 3: Stream Channel and Floodplains ___ Standard does not apply
Stream channels and floodplains are properly functioning relative to the geomorphology (e.g., gradient, size, shape, roughness, confinement, and sinuosity) and climate to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

Evaluation and Information Sources
Topographic maps, aerial photography, GIS data and imagery, field visits, and functioning condition assessments.

Rangeland Health:
Bennett Creek (BENNE-028.7) was in PFC. Nearly the full length of this segment was ponded as a result of beaver activity. The beaver dams were active, stable, and effectively capturing and retaining sediment.

Dive Creek (DIVE-001.9) is located in a narrow rocky canyon; therefore, the channel was armored, laterally and vertically stable, and in PFC.

Evaluation Finding – Allotment/watershed is:
_X_ Meeting the Standard
____ Not Meeting the Standard, but making significant progress towards meeting
____ Not Meeting the Standard

Rationale for Evaluation Finding
Stream channels and floodplains of the segments of Bennett and Dive creeks are properly functioning to provide proper nutrient and hydrologic cycling, and energy flow.

Standard 4: Native Plant Communities
Healthy, productive, and diverse native animal habitat and populations of native plants are maintained or promoted as appropriate to soil type, climate, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

Evaluation and Information Sources
Two rangeland health field assessments were conducted in 2004, three long-term trend plots were surveyed in 1988 and 2011 and two additional photo-plots were visited in 1988 and 2011.

Rangeland Health and Long-Term Trends
Rangeland health field assessment, long-term monitoring data, and photographs indicate that the native plant community was healthy. The native plant communities were rated in near reference condition and the long-term plots showed no signs of degradation. The area burned by the 1996 Bennett Mountain Fire was recovering well in 2011. Reductions in sagebrush and bluebunch wheatgrass frequencies in the burned area were as expected with normal recovery.

Evaluation Finding – Allotment/watershed is:
_X_ Meeting the Standard
____ Not Meeting the Standard, but making significant progress towards meeting
____ Not Meeting the Standard

Rationale for Evaluation Finding
Healthy, productive, and diverse native plant communities are being maintained to properly cycle nutrients, water, and energy.

Standard 5: Seedings _X_ Standard does not apply
Rangelands seeded with mixtures, including predominately non-native plants, are functioning to maintain life form diversity, production, native animal habitat, nutrient cycling, energy flow, and the hydrologic cycle.

Evaluation and Information Sources
Rangeland health field assessments, long-term monitoring data and/or photographs, field visits, actual use reports, and allotment files.

Standard 6: Exotic Plant Communities, Other than Seedings _X_ Standard does not apply
Exotic plant communities, other than seedings, will meet minimum requirements of soil stability and maintenance of existing native and seeded plants.

Evaluation and Information Sources
Rangeland health field assessments, long-term monitoring data and/or photographs, field visits, actual use reports, and allotment files.

Standard 7: Water Quality ___ Standard does not apply
Surface and ground water on public lands comply with the Idaho Water Quality Standards.

Evaluation and Information Sources:
Idaho Department of Environmental Quality (IDEQ) data, functioning condition assessments.

Rangeland Health:
The proper functioning condition of Bennett and Dive creeks makes it likely that water quality is at full potential to support applicable IDEQ standards. Standards for seasonal cold water biota were met in Dive Creek, but no temperature data are available for Dive Creek to determine support of salmonid spawning.

Evaluation Finding – Allotment/watershed is:
_X_ Meeting the Standard
____ Not Meeting the Standard, but making significant progress towards meeting
____ Not Meeting the Standard

Rationale for Evaluation Finding
The proper functioning condition ratings of Bennett and Dive creeks show that these streams are at potential to comply with applicable IDEQ standards.

Standard 8: Threatened and Endangered Plants and Animals ___ Standard does not apply
Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species.

Evaluation and Information Sources:
Rangeland health assessments, site photographs, field visits, Conservation Data Center, and plant and wildlife surveys.

Rangeland Health
Plants
No federally listed or BLM Special Status Species are known to occur in this allotment.

Wildlife
No federally listed species are currently known to occur. Sage-grouse breeding habitat assessments were not conducted; however, vegetation communities are healthy and diverse and meet sage-grouse breeding and brood-rearing habitat requirements.

Beaver ponds in Bennett Creek provide suitable water and foraging opportunities for bats, including those that are Special Status Species.

The area provides suitable habitat for mule deer, elk and a variety of other species due to the intermix of forest and sagebrush steppe habitat.

Fish
Both Dive and Bennett creeks provide good aquatic habitat. Dive Creek supports a small population of redband trout which occurs in isolated pools during the summer months. Bennett Creek also supports redband trout, although BLM has no recent fisheries data for it.

Evaluation Finding – Allotment/watershed is:
_X_ Meeting the Standard
____ Not Meeting the Standard, but making significant progress towards meeting
____ Not Meeting the Standard

Rationale for Evaluation Finding
Upland plant communities are at or near reference conditions with a static long-term trend, and riparian areas are in PFC. Upland and riparian habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status plants and animals.