Rangeland Health Assessment

North Camas Allotment (01098)

Table of Contents

General Allotment Information

The North Camas Allotment (01098) is located approximately two miles south of US Highway 20 near Cat Creek Summit (Map 1). Bennett Mountain Road runs adjacent to the allotment's western boundary. Ownership is comprised of private, State and Federal lands, totaling approximately 1,665 acres (Table 1). These numbers represent the most current and accurate estimates based on existing fence lines.

Table 1. Land ownership acres by pasture, North Camas Allotment, Elmore County, Idaho.

Pasture	Federal		Private	State	Total
	BLM	FS			
1- North	78	376	65	218	**737**
2- South	480	332	116	0	**928**
Total	**558**	**708**	**181**	**218**	**1,665**

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). Elevation ranges from approximately 5,700 feet to 6,200 feet. Major landforms consist of mountainsides, hillsides, and drainages. The Elkcreek-Demast complex is the most commonly occurring soil, accounting for approximately 70% of the allotment area; Broad Canyon-Grousecreek soil association, approximately 20%; and Simonton-Elkcreek complex, 10%. The Loamy 12-16" ecological site is associated with the soils in the allotment except for the Broad Canyon-Grousecreek association which has no assigned ecological site [ecological sites are named by their general soil type and precipitation (inches); actual precipitation at nearby Anderson Dam and Glenns Ferry varied (Figure 1)]. The characteristic vegetation of the Loamy 12-16" ecological site is mountain big sagebrush with Idaho fescue and bluebunch wheatgrass.

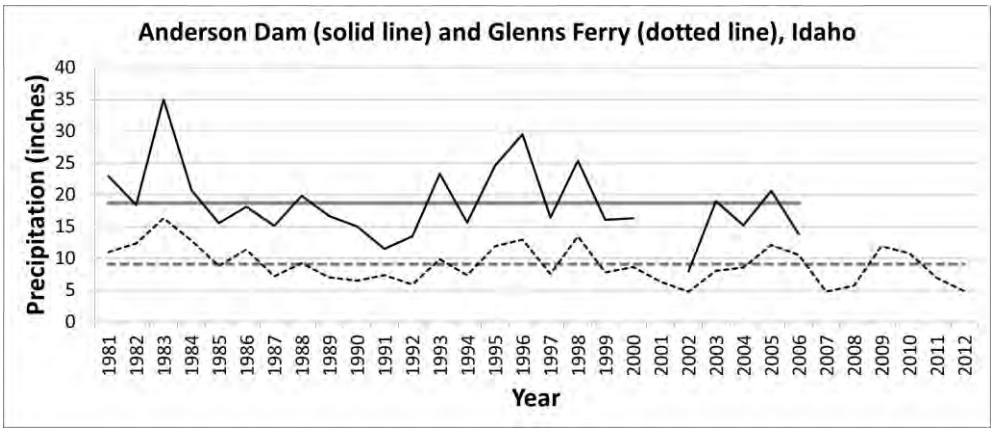


Figure 1. Annual and mean precipitation at Anderson Dam and Glenns Ferry, Idaho (Source: National Climate Data Center).

The BLM fire history since 1957 contains no record of wildfire occurrence**.**

Livestock Grazing Management

The North Camas Allotment was created through a Range Line Agreement in 1986. The East Bennett Mountain Allotment was established through a Range Line Agreement in 1987. The grazing permit authorizes livestock use between July 1 and August 15, for a total of 115 Animal Unit Months (AUMs; Table 2).

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

Authorization Number	Livestock		Season of Use		% Public Land	Authorized AUMs		
	Kind	Number	Begin	End		Active	Suspended	Permitted
1101633	Cattle	76	07/01	08/15	100	115	0	115

Based on actual use reports submitted by the authorized livestock operator or annual authorizations, annual use ranged from 115 to 118 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.

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

Grazing Year	Use Period		AUMs
	On Date	Off Date	
1997	07/01	08/15	118*
1998	07/01	08/15	115*
1999	07/01	08/15	115
2000	07/01	08/15	115
2001	07/01	08/15	115
2002	07/01	08/15	115
2003	07/01	08/15	115
2004	07/01	08/15	115
2005	07/01	08/15	115
2006	07/01	08/15	115
2007	07/01	08/15	115
2008	07/01	08/15	115
2009	07/01	08/15	115
2010	07/01	08/15	115

Grazing Year	Use Period		AUMs
	On Date	Off Date	
2011	07/01	08/15	115
2012	07/01	08/15	115
2013	07/01	08/15	115

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

Idaho Standards for Rangeland Health

In 2004, the BLM conducted three field assessments in the North Camas 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. The following subsections of this document discuss resource conditions as they relate to each of the applicable eight standards.

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 Assessment

Twelve of the 17 rangeland health indicators (1-11 and 14) relate to soil stability and hydrologic function (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 "slight to moderate" range of departure from expected conditions for the ecological site at one site, etc.

Of the 36 indicators relating to soil site stability and hydrologic function, two were rated in the "moderate" range of departure from expected conditions for the ecological site (Table 4, Appendix 1, Map 1). All field assessments were conducted in the South Pasture. The two indicators rated in the moderate range (#4-Bare Ground and #7-Litter Movement) occurred at site B-107.

Table 4. Watershed indicators of rangeland health, North Camas 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					3
2-Water Flow Patterns				1	2
3-Pedestals/Terracettes				1	2
4-Bare Ground			1	1	1
5-Gullies					3
6-Wind Scoured blowouts/depositions					3
7-Litter Movement			1		2
8-Soil Surface Resistance to Erosion				1	2
9-Soil Surface Loss or Degradation				1	2
10-Plant Community Composition and Distribution Relative to Infiltration and Runoff				2	1
11-Compaction Layer					3
14-Litter Amount				2	1
Total Indicators for Allotment = 36 (12@3sites)	**0**	**0**	**2**	**9**	**25**

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 2004 through 2009 (Map 1). To assess stream and spring health, interagency technical references (TR-1737-15, 1998 and TR-1737-16, 1999) were applied which use 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
There are no streams on public lands.

Spring Conditions

Sackrider Spring

Sackrider Spring, a developed spring on the eastern allotment boundary (Map 1), was rated in NF condition in 2009 due to extreme trampling, soil compaction, and absence of riparian vegetation in the wetted areas. Large areas of bare soil were present throughout the spring area, and extended into the adjacent uplands.

North Camas Meadow

A palustrine (wet) meadow approximately 10 acres in size is present (Map 1). A small ephemeral stream which drains seasonal snowmelt is present in the meadow. In 2004, the meadow was examined in October following the livestock off-date. The meadow was in FAR with a downward trend. At that time, the allotment fences were in poor condition; livestock may have wandered into the allotment and grazed past the off-date. A small active headcut was present in meadow, high utilization levels compacting soils, bare soil areas as a result of trampling, and encroachment of upland plant species into the meadow area were observed. Heavy grazing utilization levels (est. ≥80%) occurred throughout the meadow. Since that time, fences have been repaired, eliminating the potential for livestock from adjoining private land to wander into the allotment.

The meadow was revisited in late July 2009, 15 days prior to the grazing off-date. The wetland had improved to FAR condition with an upward trend. Density and distribution of Nebraska sedge, an obligate riparian plant, had increased throughout the stream channel. Kentucky bluegrass, Baltic rush, forbs, and annual grasses were also present in the plant community of both the stream and meadow. Vigor of hydric species had improved throughout the riparian area.

Standard 4: Native Plant Communities

Rangeland Health Field Assessment

All 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 5). 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).

Of the 27 indicators for biotic integrity, three rated in the "moderate" or higher range of departure from expected conditions for the ecological sites (Table 5, Appendix 1, Map 1). The three assessment sites are all located in South Pasture. At each of the three sites, one indicator rated in the moderate or higher range of departure from expected conditions for the ecological site. Field form comments described shrub decadence and lack of age class diversity, and fewer than expected perennial grasses as factors responsible for these ratings. The extreme rating for plant mortality/decadence was in the quaking aspen ecological site, describing a high amount of tree mortality.

Table 5. Native plant community rangeland health indicators, North Camas 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				1	2
9-Soil Surface Loss or Degradation				1	2
11-Compaction Layer					3
12-Functional/Structural Groups			1	2	
13-Plant Mortality/Decadence		1	1	1	
14-Litter Amount				2	1
15-Annual Production				2	1
16-Invasive Plants				1	2
17-Reproductive Capability of Perennial Plants					3
Total Indicators = 27 (9x3 sites)	**0**	**1**	**2**	**10**	**14**

Standard 5: Seeding

No seedings have occurred on the allotment's public lands; therefore, this standard was not applied.

Standard 6: Exotic Plant Communities

Exotic plant species do not occur on these public lands to the extent that this standard would apply.

Standard 7: Water Quality

There are no streams; therefore. This standard does not apply.

Standard 8: Threatened and Endangered Species

Plants

No federally listed or BLM Special Status Species are currently known to occur. Approximately 480 acres were surveyed for these species in May 2004. The survey area was dominated by Douglas-fir and quaking aspen forest interspersed with patches of snowbrush and mountain big sagebrush. No federally-listed or special status plants were found during the survey.

Wildlife

The general health of upland and riparian communities is important for a broad diversity of wildlife, including sensitive species. 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, grazing utilization, and weed presence.

The gray wolf was removed from the Endangered Species list in 2009. However, it remains a BLM Special Status Species. A few gray wolves were removed in a nearby allotment in 2003 as a result of livestock predation. Although the northern portion of this allotment provides potential habitat for the gray wolf, no known wolf packs occur within the area.

The public lands support 300 acres of 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. The allotment provides potential early and late brood-rearing habitat. Rangeland health assessments indicated adequate native shrub, grass, and forb diversity to provide suitable brood-rearing habitat.

Based on upland rangeland health assessments, the area provides suitable habitat for flammulated owls and northern goshawks. Surveys for flammulated owls were conducted in summer 2004. One owl response was heard, but appeared to occur outside of the allotment. No goshawks were observed.

Fish

There are no streams; therefore, the fisheries portion of this standard does not apply.

Appendices and Maps

Appendix 1. Indicators of Rangeland Health

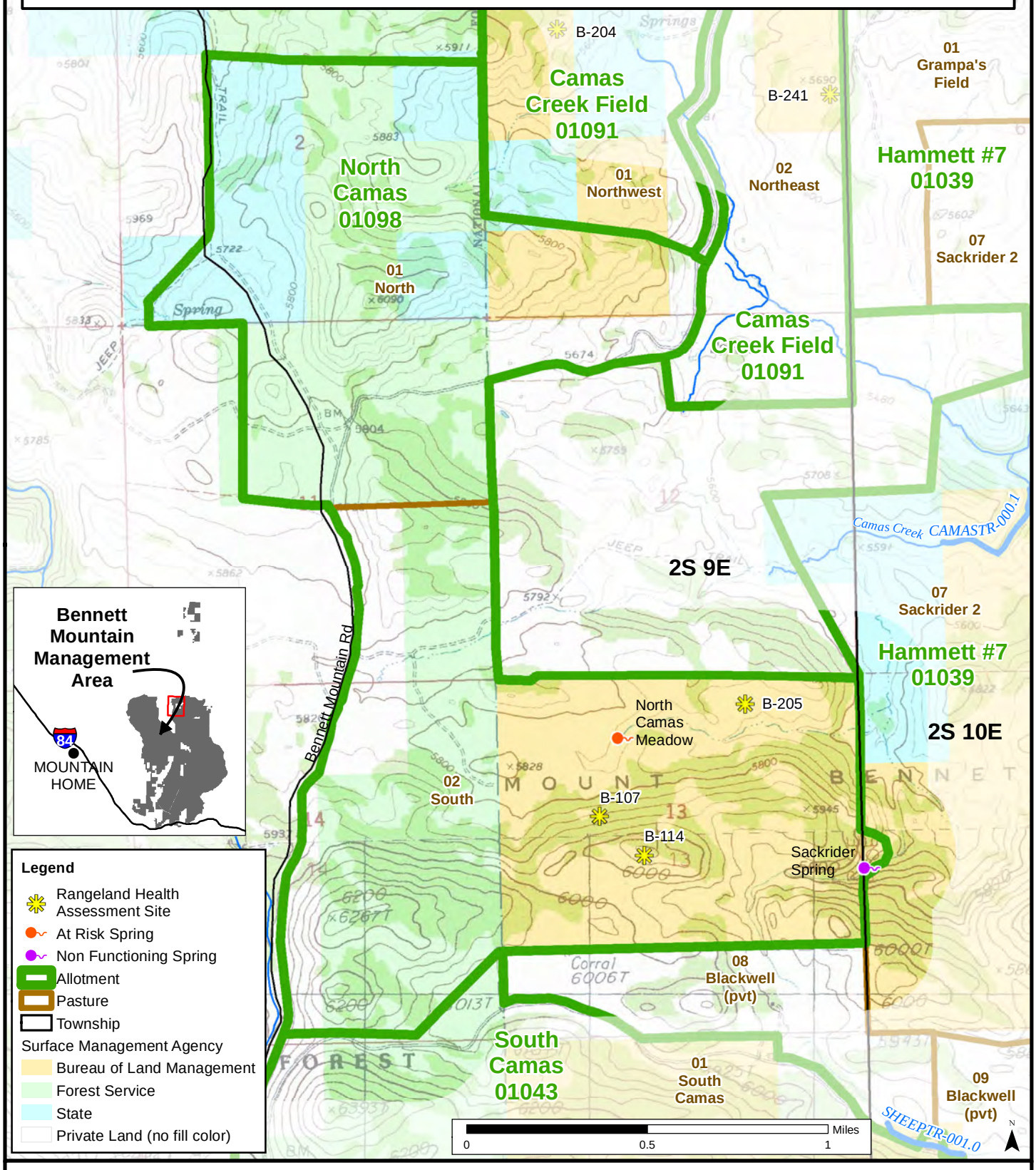
Allotment - Pasture		1098-2	1098-2	1098-2
Identifier		B-107	B-114	B-205
Location		02S09E13	02S09E13	02S09E13
Ecological Site		Loamy 12-16	Quaking Aspen 20+	Loamy 12-16
Indicator	Attribute			
1. Rills	S-H	N-S	N-S	N-S
2. Water Flow Patterns	S-H	S-M	N-S	N-S
3. Pedestals/Terracettes	S-H	S-M	N-S	N-S
4. Bare Ground	S-H	M	N-S	S-M
5. Gullies	S-H	N-S	N-S	N-S
6. Wind Scoured, Blowouts and/or Depositions	S-H	N-S	N-S	N-S
7. Litter Movement	S-H	M	N-S	N-S
8. Soil Surface to Erosion	S-H-B	S-M	N-S	N-S
9. Soil Surface Loss or Degradation	S-H-B	S-M	N-S	N-S
10. Plant Community Composition and Distribution Relative to Infiltration and Runoff	H	S-M	N-S	S-M
11. Compaction Layer	S-H-B	N-S	N-S	N-S
12. Functional / Structural Groups	B	M	S-M	S-M
13. Plant Mortality / Decadence	B	S-M	M-E	M
14. Litter Amount	H-B	S-M	N-S	S-M
15. Annual Production	B	S-M	S-M	N-S
16. Invasive Plants	B	N-S	N-S	S-M
17. Reproductive Capability of Perennial Plants	B	N-S	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 Camas Allotment (01098)
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
Map date: May 26, 2014

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EVALUATION REPORT

Achieving the Idaho Standards for Rangeland Health

Field Office: IDB010 Four Rivers

Allotment Name and Number: North Camas (01098)

Name of Permittee(s): Half Moon Ranch, c/o Jim Chambers #1101633

Introduction

The North Camas Allotment (#01098) is located approximately two miles south of US Highway 20 near Cat Creek Summit. Bennett Mountain Road runs adjacent to the allotment's western boundary. The allotment consists of two pastures, and ownership is comprised of private, State and Federal lands, totaling approximately 1,665 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), 4 (Native Plant Communities), and 8 (Threatened and Endangered Plants and Animals) were applicable to public lands in this allotment. Standard 5 (Seedings) was not applied because no rangeland seedings have occurred. Standard 6 (Exotic Plant Communities) was not applied because exotic plant species do not occur to the extent that any given area is considered an exotic plant community; therefore, plant communities were assessed under Standard 4 (Native Plant Communities).

EVALUATE STANDARDS

Standard 1: Watersheds ___ Standard does not apply

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

Three rangeland health field assessments were conducted in 2004.

Rangeland Health
The watershed was adequately protected from excessive runoff and erosion overall, although some areas were lacking sufficient soil protection in shrub interspaces. One assessment area had moderately more bare ground and accelerated litter movement than expected. Soil stability and hydrologic functions were at or near expected conditions for the ecological sites, overall.

Rangeland Health Change
No long-term monitoring studies have been established in this allotment to document changes in the composition of the plant community over time.

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 watershed is providing proper infiltration, retention, and release of water for 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
Maps, aerial photographs, functioning condition assessments, and field visits.

Rangeland Health
In 2004, the palustrine meadow and associated ephemeral stream segment were functioning at risk (FAR) with a downward trend, due to active gully formation within the stream, high utilization levels, un-vegetated areas along the streambank, and upland plant species encroachment. In 2009, the riparian area was rated in FAR condition with an upward trend due to increased densities of Nebraska sedge, Baltic rush, and forbs. Kentucky bluegrass and annual grasses were also present. Streambanks were mostly vegetated, although bank soils were exposed in a few areas along the stream. In 2009, Sackrider Spring was rated in non-functioning condition.

Rangeland Health Change
Vegetative cover in the meadow area and stream improved from 2004 to 2009. Areas along the streambank which previously were unvegetated were occupied with obligate and facultative herbaceous hydric species, and others.

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

Rationale for Evaluation Finding
Hydric species which properly cycle nutrients, water, and energy had improved in terms of frequency and abundance; however, Kentucky bluegrass and annual grasses were also common in the plant community. These species, along with areas which remain unvegetated, do not provide for proper nutrient cycling, hydrologic cycling, and energy flow.

Standard 3: Stream Channel and Floodplains X 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
Maps, aerial photographs, functioning condition assessments, and field visits.

Standard 4: Native Plant Communities ___ Standard does not apply
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
Three rangeland health field assessments were conducted in native plant communities in 2004.

Rangeland Health
Two of the assessments were conducted in the shrubland community and one was conducted in an aspen grove. Although there was higher than expected trampling of the understory in shrublands, the native plant community was health overall. In the shrubland community, few perennial grasses were present. In the aspen grove, the moderate to extreme rating was due to dead and down trees. The understory of the aspen grove contained few grasses, as would be expected in this vegetation type.

Rangeland Health Changes
No long-term monitoring studies have been established to document changes in the composition of the plant community over time.

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 condition of native plant communities is adequate to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

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, 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, photographs, field visits, actual use reports, and allotment files.

Standard 7: Water Quality X 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, maps, aerial photographs, functioning condition assessments, and field visits.

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 field assessments, site photographs, field visits, Conservation Data Center, and plant and wildlife surveys.

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

Wildlife
No federally listed wildlife species are known to occur here. 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.

The area provides suitable habitat for flammulated owls and northern goshawk. One flammulated owl was detected (audio) in the vicinity during surveys in summer 2004. No goshawks were found.

Fish
No fishery occurs in this allotment.

Rangeland Health Change:
Native plant diversity is being maintained, and the meadow and associated ephemeral stream have improved.

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

Rationale for Evaluation Finding
Upland habitats are suitable to maintain viable populations of threatened and endangered and special status plants and wildlife. Riparian habitat (i.e., the palustrine meadow and associated ephemeral stream) is improving via increases in hydric vegetation in the system.