

Rangeland Health Assessments

2013 Supplement to the Glass Creek, Gluch, Gluch FFR, West Maher, and Warn Rangeland Health Standards and Guidelines Assessments

Evaluation Reports and Determinations

Final Rangeland Health Standards and Guidelines Assessment

**Glass Creek (0552), Gluch (0553), Gluch FFR (0466)
West Maher (0567), and Warn (0596) Allotments**

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2013 Supplement to the Glass Creek, Gluch, Gluch FFR, West Maher, and Warn Rangeland Health Standards and Guidelines Assessments

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<i>2013 Supplement to the Glass Creek, Gluch, Gluch FFR, West Maher, and Warn Rangeland Health Standards and Guidelines Assessment</i>
The Rangeland Health Standards and Guidelines Assessment for the Glass Creek, Gluch, Gluch FFR, West Maher, and Warn allotments was completed in 2006 as a portion of the grazing permit renewal process. Until 2013, no rangeland health determinations were completed and the permit authorizing grazing use in this allotment has not been fully processed for renewal. The current document consists of the 2006 rangeland health assessment, in full, supplemented by new

information available since the 2006 document was completed. Portions of this 2013 document that supplement the 2006 document are presented in this two-field table format with the header above, while those portions carried forward unchanged from the 2006 document are outside the two-field tables. The 2013 supplement to the assessment includes data compiled between 2006 and 2013, as well as the completion of the 2013 evaluation report and determination consistent with the Livestock Grazing Permit Renewal Desk Guide for Idaho Bureau of Land Management, May 2009. The 2013 determinations for the Lone Tree and Louisa Creek allotments are found at the end of this document.

Standards for Rangeland Health and Guidelines for Livestock Grazing Management

Background

The Bureau of Land Management in Idaho adopted Standards for Rangeland Health in 1997 (Appendix A), which were developed in coordination with the Resource Advisory Councils. There are eight standards, however not all of them apply to all parcels of land, depending on the resources. Standards for rangeland health are expressions of the level of physical and biological condition or degree of function required for healthy, sustainable rangelands. Rangelands should be meeting or making significant progress toward meeting the standards. When the standards are being met, proper nutrient and hydrologic cycling, and energy flow occur.

Indicators are physical and biological factors and processes that can be measured or observed (Appendix B). This document contains information about the resources, and uses quantitative and qualitative information including inventory data, monitoring data, health assessment information, or other observations to evaluate the current status of the standard. This information is discussed for the standards applicable to these allotments.

Conclusions as to whether or not allotments are meeting, or making significant progress toward meeting the Standards and Guidelines will be provided in both this document and in a separate evaluations and determinations document. The determination document will be based on information provided in this document as well as the other allotment assessment documents and will be a comprehensive combination of the 19 allotments within the group. Additional information will be considered in developing the evaluations and determinations if received in a timely manner.

A Draft Assessment was previously mailed to interested parties of record, including grazing permittees, applicable State agencies, Indian tribes, and identified interested public, August 25, 2004. No comments were received in response to that mailing.

Allotment Management History

The historic South Mountain administrative unit included the allotments on these permits. South Mountain is a small, isolated, mountain range that was primarily grazed by domestic sheep in the early 1900's. Between 1934 and 1963, the majority of the permitted sheep use was converted to cattle use.

The South Mountain Unit was inventoried in 1963 and animal unit months (AUMs) were adjudicated in 1965. The inventory determined that federal lands in the South Mountain Unit were not over-obligated; therefore the BLM did not impose reductions at that time.

The Lone Tree Individual (now Warn) Allotment was separated from the spring use area in October 1967. Trailing privileges for Lequerica Bros. sheep were reserved in the Warn Allotment. The Schoolhouse (now Glass Creek) Allotment was separated from a larger spring use allotment known as the Glass Creek Allotment in November 1967, and retained sheep trailing privileges for Lequerica Bros. and Quintana of 22 AUMs and 16 AUMs, respectively. Fences around these allotments were already in place. The West Maher FFR Allotment boundaries were expanded via a rangeline agreement in October 1967. The Gluch (Individual) and Gluch FFR allotments have been individual allotments used by Robert Gluch since 1943.

Idaho Rangeland Health Standards

GLASS CREEK (0552)

Background

The Glass Creek Allotment is approximately 5 miles south of Jordan Valley, Oregon. It is located southwest of Silver City and north of South Mountain (Glass Creek Map) and is part of the South Mountain Core Area. Elevations range from 4,500 to 4,800 feet. The terrain varies from flat lowlands to rolling hills and steep side slopes. Most landform features are rhyolitic in origin and consist of valley bottomlands, foothills, and perennial and ephemeral drainages.

The allotment is within USDA Major Land Resource Area, D 25-Owyhee Uplands. The majority of the soils in the allotment are shallow to moderately deep and well drained. Soils are clayey to loamy and vary in surface and subsurface rock fragments. These soils formed in residuum and alluvium derived predominantly from welded rhyolitic tuff. The area is primarily represented by Loamy 11-13" ecological sites with basin big sagebrush, bluebunch wheatgrass plant communities and Shallow Claypan 12-16" ecological sites with low sagebrush, bluebunch wheatgrass, and Idaho fescue plant communities. A 1981 prescribed fire burned approximately 550 acres most of which were within Pasture 1. The burned area was drill seeded with crested wheatgrass, alfalfa, yellow sweet clover and 4-wing saltbush.

The Glass Creek Allotment is divided into two pastures that include public and private lands totaling approximately 1,933 acres (Glass Creek Map).

Table A1. Allotment acreage by pasture and land ownership*

Pasture	Public	State	Private	Total
1	761	0	162	923
2	992	0	18	1,010
Totals	1,753	0	180	1,933

*Acreages represent best available estimates

Livestock Use History

Prior to 1981 cattle and horses grazed the allotment annually between April 1 and July 31. Additionally, numerous bands of sheep was authorized to trail from Oregon in the spring to summer near South Mountain, returning to Oregon in the fall along the same route.

The original Glass Creek Allotment was adjudicated at 11.45 acre/animal unit month (AUM) not including sheep trailing use. When the allotment was divided in November 1967, Ray Gluch was permitted 65 AUMs for cattle and horses; and Vernon Warn was permitted 74 AUMs of cattle (controlled by Terry Warn since 1966). The season of use at adjudication in 1965 was April 1 to July 31 for Ray Gluch and April 16 to June 30 for Vernon Warn.

The 1981 Grazing Decision specified early spring (4/16-5/4), mid-spring (4/16-5/25), summer (8/1-8/20), late summer (8/1-9/10) use and a rest treatment in a five-year rotation for the two pastures and was intended to eliminate annual same-season use.

A 1981 prescribed fire burned approximately 550 acres in the northern portion of the allotment. The burned area was re-seeded the same year, and a protective fence was built on the south end of the fire, dividing the Glass Creek Allotment into two pastures. The seeding was rested and permitted use was reduced for two years to allow establishment of the seeding. The plant communities in the remainder of the allotment (Pasture 2) consist of low sagebrush with an understory of native perennial grasses.

Between 1983 and 1990, cattle grazing occurred in pasture 1 from April 15 – May 31 annually. Pasture 2 grazing occurred in a deferred rotation from April 15 to July 8, the first year, and August 1 to October 15 the second year. However, this deferred grazing rotation was not consistently followed. Horse use occurred every year during the summer months (July and August) in Pasture 2. The April 15 turnout date was retained until 1994, when turnout was modified to an April 1 turnout. Between 1983 and 1990, temporary non-renewable (TNR) was authorized in the Pasture 1 seeding, when production conditions permitted. TNR was authorized occasionally in Pasture 2 also.

In 1991, the summer horse use was discontinued. Season of Use was authorized in Pasture 1 similar to the previous authorization. Pasture 2 has been rested from grazing nine out of the thirteen years from 1991-2004. During this same period, two bands of Mackenzie Ranch sheep have been permitted to continue to follow the traditional sheep trail route over-nighting in the Glass Creek Allotment en route to Flint Creek in the spring and returning in the fall.

Total actual use in Glass Creek Allotment averaged 162 AUMs between 1991 and 2003 (Appendix D). The following Table (A2) summarizes livestock use (compiled from Actual Use Reports or annual Grazing Authorizations) for the Glass Creek Allotment from 1990 to 2006:

Table A2: Season of use, Actual Use (AUMs)¹ Glass Creek Allotment

Year*	Pasture 1 Seeding	AUMs	Pasture 2 Native	AUMs
1990	4/8-5/22	131	7/1-8/7	13 (H)
1991	4/3-5/16	152	Rest	0
1992	Rest	0	4/1-5/23	190

1993	4/8-5/24	173	Rest	0
1994	4/1-5/31	219	Rest	0
1995	4/15-5/30	210	Rest	0
1996	Rest	0	4/4-5/20	147
1997	4/4-5/20	153	Rest	0
1998	4/1-5/26	159	Rest	0
1999	4/17-6/1	110	4/18-5/12	42
2000	4/14-5/28	143	Rest	0
2001	4/18-6/6	156	Rest	0
2002	Rest	0	4/11-5/30	147
2005	Rest	0	4/16-5/31	139
2006	4/21-6/6	136	Rest	0

¹ AUMs were calculated at 100% public land. AUMs found in Table A2 above 139 AUMs were authorized as temporary non-renewable (TNR) AUMs.

(H) – authorized domestic horse use.

* No Actual Use Reports were submitted by the grazing permittee for grazing years 2003 and 2004.

Livestock Management

New records show 87 percent public land for Tom Gluch, as stated on the permit, instead of 89 percent, as recorded on the actual use reports from 1990 to 2006. Therefore, calculations were reconfigured using the 87 percent public land figure, and results show slight differences in actual use reported from the 2006 data.

Actual Use

Actual use ranged from 62 to 148 AUMs for the allotment, with an average of 124 AUMs (Table LVST-1).

Table LVST-1: Season of use and actual use (AUMs)¹ on the Glass Creek allotment 1997-2012

Year*	Pasture 1 Seeding	AUMs	Pasture 2 Native	AUMs	Total AUMs
1997	4/4-5/20	143	Rest	0	143
1998	4/10-5/26	74	4/1-5/15	74	148
1999	4/18-5/12	29	4/17-6/1	112	141
2000	4/15-5/25	59	4/14-5/20	76	135
2001	4/18-6/4	65	4/18-6/6	82	147
2002	4/17-5/30	62	4/11-5/26	76	138
2005	4/21-6/1	67	4/21-6/1	62	129
2006	4/21-6/6	102	Rest	0	102
2007	4/20-5/30	47	4/20-5/30	59	106
2008	4/18-5/10	59	4/16-5/3	29	88
2009	4/13-6/15	138	Rest	0	138
2010	4/16-5/30	62	4/16-5/27	73	135
2011	4/16-5/31	62	Rest	0	62
2012	4/16-5/30	57	4/16-5/27	73	130

Rangeland Health Standards

Standard 1: Watersheds

During 2003, rangeland health worksheets were completed at five locations in this allotment. Table A1-1 presents a summary of indicator ratings by pasture; Appendix B includes indicator ratings by individual site the locations of the rangeland health assessments are shown on the attached allotment map.

Table A1-1: Rangeland Health Evaluation Summary

Standard 1- Watersheds	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Pasture *1	11	11	2	0	0
Pasture *2	18	15	3	0	0

*1 Summarizes: 2 Loamy 11-13" ecological sites

*2 Summarizes: 1 Loamy 11-13" and 2 Shallow Claypan 12-16" ecological sites

Pasture 1

Two rangeland health worksheets were completed in this pasture in 2003, both represent the Loamy 11-13" ecological site.

At RH1A, in the central portion of the pasture, the indicators for soil site stability and hydrologic function attributes rated in the none-to-slight or slight-to-moderate ranges of departure for what is expected for this ecological site. Rangeland drill rows were still present and contribute to the water flow patterns. Pedestals were described as historic and active, and mostly associated with Sandberg bluegrass and areas with water flow paths. The water flow patterns were described as short, but connected with some cut areas. Plant composition and distribution relative to infiltration and runoff was adequate for this site.

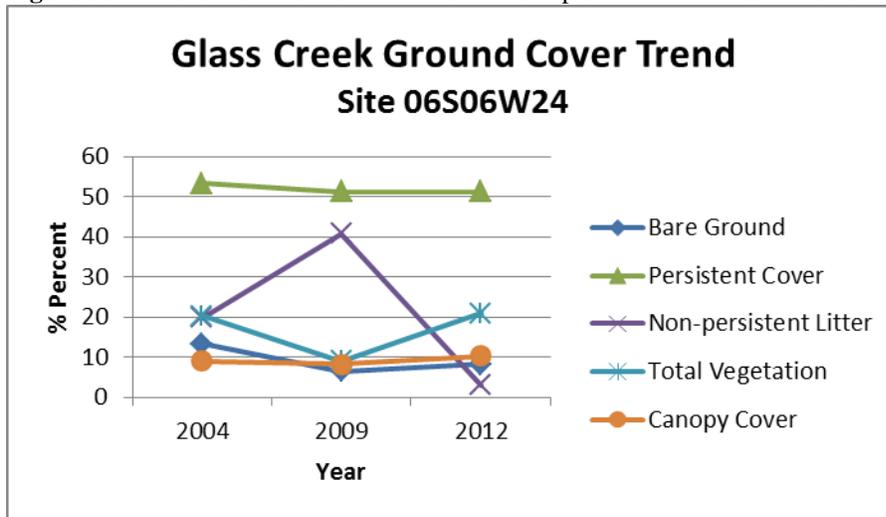
At RH1B, in the southeastern portion of the pasture, water flow patterns and pedestals are more common than expected and rated in the moderate range of departure. The amount of bare ground at this site was slightly more than expected, and was attributed to the decrease of bluebunch wheatgrass and other large bunchgrasses and an increase in the smaller bunchgrasses, Sandberg bluegrass, and squirreltail. However, in 2005 the site was re-visited and photographs show very little bare ground and good seedstalk production on perennial grasses. The bare ground rating in 2003 was mostly attributable to lack of residual plant material.

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Ground Cover Trend

Ground cover trend data were collected in pasture 1 at the nested plot frequency transect 06S06W24 in 2004, 2009, and 2012 (Figure Soil-1). Over the long term, rock, gravel, biological crusts, and persistent litter (hereafter referred to as persistent cover), basal vegetation, total vegetation, and canopy cover are static. Bare ground and non-persistent litter are decreasing, with the latter significantly decreasing (Student's t-test; p-value <0.1). Over the short term, a relatively static trend is apparent in bare ground, persistent cover, and canopy cover. Non-persistent litter is decreasing while total vegetation is increasing, with both indicators being statistically significant. Basal vegetation data for 2009 were not used due to inconsistencies in data recording; short-term trend was therefore excluded while long-term values remained.

Figure Soil-1: Ground cover data from trend site in pasture 1 for the Glass Creek FFR (2004, 2009, and 2012)



Ground cover trend has remained primarily static over the long term, though total vegetation and non-persistent litter showed some variation over the short term by either increasing or decreasing, respectively. No obvious relationship with other factors is apparent.

Grass frequency data (see Standard 4) shows that this old seeding is dominated by crested wheatgrass and Sandberg bluegrass. Native deep-rooted bunchgrasses are mostly absent, while cheatgrass is significantly increasing. Shrub frequency and density (see Standard 4) shows some increase in sagebrush after a decline between 2004 and 2009, but shrubs continue to have a relatively low presence in this burned area; this corresponds with canopy cover observations.

Overall interpretations of trend data suggest that ground cover conditions are primarily static and display no improvement. Frequency trend data show that biotic conditions match that trend due to an increase in invasive annuals and the absence of deep-rooted bunchgrasses.

2004 and 2005 Photos

Photos were taken in Glass Creek pasture 1 during visits in 2004 and 2005. The southwest corner of pasture 1 in Section 24 along the east-west trending road in the old seeding was visited in 2004. Concurrent with descriptions at rangeland health assessment site RH1A above, rangeland drill rows are still present at this site as well. Though the photos are of low quality, bare soil is apparent as part of the water flow pattern and, while sagebrush has re-established, the area is lacking diverse protective vegetation.

In 2005, rangeland health assessment site RH1B was re-visited. Even though the 2006 document incorporated the 2005 site visit photos for the sites under the above write up, the interpretation is deemed improper. While it is true that very little bare ground is visible at RH1B, the portrayal of good seed stalk production on perennial grasses appears to be unlikely. One photo shows a dense extensive carpet of invasive annuals, primarily medusahead and cheatgrass, while Sandberg bluegrass and cheatgrass appear to be dominating the interspaces between sagebrush in the second photo. Unfortunately, no field visit comments are available.

2013 Field Observations

During a field visit in 2013 (see Owyhee Field Office project file) observations near rangeland health assessment site RH1B included increased historic and active pedestaling and elevated amounts of bare soils showing surface sealing. Where recent physical damage from hoof action occurred, churned up soils, along with damaged shrubs, are results of trampling that has left soils exposed. Biological soil crusts are present but are reduced and found primarily underneath shrub cover.

Pasture 2

Three rangeland health worksheets were completed for Pasture 2, in 2003. RH2A, represents a Loamy 11-13” and RH2B, and RH2C represent the Shallow Claypan 12-16” ecological site.

At RH2A, in the northern portion of the pasture the indicators relating to soil stability and hydrologic function show little departure from expected conditions of the Loamy 11-13” ecological site description. The indicators for water flow patterns, pedestals, soil surface loss and degradation, and bare ground rated in the slight-to-moderate range of departure. Overall, these erosional features appear to be more related to historical events, as there is little indication of active, accelerated soil movement. The amount of residual plant litter observed at this site was comparable to site potential.

At RH2B, a Shallow-claypan 12-16” site in the central portion of the pasture, the soil surface resistance to erosion and the bare ground indicators rated in the none-to-slight range of departure because of the presence of abundant surface gravel, litter, and other stabilizing agents. The indicators for pedestals and water flow patterns rated in the slight-to-moderate range and appear to be more historic than recent in origin with little to no appearances of active soil loss. The indicator for plant community composition and distribution relative to infiltration and runoff rated in the moderate range of departure for this ecological site. This rating was a result of the shift from larger perennial bunchgrasses to annual grasses. The annual grasses listed for this location were dominated by the native annual grass, six-week fescue.

In the southern portion of the pasture, RH2C represents the Shallow Claypan 12-16” ecological site. At this location, the indicator for water flow patterns rated as moderate, however observer notes describe the patterns as short, stable with common cut area, but matching site expectations. The pedestals appear mostly historic and show little indication of active soil loss. The indicator for plant community composition and distribution relative to infiltration and runoff rated in the slight-to-moderate range, mostly due to the reduction of larger bunchgrasses and the increase of annual grasses. At this location the annual grasses were dominated by the native annual grass six-week fescue.

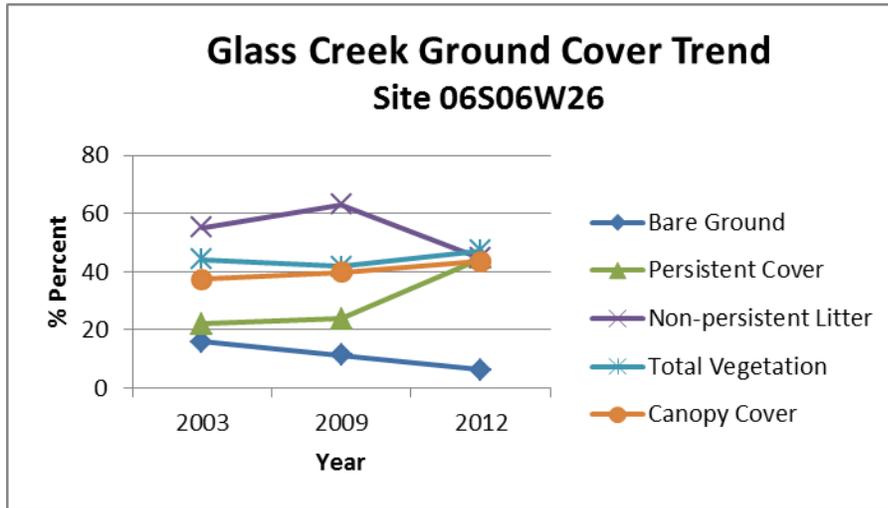
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Ground Cover Trend

Ground cover trend data were collected in pasture 2 at the nested plot frequency transect 06S06W26 in 2003, 2009, and 2012 (Figure Soil-2). Bare ground and non-persistent litter show a decline while persistent cover is significantly (Student’s t-test; p-value <0.1) increasing. Total

vegetation is static over the long term and non-significantly increasing over the short term. Canopy cover is static over the short term and increases over the long term. Basal vegetation remains static over the long term. Basal vegetation data for 2009 were not used due to inconsistencies in data recording; they therefore were excluded from short-term trend while long-term values remained.

Figure Soil-2: Ground Cover data from trend site in pasture 2 for the Glass Creek FFR (2003, 2009, and 2012)



A general static to upward trend is apparent in all cover components except non-persistent litter, which is decreasing. A positive response for bare ground is reflected in its slight decrease suggesting that bare soils are well below expected values (40 to 50 percent) for Shallow Claypan 12-16” ecological sites, providing protection from rainfall impact. Shrub frequency (see Standard 4) suggests a decline in the otherwise relatively elevated presence of low sagebrush; this does not correspond with the primarily static canopy cover observation.

Deep-rooted bunchgrasses are practically absent and even Sandberg bluegrass is on the decline. Grass frequency data (see Standard 4) shows that this site is dominated by invasive annuals, primarily cheatgrass, North African grass, field brome, and medusahead. The presence of such extensive annual vegetation, even though not desirable, has likely contributed to low bare ground values and high litter readings. Overall interpretations of trend data suggest that ground cover conditions are primarily static to slightly improving. Frequency trend data, however, displays the continuous deterioration of biotic conditions due to the near absence of deep-rooted bunchgrasses and invasion of annuals.

2005 Photos

Additional photos were taken during a visit in 2005 at rangeland health assessment sites RH2B and RH2C. Based on actual use data, the pasture was grazed from mid-April until the beginning of June during that year. Photos for RH2B show a general mix of shallow and deep-rooted bunchgrasses and no obvious soil disturbance. Site RH2C, however, includes several photos displaying mechanical hoof damage and pugging that has resulted in reduced vegetative and gravel cover and exposes the now hardened bare soils. Unfortunately, no field visit comments are

available.

2013 Field Observations

During a field visit in 2013 (see Owyhee Field Office project file), observations near site RH2B include mostly historic and some active pedestaling. Bare ground was present but did not appear to be exceeding what is expected for the ecological site; however, patches of invasive annual litter mats often cover the landscape and hide underlying soil impacts. Water flow paths are generally small, surface gravel adds to stabilizing soils, and biological crusts and mosses were present. Physical impacts from hooves are localized. The greatest departure to reference conditions comes from an increase in invasive annuals, primarily cheatgrass, medusahead, and ventenata, which alter infiltration patterns and soil productivity.

Standard 2: Riparian Areas and Wetlands

Riparian Areas

There is approximately 0.9-mile of Cattle Creek in the Glass Creek Allotment on BLM administered lands. Riparian inventory data, monitoring data, assessments, and other information were used to assess the functioning condition. Cattle Creek was assessed as being in proper functioning condition as evidenced by the health and vigor of riparian vegetation and the amount of cover surrounding the stream. Riparian vegetation included a variety of willows, sedges, and rushes. Young, healthy willows are abundant, and the channel is improving and riparian area is expanding.

Table A2-1: Riparian Indicators and Functioning Condition Rating by Stream Segment

Riparian/Wetland Indicators:	BLM Stream Segment
	Cattle Cr.
Diverse age class/structure of hydric vegetation (6)	Y
Diverse composition of hydric vegetation (7)	Y
Vegetation reflects maintenance of soil moisture (8)	Y
Plant community comprised of bank stabilizing species (9)	Y
Hydric vegetation exhibits high vigor (10)	Y
Adequate hydric vegetation cover to protect banks and dissipate energy (11)	Y
Adequate large woody material (12)	Y
Point bars re-vegetating with hydric species (14)	Y
Noxious weeds are not increasing	Y
Overall functioning condition*	PFC
Pasture	2
Stream miles	0.9
Riparian acres	4.2

(Y=yes, N=no, Y/N=both) () - item # on Function/Health Assessment

* PFC- proper functioning condition, FAR- functioning at risk, NF- nonfunctioning (overall rating determined from examination of both riparian and channel/floodplain indicators)

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The reach of Cattle Creek was re-assessed as being in PFC in 2011 (Map RNGE-1A) because there was a functional floodplain, the riparian species were adequate and vigorous, and there was woody species regeneration.

Table RIPN-1: Glass Creek pasture 2 2011 assessment

Stream Name	Miles Assessed	Assessment Issues/ Impacts Identified	Total Miles
Cattle Creek	1.0 (FARU- 2000) (PFC- 2011)	2000- unstable beaver dam/ some areas of inadequate vegetation to protect banks/ areas with lateral instability	1.0

Springs

There are no known springs on the allotment.

Standard 3: Stream Channel/Floodplain

Stream channel and floodplain of Cattle Creek were assessed to be in proper functioning condition. Above the road, the stream channel is a Rosgen “E” channel type. Although meanders are not what would be expected for this channel type in this gradient, the stream is in good shape. Below the road the channel is not in as good as shape, but this is likely due to flow disturbance caused by the road and culvert. The stream channel will continue to improve as riparian shrubs and herbaceous species increase.

Table A3-1: Stream Channel/Floodplain Indicators and Functioning Condition Rating

Riparian/Wetland Indicators:	BLM Stream Segment
	Cattle Cr.
Floodplain inundated frequently (1)	Y
Beaver dams are active and stable (2)	NA
Sinuosity, w/d ratio, gradient in balance with landscape setting (3)	Y
Riparian area is widening or has achieved potential extent (4)	Y
Upland watershed not contributing to riparian degradation (5)	Y
Floodplain and channel characteristics dissipate energy (13)	Y
Lateral stream movement associated with natural sinuosity (15)	Y
System is vertically stable (16)	Y
No excessive erosion or deposition (17)	Y
Overall functioning condition*	PFC

Riparian/Wetland Indicators:	BLM Stream Segment
	Cattle Cr.
Pasture	2
Stream miles	0.9
Riparian acres	4.2

(Y=yes, N=no, Y/N=both) () - item # on Function/Health Assessment

* PFC- proper functioning condition, FAR- functioning at risk, NF- nonfunctioning (overall rating determined from examination of both riparian and channel/floodplain indicators)

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See supplemental information for Glass Creek under Standard 2 above.

Standard 4: Native Plant Communities

During 2003, three rangeland health worksheets were completed in Pasture 2 of this allotment. Pasture 1 was re-seeded following a 1981 prescribed fire; therefore that plant community is assessed as a rangeland seeding and is discussed under Standard 5. Long-term vegetation studies (Trend) were established in both pastures. Appendix E presents graphs of the frequency data, Table A4-1 summarizes the biotic integrity indicator ratings for Pasture 2, Appendix B presents individual indicator ratings by site, and the allotment map at the back of this document shows the location of the assessments and vegetation studies.

Table A4-1: Rangeland Health Evaluation Worksheet Summary

Standard 4-Native Plant Communities	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Pasture 2	7	11	6	3	0

^aSummarizes: 1 Loamy 11-13” and 2 Shallow Claypan 12-16” ecological sites

Pasture 2

RH2A represents the Loamy 11-13” ecological site in the northern portion of the pasture, the indicator for invasive plants rated in the extreme range of departure, due to the common occurrence of; cheatgrass, medusahead rye^a, and soft brome. Other indicators relating to biotic integrity rated in the none-to-slight or slight-to-moderate ranges of departure for the ecological site. The indicator for the reproductive capability of perennial plants was described as vigorous, and recruitment was observed, however seed production was slightly less than expected. Some decadence was observed in the shrubs, and some crown die-out was noted on perennial grasses.

RH2B, located in the central portion of the pasture, represents a Shallow claypan 12-16” ecological site. The plant community at this site was low sagebrush with exotic annual grasses

^a Medusahead is referred to as medusahead rye in this document; same plant.

as the dominant herbaceous species. Large perennial bunchgrasses were few and scattered in occurrence, and exhibited low vigor. The indicator for functional and structural groups rated in the moderate range of departure, mostly due to the loss of the larger perennial bunchgrasses, and the large increase of exotic annual grasses which included cheatgrass, medusahead rye, and smooth brome. As a result, the indicator for invasive plants rated in the moderate-to-extreme range. Plant mortality and decadence rated in the moderate range with crown die-out on bunchgrasses and shrub decadence observed.

RH2C, located in the southern portion of the pasture, represents a Shallow Claypan 12-16" ecological site. Three of the indicators of biotic integrity rated in the moderate range of departure for expected conditions for this ecological site. The indicator for plant mortality and decadence was described as moderate and associated with pedestaled grasses. Invasive plants also rated as moderate due to the amount of cheatgrass, smooth brome, and medusahead rye in the plant communities. The indicator for the reproductive capabilities of perennial plants also rated in the moderate range, worksheet comments for this indicator linked the rating to reduced seed production of interspatial grasses. Overall the plant community was dominated by low sagebrush with a herbaceous understory of Sandbergs bluegrass and vulpia.

Long-term Vegetation Monitoring (Trend)

A nested plot frequency transect (TR2A) is located at T 06S, R 06W Sec 26. It was established in 1983 and was revisited in 2003. Frequency data collected from this site shows a decrease of perennial grasses from 1983 to 2003. Sandberg bluegrass frequency decreased from 93% in 1983 to 60% in 2003. Bottlebrush squirreltail frequency decreased from 25% in 1983 to 13% in 2003. Low sagebrush frequency decreased from 100% in 1983 to 85% in 2003, and in 2003, the Japanese brome frequency was 40% and cheatgrass frequency was 23%. Low sagebrush is the dominant species at this site; in 2003, the mean density was approximately 16,000 plants per acre. Refer to Glass Creek Map for the location of the trend study site, Appendix E for nested plot frequency data.

Utilization

See Appendix F for utilization data. A complete use pattern map was prepared in 1988, 1990, 1992, 1994, and 1995 for pasture 1 and in 1989 and 1996 for pasture 2. Overall utilization in pasture 1 was light (20-39%) to moderate (40-59%) in 1988, 1994 and 1995; and moderate to heavy (60-79%) in 1992. Utilization of crested wheatgrass was light to moderate in pasture 1 in 1982, 1985, 1986, 1987, 1990, 1994, and 1995. Overall utilization in pasture 2 was light in 1989 and in 1996. Utilization near Cattle Creek in pasture 2 was moderate in 1996. Partial use pattern maps were prepared in 1993 for pasture 2 and utilization in the mapped areas was approximately moderate (59%).

Standard 4: Native Plant Communities

Five Rangeland Health Assessments (RHAs) for the Glass Creek allotment (0552) were completed in 2003. Two RHAs were completed in pasture 1 in the Loamy 11-13” ecological sites, with additional RHAs completed in pasture 2 covering Loamy 11-13” and Shallow Claypan 12-16” ecological sites. Additional photos were taken in both pastures during a visit in 2005 at rangeland health assessment sites RH2C, RH2C and RH2B.

Pasture 1 was re-seeded following a 1981 prescribed fire; therefore, that plant community is assessed as a rangeland seeding and is discussed under Standard 5. Long-term vegetation studies (trend) are established in both pastures. Appendix D presents graphs of the frequency data, Table VEG-1 summarizes the biotic integrity indicator ratings for pasture 2, Appendix B presents individual indicator ratings by site, and the allotment map at the end of this document shows the location of the assessments and vegetation studies.

Table VEG-1: Rangeland Health Evaluation Worksheet Summary

Standard 4-Native Plant Communities	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Pasture*1	10	6	2	0	0
Pasture*2	7	11	6	3	0

* Summarizes: 3 Loamy 11-13” or 2 Shallow Claypan 12-16” ecological sites

*Pasture 1 is discussed in Standard 5 (Seedings).

Pasture 2

Results for RH2A are the same as the previous evaluation, with a shift from deep to shallow-rooted grasses.

Grass frequency and shrub density trend

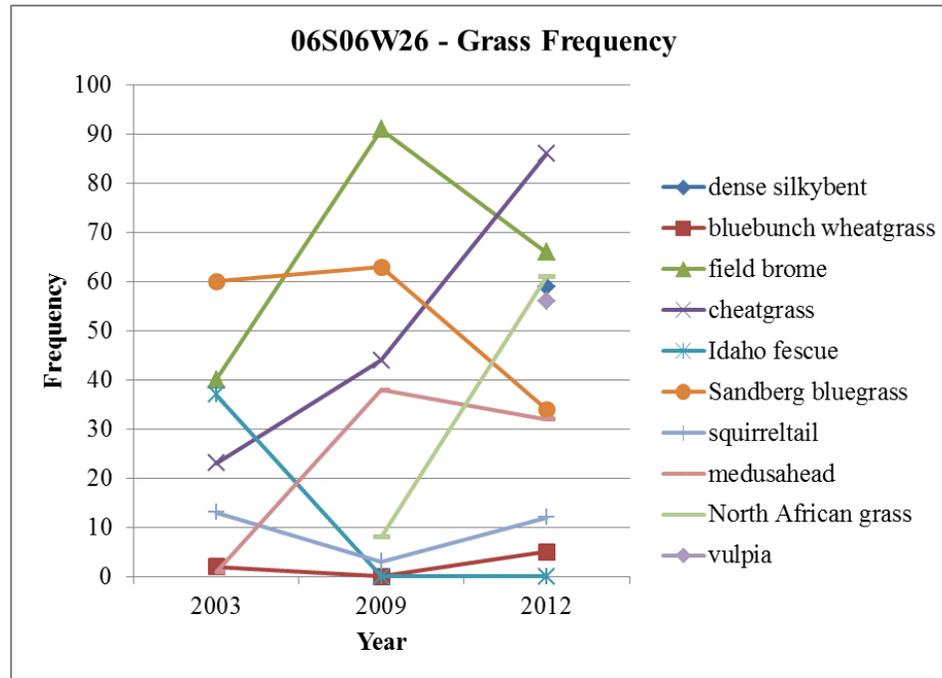
Grass frequency trend data were collected in pasture 2 at the nested plot frequency transect 06S06W26 in 2004, 2009, and 2012 (Table VEG-2 and Figure VEG-1). Over the long term, bluebunch wheatgrass is on a slightly upward trend, and Sandberg bluegrass and squirreltail are on downward trend. Idaho fescue has not been recorded on the site since 2003. Medusahead, cheatgrass, silkybent, field brome, and vulpia (invasive annuals) are increasing. Low sagebrush density is static.

Table VEG-2: Grass frequency data from trend site for pasture 2 of the Glass Creek (2004, 2009, and 2012)

Grasses		Percentage		
Species		2003	2009	2012
APIN	dense silkybent			59 ^s
AGSP	bluebunch wheatgrass	2	0	5
BRJA	field brome	40	91	66 ^s
BRTE	cheatgrass	23	44	86 ^s
FEID	Idaho fescue	37	0	0
POSE	Sandberg bluegrass	60	63	34 ^s
SIHY	squirreltail	13	3	12
TAAS	medusahead	1	38	32
VEDU	North African grass		8	61 ^s
VULPIA	vulpia			56

^svalues are statistically significant (p-value <0.1)

Figure VEG-1: Grass frequency data from trend site in pasture 2 for the Glass Creek (2004, 2009, and 2012)



Although shrub frequency suggests a decline in occurrence of low sagebrush, shrub density is static. Idaho fescue has not been recorded at the trend site and Sandberg bluegrass is on the decline. Grass frequency data shows that this site is dominated by invasive annuals, primarily cheatgrass, North African grass, field brome, and medusahead. A remnant population of bluebunch wheatgrass is present.

Overall interpretations of trend data suggest that the continuous deterioration of biotic conditions due to the near absence of deep-rooted bunchgrasses and increasing annual invasives on the site has compromised the biotic integrity of the site.

2005 Photos

Additional photos were taken during a visit in 2005 at rangeland health assessment sites RH2B and RH2C. Based on actual use data, the pasture was grazed from mid-April until the beginning of June during that year. Photos for RH2B show a general mix of shallow-rooted and deep-rooted bunchgrasses and one photo shows a dominance of invasive annuals (cheatgrass, field brome, and medusahead).

Utilization

Utilization data from 1996 to 2011 show slight to moderate use on bluebunch wheatgrass and crested wheatgrass in pasture 1. In 1999 heavy utilization was recorded on Idaho fescue and Sandberg bluegrass in pasture 2 (Table VEG-3).

Table VEG-3: Pasture 2 utilization on the Glass Creek allotment 1999-2011

Date	FEID	POSE	AGSP	SIHY
5/11/1999	70	70	3	
6/4/2007			42	
6/22/2009			15	
6/7/2011			3	33

Standard 5: Rangeland Seeding

During 2003, two rangeland health worksheets were completed in Pasture 1 of this allotment. Table A5-1 summarizes the biotic integrity indicator ratings for Pasture 1. Appendix B presents individual indicator ratings by site, and the allotment map at the back of this document shows the location of the assessments and vegetation studies. Pasture 1 was re-seeded following a 1981 prescribed fire, and therefore the plant community is assessed as a rangeland seeding and is discussed under this standard. Long-term vegetation studies (Trend) exist in both pastures, Appendix E presents graphs of the frequency data.

Table A5-1: Rangeland Health Evaluation Worksheet Summary

Standard 4-Native Plant Communities	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Pasture 1*	5	11	2	0	0

* Summarizes: 2 Loamy 11-13” ecological sites

Pasture 1

Two rangeland health worksheets were completed in this pasture, both represent the Loamy 11-13” ecological site.

At RH1A, located in the central portion of the pasture, drill rows from the 1981 seeding are still evident, crested wheatgrass is the dominant perennial grass, with both Wyoming and mountain big sagebrush re-established throughout the pasture. All biotic indicators at this assessment site rated in the none-to-slight or slight-to-moderate range of departure for expected conditions of this ecological site. Overall, the plant community at this site is adequate both in structure and function to support a diversity of perennial plant species. Crested wheatgrass, Sandberg bluegrass, and squirreltail were co-dominates and common throughout the site. Shrub composition was noted as nearly matching expectations for the site in comparison to ecological site descriptions. Seedstalk production on crested wheatgrass was adequate; however, on Sandberg bluegrass it was lower than expected. Plant mortality and decadence was rated in the slight-to-moderate category with the majority of dead crowns associated with pedestaled Sandberg bluegrass plants.

At RLH1B, located in the southern portion of the pasture, the indicators for plant mortality and decadence, and invasive plants rated in the moderate range of departure for this ecological site. The worksheets describe plant mortality as common on pedestaled plants, as evidenced by crown die-out on Sandberg bluegrass and some bluebunch wheatgrass. Additionally, worksheet comments suggest low vigor and decadence of mountain big sagebrush. Although the indicator for invasive plants rated in the moderate range, observer comments describe cheatgrass as common and medusahead rye and bur buttercup in trace amounts. Other indicators relating to biotic integrity rated in the none-to-slight or slight-to-moderate range of departure. Overall, comments for these indicators show good vigor and seedstalk production on bluebunch wheatgrass plants.

Long-term Vegetation Monitoring (Trend)

A nested plot frequency transect was established at T 06S, R 06W Sec 24 (TR1A) in 1984 and was revisited in 2003. This study site is in a crested wheatgrass seeding, data and photographs from 1984 indicate the seeding was successful. In 2003, this trend location could not be relocated. Therefore, the trend site was reestablished near the same location in 2004, and data was collected. Although it was impossible to reestablish the site exactly in the same location to what previously existed, the site was reestablished within the same stand of vegetation. Therefore, a reliable trend can not be determined between 1985 and 2004 at this time. However, because the site has been reestablished at the least within the same stand of vegetation, and as near as possible to the previous location, some general observations and comparisons are being made at this time. Generally, between 1985 and 2004, crested wheatgrass frequency appeared to remain unchanged. Sandberg bluegrass frequency was 50% in 1985 and 99% in 2004. Squirreltail frequency was 38% in 1985 and 10% in 2004. Cheatgrass, an exotic annual grass, was present in 100% of the plots in 1985 and only present in 43% of the plots in 2004. Big sagebrush frequency appeared unchanged with 3% in 1985 and 6% in 2004. Refer to Glass Creek Map for the location of the trend study site, Appendix E for nested plot frequency data.

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Standard 5: Rangeland Seeding

Pasture 1 was re-seeded following a 1981 prescribed fire, and therefore the plant community is

assessed as a rangeland seeding and is discussed here under standard 5. Long-term vegetation studies (Trend) exist in both pastures, Appendix D presents graphs of the frequency data. Additional photos were taken in pasture 1 at the site of 1981 seeding in 2004 and are discussed in pasture 1 analysis below.

Table VEG-4: Rangeland Health Evaluation Worksheet Summary

Standard 4-Native Plant Communities	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Pasture 1*	10	6	2	0	0

*Summarizes: 2 Loamy 11-13” ecological sites

Pasture 1

Two rangeland health worksheets were completed in this pasture, and both represent the Loamy 11-13” ecological site.

At RH1A, located in the central portion of the pasture, drill rows from the 1981 seeding are still evident, and crested wheatgrass is the dominant perennial grass, with both Wyoming and mountain big sagebrush re-established throughout the pasture. All biotic indicators at this assessment site rated in the none-to-slight or slight-to-moderate range of departure for expected conditions of this ecological site. Overall, the plant community at this site is adequate both in structure and function to support a diversity of perennial plant species. Crested wheatgrass, Sandberg bluegrass, and squirreltail were co-dominants and common throughout the site. Shrub composition was noted as nearly matching expectations for the site in comparison to ecological site descriptions. Seedstalk production on crested wheatgrass was adequate; however, on Sandberg bluegrass, it was lower than expected. Plant mortality and decadence was rated in the slight-to-moderate category, with the majority of dead crowns associated with pedestaled Sandberg bluegrass plants.

At RH1B, located in the southern portion of the pasture, the indicators for plant mortality and decadence and invasive plants rated in the moderate range of departure for this ecological site. The worksheets describe plant mortality as common on pedestaled plants, as evidenced by crown die-out on Sandberg bluegrass and some bluebunch wheatgrass. Additionally, photographs (2003 and 2005) and worksheet comments suggest low vigor and decadence of mountain big sagebrush. Although the indicator for invasive plants rated in the moderate range, observer comments describe cheatgrass as common and medusahead and bur buttercup in trace amounts. However, photographs from a 2005 site visit show copious amounts of medusahead present, creating a mat of litter. Other indicators relating to biotic integrity rated in the none-to-slight or slight-to-moderate range of departure. Overall, comments for these indicators show good vigor and seedstalk production on bluebunch wheatgrass plants, and shrub composition nearly matches site potential.

Grass frequency and shrub density trend

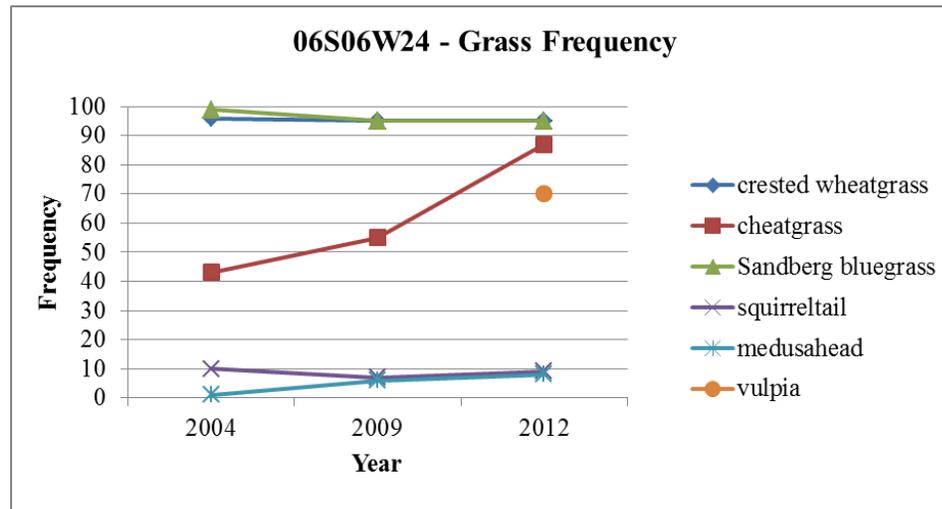
Grass frequency trend data were collected in pasture 1 at the nested plot frequency transect 06S06W24 in 2004, 2009, and 2012 (Table VEG-5 and Figure VEG-2). Over the long term, wheatgrass, Sandberg bluegrass, and squirreltail are static. Medusahead, cheatgrass and vulpia

(invasive annuals) are increasing the latter two significantly. Wyoming big sagebrush density is static.

Table VEG-5: Grass frequency data from trend site for pasture 1 of the Glass Creek (2004, 2009, and 2012)

Grasses		Percentage		
Species		2004	2009	2012
AGROP2/AGCR	Crested wheatgrass	96	95	95
BRTE	cheatgrass	43	55	87
POSE	Sandberg bluegrass	99	95	95
SIHY	squirreltail	10	7	9
TAAS	medusahead	1	6	8
VULPIA	vulpia			70

Figure VEG-2: Grass frequency data from trend site in pasture 1 for the Glass Creek (2004, 2009, and 2012)



Grass frequency data show that this old seeding is dominated by crested wheatgrass and Sandberg bluegrass. Remnant deep-rooted native bunchgrasses are practically absent but static, while cheatgrass is significantly increasing. Shrub frequency and density show static and relatively low presence in this burned area; this corresponds with canopy cover observations.

Overall interpretations of trend data suggest that grass frequency conditions are primarily static and display no improvement. Frequency trend data show that biotic conditions and diversity of perennial species are not diminishing over time.

2004 and 2005 Photos

Additional photos were taken during visits in 2004 and 2005. The 2004 visit occurred in the southwest corner of pasture 1 in Section 24 along the east-west trending road in the old seeding. Concurrent with descriptions at rangeland health assessment site RH1A above, rangeland drill

rows are still present at this site as well. Though the photos are of low quality, sagebrush has re-established the area. When favorable climatic events occur, seed production is adequate to enable recruitment of wheatgrass.

Utilization

Utilization data from 1995, 2009, and 2012 show light to moderate use on crested wheatgrass and bluebunch wheatgrass.

Standard 6: Exotic Plant Communities

This standard does not apply in this allotment. Although exotic plant species do occur in this allotment, they do not occur to the extent that any pasture would be managed as an annual plant community.

Standard 7: Surface and Ground Water Quality

There is approximately 0.9-mile of Cattle Creek in the Glass Creek Allotment on BLM administered lands. Cattle Creek is a tributary to Lone Tree Creek in the Jordan Creek sub-basin (Hydrologic Unit number 17050108). No streams in the Lone Tree Creek assessment unit (Hydrologic Unit number ID170150108SW002_02) are currently listed as water quality impaired by the Idaho Department of Environmental Quality (IDEQ 2005 Integrated (303(d)/305(b) Report). Assessment units are groups of similar streams within a sub-basin that have similar land use practices, ownership, or land management. IDEQ has not assessed water quality nor assigned specific beneficial uses to streams in the Lone Tree Creek assessment unit. Non-designated streams are managed by IDEQ to support the beneficial uses of secondary contact recreation, cold-water biota, agricultural water supply, wildlife habitat, and aesthetics.

The State evaluates support of beneficial uses through its Beneficial Use Reconnaissance Program (BURP; all IDEQ data and standards mentioned in this section are available on the IDEQ web site- see references listed in section IV of this document). IDEQ is currently evaluating water quality in the Jordan Creek sub-basin as part of the completion of a sub-basin assessment and TMDL (Total Maximum Daily Load) for Jordan Creek. The BLM also collects data to evaluate water quality and beneficial use support that can include riparian inventories, riparian Proper Functioning Condition (PFC) assessments, riparian habitat evaluation forms, stream survey forms, riparian aquatic data sheets, water temperature data, and water quality monitoring data (BLM data is available at the Owyhee Field Office).

Water Quality Monitoring - Cattle Creek is in proper functioning condition (PFC). No excessive sediment deposition or erosion was observed during riparian inventories. Riparian plant communities are diverse and vigorous and adequately stabilizing stream banks and channels. BLM and IDEQ have not collected stream temperature or bacteria samples on Cattle Creek.

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Idaho Department of Environmental Quality (IDEQ) designates basins, sub-basins, and assessment units in order to manage the state's waterways. The 2010 Integrated Report (303(d)/305(b)) uses assessment units within the sub-basin. Assessment units are groups of

similar streams within a sub-basin that have similar land use practices, ownership, or land management. Assessment units are assessed for pollutants and assigned beneficial uses with associated Water Quality Standards. Beneficial Use Reconnaissance Program (BURP) is a field assessment of stream segments (all IDEQ data and standards mentioned here are available on the IDEQ web site <http://www.deq.idaho.gov>).

Current IDEQ information identifies that the BLM portions of the two pastures of the Glass Creek allotment contain approximately 0.7 mile of stream that are not supporting the watershed's beneficial uses, and 2.2 miles that have not been assessed. The allotment contains portions of two AUs with associated beneficial uses and pollutants (Table RIPN-2). AU # ID17050108SW002_02 is currently not supporting the beneficial uses, and all of the streams that occur within the AU are on the 303(d) list of impaired waters based on the pollutants listed below.

Table RIPN-2: DEQ water quality summary

AU #	AU Name	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050108SW001_02	Lower Jordan Creek - 1st and 2nd order tributaries	not assessed	NA	NA
ID17050108SW002_02	Lone Tree Creek and tributaries - 1st and 2nd order	CWAL ¹ SS ² SCR ³	combined biota/ habitat bioassessments E. Coli	No

¹CWAL = cold water aquatic life

²SS = salmonid spawning

³SCR = secondary contact recreation

Standard 8: Threatened and Endangered, Special Status, Sensitive Species

For a summary of Special Status Animal Species, see Appendix H.

Botany

No federally listed plant species are known to occur within in the boundaries of the Glass Creek Allotment, although the U.S. Fish and Wildlife Service (USFWS) considers all of Idaho to be within the potential range of Ute ladies'-tresses (*Spiranthes diluvialis*), a federally threatened orchid species. This plant occurs in spring, seep, and riparian habitats. Due to the difficulty in narrowly defining potential habitat for this species, USFWS has chosen to apply a loose definition and requires Section 7 consultation only in three counties of southeast Idaho or in areas where the plant is known to occur (USFWS 2002). Specific surveys for this plant are recommended, but not required, prior to authorizing federal actions in southwest Idaho.

No BLM special status plant species are known to occur within the Glass Creek Allotment.

Evaluation Findings and Determination

Botany

No populations of special status plant species are known to occur in this allotment. There is insufficient information to determine site-specific impacts of livestock grazing on any special status plants that may occur in this allotment. Records show no reported special status plants in this allotment, so this standard is not applicable.

Information sources

Elemental Occurrences (EOs) for special status plant (SSP) populations are recorded in the Idaho Fish and Wildlife Information System (IFWIS) Species Diversity database (IDFG, 2011). EOs are derived by completion and review of Idaho rare plant observation reports. Other sources that were used to assess and evaluate the composition and condition of SSP habitats within the Glass Creek allotment include RHAs, photographs, field notes, Plants database (USDA NRCS, 2013), literature search, and information summarized above in RHA Standards in this document. Records show no reported special status plants in this allotment.

Wildlife

General Upland Habitat

The Glass Creek Allotment consists mostly of flats and gently rolling hills of low sage, with swales of basin big sagebrush (Table A8-1).

Although sagebrush and other shrubs are generally providing adequate woody cover and structure for sage grouse and other shrub-dependent wildlife, decreaser bunchgrasses such as bluebunch wheatgrass and Idaho fescue were reduced, and generally found only under the protective canopy cover of shrubs. RLH evaluations indicate that interspaces in many range sites were dominated by increaser bunchgrasses such as Sandbergs bluegrass, which generally provide inferior cover and structure for sage grouse and other ground nesting and foraging wildlife species.

The entire allotment is located within spring/summer/fall foraging ranges for both elk and antelope. Additionally, the allotment is included within winter/yearlong mule deer range with crucial mule deer winter range located directly north and adjacent to pasture 1- the seeding. Currently it appears that pasture 2 is providing minimally adequate big game habitat, primarily due to the common occurrence of invasive annuals grasses such as cheatgrass and medusahead rye in the understory, and lower than expected vigor and production observed in the existing perennial bunchgrasses throughout the pasture. Pasture 1, the seeding, appears to be providing adequate big game habitat. The dominant perennial bunchgrass, crested wheatgrass, appeared healthy and vigorous and producing adequate seedheads for recruitment. In addition, both Wyoming and mountain big sagebrush appeared to be reestablishing themselves throughout the pasture. However, in the southern portion of pasture 1 (RLH1B – found just outside of the seeding), indicators were rated in the moderate range for plant mortality (Sandbergs bluegrass), decadence, and invasive species (cheatgrass and medusahead rye). Additionally, it was noted that mountain big sagebrush appeared to be of low vigor and decadent. Although the seeding portion of pasture 1 is providing for adequate big game habitat, the southern portion of pasture 1

exhibits similar vegetative conditions as those observed throughout pasture 2, previously mentioned.

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Upland Habitat

Pasture 1

Pasture 1 is managed as a seeded plant community. The pasture was re-seeded after a prescribed fire in 1981. Dominant grass species are crested wheatgrass, Sandberg bluegrass and cheatgrass. Functioning wildlife habitat in the low sagebrush habitat type requires an overstory/understory interface of sagebrush and perennial grasses that create vegetation composition and structure to provide small and large mammals and birds security cover and forage resources. However, re-seeded communities inherently do not sustain the diversity of species associated with native plants communities. As a surrogate, the low sagebrush overstory and the crested wheatgrass understory are providing adequate (although not fully adequate) composition and structure that can be expected for a pasture seeded with an exotic species of perennial grass. At a minimum, habitat structure and function are meeting Standard 8 for wildlife. The co-dominance of cheatgrass is a concern and habitat conditions can be expected to decline as this species increases.

Pasture 2

Pasture 2 is managed as native plant community. Plant community information in Standard 4 identified that the herbaceous understory component is transitioning from a bluebunch wheatgrass reference community to a Sandberg bluegrass-cheatgrass community. The downward trend in the plant community composition is favoring more grazing-tolerant, shallow-rooted grass species. These species do not have the robust growth form or stature such as bluebunch wheatgrass and do not provide the plant composition, structure, and function for sagebrush steppe-dependent species.

Riparian Habitat

All 0.9 miles of stream riparian habitat in this allotment are located along Cattle Creek and are in properly functioning condition (PFC). Structural diversity, composition and vigor of hydric vegetation are all adequate and providing at least marginally suitable habitat for dependant special status species and other wildlife. Streambanks also support adequate hydric vegetation to protect streambanks and dissipate energy, which minimizes the risk of losing habitat to erosion during periods of high flow.

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Riparian Habitat

Pasture 2

Evaluation of Standards 2 and 3 identified that a short reach (0.9 miles) of Cattle Creek was properly functioning (see Standards 2 and 3). Because there is not any riparian area information specific to wildlife abundance or use, it is assumed that if a stream is assessed to be properly functioning, then it is providing at least minimum vegetation composition and structure to

support cover and forage needs for many terrestrial, avian, and aquatic species.

Evaluation of Standard 7 determined that 7.5 miles of stream are not supporting the watershed's beneficial uses for cold-water aquatic life and one unnamed stream is on the 303(d) list for impaired waters (see Standard 7).

Sage Grouse Habitat

There are four historic leks mapped within Glass Allotment, and three leks that were active in the 1990's are less than three miles from the allotment. Two breeding habitat evaluations were completed, one in each pasture (Table A8-2). Pasture 1 was burned in 1981, and although sagebrush is re-establishing, cover is not providing adequate sage grouse nesting habitat. Information concerning forb frequency and diversity is sparse although cover from tall grasses is primarily from scattered mature crested wheatgrass and bluebunch wheatgrass. The majority of Pasture 2 provides native vegetation as nesting habitat, and grass and forb abundance is greater in Pasture 1 than Pasture 2. Plant vigor and seedstalk production in a few range sites were reduced and providing questionable nesting and brood-rearing cover. Much of the loss of grasses and forbs in this allotment appears to have occurred in the past. Without an introduction of forbs in the future, this allotment currently provides poor nesting habitat.

Table A8-2: Sage Grouse Habitat Evaluation, Glass Cr Allotment, 2003.

Pasture	Location	Rating*	Vegetation	Season	Rational for Rating
1	6S 6W 24 SESW	U	Sage	Breeding	Few forbs grass cover low, although ht. ok, sagebrush cover low. Previously burned, seeded with crested wheatgrass.
2	6S 6W 26/35	M	Sage	Breeding	Sage cover suitable, but grass ht and cover marginal, forbs diversity and abundance marginal.

* Suitable (S), Marginal (M), and Unsuitable (U).

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Focal Species

Sage-grouse

On March 5, 2010, the USFWS (USDI USFWS, 2010) published a finding in the Federal Register that found the listing the greater sage-grouse was warranted but precluded by the need to take action on other species facing more immediate and severe extinction threats. The finding has changed the status of sage-grouse from a BLM Type 2 sensitive species to a candidate species under the ESA.

This allotment lies within the regional Snake River Plain Management Zone for sage-grouse. In 2012, preliminary priority habitat (PPH) and general priority habitat (GPH) were modeled to identify lands in Idaho important to sage-grouse sustainability. PPH includes breeding, late brood-rearing, and winter concentration areas. General priority habitat are lands that may serve as important corridors between PPH and habitat islands within corridors, or occupied habitats

characterized by low lek densities (Makela & Major, 2012). The BLM collaborated with respective state wildlife agencies to identify these areas. Modeling results indicate that all of the Glass Creek allotment (100 percent) lies within PPH (Table WDLF-1, Map WDLF-1A). One active lek is known to occur within pasture 1 and another active lek is documented adjacent to the boundary fence of pasture 2 and the Morgan allotment. This allotment provides seasonal breeding, upland summer, riparian, and winter habitat for sage-grouse.

Table WDLF-1: Acres¹ and portions of preliminary priority and general priority habitat within the Glass Creek allotment (Map WDLF-1A)

Allotment/Pasture Name	Acres of PPH Sagebrush Habitat in Allotment ²	Acres of PPH Perennial Grassland in Allotment	Acres of PPH Juniper Encroachment in Allotment	Acres of PGH in Allotment	Portion of Allotment in PPH/PGH
Pasture 1	833 (>99%)	0	0	1 (<1%)	834 (100%)
Pasture 2	932 (100%)	0	0	0	932 (100%)
Allotment Total	1,755 (>99%)	0	0	1 (<1%)	1,756 (100%)

¹PPH/PGH habitat acreage totals include public lands, state lands, and private property.

²PPH sagebrush can also include small amounts of perennial grasslands, conifer encroachment, and non-habitat.

Pasture 1

One sage-grouse breeding habitat assessments was conducted on June 12, 2012, on a Loamy 11-13” Basin big sagebrush / bluebunch wheatgrass community associated with a Shallow Claypan 12-16” ecological site. The pasture is managed as a seeded community (Standard 5).

Breeding Habitat Assessment

The sagebrush overstory is characterized by a marginal canopy cover (12 percent) and height (98.5 cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by a marginal canopy cover of perennial grasses (8 percent) and unsuitable canopy of perennial forbs (2 percent). Although the combined height of perennial grasses and forbs is suitable (40.6 cm), it is created by a marginal/unsuitable canopy cover of perennial grasses and forbs (Table WDLF-2). Overall, due to the combination of a mixed spreading/columnar sagebrush overstory and the marginal occurrence of perennial grasses and unsuitable occurrence of perennial forbs in the understory, this pasture is providing less-than-adequate (marginal) hiding and screening cover and forage for nesting and early brood-rearing sage-grouse.

Winter Habitat Assessment

This information was collected as part of a breeding habitat assessment conducted on June 12, 2012. Because the sagebrush community is not expected to change substantially over the course of a few months, this information can provide insight into winter habitat conditions later in the year. The sagebrush overstory is characterized by a suitable canopy cover (12 percent) and marginal height (98.5 cm). Overall, sagebrush occurrence and height are providing suitable winter cover and forage conditions for sage-grouse and are not limiting factors in this pasture (Table WDLF-2).

Table WDLF-2: Sage-grouse habitat indicators and pasture 1 ratings (Refer to Appendix C and Figure WDLF-1A (in Appendix B) for full assessment summaries and habitat indicator value ranges)

Habitat Indicator	Data	Breeding	¹ Winter
Sagebrush Canopy Cover (%)	12.0	marginal	suitable
Sagebrush Height (cm)	98.5	marginal	suitable
Sagebrush Form	mixed	marginal	
Perennial Grass and Forb Height (cm)	40.6	suitable	
² Perennial Grass Canopy Cover (%)	8.0	marginal	
Perennial Forb Canopy Cover (%)	2.0	unsuitable	
Preferred Forb Availability (#)	9	suitable	
Overall Pasture Evaluation Rating		marginal	suitable

¹Winter habitat ratings extrapolated from breeding habitat assessment information collected on 6/12/2012.

²Perennial grasses canopy cover does not include Poa species.

Pasture 2

One sage-grouse breeding habitat assessment was conducted on June 12, 2012, on a Shallow Claypan 12-16" Low sagebrush / bluebunch wheatgrass ecological site. The pasture is managed as a native plant community (Standard 4).

Breeding Habitat Assessment

The sagebrush overstory is characterized by a marginal canopy cover (42. percent) and suitable height (40.4 cm) with a suitable spreading shape. The understory is characterized by an unsuitable canopy cover of perennial grasses (0 percent) and a marginal canopy of perennial forbs (4 percent) with an unsuitable combined height (9 cm) of perennial grasses and forbs (40.6 cm) (Table WDLF-3). Overall, although the sagebrush overstory is showing favorable height and structure, the absence of perennial grasses and forbs in the understory that are a critical understory component shows that this pasture is not providing adequate breeding habitat conditions for nesting and early brood-rearing sage-grouse.

Winter Habitat Assessment

This information was collected as part of a breeding habitat assessment conducted on June 12, 2012. Because the sagebrush community is not expected to change substantially over the course of a few months this information can provide insight into winter habitat conditions later in the year. The sagebrush overstory is characterized by a suitable canopy cover (42 percent) and marginal height (40.4 cm). Overall, sagebrush occurrence and height are providing adequate winter cover and forage conditions for sage-grouse and are not limiting factors in this pasture (Table WDLF-3).

Table WDLF-3: Sage-grouse habitat indicators and pasture 2 ratings (Refer to Appendix C and Figure WDLF-1A for full assessment summaries and habitat indicator value ranges)

Habitat Indicator	Data	Breeding	¹ Winter
Sagebrush Canopy Cover (%)	42.0	marginal	suitable
Sagebrush Height (cm)	40.4	suitable	suitable
Sagebrush Form	spreading	suitable	
Perennial Grass and Forb Height (cm)	9.0	unsuitable	
Perennial Grass Canopy Cover (%)	0.0	unsuitable	
Perennial Forb Canopy Cover (%)	4.0	marginal	
Preferred Forb Availability (#)	8	marginal	
Overall Pasture Evaluation Rating		unsuitable	suitable

¹Winter habitat ratings extrapolated from breeding habitat assessment information collected on 6/12/2012.

Pygmy Rabbit Habitat

A 2005 pygmy rabbit survey of potentially suitable big sagebrush habitats failed to discover any evidence of recent or historic pygmy rabbit occupation. Occupied pygmy rabbit habitat was discovered less than 0.25 miles east of the allotment in 1995, although no evidence of recent activity was apparent during 2004 and 2005 monitoring.

GLUCH (0553)

Background

The Gluch Allotment is approximately six miles south of Jordan Valley, Oregon along the Idaho-Oregon Stateline, just south of the Pleasant Valley School (Gluch Map), and is part of the South Mountain Core Area. Elevations range from 4,540 to 4,560 feet, the terrain is flat to rolling; most landform features are rhyolitic in origin and consist of valley bottomlands and rolling hills.

The allotment is within the USDA Major Land Resource Area, D 25. The majority of the soils in the allotment are shallow-to-moderately deep, and well drained. Soils are clayey to loamy and vary in surface and subsurface rock fragments. These soils formed in residuum and alluvium derived predominantly from welded rhyolitic tuff. The associated ecological sites consist primarily of Loamy 11-13” with a basin big sagebrush and bluebunch wheatgrass plant community, and Shallow Claypan 12-16” with a low sagebrush, bluebunch wheatgrass, Idaho fescue plant community.

The Gluch Allotment is one management unit and is not divided into pastures. The allotment consists of 261 acres, of which; 241 acres are BLM administered public lands and 20 acres are privately owned, there are no state owned lands in this allotment (Gluch Map).

Livestock Use History

The BLM issued a Proposed Decision reducing the active AUMs in the Gluch Allotment from 128 to 98 dated December 29, 1981. A Final Decision was issued on December 29, 1982 and an Amended Final Decision on September 21, 1984. The Supplement split the former Robert Gluch Individual Allotment into the current Gluch (0553) and Gluch FFR (0466) Allotments. Under the Amended Final Decision, the new Gluch Allotment was authorized for 50 AUMs of permitted use and the Gluch FFR Allotment, 105 AUMs of permitted use. Total licensed use ranged between 128 and 131 AUMs from 1975 to 1982. Total actual use ranged between 30 and 82 AUMs from 1985 to 2005, averaging 49 AUMs (see Table B1 and Appendix D).

Prior to 1982, the grazing authorization included a season of use from April 1 to July 31 with 32 cow/calf pairs. The 1982 Decision specified a season of use from April 16 to November 15 with deferred grazing treatments. The Amended 1984 Final Decision authorized the implementation of the Gluch Allotment Management Plan (AMP) which outlined a 2-year deferred grazing rotation of spring use (4/16-6/15) the first year, followed by late summer-fall use (8/1-11/15) in the second year. Although the Amended Final Decision and AMP prescribed a 2-year deferred grazing rotation, the allotment has been grazed early (March and April) spring annually.

The following Table (B1) summarizes livestock use (compiled from Actual Use Reports or Grazing Authorizations) for the Gluch Allotment (0553) from 1990 to 2005:

Table B1: Season of Use, Animal Unit Months (AUMs), Gluch Allotment

Year	Season of Use	AUMs	Year	Season of Use	AUMs
1990	4/1-5/15	66	1998	3/15-3/31, 4/30-5/15	42
1991	3/15-4/15	43	1999	3/19-4/13	42
1992	3/15-4/15	49	2000	3/16-4/19	42
1993	4/1-4/15	30	2001	3/16-4/15	51
1994	3/15-4/15	42	2002	3/16-4/15	51
1995	3/15-4/15	58	2003	3/16-4/15	43
1996	3/15-4/30	82	2004	3/16-4/15	51
1997	3/15-4/15	46	2005	3/16-4/15	51

Actual Use

Actual use ranged from 22 to 55 AUMs for the allotment, with an average of 44 AUMs (Table LVST-2).

Table LVST-2: Season of use, actual use (AUMs)¹ Gluch allotment from 1997 to 2012

Year	Pasture 1	AUMs
2012	3/24-4/25	46
2011	4/1-5/2	48
2010	3/17-4/12	45
2009	3/23-5/1	55
2008	3/30-4/15	53
2007	3/16-5/6	42
2006	4/9-5/17	22
2005	3/16-4/10	45
2004	3/16-4/15	51
2003	3/16-4/15	43
2002	3/24-4/16	39
2001	3/16-4/15	51
2000	3/16-4/19	42
1999	3/19-4/13	42
1998	3/15-3/31; 4/30-5/15	42
1997	3/17-4/10	46

Rangeland Health Standards

Standard 1: Watersheds

Table B1-1: Rangeland Health Evaluation Summary

Standard 1- Watersheds	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Gluch	6	5	1	0	0

^{*}Summarizes: 1 Loamy 11-13” ecological site

Rangeland Health Evaluation

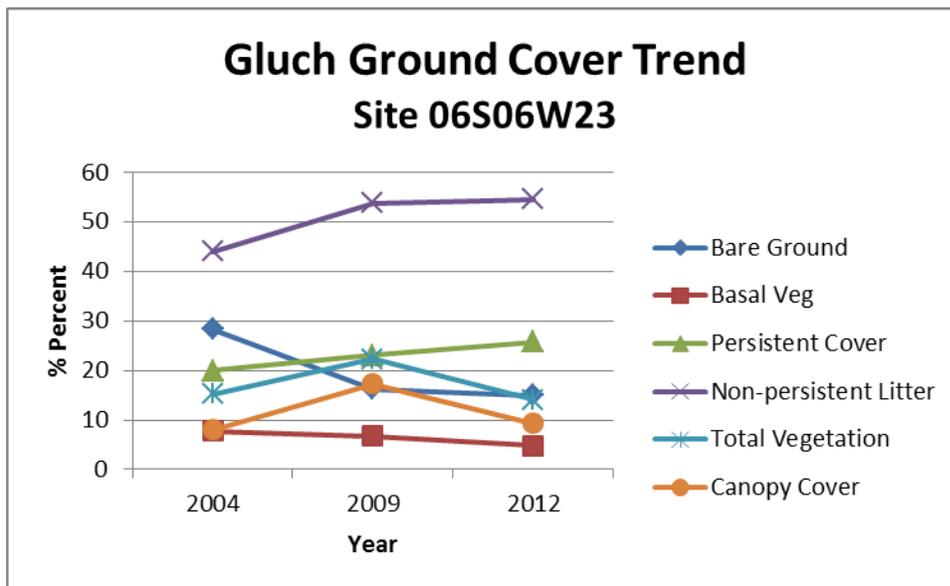
One rangeland health evaluation worksheet was completed for this allotment representing the Loamy 11-13” ecological site. The amount and distribution of ground cover, including plant litter, was adequate for site stability. Gravel, vegetative cover, biological soil crusts, and plant litter stabilize the soil surface. The amount and distribution of bare ground was slightly more

than expected and mostly associated with water flow paths and physical soil damage. Rills and/or gullies and sub-surface compaction layers were not observed, which is as expected for this ecological site. Water flow patterns rated in the moderate range of departure for expected conditions for this ecological site. The worksheets described the flow patterns of various lengths, with some cut areas, around shrubs, but appearing to be from past events. Pedestaling of Sandberg bluegrass was noted as common but appeared to be from past erosion, as indicated by the presence of biological soil crusts on the sides of many of the pedestals.

Ground Cover Trend

Ground cover trend data were collected in pasture 1 at the nested plot frequency transect (06S06W23) in 2004, 2009, and 2012 (Figure Soil-3). Long-term ground cover trend shows that basal vegetation and bare ground have decreased with the latter significantly (Student's t-test; p-value <0.1). Persistent cover significantly increased while increases in non-persistent litter were non-significant. Total vegetation and canopy cover were static. Short-term ground cover trend for basal vegetation, total vegetation, and canopy cover decreased. Persistent cover increased while bare ground and non-persistent litter remained static. None of the short-term readings were significant.

Figure Soil-3: Ground Cover data from trend site 06S06W11 for the Gluch allotment (2004, 2009, and 2012)



The site displays an upward trend between 2004 and 2009 for all ground cover values, including bare ground. As of 2009, all readings, except for persistent cover, have since become relatively static. Shrub frequency and density are on the increase for Wyoming big sagebrush and do not coincide with ground cover trend over the recent year.

Deep-rooted bunchgrasses are well represented, although grass frequency trend shows that the site is dominated by shallow-rooted Sandberg bluegrass and cheatgrass. Medusahead and field brome have been on the increase over the more recent years and are competing with native

species, potentially contributing to the static ground cover trend over the last years.

Overall interpretations of trend data suggest that ground cover conditions are primarily static over the long term after an upward trend between 2003 and 2009. Bare ground, however, has decreased and remains low. Grass frequency trend data show that biotic conditions are not improving, as deep-rooted bunchgrasses have remained static while invasive annuals continue to increase.

2004 Photos

Additional photos were taken during a visit in 2004 in the northwestern quadrant of the allotment. Bluebunch wheatgrass was noted to be dominant and vigorous, while cheatgrass was common. Although the photos are of low quality, bare soil is apparent as part of water flow patterns, trail use, and some physical damage.

2013 Field Observations

A field visit in 2013 (see Owyhee Field Office project file) to the eastern portion of the Gluch allotment showed similar conditions to previous observations made for rangeland health assessment site RH1A, although less pedestaling and flow patterns were present while soils were stable at the visited location.

Standard 2: Riparian Areas and Wetlands

There are no springs or streams on this allotment; therefore this standard does not apply.

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Approximately 0.5 miles of an unnamed creek traverses the Gluch allotment. BLM staff visited the reach in 2013 and it was ephemeral; therefore, the PFC protocol was not applicable. Any impacts or issues are discussed under Standard 1 above.

Standard 3: Stream Channel/Floodplain

There are no springs or streams on this allotment; therefore this standard does not apply.

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See information under Standard 2 above.

Standard 4: Native Plant Communities

Table B4-1: Rangeland Health Evaluation Worksheet Summary

^Standard 4-Native Plant Communities	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Gluch	3	4	0	2	0

^ See Appendix B for individual evaluations and indicators.

*1Summarizes: 1 Loamy 11-13” ecological site

Rangeland Health Field Assessment

A rangeland health assessment worksheet was completed in a Loamy 11-13" (RH1A) ecological site (Table B4-1). Refer to Map 1 for the location of the rangeland health field assessment and Appendix B for individual indicator ratings.

Bluebunch wheatgrass is the dominant understory species which are common in the shrub interspaces. However, throughout the site, the distribution of bluebunch wheatgrass was lower than expected. Because the larger, more productive bunchgrasses are slightly below potential, smaller increaser bunchgrasses, but more disturbance tolerant grasses such as Sandberg bluegrass and cheatgrass have expanded into the vacant niches. Plant vigor and seed stalk production appear adequate to enable reproduction and recruitment of plants in response to favorable climatic events. Diverse age classes of many species are present indicating good vigor and reproductive capabilities. The indicators for plant mortality and decadence, and invasive species rated in the moderate-to-extreme range of departure of expected conditions for this ecological site. Some decadence was observed on mountain big sagebrush and crown die-out was observed on pedestaled bunchgrasses. Although the indicator for invasive plants rated in the moderate-to-extreme range of departure, photographs and field notes indicate a more appropriate rating would be moderate or slight-to-moderate.

Long-term Vegetation Monitoring

A nested plot frequency transect (NPFT) and photo plot (PP) study site is located at T 06S R 06W Sec 23, it was established in 1985 and was re-read in 2004. Gluch Map shows the location of the monitoring study and Appendix E contains graphs of the nested plot frequency data. Bluebunch wheatgrass frequency increased from 56% in 1985 to 67% in 2004. Idaho fescue frequency decreased slightly from 18% in 1985 to 13% in 2004. Sandberg bluegrass frequency was 96% in 1985 and 93% in 2004, and cheatgrass frequency was only recorded in 2004, at 93%. Big sagebrush frequency was 9% in 1985 and increased to 16% in 2004.

Landscape view photographs show the native plant community is intact with big sagebrush and large bunchgrasses dominant. The vegetative cover appears lower in 2004 than in 1985 with a corresponding increase in bare ground. The photographs also show evidence of some big sagebrush decadence, but good vigor of bluebunch wheatgrass with abundant seed stalks present. Diverse age classes of species was noted and recruitment of bluebunch wheatgrass.

Utilization

Utilization data, collected between 1981 and 1995, ranged from 2.5% to 47% (Appendix F). A complete use pattern map was prepared in 1989, 1990, 1992, and in 1994 for the Gluch Allotment. Overall utilization was slight in 1989 and 1992, light (20% to 39%) in 1990, and moderate (40% to 59%) in 1994. Utilization on level areas and along drainages was light (20% to 39%) in 1997 and moderate (40% to 59%) in 1994, 1996 and 1998. A partial use pattern map was prepared in 1995. Utilization in the mapped area was light (20% to 39%) in 1995.

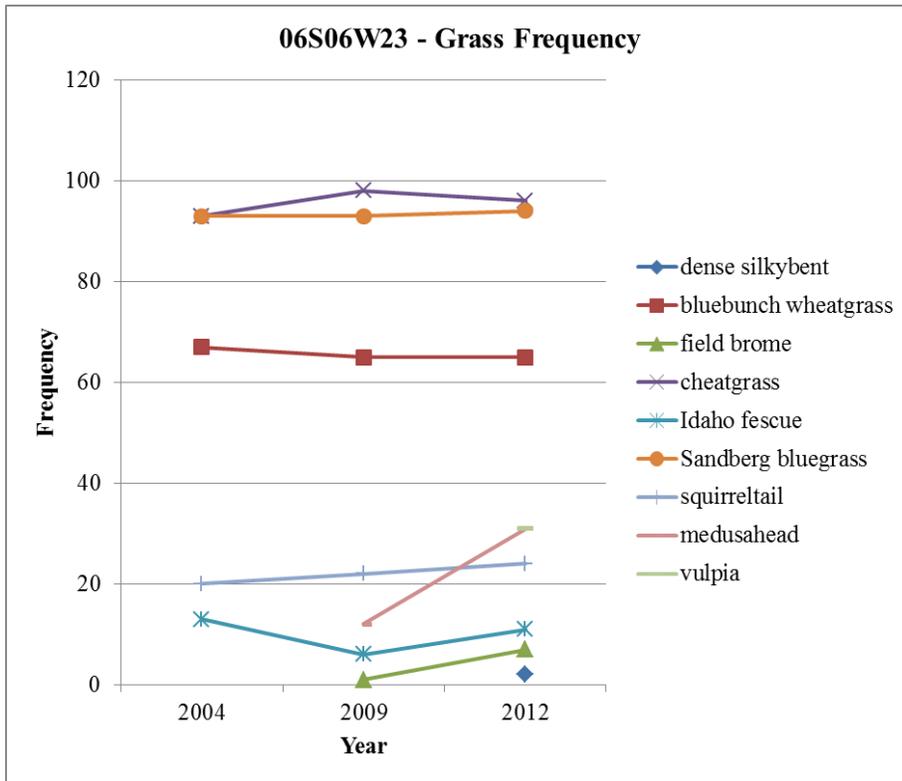
Grass frequency and shrub density trend

Ground cover trend data were collected in pasture 1 at the nested plot frequency transect 06S06W23 in 2004, 2009, and 2012 (Table VEG-6 and Figure VEG-3). Long-term grass frequency trend shows bluebunch wheatgrass, Sandberg bluegrass static and short term increases in Idaho fescue, squirreltail, and invasive annuals (field brome, silkybent, medusahead and vulpia). Wyoming big sagebrush density shows long term and short term increases and yellow rabbitbrush static.

Table VEG-6: Grass frequency data from trend site 06S06W23 for the Gluch (2004, 2009, and 2012)

Grasses		Percentage		
Species		2004	2009	2012
APIN	dense silkybent			2
AGSP	bluebunch wheatgrass	67	65	65
BRJA	field brome		1	7
BRTE	cheatgrass	93	98	96
FEID	Idaho fescue	13	6	11
POSE	Sandberg bluegrass	93	93	94
SIHY	squirreltail	20	22	24
TAAS	medusahead		12	31
VULPIA	vulpia			31

Figure VEG-3: Grass frequency data from trend site 06S06W11 for the Gluch (2004, 2009, and 2012)



Deep-rooted bunchgrasses are well represented, though grass frequency trend shows that the site is dominated by shallow-rooted Sandberg bluegrass, bluebunch wheatgrass, and cheatgrass. Overall interpretations of trend data suggest that grass frequency are primarily static and biotic conditions are maintained with a shift to shallow rooted bunchgrasses; however, invasive annuals continue to increase on the site.

Utilization

Utilization data collected on bluebunch wheatgrass in 2009 show 23 percent utilization, data in 2010 show 29 percent, and data in 2011 show 3 percent; this corresponds with overall light use.

Standard 5: Rangeland Seeding

This standard does not apply to this allotment.

Standard 6: Exotic Plant Communities

This standard does not apply to this allotment.

Standard 7: Surface and Ground Water Quality

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Idaho Department of Environmental Quality (IDEQ) designates basins, sub-basins, and assessment units in order to manage the state’s waterways. The 2010 Integrated Report

(303(d)/305(b)) uses assessment units (AUs) within the sub-basin. Assessment units are groups of similar streams within a sub-basin that have similar land use practices, ownership, or land management. Assessment units are assessed for pollutants and assigned beneficial uses with associated Water Quality Standards. The Beneficial Use Reconnaissance Program (BURP) is a field assessment of stream segments (all IDEQ data and standards mentioned here are available on the IDEQ web site <http://www.deq.idaho.gov>).

Although none of the streams that occur on BLM lands within the allotment were identified by BLM for assessment, current IDEQ information identifies that the BLM portions of the Gluch allotment contains approximately 0.6 mile of stream that is not supporting the watershed's beneficial uses. The allotment contains a portion of AU #ID17050108SW002_02 (Table RIPN-3) with associated beneficial uses and pollutants. The AU is currently not supporting the beneficial uses, and all of the streams that occur within the allotment are on the 303(d) list of impaired waters.

Table RIPN-3: DEQ water quality summary

AU #	AU Name	Beneficial Use Not Meeting	Pollutant/Pollution	TMDL
ID17050108SW002_02	Lone Tree Creek and tributaries - 1st and 2nd order	CWAL ¹ SS ² SCR ³	combined biota/habitat bioassessments E. Coli	No

¹CWAL = cold water aquatic life

²SS = salmonid spawning

³SCR = secondary contact recreation

Standard 8: Threatened and Endangered, Special Status, Sensitive Species

For a summary of Special Status Animal Species, see Appendix H.

Botany - No federally listed plant species are known to occur in this allotment, although the U.S. Fish and Wildlife Service (USFWS) considers all of Idaho to be within the potential range of Ute ladies'-tresses (*Spiranthes diluvialis*), a federally threatened orchid species. This plant occurs in spring, seep, and riparian habitats. Due to the difficulty in narrowly defining potential habitat for this species, USFWS has chosen to apply a loose definition and requires Section 7 consultation only in three counties of southeast Idaho or in areas where the plant is actually found (USFWS 2002). Surveys specifically for this plant are recommended prior to authorizing federal actions in southwest Idaho, but not required.

No BLM special status plant species are currently known to occur within this allotment.

Botany

No populations of special status plant species are known to occur in this allotment. There is insufficient information to determine site-specific impacts of livestock grazing on any special status plants that may occur in this allotment. Records show no reported special status plants in this allotment, so this standard is not applicable.

Information sources

Elemental Occurrences (EOs) for special status plant (SSP) populations are recorded in the Idaho Fish and Wildlife Information System (IFWIS) Species Diversity database (IDFG, 2011). EOs are derived by completion and review of Idaho rare plant observation reports. Other sources that were used to assess and evaluate the composition and condition of SSP habitats within the Gluch allotment include RHAs, photographs, field notes, Plants database (USDA NRCS, 2013), literature search, and information summarized above in this document. Records show no reported special status plants in this allotment.

Wildlife

General Upland Habitat

This allotment is flat to slightly rolling and is primarily mountain big sagebrush. There is a large shallow reservoir, which provides seasonal habitat for waterfowl, shorebirds, and amphibians. This allotment also includes spring/summer/fall range for both elk and antelope; and winter/yearlong range for mule deer (1999 ORMP). As stated under Standard 4 of this assessment, shrubs and herbaceous vegetation are generally as expected, and providing suitable forage and habitat for dependent special status species and sagebrush obligate wildlife, and the previously mentioned big game wildlife.

Upland Habitat

Standard 4 identified that the native plant community trends were overall static and are maintaining the transition of plant community dominance from large buchgrasses (e.g., bluebunch wheatgrass) to an increase in more grazing-tolerant species (e.g., Sandberg bluegrass and cheatgrass). The transition in plant community composition is a concern because increaser species do not provide adequate plant composition, structure, and function for sagebrush steppe-dependent species. However, at present, the community is providing adequate composition and structure for most wildlife species and is therefore meeting Standard 8.

Riparian Habitat

Evaluation of Standard 7 determined that 0.6 miles of streams within the Gluch allotment are on the 303(d) list for impaired waters and are not supporting the watershed's beneficial (see Standard 7).

Sage Grouse Habitat

No active or historic leks are known to occur within the allotment; however three active leks are located within five miles of the allotment. The habitat evaluation (Table B8-2) showed suitable breeding habitat. Sagebrush and large bunchgrasses are providing adequate cover, although forbs are sparse.

Table B8-2: Sage Grouse Habitat Evaluation, Gluch Allotment, 2003.

Location	Rating*	Vegetation	Season	Rational for Rating
6S 6W 23 SWNW	S	Mtn big sagebrush	Breeding	Grass and forb height good, cover adequate; sagebrush cover adequate.

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Focal Species

Sage-grouse

On March 5, 2010, the USFWS (USDI USFWS, 2010) published a finding in the Federal Register which found that listing the greater sage-grouse was warranted but precluded by the need to take action on other species facing more immediate and severe extinction threats. The finding has changed the status of sage-grouse from a BLM Type 2 sensitive species to a candidate species under the ESA.

This allotment lies within the regional Snake River Plain Management Zone for sage-grouse. In 2012, preliminary priority habitat (PPH) and general priority habitat (GPH) were modeled to identify lands in Idaho important to sage-grouse sustainability. PPH includes breeding, late brood-rearing, and winter concentration areas. General priority habitat are lands that may serve as important corridors between PPH and habitat islands within corridors, or occupied habitats characterized by low lek densities (Makela & Major, 2012). The BLM collaborated with respective state wildlife agencies to identify these areas. Modeling results indicate that all of the Gluch allotment (100 percent) lies within PPH (Table WDLF-4, Map WDLF-1B). No active leks are known to occur within this allotment. This allotment provides seasonal breeding, upland summer, riparian, and winter habitat for sage-grouse. No sage-grouse habitat assessments have been collected in this allotment.

Table WDLF-4: Acres¹ and portions of preliminary priority and general priority habitat within the Gluch allotment (Map WDLF-1B)

Allotment/Pasture Name	Acres of PPH Sagebrush Habitat in Allotment ²	Acres of PPH Perennial Grassland in Allotment	Acres of PPH Juniper Encroachment in Allotment	Acres of PGH in Allotment	Portion of Allotment in PPH/PGH
Allotment Total	261 (100%)	0	0	0	261 (100%)

¹PPH/PGH habitat acreage totals include public lands, state lands, and private property.

²PPH sagebrush can also include small amounts of perennial grasslands, conifer encroachment, and non-habitat.

GLUCH FFR (0466)

Background

The Gluch FFR Allotment is approximately four miles south of Jordan Valley, Oregon and crosses the Idaho-Oregon Stateline, (Gluch FFR Map), and is part of the South Mountain Core Area. Elevations range from 4,500 to 4,600 feet. The terrain is flat to rolling. Most landform features are rhyolitic in origin, consisting primarily of valley bottomlands and rolling hills.

The allotment is within USDA Major Land Resource Area, D 25. The majority of the soils in the allotment are shallow to moderately deep and well drained. Soils are clayey to loamy and vary in surface and subsurface rock fragments. These soils formed in residuum and alluvium that were derived predominantly from welded rhyolitic tuff. The associated ecological sites consist primarily of Loamy 11-13” (basin big sagebrush, bluebunch wheatgrass community) and Shallow Claypan 12-16” (low sagebrush, bluebunch wheatgrass, Idaho fescue community).

The Gluch FFR Allotment is one management unit and is not divided into pastures. The allotment consists of approximately 2,180 acres, of which 719 are BLM administered public lands, 1,400 are State lands, and 58 are private (Gluch FFR Map). In 1983, a prescribed fire burned approximately 150 acres in this allotment, it was re-seeded with crested wheatgrass which did not establish very well, and remains scattered throughout the current native plant community.

Livestock Use History

The BLM issued a Proposed Decision reducing the active AUMs in the Gluch Allotment from 128 to 98 dated December 29, 1981. A Final Decision was issued on December 29, 1982 and an Amended Final Decision on September 21, 1984. The Supplement split the former Robert Gluch Individual Allotment into the current Gluch (0553) and Gluch FFR (0466) Allotments. Under the Amended Final Decision, the new Gluch Allotment was authorized for 50 AUMs of permitted use and the Gluch FFR Allotment, 105 AUMs of permitted use.

Total actual and licensed use on the Idaho portion of the Gluch FFR Allotment ranged between 49 and 105 AUMs from 1990 to 2006 and averaged 70 AUMs (Table C1, Appendix D). Levels of use under the State of Oregon lease on the Oregon portion of the Gluch FFR Allotment are not documented. The Proposed Decision outlining livestock grazing was issued on September 21, 1984 identified the season of use and grazing management in Gluch FFR Allotment as discretionary, with exception to utilization levels stipulated to not exceed 50% of the current year’s growth. The season of use identified on the grazing permit is December 1-31 for billing purposes only, allowing the permittee to grazing cattle any time during the grazing year (3/1-2/28) at the permittee’s discretion?

Livestock Use is summarized from Actual Use Reports or Grazing Authorizations, from 1990 to 2006 in Table C1, below.

Table C1: Season of Use and Actual Use (AUMs) Gluch FFR Allotment

Year	AUMs	Season of Use	Year	AUMs	Season of Use
1990	66	4/1-5/12	1999	42	3/10-4/13
1991	43	3/20-4/20	2000	42	3/16-4/19
1992	49	3/20-4/25	2001	105	3/15-5/31
1993	30	4/1-4/20	2002	56	3/24-6/5
1994	42	3/18-4/25	2003	48	4/27-7/3
1995	58	3/17-4/21	2004	105	3/16-5/31
1996	66	3/15-4/15	2005	0	Rest
1997	46	3/17-4/10	2006	54	4/10-4/27, 5/2-5/11
1998	42	3/25-5/15			

Allotment History

The Gluch FFR allotment actual use was reported as one pasture; however, there have been fences in place on the allotment since at least the early 1980s (see allotment map in Appendix H). Pasture 1 has been used in the winter and spring repeatedly for a feed ground January 1 through April 1. Pasture 2 has been used repeatedly in the spring April 1 to May 1; pasture 3 has been used repeatedly in the spring May 1 to June 1. Pasture 4 was used in conjunction with the hay fields mainly for fall use. However, it has been used any time of year repeatedly; use was authorized under an exchange-of-use agreement. Pasture 5 is a water gap with the reservoir and minimal Idaho BLM lands are associated with this pasture; it is mostly made up of Oregon state lands and is used in the spring and summer.

Actual Use

Actual use ranged from 20 to 105 AUMs for the allotment, with an average of 54 AUMs. Gluch FFR has been reported as one pasture; however there are now five pastures (Table LVST-3). This data is incomplete as the allotment has been used as 5 different pastures; not a single allotment as reported.

Table LVST-3: Season of use and actual use (AUMs)¹ for the Gluch FFR allotment 1997 to 2012

Year	Allotment	AUMs
2012	4/15-5/6	92
2011	4/2-4/7	20
2010	4/19-5/6	43
2009	5/2-5/20; 8/6-8/16	58
2007	4/22-5/30	27
2006	4/10-5/11	54
2005	Rest	--
2004	6/16-5/31	105
2003	4/27-7/3	48
2002	3/24-5/26	56
2001	3/15-5/31	105
2000	3/16-4/19	42
1999	3/10-4/13	42
1998	3/25-5/15	42
1997	3/17-4/10	46

--No use

Rangeland Health Standards

Standard 1: Watersheds

Table C1-1: Rangeland Health Evaluation Summary

Standard 1-Watersheds	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Gluch FFR	5	2	3	2	0

*Summarizes: 1 Loamy 11-13” ecological site

Rangeland Health Evaluation

2013 Supplement to the Gluch FFR Rangeland Health Standards and Guidelines Assessments

Pasture 1

Based on a re-configuration of pastures due to existing fence lines, a new rangeland health assessment was completed in 2013 at a Loamy 11-13” ecological site (Table SOIL-1; Appendix B) in what is now pasture 1 (Appendix H - Map RNGE-1B).

Table SOIL-1: 2013 Rangeland Health Evaluation Summary

Standard 1 Watersheds	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Gluch FFR* ¹	4	2	5	1	0

*¹Summarizes: 1 Loamy 11-13” ecological site

Plant community composition and distribution relative to infiltration and run-off rated in the moderate-to-extreme range of departure from expected conditions for this ecological site. Bare ground was moderate with little surface gravel present to further stabilize surface soils. Invasive annuals are widespread, and the amount of litter is very low and rated moderate due to the absence of perennial deep-rooted vegetation and native forbs, shrub mortality, and an overall lack of vegetative cover. Compaction is widespread and rated moderate, while localized accelerated erosion in the form of water flow patterns and pedestals are in the moderate to slight-to-moderate range. Water flow patterns vary in length, form localized networks of instability (cut areas) and deposition (ponding areas) with the latter showing surface sealing. Mechanical damage from hoof action resulted in pugging and churning when soils were wet and saturated. As a result, bare ground is increased and vegetation is suppressed.

The plant community at this site was big sagebrush with exotic annual grasses as the dominant herbaceous species. Large perennial bunchgrasses were few and scattered in occurrence, and exhibited low vigor. The indicator for functional and structural groups rated in the moderate range of departure, mostly due to the loss of the larger perennial bunchgrasses and the large increase of exotic annual grasses, which included cheatgrass and medusahead. As a result, the indicator for invasive plants rated in the moderate-to-extreme range. Plant mortality and decadence rated in the moderate range, with crown die-out on bunchgrasses and shrub decadence observed. Also noted by the observers was columnar growth form on the sagebrush from being hedged. The indicator for litter amount of organic material was rated at moderate departure, with standing dead shrubs and residue from hay feed present. Two Idaho noxious weeds, whitetop

and thistle, were observed by the interdisciplinary team throughout the pasture. Higher up on the northern part of the pasture, there is better rangeland habitat with fewer invasive weeds and increased native forb and grass species.

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Pasture 2

Based on a re-configuration of pastures due to existing fence lines, rangeland health assessment RH1A is now located in pasture 2 (Appendix H - Map RNGE-1B).

2013 Field Observations

A field visit in 2013 (see Owyhee Field Office project file) to the pasture and RH1A confirmed previous observations as summarized (below this box). Mechanical impacts from hoof prints are common across the landscape, along with pedestaling and bare flow paths. While some biological soil crusts are present, they are greatly reduced and often occur under the protection of shrubs. Cheatgrass and medusahead are widespread and often cover the ground in an extensive mat. While that provides some reduction from rain splash, it offers little protection otherwise, especially once the plants dry up. Litter is variable, with some areas having too much while others are lacking.

A rangeland health evaluation (RH1A) was completed in this allotment in a Loamy 11-13” ecological site (Table C1-1). Map 1 shows the location of the rangeland health field assessment and Appendix B includes indicator ratings by site.

Plant community composition and distribution relative to infiltration and run-off rated in the moderate range of departure from expected conditions for this ecological site. The amount of bare ground rated in the slight-to-moderate range; however, abundant surface gravels are present to stabilize the soil surface. Accelerated erosion in the form of pedestals and water flow patterns were observed and noted as ongoing processes at this site and rated in the moderate-to-extreme range. Pedestals and mortality are common on Sandberg bluegrass and squirreltail plants, resulting from mechanical damage in early spring, potentially when soils are saturated. Water flow patterns vary in length, and form a network of instability (cut areas) and deposition (ponding areas).

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Pasture 3

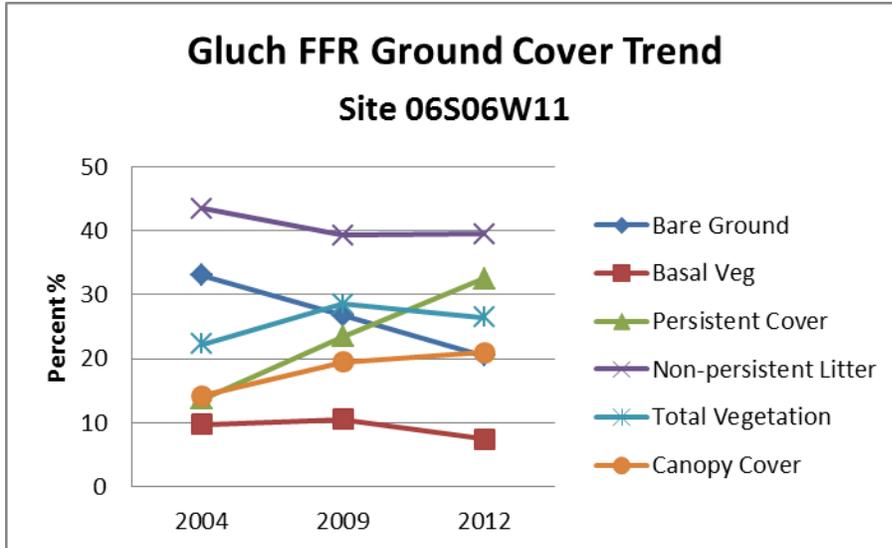
Based on a re-configuration of pastures due to existing fence lines, the two trend sites located at 06S06W11 and 06S06W14A are now located in pasture 3 (Appendix H - Map RNGE-1B).

Ground Cover Trend

Ground cover trend data were collected at two nested plot frequency transects. At site 06S06W11 (Figure Soil-4), data collected in 2004, 2009, and 2012 show that long-term trend reflects a significant (Student’s t-test; p-value <0.1) increase for persistent cover, total vegetation, and canopy, while bare ground is significantly reduced. Basal vegetation and non-

persistent litter are decreasing. Over the short term, persistent cover is increasing and bare ground is decreasing. Basal vegetation, non-persistent litter, total vegetation, and canopy cover remain generally static.

Figure Soil-4: Ground cover data from trend site 06S06W11 for the Gluch FFR (2004, 2009, and 2012)

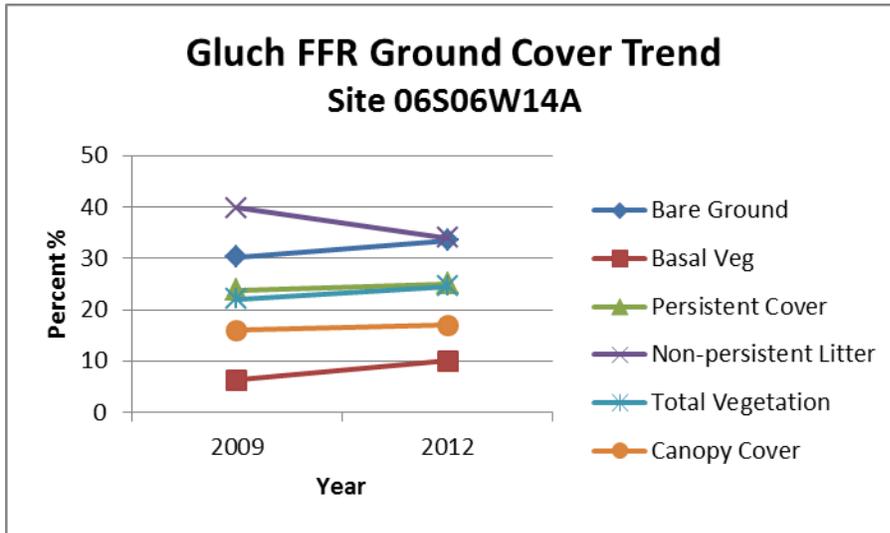


This site displays a slight long-term upward trend between 2004 and 2012, while the more recent years have been primarily static, with the exception of bare ground and persistent cover. Bare ground has been improving and is now below the expected range of values (30 to 40 percent) for a Loamy 11-13” ecological site, although the inverse relationship with persistent cover suggests that the increase in the latter may have been the result of an increased gravel or stone count due to the removal of fines. The frequency and density (see Standard 4) of sagebrush and rabbitbrush have been maintained, which corresponds with canopy cover.

Grass frequency (see Standard 4) is fairly static and shows that shallow-rooted bunchgrass dominates, although a component of deep-rooted bunchgrasses is present; invasive annuals are common. Overall interpretations of ground cover trend data show slight long-term improvements that have turned more static over the recent years. It is inconclusive that bare ground has been improving over the recent years due to an inverse relationship with persistent cover.

At site 06S06W14A, data collected in 2009 and 2012 (Figure Soil-5) show that persistent cover, total vegetation, and canopy cover are static. Basal vegetation and bare ground indicate a slight increase, while non-persistent litter is decreasing. None of the values are significant.

Figure Soil-5: Ground cover data from trend site 06S06W11 for the Gluch FFR (2009 and 2012)



This site displays a relatively static trend for all values. A slight increase in bare ground is apparent, but it is non-significant and values are at the upper limit of the expected range (25 to 40 percent) for a Loamy 11-13” ecological site. A slight decline in shrub frequency and density (see Standard 4) of mountain big sagebrush is not reflected in canopy cover.

Grass frequency trend (see Standard 4) is static as well, with shallow bunchgrass dominating over barely represented deep-rooted bunchgrass species. Overall interpretations of ground cover trend and frequency trend show static values.

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Pasture 4

Based on a re-configuration of pastures due to existing fence lines, the valley bottom is now pasture 4 and consists primarily of private land along with a small component of BLM land (Appendix H - Map RNGE-1B).

2013 Field Observations

A field visit in 2013 (see Owyhee Field Office project file) to the newly configured pasture 4 in 2013 showed a good distribution and variety of native perennial bunchgrasses and forbs providing for functional structural groups that are within the range of expected vegetation for this Loamy 11-13” ecological site. Soil stability and hydrologic function are adequate, with isolated small flow paths, few pedestals, little bare ground, and plentiful litter. Soils are deep, the A horizon was intact, and no soil surface loss was observed. The shrub component was higher than expected. Overall, the BLM component of the pasture is meeting Standard 1.

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Pasture 5

Based on a re-configuration of pastures due to existing fence lines, pasture 5 now consists of the

Oregon State lands, a small section of Oregon BLM land, and a small component of Idaho BLM lands surrounding a large reservoir that is fed by water diverted from an unnamed drainage through an excavated trench (Appendix H - Map RNGE-1B).

2013 Field Observations

A field visit in 2013 (see Owyhee Field Office project file) to the newly configured pasture 5 in 2013 showed stable soils and good hydrologic function. While some invasive annuals and shallow-rooted bunchgrasses are present, the distribution and variety of native perennial bunchgrasses and forbs provide for effective cover that is within the expected range for this Loamy 11-13” ecological site.

Soil stability and hydrologic function are adequate, with isolated small flow paths, few pedestals, little bare ground, and plentiful litter present. Soils are deep, the A horizon is intact, and no soil surface loss was observed. The shrub component was higher than expected. Overall, the BLM component of the pasture is meeting Standard 1. Some bare ground is present and interspaces are sparsely vegetated but soils are stable, litter is adequate, and biological soil crusts provide additional protection.

An excavated channel, dry at time of visit, appears to supply a large reservoir with water diverted from Lone Tree Creek. The reservoir, which extends into Oregon, drains toward Pleasant Valley on the northeast part of the reservoir. Recent earth work shows that it was dredged around the outlet, which resulted in impacts caused by heavy equipment along a small portion of reservoir shore. Soils are bare, locally compacted, and susceptible to erosion and invasion of exotic annuals. ORMP objectives of stabilizing current and preventing the potential for future, localized accelerated soil erosion from human actions are not being met.

Standard 2: Riparian Areas and Wetlands

There are no springs or streams on this allotment therefore this standard does not apply.

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Approximately 0.6 miles of an unnamed creek traverses pasture 3 in the Gluch FFR allotment. BLM staff visited the site in 2013, and the tributary has been converted to a canal that transports water from a diversion on Lone Tree Creek on private land to a reservoir on BLM land within pasture 5. The tributary is no longer a functioning riparian area; therefore, the PFC protocol is not appropriate.

Standard 3: Stream Channel/Floodplain

There are no springs or streams on this allotment therefore this standard does not apply.

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See information under Standard 2 above.

Standard 4: Native Plant Communities

Table C4-1: Rangeland Health Evaluation Worksheet Summary

Standard 4-Native Plant Communities	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Gluch FFR	1	2	5	1	0

[^] See Appendix B for individual evaluations and indicators.

^{*} Summarizes: 1 Loamy 11-13” ecological site

Rangeland Health

A rangeland health evaluation (RH1A) was completed in the Loamy 11-13” ecological site (Table C4-1). Gluch FFR Map shows the location of the rangeland health field assessment and Appendix B has individual site indicator ratings.

Bluebunch wheatgrass is generally present only under the protective cover of shrubs and in the interspatial areas between shrubs, and is substantially below potential. The decrease of the larger bunchgrasses has allowed the smaller and more disturbance tolerant increaser bunchgrasses; Sandberg bluegrass and squirreltail to expand into the vacant niches. Sandberg bluegrass and bottlebrush squirreltail have become the dominant herbaceous species.

Plant vigor and seedstalk production on perennial plants rated below site potential, seedstalk production was reduced on plants in the shrub interspaces compared to those under the protective cover of shrubs. Large patches of various exotic annual grasses including cheatgrass, medusahead rye, and ventenata, co-dominate the herbaceous understory. The indicator for invasive plants rated in the moderate-to-extreme range. Changes in species composition has decreased herbaceous litter and increased bare ground.

Long-term Vegetation Monitoring

A nested plot frequency transect study is located at T 06S R 06W Sec 11 (Gluch FFR Map), was established in 1984 primarily to record the effects of a prescribed burn and subsequent re-seeding. Field notes from 1984 indicate that the seeding was a failure with very little establishment of crested wheatgrass. The site was visited in 2003 to read the transects; however, only the photo-plot was read. In 2004, the transects were re-established and read using current BLM protocol (Appendix C). Bluebunch wheatgrass was recorded in 24 percent of the plots, and crested wheatgrass in 7 percent of the plots. Wyoming big sagebrush occurred in 19 percent of the plots, and squirreltail and cheatgrass were 8 and 34 percent respectively. Sandberg bluegrass occurred in all plots. Shrub density was calculated as 1,000 rabbitbrush plants per acre and 1,800 Wyoming big sagebrush plants per acre.

Landscape view photographs show slight changes in the plant community, including a reduction of ground cover in 2003 and 2004. In 2004, field notes indicate recent livestock use and trampling made it difficult to identify grass species.

Utilization

No utilization data exists since the implementation of current grazing management in 1984.

Pasture 1

Pasture 1 is evaluated under Standard 6 exotics.

Pasture 2

Rangeland Health

A rangeland health evaluation (RH1A) was completed in the Loamy 11-13” ecological site (Table VEG-7). The Gluch FFR RNGE-1 map (Appendix H) shows the location of the rangeland health field assessment and Appendix B has individual site indicator ratings. Three additional site visits occurred in 2004, 2005, and 2013, with photographs taken.

Pasture 3

Grass frequency and shrub density trend

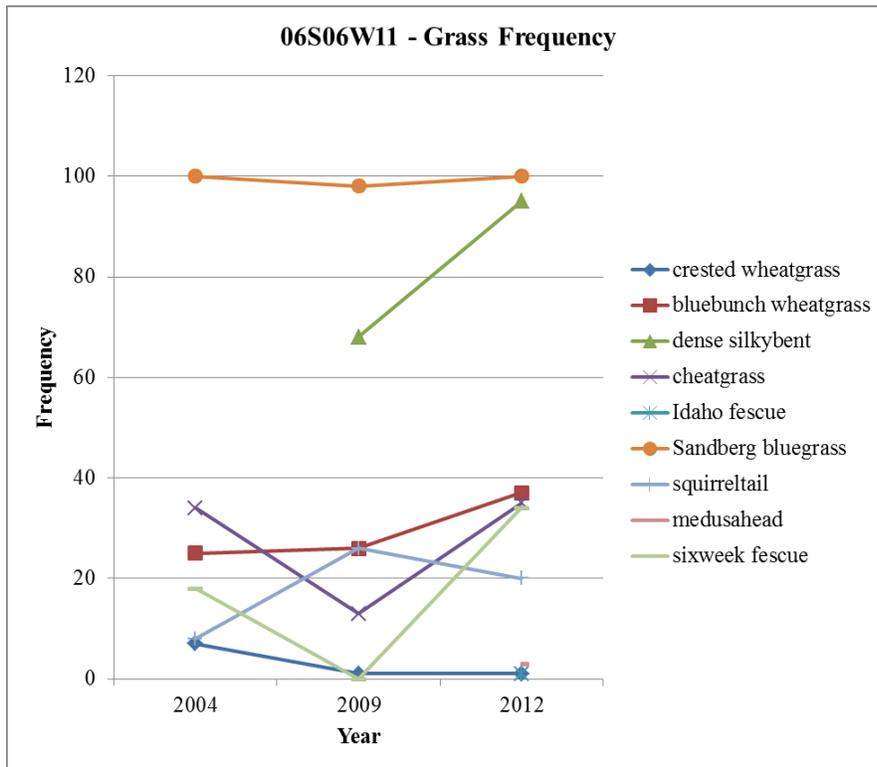
Grass frequency trend data were collected at two nested plot frequency transects. At site 06S06W11 (Table VEG-7 and Figure VEG-4), data collected in 2004, 2009, and 2012 shows that long-term trend reflects a significant increase for bluebunch wheatgrass and squirreltail also increases in annual invasives; sixweek fescue, medusahead silkybent and static trend in cheatgrass and Sandberg bluegrass. Big sagebrush densities increased at both sites.

Table VEG-7: Grass frequency data from trend site 06S06W11 for the Gluch FFR (2004, 2009, and 2012)

Grasses		Percentage		
Species		2004	2009	2012
AGRO/AGCR	crested wheatgrass	7	1	1
AGSP	bluebunch wheatgrass	25	26	37 ^s
APIN	dense silkybent		68	95 ^s
BRTE	cheatgrass	34	13	35 ^s
FEID	Idaho fescue			1
POSE	Sandberg bluegrass	100	98	100
SIHY	squirreltail	8	26	20
TAAS/TACA	medusahead			3
VULPIA/VOUC	sixweek fescue	18	0	34 ^s

^svalues are statistically significant (p-value <0.1)

Figure VEG-4: Grass frequency data from trend site 06S06W11 for the Gluch FFR (2004, 2009, and 2012)



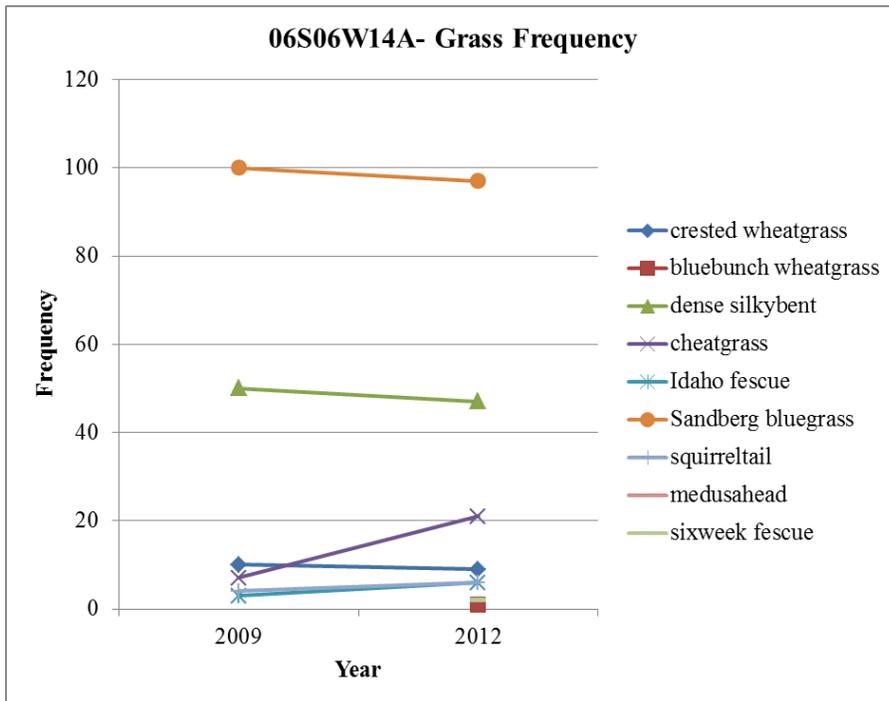
This site displays a slight short-term upward trend between 2009 and 2012 (Table VEG-8 and Figure VEG-5) on Idaho fescue and squirreltail. Crested wheatgrass and Sandberg bluegrass has remained static. Overall, invasive annuals are increasing on the site. The frequency and density of sagebrush and rabbitbrush has been maintained, which corresponds with canopy cover.

Grass frequency is static and shows that shallow-rooted bunchgrasses dominate, although a component of deep-rooted bunchgrasses is present; invasive annuals are common. Overall biotic integrity of vegetation has remained static.

Table VEG-8: Grass frequency data from trend site 06S06W14A for the Gluch FFR (2009 and 2012)

Grasses		Percentage	
		2009	2012
AGRO/AGCR	crested wheatgrass	10	9
AGSP	bluebunch wheatgrass		1
APIN	dense silkybent	50	47
BRTE	cheatgrass	7	21
FEID	Idaho fescue	3	6
POSE	Sandberg bluegrass	100	97
SIHY	squirreltail	4	6
TACA/TAAS	medusahead		2
VULPIA/VOUC	sixweek fescue		2

Figure VEG-5: Grass frequency data from trend site 06S06W11 for the Gluch FFR (2009 and 2012)



Pasture 4

This is a newly created pasture that is mostly private land, with a small percentage of BLM lands that was previously authorized for grazing under an exchange of use permit.

This site is a Loamy 16+” ecological site; big sagebrush and bluebunch wheatgrass are the dominant understory species, which are common in the shrub interspaces. Plant vigor and seed stalk production appear adequate to enable reproduction and recruitment of plants in response to favorable climatic events. Diverse age classes of many species are present, indicating good vigor and reproductive capabilities. Some decadence was observed on Wyoming big sagebrush.

Overall interpretations of 2013 field observations suggest that biotic conditions are productive and diverse to maintain proper nutrient cycling, hydrologic cycling and energy flow (Figure VEG-6).

Figure VEG-6: Overview of pasture 4 in the Gluch FFR allotment



Pasture 5

This pasture is in Oregon, with a reservoir in Idaho, and consists mostly of state lands.

This site is a Loamy 11-13” ecological site; big sagebrush and needle and thread with Idaho fescue are the dominant understory species, which are common in the shrub interspaces. Plant vigor and seed stalk production appear adequate to enable reproduction and recruitment of plants in response to favorable climatic events. Diverse age classes of many species are present, indicating good vigor and reproductive capabilities. Big sagebrush appeared vigorous.

Overall interpretations of 2013 field observations suggest that biotic conditions are productive and diverse to maintain proper nutrient cycling, hydrologic cycling, and energy flow (Figure VEG-7).

Figure VEG-7: Gluch FFR allotment pasture 5 overview



Utilization

Utilization data for pastures 2 and 3 were collected in 2011 on bluebunch wheatgrass show 3 percent utilization, and data collected in 2012 show 16 percent, which corresponds with overall slight to light use.

Standard 5: Rangeland Seeding

This standard does not apply.

Standard 6: Exotic Plant Communities

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Pasture 1

A rangeland health evaluation (RHA) was completed in 2013 in the Loamy 11-13” ecological site (Table VEG-9, Figure VEG-8). Gluch FFR RNGE-1 map Appendix H shows the location of the rangeland health field assessment and Appendix B has individual site indicator ratings.

The plant community at this site was big sagebrush with exotic annual grasses as the dominant herbaceous species. Large perennial bunchgrasses were few and scattered in occurrence, and exhibited low vigor. The indicator for functional and structural groups rated in the moderate range of departure, mostly due to the loss of the larger perennial bunchgrasses and the large increase of exotic annual grasses, which included cheatgrass, medusahead rye, and cheatgrass. As a result, the indicator for invasive plants rated in the moderate-to-extreme range. Plant mortality and decadence rated in the moderate range, with crown die-out on bunchgrasses and shrub decadence observed. Also noted by the observers was columnar growth form on the sagebrush from being hedged. The indicator for litter amount of organic material was rated at moderate departure, with standing dead shrubs and residue from hay feed present. Two Idaho noxious weeds, whitetop and thistle, were observed by the interdisciplinary team throughout the

pasture. Higher up on the northern part of the pasture there is better rangeland habitat with fewer invasive weeds and increased native forb and grass species.

Table VEG-9: Rangeland Health Evaluation Worksheet Summary

Standard 6-Exotics	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Gluch FFR pasture 1	0	1	6	1	1



Figure VEG-8: Overview of Gluch FFR allotment pasture 1 (May 16, 2013)

Standard 7: Surface and Ground Water Quality

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Idaho Department of Environmental Quality (IDEQ) designates basins, sub-basins, and assessment units in order to manage the state’s waterways. The 2010 Integrated Report (303(d)/305(b)) uses assessment units (AUs) within the sub-basin. Assessment units are groups of similar streams within a sub-basin that have similar land use practices, ownership, or land management. Assessment units are assessed for pollutants and assigned beneficial uses with associated Water Quality Standards. The Beneficial Use Reconnaissance Program (BURP) is a field assessment of stream segments (all IDEQ data and standards mentioned here are available on the IDEQ web site <http://www.deq.idaho.gov>).

Although none of the streams that occur on BLM lands within the allotment were identified by BLM for assessment, current IDEQ information identifies that the BLM portions of the five pastures within the Gluch FFR allotment contain approximately 1.5 miles of stream that are not

supporting the watershed’s beneficial uses, and 0.3 mile that have not been assessed. The allotment contains portions of three AUs with associated beneficial uses and pollutants (Table RIPN-4). AU # ID17050108SW002_02 is currently not supporting the beneficial uses, and all of the streams that occur within the allotment are on the 303(d) list of impaired waters based on the pollutants listed below.

Table RIPN-4: DEQ Water Quality Summary

AU #	AU Name	Pasture AU occur within	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050108SW001_02	Lower Jordan Creek - 1st and 2nd order tributaries	4	not assessed	NA	NA
ID17050108SW002_02	Lone Tree Creek and tributaries - 1st and 2nd order	3, 4	CWAL ¹ SS ² SCR ³	combined biota/ habitat bioassessments E. Coli	No
ID17050108SW002_03	Lone Tree Creek - 3rd order	4	not assessed	NA	NA

¹CWAL = cold water aquatic life

²SS = salmonid spawning

³SCR = secondary contact recreation

Standard 8: Threatened and Endangered, Special Status, Sensitive Species

Botany

No federally listed plant species are known to occur in this allotment, although the U.S. Fish and Wildlife Service (USFWS) considers all of Idaho to be within the potential range of Ute ladies’-tresses (*Spiranthes diluvialis*), a federally threatened orchid species. This plant occurs in spring, seep, and riparian habitats. Due to the difficulty in narrowly defining potential habitat for this species, USFWS has chosen to apply a loose definition and requires Section 7 consultation only in three counties of southeast Idaho or in areas where the plant is actually found (USFWS 2002). Surveys specifically for this plant are recommended prior to authorizing federal actions in southwest Idaho, but not required.

An occurrence of Bach’s calico flower (*Downingia bacigalupii*), a Type 4 BLM Sensitive species was located on the eastern side of the reservoir in the center of the pasture in 2004. This species persists under considerable disturbance in wet meadows and seeps.

For a summary of Special Status Animal Species, see Appendix H.

Botany

No populations of special status plant species are known to occur in this allotment. There is insufficient information to determine site-specific impacts of livestock grazing on any special status plants that may occur in this allotment. Records show no reported special status plants in this allotment, so this standard is not applicable.

No EO record is associated with the occurrence of Bach's calico flower (*Downingia bacigalupii*), as stated in the 2006 Rangeland Health Standards and Guidelines Assessment.

Information sources

Elemental Occurrences (EOs) for SSP populations is recorded in the Idaho Fish and Wildlife Information System (IFWIS) Species Diversity database (IDFG, 2011). EOs are derived by completion and review of Idaho rare plant observation reports from the Idaho Natural Heritage Program. Other sources that were used to assess and evaluate the composition and condition of special status plant (SSP) habitats within the Gluch FFR allotment include RHAs, photographs, field notes, Plants database (USDA NRCS, 2013), literature search, and information summarized above in RHA Standards in this document. Records show no reported special status plants in this allotment.

Wildlife

Appendix H contains a summary of Special Status Animal Species.

General Upland Habitat

Although sagebrush and other shrubs are generally providing adequate woody cover and structure for sage grouse and other shrub-dependent wildlife, large decreaser bunchgrasses (bluebunch wheatgrass) are reduced and generally present only under the protective canopy cover of shrubs. These grasses have been replaced in the interspaces by smaller increaser bunchgrasses (Sandberg's bluegrass) and annual grasses (cheatgrass) that provide poor cover and structure for sage grouse and other ground nesting and foraging species. Plant vigor and seed stalk production are also reduced and contributing to poor nesting and brood-rearing cover and less forage and seed production.

This allotment is located within spring/summer/fall foraging ranges for both elk and antelope. Additionally, the allotment is included within winter/yearlong mule deer range. Currently it appears that this allotment is providing minimally adequate big game habitat, primarily due to the common occurrence of invasive annual grasses such as cheatgrass and medusahead rye in the understory, and lower than expected vigor and production observed in the existing perennial bunchgrasses throughout the pasture.

Upland Habitat

Pasture 1

Pasture 1 is managed as an exotic plant community. Vegetation composition, structure, and function are lacking or absent in these communities, substantially reducing effective nesting, hiding, escape, travel, and foraging cover values for upland wildlife species. These exotic communities further create large open spaces, diminish habitat connectivity, and increase sagebrush community fragmentation.

Pastures 2 and 3

Pastures 2 and 3 are managed as native plant communities. Plant community information in Standard 4 identified the herbaceous understory component is transitioning from a bluebunch wheatgrass reference community to a Sandberg bluegrass-cheatgrass community (see Standard 4). The downward trend in the plant community composition is favoring more grazing-tolerant, shallow-rooted grass species. These species do not have the robust growth form or stature such as bluebunch wheatgrass and do not provide the plant composition, structure, and function for sagebrush steppe dependent species.

Pastures 4 and 5

Pastures 4 and 5 are managed as native plant communities and are identified to be meeting Standard 4 (see Standard 4). Because there is not any wildlife species specific information (e.g., sage-grouse habitat assessments), an assumption is being made that pastures 4 and 5 are at least providing minimum habitat composition and structure for most shrub steppe dependent species.

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Riparian Habitat

Evaluation of Standard 7 determined that 1.5 miles of streams within the Gluch FFR allotment are on the 303(d) list for impaired waters and are not supporting the watershed's beneficial (see Standard 7).

Sage Grouse

No historic leks are known to occur within the allotment, but three active leks are located within five miles of the allotment. No habitat evaluations were done in this allotment. However, the current conditions of the uplands vegetative communities are not adequate for providing good sage grouse habitat.

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Focal Species

Sage-grouse

On March 5, 2010, the USFWS (USDI USFWS, 2010) published a finding in the Federal Register which found that listing the greater sage-grouse was warranted but precluded by the need to take action on other species facing more immediate and severe extinction threats. The finding has changed the status of sage-grouse from a BLM Type 2 sensitive species to a candidate species under the ESA.

This allotment lies within the regional Snake River Plain Management Zone for sage-grouse. In 2012, preliminary priority habitat (PPH) and general priority habitat (GPH) were modeled to

identify lands in Idaho important to sage-grouse sustainability. PPH includes breeding, late brood-rearing, and winter concentration areas. General priority habitat are lands that may serve as important corridors between PPH and habitat islands within corridors, or occupied habitats characterized by low lek densities (Makela & Major, 2012) The BLM collaborated with respective state wildlife agencies to identify these areas. Modeling results indicate that all of the Gluch FFR allotment (100 percent) lies within PPH (Table WDLF-5, Map WDLF-1C). No active leks are known to occur within this allotment. This allotment provides seasonal breeding, upland summer, riparian, and winter habitat for sage-grouse.

Table WDLF-5: Acres¹ and Portions of Preliminary Priority and General Priority Habitat within the Gluch FFR allotment (Map WDLF-1C)

Allotment/Pasture Name	Acres of PPH Sagebrush Habitat in Allotment ²	Acres of PPH Perennial Grassland in Allotment	Acres of PPH Juniper Encroachment in Allotment	Acres of PGH in Allotment	Portion of Allotment in PPH/PGH
Pasture 1	144 (100%)	0	0	0	144 (100%)
Pasture 2	197 (100%)	0	0	0	197 (100%)
Pasture 3	280 (100%)	0	0	0	280 (100%)
Pasture 4	734 (100%)	0	0	0	734 (100%)
Pasture 5	98 (100%)	0	0	0	98 (100%)
Allotment Total	1453 (100%)	0	0	0	1453 (100%)

¹PPH/PGH habitat acreage totals include public lands, state lands, and private property.

²PPH sagebrush can also include small amounts of perennial grasslands, conifer encroachment, and non-habitat.

Pasture 3

Two sage-grouse breeding habitat assessments were conducted on June 6, 2012, on a Loamy 11-13” Basin big sagebrush / bluebunch wheatgrass ecological site.

Breeding Habitat Assessment

The sagebrush overstory is characterized by a suitable canopy cover (21 percent) and marginal height (88.8 cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by a marginal canopy cover of perennial grasses (9 percent) and unsuitable canopy of perennial forbs (1 percent). Although the combined height of perennial grasses and forbs is suitable (29 cm) it is created by a marginal/unsuitable canopy cover of perennial grasses and forbs (Table C8-2). Overall, the combination of a mixed spreading/columnar sagebrush overstory and the marginal occurrence of perennial grasses and unsuitable occurrence of perennial forbs in the understory, this site is providing less than adequate (marginal) hiding and screening cover and forage for nesting and early brood-rearing sage-grouse.

Winter Habitat Assessment

This information was collected as part of a breeding habitat assessment conducted on 6/12/2012. Because the sagebrush community is not expected to change substantially over the course of a

few months this information can provide insight into winter habitat conditions later in the year. The sagebrush overstory is characterized by a suitable canopy cover (21 percent) and marginal height (88.8cm). Overall, sagebrush occurrence and height are providing adequate cover and forage conditions for sage-grouse and is not a limiting factor in this pasture (Table WDLF-6).

Table WDLF-6: Sage-grouse habitat indicator and pasture 3 (Refer to Appendix C and Figure WDLF-1C for full assessment summaries and habitat indicator value ranges)

Habitat Indicator	Data	Breeding	¹ Winter
Sagebrush Canopy Cover (%)	21.0	suitable	suitable
Sagebrush Height (cm)	88.8	marginal	suitable
Sagebrush Form	mixed	marginal	
Perennial Grass and Forb Height (cm)	29.0	suitable	
Perennial Grass Canopy Cover (%)	9.0	marginal	
² Perennial Forb Canopy Cover (%)	1.0	unsuitable	
Preferred Forb Availability (#)	9.5	suitable	
Overall Pasture Evaluation Rating		marginal	suitable

¹Winter habitat ratings extrapolated from breeding habitat assessment information collected on 6/6/2012.

²Perennial grasses canopy cover does not include Poa species.

WEST MAHER FFR (0567)

Background

The West Maher Allotment is approximately 11 miles south of Jordan Valley, Oregon. It is located southwest of Silver City and northwest of South Mountain (West Maher Map) and is part of the South Mountain Core Area. Elevations range from 4,700 to 5,800 feet. The terrain is rolling to very steep. Most landform features are rhyolitic in origin, which consist of foothills, ridges, and perennial and ephemeral drainages.

The allotment is within USDA Major Land Resource Area, D 25. The majority of the soils in the allotment are shallow to moderately deep and well drained, texture ranges from clayey to loamy and vary in surface and subsurface rock fragments. These soils formed in residuum and alluvium derived predominantly from welded rhyolitic tuff. The associated ecological sites are primarily Loamy 13-16” with a mountain big sagebrush, bluebunch wheatgrass, and Idaho fescue plant community, and Shallow Claypan 12-16” with a low sagebrush, bluebunch wheatgrass, and Idaho fescue plant community.

The West Maher Allotment is one management unit and is not divided into multiple pastures. The allotment consists of approximately 1,800 acres; of which 910 are BLM administered public lands; and 890 are privately owned lands (West Maher Map).

Livestock Use History

The West Maher FFR Allotment was established prior to the South Mountain Adjudication. It originally consisted of 120 AUMs of permitted use at 100% public land. On September 11, 1987 the BLM issued a Proposed Decision that became Final without protest in which the decision retained the original permitted use and authorized livestock grazing at the permittee’s discretion.

Permitted use in West Maher FFR Allotment is currently 120 Active AUMs which are authorized to be used at the permittee’s discretion during the grazing year (Appendix D). Actual use reports exist for 1992 and 2005, and show 120 AUMs of livestock use between April 1st and 15th, and 116 AUMs between April 1st and 30th respectively.

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Actual Use		
Actual use ranged from 4 to 122 AUMs for the allotment, with an average of 102 AUMs. This allotment was reported as one pasture; however, there are currently three pastures. Pasture 1 is all private land and pastures 2 and 3 have BLM land.		
Table LVST-4: Season of use and actual use (AUMs) for the West Maher FFR allotment 2005 to 2011		
Year	Pasture 1	AUMs
2011	4/1-6/1	120
2010	4/1-4/30	116
2009	4/1-4/30	116
2008	12/1-12/31	120
2007	12/1-12/1	4
2006	4/1-5/1	122
2005	4/1-4/30	116

Rangeland Health Standards

Standard 1: Watersheds

Table D1-1: Rangeland Health Evaluation Summary

Standard 1-Watersheds	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
West Maher* ¹	5	3	2	2	0

*¹Summarizes: 1 Shallow Claypan 12-16” ecological site

One rangeland health evaluation worksheet (RH1A) was completed in this allotment in a Shallow Claypan 12-16” ecological site. A summary of indicator ratings is presented in Table D1-1, individual indicator ratings are found in Appendix B, and Map 4 shows the location of the field assessment.

The indicator of plant community composition and distribution relative to infiltration and run-off rated in the moderate range of departure due to the reduction of the larger bunchgrasses and the compensatory increase in the smaller Sandberg’s bluegrass. Accelerated erosion was evidenced by plant pedestaling and water flow patterns both of which rated in the moderate-to-extreme range of departure. Pedestals were described as common, deep, and mainly associated with water flow paths. Pedestals were observed on Sandberg bluegrass, Nevada bluegrass, and Idaho fescue. Indicators for soil surface loss or degradation, and plant community composition relative to infiltration and runoff rated in the moderate range.

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Dividing the previous 1 pasture allotment into three pastures results in the above described rangeland health assessment RH1A (2003) now being located in pasture 3 (see Appendix H – Maps for the new configuration). Pasture 1 is private land.

Pasture 2

A new rangeland health assessment (07S06W23) was completed in 2013 at a Shallow Claypan 12-16” ecological site (Appendix B) in pasture 2 (Table SOIL-2; Appendix H - Map RNGE-1D).

Table SOIL-2: 2013 Rangeland Health Evaluation Summary

Standard 1 Watersheds	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
West Maher* ¹	9	3	0	0	0

*¹Summarizes: 1 Shallow Claypan 12-16” ecological site

Plant community composition and distribution relative to infiltration and run-off are rated in the none-to-slight range of departure from expected conditions for this ecological site. Bare ground and water flow patterns are also none-to-slight, of small scale, and unconnected due to abundant cover to stabilize surface soils. Pedestaling is slight-to-moderate and can be associated with past soil surface loss. Microbiotic soil crusts, however, were lower than expected. Invasive annuals are common, add to the amount of litter, and contribute to a reduction in perennial deep-rooted vegetation and native forbs.

2013 Field Observations

Additional observations were made during a 2013 monitoring trip to pasture 2 and a site visit to pasture 3 (see Owyhee Field Office project file). While the rangeland health assessment site 07S06W23 represented the more gently sloping parts of pasture 2, side slopes reflected widespread heavy use with extensive physical trail damage across the steeper parts. Bare soils are indicative of the trail terraces where vegetation is often pedestaled or pushed into small strips that

define the outer edge of each trail. The connectivity of the network of side hill trails encourages water movement, soil loss, and compaction.

A site visit to pasture 3 confirmed observations made in 2003 at site RH1A in pasture 3. Widespread mechanical damage in the form of trampling along numerous trails is present, leaving a network of churned soils. Pedestals and water flow paths are extensive and connect bare soil areas to cause soil loss and degradation. Invasive annuals and shallow rooted bunchgrasses are common with some vegetation retreating underneath shrubs for protection; biological soil crusts are much reduced, especially in interspaces.

Standard 2: Riparian Areas and Wetlands

There is approximately 0.9 mile of Lone Tree Creek on BLM lands in the West Maher FFR Allotment. Riparian inventory data, monitoring data, assessment, and other information were used to assess functioning condition (Appendix C). Lone Tree Creek was assessed as functioning-at risk, with no apparent trend. The components necessary for recovery are present, and some regeneration is occurring, as well as some point bar re-vegetation. Willows and herbaceous vegetation exhibit signs of considerable livestock use. The dominant plant community type is the whiplash willow (*Salix lasiandra*) CT. A low percentage of seedlings and saplings are present and the canopy is dominated by mature and decadent willows. Many of the willows are umbrella or club shaped, indicative of considerable livestock browsing. The understory is comprised of uplands species which reflect a shift from the mat-forming, stabilizing hydric species, such as sedges and rushes, to Kentucky bluegrass which is suited to a dryer site and less capable of stabilizing banks. The riparian vegetation exhibited poor vigor with sparse regeneration, particularly in willows. The current plant community type is typically disturbance induced. Observations identified numerous well-established livestock trails and eroding banks as sediment sources to the stream.

Table D2-1: Riparian Indicators and Functioning Condition Rating by Stream Segment

Riparian/Wetland Indicators		Lone Tree 001
6	Diverse age class/structure of hydric vegetation	Y/N
7	Diverse composition of hydric vegetation	N
8	Vegetation reflects maintenance of soil moisture	Y/N
9	Plant community comprised of bank stabilizing species	N
10	Hydric vegetation exhibits high vigor	N
11	Adequate hydric vegetation cover to protect banks and dissipate energy	Y/N
12	Adequate large woody material	Y
14	Point bars re-vegetating with hydric species	Y
Noxious weeds are not increasing		Y
Overall functioning condition*		FAR
Stream miles		0.9

Riparian/Wetland Indicators	Lone Tree 001
Riparian acres	2.8

(Y=yes, N=no, Y/N=both) (#) – indicator # on Function/Health Assessment
 * PFC- proper functioning condition, FAR- functioning at risk, NF- Non Functioning

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The same reach of Lone Tree Creek was again assessed FAR in 2003 (Map RNGE-1D). Issues identified were similar to those documented in 2000 and included a lack of regeneration, an understory of upland vegetation, and heavy use by livestock. Additionally, a MMIM site was established in pasture 3 on the same reach of Lone Tree Creek in 2011 (Table RIPN-5). The mean stubble height was 4.2 inches, woody use was 21 percent, and stream bank alteration was 46 percent.

Table RIPN-5: West Maher FFR pasture 3 Riparian Information Summary

Stream Name	Miles Assessed	Assessment Issues/ Impacts Identified	Total Miles		
Lone Tree Creek	0.8 (FAR- 2000/ FARS- 2003)	inadequate woody regeneration/ understory comprised of upland species			
MIM Metrics					
Stream Name	Mean Stubble Height (inches)	Woody Use (%)	Streambank Alteration (%)	Stable Bank (%)	Covered Bank (%)
Lone Tree Creek	4.2	21.7	46	79	99

Springs - There are no springs known to occur on BLM administered public land in this allotment.

Standard 3: Stream Channel/Floodplain

The Lone Tree Creek channel is an old incisement within a gully that appears to be stabilizing. The creek is classified predominantly as Rosgen B and F channel types (Rosgen1996). F channel types are described as deeply entrenched with depositional features that aid in new floodplain formation and are susceptible to shifts in both lateral and vertical instability (Rosgen 1996). Floodplain inundation and water storage capacities are reduced and the width/depth ratio is out of balance with the landscape setting, but this will improve as the new floodplain continues to develop within the current gully. The bank full stream channel is wide and shallow. A low percentage (35-65%) of the banks have plants with deep binding root masses capable of stabilizing the stream. Approximately 60% of the banks are unstable. Approximately 30% of the streambanks have been altered by shearing. There is a high percentage of non-hydric grasses here which limits the ability of the stream to dissipate energy. The stream channel and floodplain are functioning-at risk with no apparent trend.

Table D3-1: Stream Channel/Floodplain Indicators and Functioning Condition

Riparian/Wetland Indicators		Lone Tree 001
1	Floodplain inundated frequently	Y/N
2	Beaver dams are active and stable	NA
3	Sinuosity, w/d ratio, gradient in balance with landscape setting	N
4	Riparian area is widening or has achieved potential extent	N
5	Upland watershed not contributing to riparian degradation	Y
13	Floodplain and channel characteristics dissipate energy	N
15	Lateral stream movement associated with natural sinuosity	N
16	System is vertically stable	Y
17	No excessive erosion or deposition	Y
Overall functioning condition*		FAR
Stream miles		0.9
Riparian acres		2.8

(Y=yes, N=no, Y/N=both) (#) – indicator # on Function/Health Assessment

* PFC- proper functioning condition, FAR- functioning at risk, NF- nonfunctioning (overall rating determined from examination of both riparian and channel/floodplain indicators)

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See supplemental information for Lone Tree Creek under Standard 2 above

Standard 4: Native Plant Communities

Table D4-1: Rangeland Health Evaluation Worksheet Summary

Standard 4-Native Plant Communities	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Pasture 1	3	4	3	0	0

*Summarizes: 1 Shallow Claypan 12-16” ecological site

A rangeland health evaluation (RH1A) was completed in the Shallow Claypan 12-16” ecological site (West Maher Map). Appendix B contains individual indicator ratings. The plant community was dominated by Sandbergs bluegrass, bulbous bluegrass, and squirreltail rather than bluebunch wheatgrass and Idaho fescue, at this ecological site. Bluebunch wheatgrass and Idaho fescue were present, although less common than expected and primarily isolated to the protective cover of shrubs. Plant vigor and seedstalk production were adequate on all bunchgrasses observed with the exception of pedestaled plants located in water flow paths. Plant mortality and decadence was observed on pedestaled Sandberg bluegrass and Idaho fescue plants, this indicator rated in the moderate range departure from expected conditions. Invasive species recorded include; bulbous bluegrass and western juniper. Western juniper was present at the

evaluation site, in nearby loamy sites and along dry drainages. Plant litter accumulation was less than expected, which generally helps in moisture retention and nutrient cycling.

Table VEG-10: Rangeland Health Evaluation Worksheet Summary

Standard 4-Native Plant Communities ¹	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Pasture 3	3	4	2	0	0
Pasture 2	6	3	0	0	0

¹Summarizes: Shallow Claypan 12-16” ecological site

Pasture 2

A rangeland health evaluation assessment was completed in 2013 in the Shallow Claypan 12-16” ecological site (West Maher Map RNGE-1). Appendix B contains individual indicator ratings. The plant community was dominated by low sagebrush, some mountain big sagebrush, and an understory of bluebunch wheatgrass and Sandberg bluegrass. Plant vigor and seedstalk production were adequate on all bunchgrasses observed. Plant mortality on bitterbrush was observed, not to exceed site potential. Scattered Japanese brome and scattered amounts of thistle was observed; overall indicator rating was a slight departure from expected conditions.

Pasture 3

A rangeland health evaluation (RH1A) was completed in the Shallow Claypan 12-16” ecological site (West Maher Map). Appendix B contains individual indicator ratings. The plant community has shifted to a site dominated by Sandberg bluegrass, bulbous bluegrass, and squirreltail, rather than bluebunch wheatgrass and Idaho fescue, at this ecological site. Bluebunch wheatgrass and Idaho fescue were present, although less common than expected and primarily isolated to the protective cover of shrubs. Plant vigor and seedstalk production were adequate on all bunchgrasses observed, with the exception of pedestaled plants located in water flow paths. Plant mortality and decadence were observed on pedestaled Sandberg bluegrass and Idaho fescue plants; this indicator rated in the moderate range departure from expected conditions. Invasive species recorded include bulbous bluegrass and western juniper. Western juniper was present at the evaluation site, in nearby loamy sites, and along dry drainages. Plant litter accumulation was less than expected, which generally helps in moisture retention and nutrient cycling.

Utilization

Current utilization data show slight to light use.

Standard 5: Rangeland Seeding

This standard does not apply.

Standard 6: Exotic Plant Communities

This standard does not apply.

Standard 7: Surface and Ground Water Quality

About 0.9 mile of Lone Tree Creek is located within the West Maher FFR Allotment. Lone Tree Creek is a tributary to Jordan Creek in the Jordan Creek sub-basin (Hydrologic Unit number 17050108). No streams in the Lone Tree Creek assessment unit (Hydrologic Unit Number ID170150108SW002_02) are currently listed as water quality impaired by the Idaho Department of Environmental Quality (IDEQ 2005 Integrated (303(d)/305(b) Report). Assessment units are groups of similar streams within a sub-basin that have similar land use practices, ownership, or land management. IDEQ has not assessed water quality nor assigned specific beneficial uses to streams in the Lone Tree Creek assessment unit. Non-designated streams are managed by IDEQ to support the beneficial uses of secondary contact recreation, cold-water biota, agricultural water supply, wildlife habitat, and aesthetics.

The State evaluates support of beneficial uses through its Beneficial Use Reconnaissance Program (BURP; all IDEQ data and standards mentioned in this section are available on the IDEQ web site- see references listed in section IV of this document). IDEQ is currently evaluating water quality in the Jordan Creek sub-basin as part of the completion of a sub-basin assessment and TMDL (Total Maximum Daily Load) for Jordan Creek. The BLM also collects data to evaluate water quality and beneficial use support that can include riparian inventories, riparian Proper Functioning Condition (PFC) assessments, riparian habitat evaluation forms, stream survey forms, riparian aquatic data sheets, water temperature data, and water quality monitoring data (BLM data is available at the Owyhee Field Office).

Temperature Monitoring - In 2003, the BLM monitored water temperature in Lone Tree Creek within the West Maher FFR Allotment. Water temperature monitoring indicated Lone Tree Creek does not fully support the cold-water biota beneficial use (Table D7-1). Water temperatures were monitored using automatic data-recording thermographs. The over-widened stream channel contributes to elevated stream temperatures by increasing the area of the stream that is exposed to heating from solar insolation.

Table D7-1: Stream Temperatures and evaluation of water quality for the support of cold water biota beneficial use*.

Stream (Allotment)	Location	Max. Temp °C	Avg. Max. Temp. °C	Days Sampled	Dates Sampled	Support Status
Lone Tree (05671)	4736050N/ 498478E ~270m N of southern allot boundary	28.9	23.4	62	5/29/2003- 7/29/2003	Not Supported

*Full support of cold-water biota beneficial use - water temperatures are 22° C or less, with a maximum daily average of less than 19° C.

Bacteria Monitoring - No data were collected for fecal coliform and *E. coli* bacteria concentrations to examine whether streams supported primary and secondary contact recreation beneficial uses.

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Idaho Department of Environmental Quality (IDEQ) designates basins, sub-basins, and

assessment units in order to manage the States waterways. The 2010 Integrated Report (303(d)/305(b)) uses assessment units (AUs) within the sub-basin. Assessment units are groups of similar streams within a sub-basin that have similar land use practices, ownership, or land management. Assessment units are assessed for pollutants and assigned beneficial uses with associated Water Quality Standards. The Beneficial Use Reconnaissance Program (BURP) is a field assessment of stream segments (all IDEQ data and standards mentioned here are available on the IDEQ web site <http://www.deq.idaho.gov>).

Current IDEQ information identifies that the BLM portion of pasture 3 within the West Maher allotment contains approximately 0.7 mile of stream that is not supporting the watershed's beneficial uses. The allotment contains a portion of AU #ID17050108SW002_02 with associated beneficial uses and pollutants (Table RIPN-6). The AU is currently not supporting the beneficial uses, and all of the streams that occur within the allotment are on the 303(d) list of impaired waters based on the pollutants listed below.

Table RIPN-6: IDEQ Water Quality Summary

AU #	AU Name	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050108SW002_02	Lone Tree Creek and tributaries - 1st and 2nd order	CWAL ¹ SS ² SCR ³	combined biota/habitat bioassessments E. Coli	No

¹CWAL = cold water aquatic life

²SS = salmonid spawning

³SCR = secondary contact recreation

Standard 8: Threatened and Endangered, Special Status, Sensitive Species

Botany

No federally listed plant species are known to occur in this allotment, although the U.S. Fish and Wildlife Service (USFWS) considers all of Idaho to be within the potential range of Ute ladies'-tresses (*Spiranthes diluvialis*), a federally threatened orchid species. This plant occurs in spring, seep, and riparian habitats. Due to the difficulty in narrowly defining potential habitat for this species, USFWS has chosen to apply a loose definition and requires Section 7 consultation only in three counties of southeast Idaho or in areas where the plant is actually found (USFWS 2002). Surveys specifically for this plant are recommended prior to authorizing federal actions in southwest Idaho, but not required.

No BLM special status plant species are known to occur in this allotment.

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For a summary of Special Status Animal Species, see Appendix H.

Botany

No populations of special status plant species are known to occur in this allotment. There is

insufficient information to determine site-specific impacts of livestock grazing on any special status plants that may occur in this allotment. Records show no reported special status plants in this allotment, so this standard is not applicable.

Information sources

Elemental Occurrences (EOs) for SSP populations is recorded in the Idaho Fish and Wildlife Information System (IFWIS) Species Diversity database (IDFG, 2011). EOs are derived by completion and review of Idaho rare plant observation reports from the Idaho Natural Heritage Program. Other sources that were used to assess and evaluate the composition and condition of special status plant (SSP) habitats within the Gluch FFR allotment include RHAs, photographs, field notes, Plants database (USDA NRCS, 2013), literature search, and information summarized above in RHA Standards in this document. Records show no reported special status plants in this allotment.

Wildlife

For a summary of Special Status Animal Species, see Appendix H.

General Upland Habitat

West Maher FFR Allotment consists mostly of steep hillsides, and contains a portion of Lone Tree Creek in the southwest corner. The allotment is dominated by low sagebrush with big sagebrush occurring mostly along draws and in deeper soils. Western juniper was noted and scattered throughout the plant community.

This allotment is located within spring/summer/fall foraging ranges for both elk and antelope. Additionally, the allotment is included within winter/yearlong mule deer range. Although the allotment is dominated small stature perennial grasses such as Sandberg’s bluegrass, squirreltail, and bulbous bluegrass (with existing bluebunch wheatgrass and Idaho fescue primarily isolated under shrub canopies), it appears that this allotment is providing adequate big game habitat. It was noted that steeper areas supported healthy, vigorous stands of desirable bunchgrasses (bluebunch wheatgrass) that, along with a healthier shrub component, are providing preferred big game habitat.

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Upland Habitat

Pasture 2

Pasture 2 is managed as a native plant community. Plant community information in Standard 4 reveals that Rangeland Health Standards and Guides are being met (see Standard 4). Because there is no other vegetation information to draw from (i.e., sage-grouse habitat assessments), and a favorable rangeland health assessment collected in 2013 reported adequate plant vigor, composition and production of native species, it is assumed that minimum upland habitat conditions for sagebrush steppe dependent species exist.

Pasture 3

Pasture 3 is managed as a native plant community. Plant community information in Standard 4 identified a transition in the plant community from deep-rooted perennial grasses to the

dominance of increaser species such as Sandberg bluegrass, bulbous bluegrass, and squirreltail. These shallower-rooted species do not have the robust growth form or stature such as bluebunch wheatgrass and do not provide the plant composition, structure, and function for sagebrush steppe-dependent species.

Riparian Habitat

All 0.9 miles of stream riparian habitat in this allotment are located along Lone Tree Creek and rated as functioning-at-risk with no apparent trend. Structural diversity, composition and vigor of hydric vegetation are partially lacking and not providing for the needs of dependant special status species and other wildlife. Hydric vegetation along streambanks is also inadequate to protect streambanks and dissipate energy, which increases the risk of losing habitat to erosion during periods of high flow.

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Riparian Habitat

Evaluation of Standards 2 and 3 identified that riparian habitat conditions were properly functioning. Reporting showed that riparian areas were providing adequate functional floodplain processes, riparian species were adequate and vigorous, and there was woody species regeneration (see Standard 2 and 3).

Evaluation of Standard 7 identified that Lone Creek is on IDEQ's 303(d) list of impaired streams and that water quality parameters are not being met for the watershed's beneficial uses. The list of beneficial uses includes water quality standards for cold-water aquatic life (see Standard 7).

Sage Grouse Habitat

No historic leks are known to occur in West Maher FFR Allotment, although the allotment is within four miles of two leks that were known to be active in 1994. Most of the allotment is too steep for sage grouse nesting. However, Lone Tree Creek provides potential brood-rearing habitat.

No sage grouse breeding or late brood-rearing habitat evaluations were completed for this allotment. Upland vegetation assessments found that the taller stature decreaser bunchgrasses preferred for sage grouse habitat are poorly represented at this site, and have been replaced with Sandberg's bluegrass (primarily), a short-stature increaser bunchgrass.

Large decreaser bunchgrasses (bluebunch wheatgrass) are reduced, providing poor cover and structure for sage grouse and other ground nesting and foraging species believed to inhabit the evaluation site. However, other areas located within the allotment found on steeper slopes appear to provide adequate sage grouse habitat. These steeper areas generally support healthy, vigorous stands of desirable bunchgrasses that, along with a healthy shrub component, are providing suitable habitat.

Focal Species

Sage-grouse

On March 5, 2010, the USFWS (USDI USFWS, 2010) published a finding in the Federal Register that found the listing the greater sage-grouse was warranted but precluded by the need to take action on other species facing more immediate and severe extinction threats. The finding has changed the status of sage-grouse from a BLM Type 2 sensitive species to a candidate species under the ESA.

This allotment lies within the regional Snake River Plain Management Zone for sage-grouse. In 2012, preliminary priority habitat (PPH) and general priority habitat (GPH) were modeled to identify lands in Idaho important to sage-grouse sustainability. PPH includes breeding, late brood-rearing, and winter concentration areas. General priority habitat are lands that may serve as important corridors between PPH and habitat islands within corridors, or occupied habitats characterized by low lek densities (Makela & Major, 2012). The BLM collaborated with respective state wildlife agencies to identify these areas. Modeling results indicate that all of the West Maher allotment (100 percent) lies within PPH (Table WDLF-7, Map WDLF-1D). No leks are documented to occur in this allotment. This allotment provides seasonal breeding, upland summer, and winter habitat for sage-grouse.

Table WDLF-7: Acres¹ and portions of preliminary priority and general priority habitat within the West Maher FFR allotment (Map WDLF-1D)

Allotment/Pasture Name	Acres of PPH Sagebrush Habitat in Allotment ²	Acres of PPH Perennial Grassland in Allotment	Acres of PPH Juniper Encroachment in Allotment	Acres of PGH in Allotment	Portion of Allotment in PPH/PGH
Pasture 1	552 (100%)	0	0	0	552 (100%)
Pasture 2	575 (100%)	0	0	0	575 (100%)
Pasture 3	261 (83%)	0	53 (17%)	0	261 (100%)
Allotment Total	1,388 (96%)	0	53 (4%)	0	1,441 (100%)

¹PPH/PGH habitat acreage totals include public lands, state lands, and private property.

²PPH sagebrush can also include small amounts of perennial grasslands, conifer encroachment, and non-habitat.

Pasture 1

One sage-grouse upland summer habitat assessments was conducted on August 8, 2012 on a Loamy 11-13” Wyoming big sagebrush / bluebunch wheatgrass community associated with Shallow Claypan 12-16” ecological site. The pasture is managed as a native plant community (Standard 4).

Breeding Habitat Assessment

This information was collected as part of an upland summer habitat assessment conducted on August 8, 2012. Because the sagebrush community is not expected to change substantially over the course of a few months and the data collection protocols are the same, this information can

provide insight into breeding habitat conditions earlier in the spring. Due to the time of year this data was collected, the forb information was not used in this assessment.

The sagebrush overstory is characterized by a marginal canopy cover (58 percent) and marginal height (137.5 cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by a suitable canopy cover of perennial grasses (28 percent) perennial forbs (12 percent) with a combined perennial grass/forb height of 26.3 cm (Table WDLF-8). Overall, although the understory is providing favorable canopy cover, height, and forb availability, overstory conditions are heavily stocked with a mixed physical shape (predominantly spreading/columnar) that tends to open up the canopy and expose the understory reducing security cover for nesting and brooding sage-grouse; therefore, this pasture is considered to be less-than-adequate (marginal) breeding habitat conditions for sage-grouse.

Upland Summer Habitat Assessment

The sagebrush overstory is characterized by a marginal canopy cover (58 percent) and marginal height (137.5 cm). The understory is characterized by a combined suitable canopy cover of perennial grasses and forbs (18 percent) (Table WDLF-8). The diversity of forbs is lower than desirable, but those identified appear abundant. Overall, although the understory is providing favorable canopy cover and height of perennial grasses and forbs, the overstory conditions are heavily stocked and a mixed growth form (predominantly spreading/columnar) tends to open up the canopy and expose the understory reducing security cover for brooding sage-grouse; therefore, this pasture is considered to be providing less-than-adequate (marginal) upland summer habitat conditions for sage-grouse.

Winter Habitat Assessment

This information was collected as part of an upland summer habitat assessment conducted on August 8, 2012. Because the sagebrush community is not expected to change substantially over the course of a few months, this information can provide insight into winter habitat conditions later in the year. The sagebrush overstory is characterized by a suitable canopy cover (58 percent) and marginal height (137.5 cm). Overall, sagebrush occurrence and height are providing suitable winter cover and forage conditions for sage-grouse and is not a limiting factor in this pasture (Table WDLF-8).

Table WDLF-8: Sage-grouse habitat indicators and pasture 1 ratings (Refer to Appendix C and Figure WDLF-1D for full assessment summaries and habitat indicator value ranges)

Habitat Indicator	Data	Breeding	¹ Upland Summer	¹ Winter
Sagebrush Canopy Cover (%)	58.0	marginal	marginal	suitable
Sagebrush Height (cm)	137.5	marginal	marginal	suitable
Sagebrush Form	mixed	marginal		
² Perennial Grass Canopy Cover (%)	28	suitable		
Combined Grass/Forb Canopy Cover (%)	18.0		suitable	
Preferred Forb Availability	5		marginal	

(#)				
Overall Pasture Evaluation Rating		marginal	marginal	suitable

¹Breeding and winter habitat ratings extrapolated from upland summer habitat assessment information collected on 8/8/2012.
²Perennial grass canopy cover does not include Poa species.

WARN (0596)

Background

The Warn Allotment is approximately 14 miles south of Jordan Valley, Oregon, southwest of Silver City and west of South Mountain (Warn Map). It is part of the South Mountain Core Area. Elevations on the allotment range from 5,000 to 5,700 feet. The terrain is flat to rolling to fairly steep. Most landform features are rhyolitic in origin and consist of gently sloping hills to fairly steep foothills and ridges.

The allotment is within USDA Major Land Resource Area D 25 – Owyhee High Plateau (Soil Survey Staff, 1981). The majority of the soils in the allotment are shallow to moderately deep, well drained, clayey to loamy and occasionally silty, and vary in surface and subsurface rock fragments. These soils formed in residuum and alluvium derived predominantly from welded rhyolitic tuff. The ecological sites consist primarily of Loamy 13-16” with a mountain big sagebrush, bluebunch wheatgrass, Idaho fescue plant community, and Shallow Claypan 12-16” with a low sagebrush, bluebunch wheatgrass, Idaho fescue plant community.

The Warn Allotment consists of one management unit, and is not divided into pastures. The allotment encompasses approximately 707 acres, all of which are BLM administered public lands (Warn Map).

Livestock Use History

The Warn Allotment was previously named the Lone Tree Individual Allotment. It was separated from the common spring use area in October 1967, with trailing privileges reserved for Lequerica Bros. sheep. From 1969 through 1981, the season of use was authorized from June 1 to July 31. Beginning in 1997, the season of use in the Warn Allotment was changed to May 1 to May 31 on the annual application. Utilization limits of 50% on key perennial grasses were also imposed and were to be the actual basis for any adjustments in permitted use.

Permitted use in the Warn Allotment is currently 75 active AUMs with a season of use between May 1st and May 31st. Temporary non renewable use (TNR) was authorized in the fall for the Warn Allotment between 1991 and 2001.

Total actual use in Warn Allotment is summarized in Table E1, below. This information was compiled from Actual Use Reports submitted by the grazing permittee for the Warn Allotment (0596).

Table E1: Actual Use on Warn FFR Allotment 1990-2006

Year	Season	AUMs	Year	Season	AUMs
1990	4/15-5/15	79	2001	5/26-6/10	105
1991	5/15-6/15	174	2002	5/26-6/10	72
1992	4/22-5/3	98	2003	5/15-5/26	79
1993	5/17-6/16	74	2004	5/1-5/31	74
1994	5/20-6/18	191	2005	5/12-5/23	79
1995	5/16-6/1	112	2006	4/15-4/24	66
1996	4/25-5/29	115			
1997	5/21-6/16	106			
1998	6/9-6/19	67			
1999	5/4-5/22	118			
2000	5/30-6/15	112			

2013 Supplement to the Warn Allotment Actual Use

Actual Use

Actual use ranged from 66 to 118 AUMs for the allotment, with an average of 82 AUMs (Table LVST-5).

Table LVST-5: Season of use and actual use (AUMs) for the Warn allotment 1997 to 2012

Year	Pasture 1	AUMs
2012	5/1-5/11	66
2011	5/1-5/11	72
2010	5/1-5/11	72
2009	5/1-5/11	72
2008	5/1-5/11	72
2007	4/15-4/26	79
2006	4/15-4/24	66
2005	5/14-5/25	79
2004	5/1-5/31	74
2003	5/15-5/26	79
2002	5/24-6/3	72
2001	5/26-6/10	105
2000	5/30-6/15	112
1999	5/4-5/22	118
1998	6/9-6/19	67
1997	5/21-6/16	106

Rangeland Health Standards

Standard 1: Watersheds

Two Rangeland Health Evaluation Worksheets were completed in this allotment. The following table (E1-1) contains a summary of indicator ratings in degree of departure from ecological site descriptions or reference site condition. Warn Map shows the location of the field assessment and Appendix B contains detailed indicator information.

Table E1-1: Rangeland Health Evaluation Summary

Standard 1-Watersheds	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Warn Allotment	8	8	6	2	0

*Summarizes: 1 Loamy 13-16” and 1 Shallow Claypan 12-16” ecological sites

RH1A (U05961-090303-2A) represents a Shallow Claypan 12-16” in the central portion of the allotment, the indicators for water flow patterns and pedestals and terracettes rated in the moderate to extreme range of departure for expected conditions for this ecological site. The water flow patterns were described as distinct, long, deeper than wide, and connected. They were less pronounced in areas where Idaho fescue was a dominant grass species. Plant pedestaling and terracettes were described as being severe when associated with flow paths. Exposed roots were common on a variety of species. The indicators for bare ground, gullies, soil surface resistance to erosion, and soil surface loss or degradation rated in the moderate range of departure. The ratings for these indicators are tied to concentrated overland water flows, which is causing the accelerated erosion. The gully indicator was described with some edges vegetated which indicates healing.

The area affected by the flow paths is representative of a small portion of this pasture. Areas not affected by the water flow patterns are more typical of this site and of the allotment in general. The affected areas also have a reduced ability to capture and store water, and to provide for proper infiltration. It appears that livestock use when soils were saturated created physical damage, resulting in localized compaction, and pedestaling.

RH1B (U05961-090303-1A) represents the Loamy 13-16” ecological site in the southern portion of the allotment, it is located in a basin drainage area. Minor changes are only having a influence on site stability. Vegetative cover, biological soil crusts, and litter help to stabilize the soil surface. The amount and distribution of ground cover, including litter, are overall adequate for site stability. The amount and distribution of bare ground is slightly higher than expected and some soil loss and degradation has occurred. Some water flow patterns and pedestaled plants but appear to be primarily historic.

<i>2013 Supplement to the Warn Allotment Rangeland Health Standards and Guidelines Assessment</i>
2013 Field Observations
A site visit in the spring of 2013 (see Owyhee Field Office project file) showed widespread pedestaling and flow patterns in portions of lower elevations representing Shallow Claypan 12-

16” ecological sites located in the southwest of the allotment. Some pedestals ranged on the extreme side, extending several inches above the current surface. Soil loss is apparent with flow paths surrounding the pedestaled grasses, as well as past mechanical hoof damage and localized compacted areas. Bare ground shows surface sealing and biological soil crusts are reduced, especially in interspaces. Bulbous bluegrass was observed during the time of visit along with other shallow-rooted bunchgrasses, some deep-rooted bunchgrasses, and emerging invasive annuals such as cheatgrass and medusahead; mats of their old litter were present. While much of the disturbance is historic, the trampling in ephemeral draws and localized uplands are recent (past years) and clearly visible in the form of hardened pugging relics and shearing. There are a high rock and cobble component and deeper soils in the more gently sloping southwest portion of the allotment, while the eastern part contains steeper slopes covered with shallow soils and rocky outcrops.

Standard 2: Riparian Areas and Wetlands

Approximately 1.1 miles of Lone Tree Creek are located on BLM lands within the Warn Allotment. Riparian inventory data and Proper Functioning Condition (PFC) assessments were collected in 2000 by Riparian Resources. Table E2-1 summarizes the BLM lotic (stream) riparian PFC checklist elements specific to Standard 2. The standard lotic PFC checklist has 17 indicators; of these, indicators 6-12 and 14 describe conditions associated with riparian vegetation. PFC assessment methods for lotic areas are described in Interagency Technical Reference 1737-15 (1998). In addition, BLM collected field observations and riparian stubble height monitoring on this reach of Lone Tree Creek during 2003.

The reach of Lone Tree Creek on the Warn allotment is dominated by *Salix lutea* (yellow willow), with inclusions of *Crataegus succulenta* (succulent hawthorn), *Salix lasiandra* (whiplash willow), and *Salix exigua* (sandbar willow) community types (CT). Approximately 50% of the length of this reach is perennial, and the remainder is intermittent or ephemeral. Shrub (willow) cover along the reach ranges from approximately 35% to 85%. The riparian area width is restricted by the stream’s location within a historic incisement, but appears to be expanding within this incisement. Approximately 65-85% of the streambanks along this reach are covered by riparian species with deep binding root masses. Diverse age classes and composition of riparian species are present along this reach. Vigor appeared to be high in these plant communities. This reach was rated in the high range of Functional-at Risk (FAR) during 2000 (Table E2-1). During site visits in 2003, BLM staff noted that the riparian area was continuing to improve, but cover of stabilizing riparian vegetation was still somewhat below potential, leaving the riparian area vulnerable to degradation during periodic high flow events. Yellowstar thistle was noted along the reach in 2003, and some western juniper has established within the floodplain area.

PFC assessments have not been completed for Toppin Creek, which is an ephemeral drainage. However, during site visits in 2003, BLM staff noted that the stream channel was stable, and that the drainage is in good condition relative to its potential. The reach is dominated by tufted hairgrass and Baltic rush, and also supports limited populations of willow and Nebraska sedge.

Table E2-1: Riparian Indicators and Functioning Condition Rating by Stream Segment

BLM Stream Segment	Lone Tree 002
<i>Pasture</i>	<i>1</i>
<i>Stream miles</i>	<i>1.1</i>
<i>Riparian acres</i>	<i>30</i>
Riparian/Wetland Indicators:	Rating¹
Diverse age class/structure of hydric vegetation (6) ²	Y
Diverse composition of hydric vegetation (7)	Y
Vegetation reflects maintenance of soil moisture (8)	Y/N
Plant community comprised of bank stabilizing species (9)	Y
Hydric vegetation exhibits high vigor (10)	Y
Adequate hydric vegetation cover to protect banks and dissipate energy (11)	Y/N
Adequate large woody material (12)	Y
Point bars revegetating with hydric species (14)	Y/N
Noxious weeds are not increasing	N
Overall functioning condition ³	FAR

¹Y=yes, N=no, Y/N=both

²() - indicator # on Proper Functioning Condition Checklist

³PFC: proper functioning condition, FAR: functioning at risk, FARU: functioning at risk with an upward trend, FAR-D: functioning at risk with a downward trend, NF: nonfunctioning (overall rating determined from examination of both riparian and channel/floodplain indicators)

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In 2011, a MMIM site was established on the same reach of Lone Tree Creek (Map RNGE-1E). The mean stubble height was 4.4 inches, woody use was 28 percent, and stream bank alteration was 32 percent.

Utilization: During riparian inventory in 2000, stubble height along Lone Tree Creek in the Warn allotment ranged from 1 inch to 7 inches. Stubble height was measured again in October, 2003 by BLM staff; median stubble height was 6 inches.

Standard 3: Stream Channel/Floodplain

Proper functioning condition assessments and riparian inventory were completed on Lone Tree Creek in 2000. Table E3-1 summarizes the PFC checklist indicators specific to Standard 3. The standard checklist has 17 indicators; of these, numbers 1-5, 13 and 15-17 describe conditions associated with stream channel/floodplain function. PFC assessment methods for lotic areas are described in Interagency Technical Reference 1737-15 (1998).

Lone Tree Creek stream channel is a Rosgen type F channel with a 4% gradient. The stream is dominated by willow community types, but the floodplain is limited due to historic incisement.

The stream channel and floodplain are currently stabilizing due to increases in riparian shrubs and herbaceous species. However, cover of riparian vegetation is not yet adequate to stabilize streambanks and dissipate energy during periodic high flow events. Approximately 20-40% of streambanks along this reach were unstable in 2000. Sinuosity is low (1.0) and the channel is somewhat over-widened, reducing floodplain access. The stream channel appears to be vertically stable, and limited lateral movement is associated with natural sinuosity. This reach was rated as functional-at risk with an upward trend in 2000 (Table E3-1).

Table E3-1: Stream Channel/Floodplain Indicators and Functioning Condition Rating

BLM Stream Segment	Lone Tree 002
<i>Pasture</i>	<i>1</i>
<i>Stream miles</i>	<i>1.1</i>
<i>Riparian acres</i>	<i>30</i>
Riparian/Wetland Indicators:	<i>RATING¹</i>
Floodplain inundated frequently (1) ²	Y/N
Beaver dams are active and stable (2)	NA
Sinuosity, w/d ratio, gradient in balance with landscape setting (3)	Y/N
Riparian area is widening or has achieved potential extent (4)	Y
Upland watershed not contributing to riparian degradation (5)	Y/N
Floodplain and channel characteristics dissipate energy (13)	Y/N
Lateral stream movement associated with natural sinuosity (15)	Y
System is vertically stable (16)	Y
No excessive erosion or deposition (17)	Y
Overall functioning condition ³	FAR-U

¹(Y=yes, N=no, Y/N=both)

²() - indicator # on Function/Health Assessment

³ PFC: proper functioning condition, FAR: functioning at risk, FARU: functioning at risk with an upward trend, FAR-D: functioning at risk with a downward trend, NF: nonfunctioning (overall rating determined from examination of both riparian and channel/floodplain indicators)

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See supplemental information for Lone Tree Creek under Standard 2 above.

Standard 4: Native Plant Communities

Two Rangeland Health Evaluation worksheets were completed in this allotment. The following table (E4-1) contains a summary of indicator ratings by degree of departure from ecological site descriptions or reference sites. Warn Map shows the location of the field assessments and Appendix B contains individual indicator ratings by site.

Table E4-1: Rangeland Health Evaluation Worksheet Summary

^Standard 4-Native Plant Communities	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Pasture 1	7	8	3	0	0

^ See Appendix B for individual evaluations and indicators.

*1 Summarizes: 1 Loamy 13-16” and 1 Shallow Claypan 12-16” ecological sites

RH1A (U05961-090303-2A) represents a Shallow Claypan 12-16” ecological site in the central portion of the allotment. The indicators for soil surface resistance to erosion and soil surface loss or degradation at this site rated in the moderate range of departure. The description for the resistance to erosion included increased bare ground and reduced stabilizing agents. The soil loss or degradation was associated with water flow paths, pedestals, and terracettes. Localized mechanical disturbance, and compaction were also included, as well as a decrease in organic matter and biological soil crust. The other indicators relating to biotic integrity rated in acceptable ranges of departure relative to this ecological site. The reproductive capability of perennial plants was good; seedheads were present on all grasses (Bluebunch Wheatgrass and Idaho Fescue), and vigor was high on perennial grasses and shrubs. Invasive species present were soft brome and cheatgrass, although they do not pose a risk to the diversity and vigor of the plant community. The composition of the structure and function of the plant community are appropriate and providing proper nutrient and energy cycling.

RH1B (U05961-090303-1A) in the southern portion of the allotment, represents the Loamy 13-16” ecological site. The indicators relating to biotic integrity rated in the none-to-slight or slight-to-moderate ranges of departure, with the exception of the indicator for invasive plants. This indicator described cheatgrass as scattered, and rabbitbrush and western juniper as present in trace amounts. Overall, the plant community is diverse, both in structure and function, and vigor is good, with adequate reproductive capabilities of the perennial grasses (Bluebunch Wheatgrass and Idaho Fescue) and other perennial plants.

Utilization

A use pattern maps were prepared in 1988, 1989, 1994, 1995, 1996, 1997, and 1998 for the Warn Allotment. Overall, utilization was slight in 1988, 1995, and 1998; light in 1989, 1996 and 1995; and moderate to heavy in 1992 (Appendix F). Utilization levels in flat areas and along drainages was light in 1997; and moderate in 1994, 1996 and 1998. Partial use pattern maps were prepared in 1993, showing moderate utilization levels in the mapped areas. Utilization ranged from 29-66% on bluebunch wheatgrass and 13-65% on Idaho fescue.

<i>2013 Supplement to the Warn Allotment Rangeland Health Standards and Guidelines Assessment</i>
RH1A represents a Shallow Claypan 12-16” ecological site in the central portion of the allotment. The indicators for soil surface resistance to erosion and soil surface loss or degradation at this site rated in the moderate range of departure. The description for the resistance to erosion included increased bare ground and reduced stabilizing agents. The soil loss or degradation was associated with water flow paths, pedestals, and terracettes. Localized mechanical disturbance, and compaction were also included, as well as a decrease in organic matter and biological soil crust. The other indicators relating to biotic integrity rated in

acceptable ranges of departure relative to this ecological site. The reproductive capability of perennial plants was good; seedheads were present on all grasses (bluebunch wheatgrass and Idaho fescue), and vigor was high on perennial grasses and shrubs. Invasive species present were soft brome and cheatgrass, although they do not pose a risk to the diversity and vigor of the plant community. The composition of the structure and function of the plant community are suitable and providing proper nutrient and energy cycling.

The term *at risk* has been applied to pastures that are meeting Standard 4, meaning that watershed health is satisfactory but that it is near a point where soil and hydrologic function are susceptible to degradation. This takes into consideration a lag in response time, specifically between soils and vegetation, where soils may be resilient enough to withstand resulting adverse effects of declining vegetation conditions over a longer time before showing a measurable divergence from reference conditions. Similarly, soils may be the first to show declining conditions while the vegetation community is still relatively robust. For these reasons RH1A is a site at risk.

Utilization

Utilization was collected in 1994-1998, 2007, 2009, 2011, and 2012 on bluebunch wheatgrass and Idaho fescue. More recent utilization levels were slight to light (6 to 35 AUMs) in 1995, 1996, 2007, 2009, 2011, and 2012. Moderate use levels (44 to 65 AUMs) were collected in 1994, 1997, and 1998.

Standard 5: Rangeland Seeding

This standard does not apply.

Standard 6: Exotic Plant Communities

This standard does not apply.

Standard 7: Surface and Ground Water Quality

About 1.1 miles of Lone Tree Creek is located within the Warn Allotment. Lone Tree Creek is a tributary to Jordan Creek in the Jordan Creek sub-basin (Hydrologic Unit number 17050108). No streams in the Lone Tree Creek assessment unit (Hydrologic Unit Number ID170150108SW002_02) are currently listed as water quality impaired by the Idaho Department of Environmental Quality (IDEQ 2005 Integrated (303(d)/305(b) Report). Assessment units are groups of similar streams within a sub-basin that have similar land use practices, ownership, or land management. IDEQ has not assessed water quality nor assigned specific beneficial uses to streams in the Lone Tree Creek assessment unit. Non-designated streams are managed by IDEQ to support the beneficial uses of secondary contact recreation, cold-water biota, agricultural water supply, wildlife habitat, and aesthetics.

The State evaluates support of beneficial uses through its Beneficial Use Reconnaissance Program (BURP; all IDEQ data and standards mentioned in this section are available on the IDEQ web site- see references listed in section IV of this document). IDEQ is currently evaluating water quality in the Jordan Creek sub-basin as part of the completion of a sub-basin assessment and TMDL (Total Maximum Daily Load) for Jordan Creek. The BLM also collects data to evaluate water quality and beneficial use support that can include riparian inventories,

riparian Proper Functioning Condition (PFC) assessments, riparian habitat evaluation forms, stream survey forms, riparian aquatic data sheets, water temperature data, and water quality (bacteria) monitoring data (BLM data is available at the Owyhee Field Office).

Temperature Monitoring

During 2003, the BLM monitored two locations for water temperature in Lone Tree Creek within the Warn allotment. Water temperature monitoring indicated Lone Tree Creek is not fully supporting the cold-water biota beneficial use (Table E7-1). Water temperatures were monitored using automatic data-recording thermographs.

Table E7-1: Stream Temperatures and evaluation of water quality for the support of cold water biota beneficial use*.

Stream (Allotment)	Location	Max. Temp °C	Avg. Max. Temp. °C	Days Sampled	Dates Sampled	Support Status
Lone Tree (05961)	4735368N/ 499705E	24	18	43	5/28/2003- 7/9/2003	Not Fully Supported
Lone Tree (05961)	4735253N/ 499200E	26.7	21.4	44	7/19/2000- 8/31/2000	Not Supported

*Full support of the Cold-water biota beneficial use - water temperatures of 22° C or less, with a maximum daily average of less than 19° C.

Bacteria Monitoring

The BLM collected a water quality sample from Lone Tree Creek in 1995 and it had a total fecal coliform count of 1100 organisms/100 ml, which exceeded the criteria for support of secondary contact recreation at that time. This is the most recent data available and may not reflect current conditions. *E. coli* bacteria concentrations are currently used to evaluate support of the secondary contact recreation beneficial use.

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Idaho Department of Environmental Quality (IDEQ) designates basins, sub-basins, and assessment units in order to manage the state’s waterways. The 2010 Integrated Report (303(d)/305(b)) uses assessment units within the sub-basin. Assessment units are groups of similar streams within a sub-basin that have similar land use practices, ownership, or land management. Assessment units are assessed for pollutants and assigned beneficial uses with associated Water Quality Standards. The Beneficial Use Reconnaissance Program (BURP) is a field assessment of stream segments (all IDEQ data and standards mentioned here are available on the IDEQ web site <http://www.deq.idaho.gov>).

Current IDEQ information identifies that the BLM portions of the Warn allotment contain approximately 0.9 mile of stream that is not supporting the watershed’s beneficial uses, and 1.0 mile that has not been assessed. The allotment contains portions of two AUs with associated beneficial uses and pollutants (Table RIPN-7). AU #ID17050108SW002_02 is currently not supporting the beneficial uses, and all of the streams that occur within the allotment are on the 303(d) list of impaired waters based on the pollutants listed below.

Table RIPN-7: DEQ Water Quality Summary

AU #	AU Name	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050107SW014_02	Soldier, Stove and Sheep Creeks - 1st and 2nd order	not assessed	NA	NA
ID17050108SW002_02	Lone Tree Creek and tributaries - 1st and 2nd order	CWAL ¹ SS ² SCR ³	combined biota/ habitat bioassessments E. Coli	No

¹CWAL = cold water aquatic life

²SS = salmonid spawning

³SCR = secondary contact recreation

Standard 8: Threatened and Endangered, Special Status, Sensitive Species

For a summary of Special Status Animal Species, see Appendix H.

Botany

No federally listed plant species are known to occur in this allotment, although the U.S. Fish and Wildlife Service (USFWS) considers all of Idaho to be within the potential range of Ute ladies'-tresses (*Spiranthes diluvialis*), a federally threatened orchid species. This plant occurs in spring, seep, and riparian habitats. Due to the difficulty in narrowly defining potential habitat for this species, USFWS has chosen to apply a loose definition and requires Section 7 consultation only in three counties of southeast Idaho or in areas where the plant is actually found (USFWS 2002). Surveys specifically for this plant are recommended prior to authorizing federal actions in southwest Idaho, but not required.

No BLM special status plant species are currently known to occur within this allotment.

For a summary of Special Status Animal Species, see Appendix H.

Botany

No populations of special status plant species are known to occur in this allotment. There is insufficient information to determine site-specific impacts of livestock grazing on any special status plants that may occur in this allotment. Records show no reported special status plants in this allotment, so this standard is not applicable.

Information sources

Elemental Occurrences (EOs) for SSP populations is recorded in the Idaho Fish and Wildlife Information System (IFWIS) Species Diversity database (IDFG, 2011). EOs are derived by completion and review of Idaho rare plant observation reports from the Idaho Natural Heritage Program. Other sources that were used to assess and evaluate the composition and condition of special status plant (SSP) habitats within the Warn allotment include RHAs, photographs, field notes, Plants database (USDA NRCS, 2013), literature search, and information summarized above in RHA Standards in this document. Records show no reported special status plants in this allotment.

Wildlife

General Upland Habitat

Warn Allotment contains some flats that are dominated by low sage, and hillsides with mesic mountain sagebrush communities including bitterbrush, snowberry, rose, rabbitbrush, and golden current. Juniper is increasing on the hillsides.

Sagebrush and other shrubs provide good woody cover and structure for shrub dependant species, including sagebrush obligates. The herbaceous understory is largely dominated by desirable native bunchgrasses and forbs that are providing good cover for sage grouse and other ground nesting and foraging species. It appears that bitterbrush is providing good late summer and winter deer forage and does not appear to be excessively browsed by cattle or big game ungulates.

Upland Habitat

Plant community information in Standard 4 revealed that the reproductive capability of perennial plants was favorable and that composition, structure and function of the plant community are appropriate (see Standard 4).

Riparian Habitats

All 1.1 miles of perennial stream riparian habitat is located along Lone Tree Creek in this allotment and rated as functioning-at-risk. However, key indicators including structural diversity, composition, and vigor of hydric vegetation are as expected and generally providing habitat that is adequate to meet the needs of dependant special status species and other wildlife. Both herbaceous and woody components also appear in an upward trend supporting adequate

residual cover and growth following periods of livestock grazing. Toppin Creek supports some herbaceous riparian.

<i>2013 Supplement to the Warn Allotment Rangeland Health Standards and Guidelines Assessment</i>
<p>Riparian Habitat</p> <p>Evaluation of Standards 2 and 3 identified that a reach of Lone Tree Creek was assessed to be functioning-at-risk (FAR) due to inadequate vegetation to protect streambanks and invasive weeds were present (see Standards 2 and 3).</p> <p>Standard 7 identified that Lone Tree Creek and Toppin Creek are on IDEQ’s 303(d) list of impaired steams and that water quality parameters are not being met for the watershed’s beneficial uses on 4.5 miles of Lone Tree and Toppin Creeks. The list of beneficial uses includes water quality standards for cold-water aquatic life (Standard 7).</p>

<i>2013 Supplement to the Combination Creek Rangeland Health Standards and Guidelines Assessments</i>
<p><i>Columbia Spotted Frog</i></p> <p>A portion of this allotment is identified within the modeled distribution of the Columbia spotted frog. Potential habitat exists along stream channels, wetlands, and springs (Map WDLF-2A). Inventory/target survey information in 2008 in Lone Tree Creek did not record any occurrence of spotted frog in this allotment.</p>

Sage Grouse Habitat

One historic lek is located in the allotment, and five other leks are located within a 5-mile radius.

One breeding habitat evaluation was completed, revealing good herbaceous cover, height, vigor, and diversity. However, overall habitat suitability rated as marginal due to excessive shrub cover that included bitterbrush and snowberry, steep terrain, and encroaching juniper. Notes taken during the upland rangeland health assessments show that sage grouse scat was observed on the allotment.

Table E8-2: Sage Grouse Habitat Evaluation, Warn Allotment, 2003.

Pasture	Location	Rating*	Vegetation	Season	Rationale for Rating/Comments
1	7S 6W 35 NESE	M	Sagebrush	Breeding	Naturally marginal because of steepness, sage cover too high, lots of juniper. Grasses vigorous, good for diversity.

* Suitable (S), Marginal (M), and Unsuitable (U).

<i>2013 Supplement to the Warn Allotment Rangeland Health Standards and Guidelines Assessment</i>
<p>Focal Species</p> <p><i>Sage-grouse</i></p> <p>On March 5, 2010, the USFWS (USDI USFWS, 2010) published a finding in the Federal Register</p>

which found that listing the greater sage-grouse was warranted but precluded by the need to take action on other species facing more immediate and severe extinction threats. The finding has changed the status of sage-grouse from a BLM Type 2 sensitive species to a candidate species under the ESA.

This allotment lies within the regional Snake River Plain Management Zone for sage-grouse. In 2012, preliminary priority habitat (PPH) and general priority habitat (GPH) were modeled to identify lands in Idaho important to sage-grouse sustainability. PPH includes breeding, late brood-rearing, and winter concentration areas. General priority habitat are lands that may serve as important corridors between PPH and habitat islands within corridors, or occupied habitats characterized by low lek densities (Makela & Major, 2012). The BLM collaborated with respective state wildlife agencies to identify these areas. Modeling results indicate that all of the Warn allotment (100 percent) lies within PPH (Table WDLF-9, Map WDLF-E1). No active leks are documented to occur in this allotment. This allotment provides seasonal breeding, upland summer, and winter habitat for sage-grouse.

Table WDLF-9: Acres¹ and portions of preliminary priority and general priority habitat within the Warn allotment (Map WDLF-1E)

Allotment/Pasture Name	Acres of PPH Sagebrush Habitat in Allotment ²	Acres of PPH Perennial Grassland in Allotment	Acres of PPH Juniper Encroachment in Allotment	Acres of PGH in Allotment	Portion of Allotment in PPH/PGH
Allotment Total	1,845 (100%)	0	0	0	1,845 (100%)

¹PPH/PGH habitat acreage totals include public lands, state lands, and private property.

²PPH sagebrush can also include small amounts of perennial grasslands, conifer encroachment, and non-habitat.

Pasture 1

Two sage-grouse upland summer habitat assessments were conducted on August 8, 2012, on a Loamy 12-16” Wyoming big sagebrush / bluebunch wheatgrass community associated with Shallow Claypan 12-16” and Loamy 13-16” ecological sites. The pasture is managed as a native plant community (Standard 4).

Breeding Habitat Assessment

This information was collected as part of an upland summer habitat assessment conducted on August 8, 2012. Because the sagebrush community is not expected to change substantially over the course of a few months and the data collection protocols are the same, this information can provide insight into breeding habitat conditions earlier in the spring. Due to the time of year this data was collected, the forb information was not used in this assessment.

The sagebrush overstory is characterized by a suitable canopy cover (24 percent) and marginal height (98.5 cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by a suitable canopy cover of perennial grasses (8 percent) and unsuitable canopy of perennial forbs (0 percent) with a combined perennial grass/forb height of 20.9 cm (Table WDLF-10). Overall, because of favorable combined occurrence of sagebrush and the occurrence and height of perennial grasses, this pasture is providing adequate (suitable) overstory/understory

composition and structure for sage-grouse nesting and hiding cover and is therefore meeting Standard 8.

Upland Summer Habitat Assessment

The sagebrush overstory is characterized by a suitable canopy cover (24 percent) and marginal height (98.5 cm). The understory is characterized by a combined suitable canopy cover of perennial grasses and forbs (18 percent) (Table WDLF-10). The occurrence of forbs is rare and those that do occur are not well represented. Overall, although sagebrush occurrence and perennial grass occurrence and height are favorable, the availability of forbs is a critical forage component this time of year and they are not well represented. Due to the rarity of forbs, this allotment is only providing less-than-adequate (marginal) upland summer habitat conditions for late brood-rearing sage-grouse and therefore is not meeting Standard 8.

Winter Habitat Assessment

This information was collected as part of an upland summer habitat assessment conducted on August 8, 2012. Because the sagebrush community is not expected to change substantially over the course of a few months, this information can provide insight into winter habitat conditions later in the year. The sagebrush overstory is characterized by a suitable canopy cover (24 percent) and marginal height (122.5 cm). Overall, sagebrush occurrence and height are providing suitable winter cover and forage conditions for sage-grouse and is not a limiting factor in this pasture (Table WDLF-10).

Although the rarity of forbs was identified in the upland summer assessment, overall sagebrush overstory and herbaceous understory composition and structure are adequately being provided within this allotment for breeding, nesting, early brood-rearing, late-brood rearing, and wintering sage-grouse. Because of the variability of timing and persistence of forbs through the year, this habitat indicator alone was not appropriate to dismiss this allotment. Therefore, overall, this allotment is meeting Standard 8 for sage-grouse.

Table WDLF-10: Sage-grouse habitat indicators and pasture 1 ratings (Refer to Appendix C and Figure WDLF-1E for full assessment summaries and habitat indicator value ranges)

Habitat Indicator	Data	Breeding	¹ Upland Summer	¹ Winter
Sagebrush Canopy Cover (%)	24	suitable	suitable	suitable
Sagebrush Height (cm)	122.5	marginal	marginal	suitable
Sagebrush Form	mixed	marginal		
² Perennial Grass Canopy Cover (%)	18	suitable		
Combined Grass/Forb Canopy Cover (%)	18		suitable	
Preferred Forb Availability (#)	5		unsuitable	
Overall Pasture Evaluation Rating		suitable	marginal	suitable

¹Breeding and winter habitat ratings extrapolated from summer upland habitat assessment information collected on

8/8/2012.

²Perennial grass canopy cover does not include Poa species.

Pygmy Rabbit Habitat

A 2005 pygmy rabbit survey of potentially suitable big sagebrush habitats failed to discover any evidence of recent or historic pygmy rabbit occupation within this allotment. However, evidence of historically occupied burrows was discovered less than a half mile away on the adjacent Corta allotment.

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Appendices and Maps

APPENDIX A – IDAHO STANDARDS FOR RANGELAND HEALTH AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT

IDAHO STANDARDS FOR RANGELAND HEALTH

Standard 1

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.

Indicators may include, but are not limited to, the following:

1. The amount and distribution of ground cover, including litter, for identified ecological site or soil-plant associations are appropriate for site stability.
2. Evidence of accelerated erosion in the form of rills and/or gullies, erosional pedestals, flow patterns, physical soil crusts/ surface sealing, and compaction layers below the soil surface is minimal for soil type and landform.

Standard 2

Riparian-wetland areas are in proper functioning condition appropriate to soil type, climate, geology, and landform to provide for proper nutrient cycling, hydrologic cycling and energy flow.

Indicators may include, but are not limited to, the following:

1. The riparian/wetland vegetation is controlling erosion, stabilizing streambanks, shading water areas to reduce water temperature, stabilizing shorelines, filtering sediment, aiding in floodplain development, dissipating energy, delaying floodwater, and increasing recharge of groundwater appropriate to site potential.
2. Riparian/wetland vegetation with deep strong binding roots is sufficient to stabilize streambanks and shorelines. Invader and shallow rooted species are a minor component of the floodplain.
3. Age class and structural diversity of riparian/wetland vegetation is appropriate for the site.
4. Noxious weeds are not increasing.

Standard 3

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.

Indicators may include, but are not limited to, the following:

1. Stream channels and floodplains dissipate energy of high water flows and transport sediment. Soils support appropriate riparian-wetland species, allowing water movement, sediment filtration, and water storage. Stream channels are not entrenching.
2. Stream width/depth ratio, gradient, sinuosity, and pool, riffle and run frequency are appropriate for the valley bottom type, geology, hydrology, and soils.
3. Streams have access to their floodplains and sediment deposition is evident.
4. There is little evidence of excessive soil compaction on the floodplain due to human activities.
5. Streambanks are within an appropriate range of stability according to site potential.
6. Noxious weeds are not increasing.

Standard 4

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.

Indicators may include, but are not limited to, the following:

1. Native plant communities (flora and microbiotic crusts) are maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species.
2. The diversity of native species is maintained.
3. Plant vigor (total plant production, seed and seedstalk production, cover, etc.) is adequate to enable reproduction and recruitment of plants when favorable climatic events occur.
4. Noxious weeds are not increasing.
5. Adequate plant litter and standing dead plant material are present for site protection and for decomposition to replenish soil nutrients relative to site potential.

Standard 5

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.

Indicators may include, but are not limited to, the following:

1. In established seedings, the diversity of perennial species is not diminishing over time.
2. Plant production, seed production, and cover are adequate to enable recruitment when favorable climatic events occur.
3. Noxious weeds are not increasing.
4. Adequate litter and standing dead plant material are present for site protection and for decomposition to replenish soil nutrients relative to site potential.

Standard 6

Exotic plant communities, other than seedings, will meet minimum requirements of soil stability and maintenance of existing native and seeded plants. These communities will

be rehabilitated to perennial communities when feasible cost effective methods are developed.

Indicators may include, but are not limited to, the following:

1. Noxious weeds are not increasing.
2. Perennial species numbers are being maintained.
3. Native and introduced perennial species are vigorous enough to reproduce when climatic and other environmental conditions are favorable.
4. Litter and standing dead plant material is adequate to replenish soil nutrients relative to site potential.

Standard 7

Surface and groundwater on public lands comply with the Idaho Water Quality Standards.

Indicators may include, but are not limited to, the following:

1. Physical, chemical, and biologic parameters described in the Idaho Water Quality Standards.

Standard 8

Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species.

Indicators may include, but are not limited to, the following:

1. Parameters described in the Idaho Water Quality Standards.
2. Riparian/wetland vegetation with deep, strong, binding roots is sufficient to stabilize streambanks and shorelines. Invader and shallow rooted species are a minor component of the floodplain.
3. Age class structure diversity or riparian/wetland vegetation is appropriate for the site.
4. Native plant communities (flora and microbiotic crusts) are maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species.
5. The diversity of native species is maintained.
6. The amount and distribution of ground cover, including litter, for identified ecological site(s) or soil-plant associations are appropriate for site stability.
7. Noxious weeds are not increasing.

GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT

INTRODUCTION

Guidelines direct the selection of grazing management practices, and where appropriate, livestock management facilities to promote significant progress toward, or the attainment and maintenance of, the standards. Grazing management practices are livestock management

techniques. They include the manipulation of season, duration (time), and intensity of use, as well as numbers, distribution, and kind of livestock. Livestock management facilities are structures such as fences, corrals, and water developments (ponds, springs, pipelines, troughs, etc.) used to facilitate the application of grazing management practices. Livestock grazing management practices and guidelines will be consistent with the Idaho Agricultural Pollution Abatement Plan.

Grazing management practices and facilities are implemented locally, usually on an allotment or watershed basis. Grazing management practices and facilities are developed through consultation, coordination, and cooperation with the Bureau of Land Management, permittees, other agencies, Indian tribes, and interested publics.

These guidelines were prepared under the assumption that regulations and policies regarding grazing on the public lands will be implemented and will be adhered to by the grazing permittees and agency personnel. Anything not covered in these guidelines will be addressed by existing laws, regulations, Indian treaties, and policies.

The BLM will identify and document within the local watershed all impacts that affect the ability to meet the standards. If a standard is not being met due to livestock grazing, then allotment management will be adjusted unless it can be demonstrated that significant progress toward the standard is being achieved. This applies to all subsequent guidelines.

GUIDELINES

1. Use grazing management practices and/or facilities to maintain or promote significant progress toward adequate amounts of ground cover to support infiltration, maintain soil moisture storage and stabilize soils.
2. Locate livestock management facilities away from riparian areas wherever they conflict with achieving or maintaining riparian-wetland functions.
3. Use grazing management practices and/or facilities to maintain or promote soil conditions that support water infiltration, plant vigor, and permeability rates and minimize soil compaction appropriate to site potential.
4. Implement grazing management practices that provide periodic rest or deferment during critical growth stages to allow sufficient regrowth to achieve and maintain healthy, properly functioning conditions, including good plant vigor and adequate vegetative cover appropriate to site potential.
5. Maintain or promote grazing management practices that provide sufficient residual vegetation to improve, restore, or maintain healthy riparian-wetland functions and structure for energy dissipation, sediment capture, ground water recharge, streambank stability, and wildlife habitat appropriate to site potential.
6. The development of springs, seeps or other projects affecting water and associated resources shall be designed to protect the ecological functions, wildlife habitat, and significant cultural and historical/ archaeological/ paleontological values associated with the water source.
7. Apply grazing management practices to maintain, promote, or progress toward appropriate stream channel and streambank morphology and functions. Adverse impacts due to livestock grazing will be addressed.

8. Apply grazing management practices that maintain or promote the interaction of the hydrologic cycle, nutrient cycle, and energy flow that will support the appropriate types and amounts of soil organisms, plants and animals appropriate to soil type, climate and landform.
9. Apply grazing management practices to maintain adequate plant vigor for seed production, seed dispersal, and seedling survival of desired species relative to soil type, climate and landform.
10. Implement grazing management practices and/or facilities that provide for complying with the Idaho Water Quality Standards.
11. Use grazing management practices developed in recovery plans, conservation agreements, and Endangered Species Act, Section 7 consultations to maintain or improve habitat for federally listed threatened, endangered, and sensitive plants and animals.
12. Apply grazing management practices and/or facilities that maintain or promote the physical and biological conditions necessary to sustain native plant populations and wildlife habitats in native plant communities.
13. On areas seeded predominantly with non-native plants, use grazing management practices to maintain or promote the physical and biological conditions to achieve healthy rangelands.
14. Where native communities exist, the conversion to exotic communities after disturbance will be minimized.
15. Use non-native plant species for rehabilitation only in those situations where:
 - a. native species are not readily available in sufficient quantities;
 - b. native plant species cannot maintain or achieve the standards; or
 - c. non-native plant species provide for management and protection of native rangelands
16. Include a diversity of appropriate grasses, forbs, and shrubs in rehabilitation efforts.
17. On burned areas, allow natural regeneration when it is determined that populations of native perennial shrubs, grasses, and forbs are sufficient to revegetated the site. Rest burned or rehabilitated areas to allow recovery or establishment of perennial plant species.
18. Carefully consider the effects of new management facilities (e.g., water developments, fences) on healthy and properly functioning rangelands prior to implementation.
19. Use grazing management practices, where feasible, for wildfire control and to reduce the spread of targeted undesirable plants (e.g., cheatgrass, medusahead wildrye, and noxious weeds) while enhancing vigor and abundance of desirable native or seeded species.
20. Employ grazing management practices that promote natural forest regeneration and protect reforestation projects until the Idaho Forest Practices Act requirements for timber stand replacement are met.
21. Design management fences to minimize adverse impacts, such as habitat fragmentation, to maintain habitat integrity and connectivity for native plants and animals.

APPENDIX B – INDICATORS OF RANGELAND HEALTH

Rangeland Health Evaluation Summary Worksheets Glass Creek Allotment (0552)

Attributes**			Indicators for Rangeland Health*	Pasture 1		Pasture 2		
				RH1A	RH1B	RH2A	RH2B	RH2C
S	H		1-Rills	1	1	1	1	1
S	H		2-Water Flow Pattern	2	3	2	2	3
S	H		3-Pedestals / Terracettes	2	3	2	2	3
S	H		4-Bare Ground	2	2	2	1	2
S	H		5-Gullies	1	1	1	1	1
S			6-Wind-scoured, blowouts/deposition	1	1	1	1	1
	H		7-Litter Movement	1	1	1	1	1
S	H	B	8-Soil Surface Resistance to Erosion	2	2	2	1	2
S	H	B	9-Soil Surface Loss or Degradation	2	2	2	2	2
	H		10-Plant Community Composition / Distribution Relative to infiltration and runoff	2	2	2	3	2
S	H	B	11-Compaction Layer	1	1	1	1	1
		B	12-Functional / Structural Groups	2	2	2	4	2
		B	13-Plant Mortality / Decadence	2	3	2	3	3
	H	B	14-Litter Amount	2	2	1	1	2
		B	15-Annual Production	2	1	1	3	2
		B	16-Invasive Plants	1	3	4	4	3
		B	17-Reproductive Capability of Perennial Plants	2	2	2	3	3

*Indicators for Rangeland Health are rated based on their departure from ecological site guide descriptions and/or reference areas. **1** = None-Slight, **2** = Slight-Moderate, **3** = Moderate, **4** = Moderate-Extreme, and **5** = Extreme departure.

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

Rangeland Health Evaluation Summary Worksheets
Gluch, Gluch FFR, W. Maher FFR, and Warn Allotments

Attributes**			Indicators for Rangeland Health*	Gluch	Gluch FFR	W.Maher FFR	Warn	Warn
				RH1A	RH1A	RH1A	RH1A	RH1B
S	H		1-Rills	1	1	1	1	1
S	H		2-Water Flow Pattern	3	4	4	4	3
S	H		3-Pedestals / Terracettes	2	4	4	4	3
S	H		4-Bare Ground	2	2	2	3	2
S	H		5-Gullies	1	1	1	3	1
S			6-Wind-scoured, blowouts/deposition	1	1	1	1	1
	H		7-Litter Movement	1	1	1	2	2
S	H	B	8-Soil Surface Resistance to Erosion	2	2	2	3	2
S	H	B	9-Soil Surface Loss or Degradation	2	3	3	3	2
	H		10-Plant Community Composition / Distribution Relative to infiltration and runoff	2	3	3	2	1
S	H	B	11-Compaction Layer	1	1	1	2	1
		B	12-Functional / Structural Groups	2	3	2	1	1
		B	13-Plant Mortality / Decadence	4	3	3	2	2
	H	B	14-Litter Amount	1	3	2	2	1
		B	15-Annual Production	1	2	1	1	1
		B	16-Invasive Plants	4	4	1	2	3
		B	17-Reproductive Capability of Perennial Plants	2	3	2	1	2

*Indicators for Rangeland Health are rated based on their departure from ecological site guide descriptions and/or reference areas. **1** = None-Slight, **2** = Slight-Moderate, **3** = Moderate, **4** = Moderate-Extreme, and **5** = Extreme departure.

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

Rangeland Health Evaluation Summary Worksheet for 2013 RHAs in the Gluch FFR and West Maher Allotments

Attributes**			Indicators for Rangeland Health*	Gluch FFR	West Maher FFR
				051613-P1	060613-P2
S	H		1-Rills	1	1
S	H		2-Water Flow Pattern	3	1
S	H		3-Pedestals / Terracettes	2	2
S	H		4-Bare Ground	3	1
S	H		5-Gullies	1	1
S			6-Wind-scoured, blowouts/deposition	1	1
	H		7-Litter Movement	1	1
S	H	B	8-Soil Surface Resistance to Erosion	2	1
S	H	B	9-Soil Surface Loss or Degradation	3	2
	H		10-Plant Community Composition / Distribution Relative to infiltration and runoff	4	1
S	H	B	11-Compaction Layer	3	1
		B	12-Functional / Structural Groups	5	2
		B	13-Plant Mortality / Decadence	3	1
	H	B	14-Litter Amount	3	2
		B	15-Annual Production	3	1
		B	16-Invasive Plants	4	2
		B	17-Reproductive Capability of Perennial Plants	3	1

*Indicators for Rangeland Health are rated based on their departure from ecological site guide descriptions and/or reference areas. 1 = None-Slight, 2 = Slight-Moderate, 3 = Moderate, 4 = Moderate-Extreme, and 5 = Extreme departure.

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

C. APPENDIX – Methods

This section describes methods used to collect data for this assessment. Resources of interest, as identified by the Idaho Rangeland Health Standards and Guidelines, are assessed to determine whether they are meeting, or making significant progress toward meeting the Standards. The information collected includes data that enables an Interdisciplinary Team (ID Team) to analyze the condition of upland and riparian areas, as well as habitat for wildlife species and areas of concern for special status plants.

Uplands

Rangeland Health Assessments - Rangeland Health Evaluation Summary Worksheets (RHE), outlined in *BLM technical reference 1734-6 Interpreting Indicators of Rangeland Health*, and other available qualitative and quantitative data are used to determine if rangelands are meeting or making significant progress toward meeting the Standards for Rangeland Health.

The rangeland health evaluation summary worksheet consists of 17 indicators, each of which is rated on the degree of departure from the appropriate ecological site description or ecological reference area. Areas without a nearby reference site are evaluated using the appropriate ecological site description, familiarity of the area, and incorporating the best professional judgment of the evaluators. The 17 indicators, from the summary worksheet, are compiled into three interlocking attribute categories representing soil/site stability, hydrologic function, and biotic integrity (Appendix B). The preponderance of evidence of each attribute determines the condition of the site.

Nested Plot Frequency and Photo Plots – Nested Plot Frequency Transect (NPFT) data provide insight into changes in the plant community, such as plant occurrence, vigor, and/or health. NPFT data are collected at permanently located study sites and includes; species frequency, cover data, as well as shrub density where applicable. The methodology used to establish and collect data at these sites is described in detail in *BLM technical references 1400-4* and *1730-1*.

Frequency data shows changes in the occurrence of plants. Additional phenological information and photographs provides information on the reproductive capabilities of plants. Cover data describes the percent of ground covered by plant material, biological soil crusts, gravel, rock, and plant litter.

Photographs are taken at NPFT sites as well as photo plot sites. A minimum of three photographs are taken, two general landscape views and one close-up of the photo plot. Additionally, the photo plot is sketched to help illustrate species composition, size, and vigor, and is used to help corroborate the photograph.

Shrub density is collected when shrubs are present, in either 1/100th or 1/200th acre plots, depending on shrub distribution, and calculated and expressed as plants per acre.

Utilization - Utilization data is important in evaluating the effects of grazing and browse on specific areas of rangeland. Utilization refers to the percentage of forage that has been removed

by animals during the grazing period. It is expressed as a percentage, and can characterize the amount of use on vegetation in an area or the use of individual plant species. Generally, utilization data are collected on transects located at pre-selected key use areas, such as permanently located study sites, although utilization may be collected at appropriate sites throughout a pasture or allotment.

Numerous methods are available for measuring utilization, some of which include: the Landscape Appearance Method, Key Species Method, Grazed Class Method, Cole Browse Method or Extensive Browse Method (*Interagency Technical Reference 1996 BLM/RS/ST-96/004+1730: Utilization Studies and Residual Measurements*). In general, the utilization data used in this assessment were collected using the Key Species Method and the Cole Browse Method.

Riparian/Wetland

A Standard Checklist, outlined in the 1998 BLM *Technical Reference 1737-15, A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas* (flowing water), and other available qualitative and quantitative data are used to determine if riparian areas are meeting Rangeland Health Standards.

The standard lotic PFC checklist consists of 17 indicators that are used to assess the functioning condition of riparian areas. The indicators are compiled into three interlocking attribute categories representing erosion/deposition, hydrologic function, and vegetative status. Status of noxious weeds is also considered when evaluating riparian health.

Spring wetland areas were assessed for proper functioning condition as outlined in *Technical Reference 1737-16, "A User Guide to Assessing Proper Functioning Condition and Supporting Science for Lentic Areas"* (USDI 1999). Lentic areas are defined as wetland-riparian areas adjacent to standing water habitats such as lakes, ponds, seeps, and meadows. The standard lentic PFC checklist consists of 20 indicators that are used to assess the functioning condition of lentic areas.

Special Status Species

Wildlife - Sage grouse habitat was evaluated using "A Framework to Assist in Making Sensitive Species Habitat Assessments for BLM-Administered Public Lands in Idaho – Sage Grouse" (draft revised in May, 2001). Nesting, brood-rearing, and winter habitat are each evaluated using different criteria. Although this methodology was developed for sage grouse, the criteria are useful for assessing the general health of sagebrush ecosystems and their suitability for other sagebrush obligate species.

Sage-grouse breeding and upland summer habitat assessments were conducted using the BLM Sage-grouse Habitat Assessment Framework, Multi-scale Habitat Assessment Tool, August 2010 (Stiver, Rinkes, & Naugle, 2010). This assessment tool has been going through slight modifications since 2001 to present as information and findings come forward to better capture and characterize sage-grouse habitat indicators.

The sage-grouse assessment information collected in 2012 can be reviewed below. Assessment teams collected breeding habitat and upland summer habitat assessment information during the spring and summer of 2012.

In interpreting the breeding and upland summer habitat information, where it is applicable, because the composition and structure of the sagebrush – steppe community is not expected to change significantly over the course of a few weeks to a couple of months, except in situations effected by wildfire or mechanical manipulation, the information can provide insight into habitat conditions during other times of the year.

For example, the breeding habitat assessment can provide sagebrush canopy cover and height to assess winter habitat potential and conditions. However, an assessment of upland summer habitat conditions could not be clearly made because the forb information was not representative of the time of year the data was collected and removing the forb information eliminated two critical habitat indicators in making a clear assessment of potential habitat conditions later in the year. Therefore, upland summer habitat was not evaluated using breeding habitat assessment information.

However, because the data collection methods are the same, upland summer habitat assessment information could provide insight into breeding habitat conditions earlier in the year. Largely due to the collection of information specific to sagebrush physical shape and perennial grass canopy cover. Consistent with the discussion above, forb information was not used because it did not represent any other assessment except for the time of year it was collected. Upland summer habitat conditions also provided insight into winter habitat conditions. Therefore, upland summer habitat assessment and supplemental information collected in the summer season were used to assess and evaluate breeding and winter conditions earlier and later in the year.

Figure WDLF-1A: Glass Creek allotment sage-grouse assessments 2012

Form H-3 Sage-grouse Habitat Suitability Worksheet – BREEDING 0552-1-06506W24-20 Glass Creek							
Date:	6/12/2012	County:	Owyhee	State:	Idaho	Subpopulation:	NC NV/ SE OR/ SW ID
Evaluators:	Harmon, Schroeder			Home Range Name:	Pleasant Valley		
Legal Description:	T06SR06WS24QNWQQSE			Associated Leaks:	20498, 20459,		
Land Cover Type:	ARTRT/POSE/AGCR			Ecological Site:	R025XY043ID		
Number of Transects:	1	Area Sampled (ha):	10	Site Info:	Arid		
List UTM Coordinates:							
Starting (NAD83)	500036E	4748206N					
Ending (NAD 83)	4748254N	500017E					
Habitat Indicator Suitability Range (Primary)							
Habitat Indicator	χ	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	12.0	15-25%		5-<15% or >25%	X	<5%	
Sagebrush Height Mesic Site (mean)	98.5	40-80 cm		20-<40 cm or >80 cm	X	<20 cm	
Arid Site (mean)		30-80 cm		20-<30 cm or >80 cm		<20 cm	
Predominant Sagebrush Shape (mode)	Mixed	Spreading		Mix of Spreading and Columnar	X	Columnar	
Perennial Grass and Forb Height (mean)	40.6	≥18 cm	X	10-18 cm		<10 cm	
Perennial Grass Canopy Cover Mesic Site (mean)	8.0	≥15%		5-<15%	X	<5%	
Arid Site (mean)		≥10%		5-<10%		<5%	
Perennial Forb Canopy Cover Mesic Site (mean)	2.0	≥10%		5-<10%		<5%	X
Arid Site (mean)		≥5%		3-<5%		<3%	
Preferred Forb Availability (relative to site potential)	Common	Preferred forbs are common with several species present	X	Preferred forbs are common but only a few species are present		Preferred forbs are rare	
Number of Preferred Forb Species (n)	9.0						
Habitat Indicator Suitability Range (Supplemental)							
Habitat Indicator	χ	Suitability	Rationale				
Other Shrub Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Other Shrub Height (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Canopy Cover (mean)	12.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Height (mean)	98.5	Marginal	Height of shrub overstory is high than desirable.				
Perennial Grass Height (excluding Poa spp.) (mean)	49.3	Suitable	Perennial grass height >18cm is suitable; however, height is generated by marginal 5<10% perennial grass canopy cover.				
Poa Spp. Canopy Cover (mean)	28.0	Marginal	Slight departure from reference site conditions.				
Annual Grass Canopy Cover (mean)	8.0	Suitable	Appropriate for reference site conditions.				
Annual Forb Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Bare Ground Canopy Cover (relative to site potential) (mean)	2.0	Unsuitable	Bareground for this site should range from 30-40%. Low bareground is usually associated with an increased occurrence of Poa and/or invasives annual species.				
Does ecological site potential limit suitability potential?				YES	NO		
					X		
Drought Condition:	Extreme Drought	Severe Drought	Moderate Drought	Mid-Range	Moderately Moist	Very Moist	Extremely Moist
			X				
Evidence of sage-grouse use?	Not indicated						
Evidence of recent livestock use?	AGCR has been grazed heavily						
Rationale for Overall Suitability Rating:	The site appears to be located within a past seeding project. The current community is composed of ARTRT/AGCR-POSE. The site is characterized by a marginal canopy cover (12%), height (98.5cm), and predominantly mixed growth form of sagebrush in the overstory. The understory is characterized by a marginal canopy cover of AGCR (8%) and an unsuitable (2%) canopy cover of forbs although combined their combined height (40.6cm) is suitable. However, 9 preferred forbs were recorded on the site and were commonly available. Overall, this pasture rates as marginal for providing sage-grouse breeding habitat conditions due to the less than desirable distribution and structure of the sagebrush overstory and marginal understory conditions due to reduced occurrence of perennial grasses and forbs.						
Site-Scale Suitability	Suitable		Marginal		Unsuitable		
		X					

Form H-3	Sage-grouse Habitat Suitability Worksheet -- BREEDING		0552-1-06S06W24-20 Glass Creek				
Date:	6/12/2012	County:	Owyhee	State:	Idaho	Subpopulation:	NC NV/ SE OR/ SW ID
Evaluators:	Harmon, Schroeder					Home Range Name:	Pleasant Valley
Legal Description:	T06SR06WS24QNWQQSE					Associated Leaks:	20498, 20459,
Land Cover Type:	ARTRT/POSE/AGCR					Ecological Site:	R025X043ID
Number of Transects:	1	Area Sampled (ha):	10			Site Info:	Arid
List UTM Coordinates:							
Starting (NAD83)	500036E	4748206N					
Ending (NAD 83)	4748254N	500017E					
Habitat Indicator Suitability Range (Primary)							
Habitat Indicator	χ	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	12.0	15-25%		5-<15% or >25%	X	<5%	
Sagebrush Height Mesic Site (mean)	98.5	40-80 cm		20-<40 cm or >80 cm	X	<20 cm	
Arid Site (mean)		30-80 cm		20-<30 cm or >80 cm		<20 cm	
Predominant Sagebrush Shape (mode)	Mixed	Spreading		Mix of Spreading and Columnar	X	Columnar	
Perennial Grass and Forb Height (mean)	40.6	≥18 cm	X	10-18 cm		<10 cm	
Perennial Grass Canopy Cover Mesic Site (mean)	8.0	≥15%		5-<15%	X	<5%	
Arid Site (mean)		≥10%		5-<10%		<5%	
Perennial Forb Canopy Cover Mesic Site (mean)	2.0	≥10%		5-<10%		<5%	X
Arid Site (mean)		≥5%		3-<5%		<3%	
Preferred Forb Availability (relative to site potential)	Common	Preferred forbs are common with several species present	X	Preferred forbs are common but only a few species are present		Preferred forbs are rare	
Number of Preferred Forb Species (n)	9.0						
Habitat Indicator Suitability Range (Supplemental)							
Habitat Indicator	χ	Suitability	Rationale				
Other Shrub Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Other Shrub Height (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Canopy Cover (mean)	12.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Height (mean)	98.5	Marginal	Height of shrub overstory is high than desirable.				
Perennial Grass Height (excluding Poa spp.) (mean)	49.3	Suitable	Perennial grass height >18cm is suitable; however, height is generated by marginal 5-<10% perennial grass canopy cover.				
Poa Spp. Canopy Cover (mean)	28.0	Marginal	Slight departure from reference site conditions.				
Annual Grass Canopy Cover (mean)	8.0	Suitable	Appropriate for reference site conditions.				
Annual Forb Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Bare Ground Canopy Cover (relative to site potential) (mean)	2.0	Unsuitable	Bareground for this site should range from 30-40%. Low bareground is usually associated with an increased occurrence of Poa and/or invasives annual species.				
Does ecological site potential limit suitability potential?				YES	NO		
					X		
Drought Condition:	Extreme Drought	Severe Drought	Moderate Drought	Mid-Range	Moderately Moist	Very Moist	Extremely Moist
			X				
Evidence of sage-grouse use?	Not indicated						
Evidence of recent livestock use?	AGCR has been grazed heavily						
Rationale for Overall Suitability Rating:	The site appears to be located within a past seeding project. The current community is composed of ARTRT/AGCR-POSE. The site is characterized by a marginal canopy cover (12%), height (98.5cm), and predominantly mixed growth form of sagebrush in the overstory. The understory is characterized by a marginal canopy cover of AGCR (8%) and an unsuitable (2%) canopy cover of forbs although combined their combined height (40.6cm) is suitable. However, 9 preferred forbs were recorded on the site and were commonly available. Overall, this pasture rates as marginal for providing sage-grouse breeding habitat conditions due to the less than desirable distribution and structure of the sagebrush overstory and marginal understory conditions due to reduced occurrence of perennial grasses and forbs.						
Site-Scale Suitability	Suitable		Marginal		Unsuitable		
			X				

Form H-4		Sage-grouse Habitat Suitability Worksheet –		UPLAND SUMMER 0552-1-06506W24-2C Glass Creek			
Date:	6/12/2012	County:	Owyhee	State:	Idaho	Subpopulation:	NC NV/ SE OR/ SW ID
Evaluators:	Harmon, Schroeder				Home Range Name:		Pleasant Valley
Legal Description:	T06SR06WS24QNWWQOSE				Associated Leaks:		20498, 20459,
Land Cover Type:	ARTRT/POSE/AGCR				Ecological Site:		R025XY043ID
Number of Transects:	1	Area Sampled (ha):	10			Site Info:	Arid
List UTM Coordinates:							
Starting (NAD83)	500036E	4748206N					
Ending (NAD 83)	4748254N	500017E					
Habitat Indicator Suitability Range (Primary)							
Habitat Indicator	χ	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	12.0	10-25%	X	5-<10% or >25%		<5%	
Sagebrush Height (mean)	98.5	40-80 cm		20-<40 cm or >80 cm	X	<20 cm	
Perennial Grass and Forb Canopy Cover (mean)	10.0	≥15%		5-15%	X	<5%	
Preferred Forb Availability (relative to site potential)	Common	Preferred forbs are common with several species present	X	Preferred forbs are common but only a few species are present		Preferred forbs are rare	
Number of Preferred Forb Species (n)	9.0						
Habitat Indicator Suitability Range (Supplemental)							
Habitat Indicator	χ	Suitability	Rationale				
Predominant Sagebrush Shape (mode)	Mixed	Marginal	Mixed spreading and columnar sagebrush shape tends to open the overstory and expose the understorey.				
Perennial Grass and Forb Height (mean)	40.6	Suitable	Combined height is >18cm.				
Perennial Grass Canopy Cover (mean)	8.0	Marginal	Perennial grass canopy cover is between 5<10%.				
Perennial Forb Canopy Cover (mean)	2.0	Unsuitable	Perennial forb canopy cover is between <3%.				
Other Shrub Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Other Shrub Height (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Canopy Cover (mean)	12.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Height (mean)	98.5	Marginal	Height of shrub overstorey is high than desirable.				
Perennial Grass Height (excluding Poa spp.) (mean)	49.3	Suitable	Perennial grass height >18cm is suitable; however, height is generated by marginal 5<10% perennial grass canopy cover.				
Poa Spp. Canopy Cover (mean)	28.0	Marginal	Slight departure from reference site conditions.				
Annual Grass Canopy Cover (mean)	8.0	Suitable	Appropriate for reference site conditions.				
Annual Forb Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Bare Ground Canopy Cover (relative to site potential) (mean)	2.0	Unsuitable	Bareground for this site should range from 30-40%. Low bareground is usually associated with an increased occurrence of Poa and/or invasives annual species.				
Does ecological site potential limit suitability potential?				YES	NO		
					x		
Drought Condition:	Extreme Drought	Severe Drought	Moderate Drought	Mid-Range	Moderately Moist	Very Moist	Extremely Moist
		x					
Evidence of sage-grouse use?	Not indicated						
Evidence of recent livestock use?	AGCR has been grazed heavily						
Rationale for Overall Suitability Rating:	<p>NOTE: Did not use the summer upland habitat assessment because of when the breeding habitat assessment was collected which would influence the distribution and abundance of forbs as well as remove wto important habitat indicators needed to make an assessment. This information is part of a breeding habitat assessment conducted on 2/12/2012. Because sagebrush community composition and structure are not expected to change over the course of a few months and the data collection protocols are the same, this information can provide insight into summer upland habitat conditions later in the summer. The sagebrush overstorey is characterized by a marginal canopy cover (12%), height (98.5cm). The understorey is characterized by a marginal combined canopy cover of perennial grasses and forbs (8%). However, 9 preferred forbs were recorded on the site and were commonly available. Overall, this pasture rates as marginal for providing sage-grouse</p>						
Site-Scale Suitability	Suitable		Marginal		Unsuitable		
		x					

Form H-6	Sage-grouse Habitat Suitability Worksheet –		WINTER	0552-1-06S06W24-20 Glass Creek			
Date:	6/12/2012	County:	Owyhee	State:	Idaho	Subpopulation:	NC NV/ SE OR/ SW ID
Evaluators:	Harmon, Schroeder				Home Range Name:	Pleasant Valley	
Legal Description:	T06SR06WS24QNWQQSE				Associated Leks:	20498, 20459,	
Land Cover Type:	ARTRT/POSE/AGCR				Ecological Site:	R025XY0431D	
Number of Transects:	1	Area Sampled (ha):	10	Site Info:	Arid		
List UTM Coordinates:							
Starting (NAD83)	500036E	4748206N					
Ending (NAD 83)	4748254N	500017E					
Habitat Indicator Suitability Range (Primary)							
Habitat Indicator	X	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	12.0	>10%	X	5-10%		<5%	
Sagebrush Height above Snow							
0 cm snow (annual mean)	98.5	>25 cm	X	10-25 cm		<10 cm	
15 cm snow (annual mean)		>40 cm		25-40 cm		<25 cm	
30 cm snow (annual mean)		>55 cm		40-55 cm		<40 cm	
Habitat Indicator Suitability Range (Supplemental)							
Habitat Indicator	X	Suitability	Rationale				
Predominant Sagebrush Shape (mode)	Mixed	Marginal	Mixed (spreading/columnar) growth form tends to expose the understory and reduce thermal cover and may make some sagebrush forage material less accessible.				
Other Shrub Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Other Shrub Height (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Canopy Cover (mean)	12.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Height (mean)	98.5	Suitable	Appropriate for reference site conditions.				
Does ecological site potential limit suitability potential?				YES	NO		
					X		
Drought Condition:	Extreme Drought	Severe Drought	Moderate Drought	Mid-Range	Moderately Moist	Very Moist	Extremely Moist
			X				
Evidence of sage-grouse use?	Not indicated						
Evidence of recent livestock use?	AGCR has been grazed heavily						
Rationale for Overall Suitability Rating:	Winter habitat conditions are characterized by suitable occurrence and height of sagebrush. Overall, adequate winter habitat conditions are being provided in this pasture for sage-grouse.						
Site-Scale Suitability	Suitable		Marginal		Unsuitable		
	X						

Figure WDLF-1C: Gluch FFR allotment sage-grouse assessments 2012

Form H-3		Sage-grouse Habitat Suitability Worksheet –		BREEDING	R025XY043ID								
Allotment-Pasture Names: Gluch FFR		Allotment-Pasture Number: 0466-03		Number of Transects: 2		Subpopulation: NC NV/ SE OR/ SW ID							
Ecological Site ID: R025XY043ID		Ecological Site Name: Loamy 11-13" ARTRT/PSSPS				Home Range Name: Pleasant Valley							
Site IDs:		Land Cover Type/s:		Area Sampled (ha):		Date:							
0466-03-06S06W11A		ARTRT/POSE-PSSPS-BRTE-AGCR		10		6/12/2012							
0466-03-06S06W14B		ARTRT/POSE		10		6/12/2012							
						Site Info: Arid							
Habitat Indicator Suitability Range (Primary)													
Habitat Indicator	x	Suitable	✓	Marginal	✓	Unsuitable	✓						
Sagebrush Canopy Cover (mean)	21.0	15-25%	X	5-<15% or >25%		<5%							
Sagebrush Height	88.8	40-80 cm		20-<40 cm or >80 cm	X	<20 cm							
Mesic Site (mean)		30-80 cm		20-<30 cm or >80 cm		<20 cm							
Arid Site (mean)													
Predominant Sagebrush Shape (mode)	Mixed	Spreading		Mix of Spreading and Columnar	X	Columnar							
Perennial Grass and Forb Height (mean)	29.0	≥18 cm	X	10-18 cm		<10 cm							
Perennial Grass Canopy Cover	9.0	≥15%		5-<15%	X	<5%							
Mesic Site (mean)		≥10%		5-<10%		<5%							
Arid Site (mean)													
Perennial Forb Canopy Cover	1.0	≥10%		5-<10%		<5%	X						
Mesic Site (mean)		≥5%		3-<5%		<3%							
Arid Site (mean)													
Preferred Forb Availability (relative to site potential)	Common	Preferred forbs are common with several species present	X	Preferred forbs are common but only a few species are present		Preferred forbs are rare							
Number of Preferred Forb Species (n)	9.5												
Habitat Indicator Suitability Range (Supplemental)													
Habitat Indicator	x	Suitability	Rationale										
Other Shrub Canopy Cover (mean)	14.0	Suitable	CHVI is a common shrub on this site.										
Other Shrub Height (mean)	48.5	Suitable	Height of other shrubs is between 30-80cm.										
Sagebrush and Other Shrub Canopy Cover (mean)	35.0	Marginal	Canopy cover of all shrubs is >25%.										
Sagebrush and Other Shrub Height (mean)	76.8	Suitable	Height of other shrubs is between 30-80cm.										
Perennial Grass Height (excluding Poa spp.) (mean)	24.5	Suitable	Height is >18cm.										
Poa Spp. Canopy Cover (mean)	25.0	Marginal	Poa is a sub-dominant species on this site.										
Annual Grass Canopy Cover (mean)	10.0	Marginal	Annual grasses are present but are still a sub-dominant feature in this community.										
Annual Forb Canopy Cover (mean)	13.0	Suitable	Appropriate for reference site descriptions.										
Bare Ground Canopy Cover (relative to site potential) (mean)	38.0	Suitable	Bareground for this ESD ranges from 30-40%.										
Does ecological site potential limit suitability potential?													
				YES		NO							
						x							
Drought Condition:													
Extreme Drought		Severe Drought		Moderate Drought		Mid-Range							
				x									
Evidence of sage-grouse use?													
None noted													
Evidence of recent livestock use?													
None noted													
Rationale for Overall Suitability Rating:													
The sagebrush overstory is characterized by a suitable canopy cover (21.0%) and marginal height (88.8cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by an marginal canopy cover of perennial grasses (9.0%) and unsuitable canopy of perennial forbs (1%). Although the combined height of perennial grasses and forbs is suitable (29.0cm) it is created by an marginal/unsuitable canopy cover of perennial grasses and forbs. Overall, because of adequate overstory combined with marginal understory conditions, this pasture is providing less than adequate (marginal) nesting and hiding cover for breeding sage-grouse.													
<table border="1" style="width: 100%;"> <tr> <td style="width: 33%; text-align: center;">Suitable</td> <td style="width: 33%; text-align: center;">Marginal</td> <td style="width: 33%; text-align: center;">Unsuitable</td> </tr> <tr> <td></td> <td style="text-align: center;">x</td> <td></td> </tr> </table>								Suitable	Marginal	Unsuitable		x	
Suitable	Marginal	Unsuitable											
	x												
Site-Scale Suitability													

Form H-6		Sage-grouse Habitat Suitability Worksheet –		WINTER		R025XY0431D	
Allotment-Pasture Names:		Gluch FFR		Allotment-Pasture Number:		0466-03	
Ecological Site ID:		R025XY0431D		Ecological Site Name:		Loamy 11-13" ARTRT/PSSPS	
Site IDs:		Land Cover Type/s:		Area Sampled (ha):		Date:	
0466-03-06S06W11A		ARTRT/POSE-PSSPS-BRTE-AGCR		10		6/12/2012	
0466-03-06S06W14B		ARTRT/POSE		10		6/12/2012	
						Associated Leks: 20498, Oregon leks	
						Site Info: Arid	
Habitat Indicator Suitability Range (Primary)							
Habitat Indicator	x	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	21.0	>10%	X	5-10%		<5%	
Sagebrush Height above Snow		>25 cm		10-25 cm		<10 cm	
0 cm snow (annual mean)	88.8	>40 cm	X	25-40 cm		<25 cm	
15 cm snow (annual mean)		>55 cm		40-55 cm		<40 cm	
30 cm snow (annual mean)							
Habitat Indicator Suitability Range (Supplemental)							
Habitat Indicator	x	Suitability	Rationale				
Predominant Sagebrush Shape (mode)	Mixed	Marginal	Mixed spreading and columnar sagebrush shape tends to open up the overstory and expose the understory.				
Other Shrub Canopy Cover (mean)	14.0	Suitable	CHVI is a common shrub on this site.				
Other Shrub Height (mean)	48.5	Suitable	Height of other shrubs is between 30-80cm.				
Sagebrush and Other Shrub Canopy Cover (mean)	35.0	Marginal	Canopy cover of all shrubs is >25%.				
Sagebrush and Other Shrub Height (mean)	76.8	Suitable	Height of other shrubs is between 30-80cm.				
Does ecological site potential limit suitability potential?				YES	NO		
					x		
Drought Condition:	Extreme Drought	Severe Drought	Moderate Drought	Mid-Range	Moderately Moist	Very Moist	Extremely Moist
			x				
Evidence of sage-grouse use?	None noted						
Evidence of recent livestock use?	None noted						
Rationale for Overall Suitability Rating:	This information was collected as part of a summer upland habitat assessment conducted on 8/9/2012. Because the sagebrush community is not expected to change substantially over the course of a few months this information can provide insight into winter habitat conditions later in the year. The overstory is characterized by a suitable canopy cover (21.0%) and marginal height (88.8cm). Overall, the sagebrush occurrence and height are providing adequate winter habitat conditions for sage-grouse.						
Site-Scale Suitability	Suitable		Marginal		Unsuitable		
	X						

Figure WDLF-1D: West Maher allotment sage-grouse assessments 2012

Form H-3		Sage-grouse Habitat Suitability Worksheet – BREEDING		0567-3-07506W27a-2W. Maher FFR			
Date:	8/8/2012	County:	Owyhee	State:	Idaho	Subpopulation:	NC NV/ SE OR/ SW ID
Evaluators:	Roseman, Ferguson					Home Range Name:	Pleasant Valley
Legal Description:	T075R06W5270SEQQNE					Associated Leaks:	0
Land Cover Type:	ARTRT/PSSPS-ELELS-POSE-BRTE					Ecological Site:	oamy 11-13* ARTRT/PSSPS
Number of Transects:	1	Area Sampled (ha):	1.5			Site Info:	Arid
List UTM Coordinates:							
Starting (NAD83)	497964	4736660					
Ending (NAD 83)	4736708	497957					
Habitat Indicator Suitability Range (Primary)							
Habitat Indicator	\bar{x}	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	58.0	15-25%		5-<15% or >25%	X	<5%	
Sagebrush Height							
Mesic Site (mean)	137.5	40-80 cm		20-<40 cm or >80 cm	X	<20 cm	
Arid Site (mean)		30-80 cm		20-<30 cm or >80 cm		<20 cm	
Predominant Sagebrush Shape (mode)	Mixed	Spreading		Mix of Spreading and Columnar	X	Columnar	
Perennial Grass and Forb Height (mean)		≥18 cm		10-18 cm		<10 cm	
Perennial Grass Canopy Cover							
Mesic Site (mean)	28.0	≥15%	X	5-<15%		<5%	
Arid Site (mean)		≥10%		5-<10%		<5%	
Perennial Forb Canopy Cover							
Mesic Site (mean)		≥10%		5-<10%		<5%	
Arid Site (mean)		≥5%		3-<5%		<3%	
Preferred Forb Availability (relative to site potential)		Preferred forbs are common with several species present		Preferred forbs are common but only a few species are present		Preferred forbs are rare	
Number of Preferred Forb Species (n)							
Habitat Indicator Suitability Range (Supplemental)							
Habitat Indicator	\bar{x}	Suitability	Rationale				
Other Shrub Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Other Shrub Height (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Height (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Perennial Grass Height (excluding Poa spp.) (mean)	26.1	Suitable	Perennial grass height is >18cm.				
Poa Spp. Canopy Cover (mean)	4.0	Suitable	Appropriate for reference site conditions.				
Annual Grass Canopy Cover (mean)	36.0	Unsuitable	BRTE is a co-dominant species on this site.				
Annual Forb Canopy Cover (mean)							
Bare Ground Canopy Cover (relative to site potential) (mean)	6.0	Unsuitable	Bareground for this site identified by the ESD ranges from 30-40%.				
Does ecological site potential limit suitability potential?				YES	NO		
					X		
Drought Condition:	Extreme Drought	Severe Drought	Moderate Drought	Mid-Range	Moderately Moist	Very Moist	Extremely Moist
			X				
Evidence of sage-grouse use?	Sage-grouse feathers found						
Evidence of recent livestock use?	None noted						
Rationale for Overall Suitability Rating:	This information was collected during a sage-grouse summer riparian habitat assessment (corrected to a summer upland habitat assessment due to transect location on the uplands). This pasture is also within breeding habitat for sage-grouse. Because the summer upland habitat assessment protocols are the same and much of the habitat indicators would not change, the information can be applicable to assessing breeding habitat conditions as well; however the forb information is not applicable due to the time of year the assessment was collected and does represent the breeding period. Overstory conditions in the pasture are characterized by marginal sagebrush canopy cover (58%), height (122.5cm) and growth form (predominantly spreading/columnar). The understory is characterized by suitable canopy cover of perennial grasses (28%) and height (26.1cm). Overall, although the understory is providing adequate canopy cover, height, and availability of perennial grasses, the overstory conditions are heavily stocked and a mixed growth form (predominantly spreading/columnar) tends to open up the canopy and expose the understory reducing security cover for nesting and brooding sage-grouse; therefore this pasture is considered to be providing marginal breeding habitat conditions for sage-grouse.						
Site-Scale Suitability	Suitable		Marginal		Unsuitable		
			X				

Form H-4		Sage-grouse Habitat Suitability Worksheet – UPLAND SUMMER			0567-3-07506W27a-2 W. Maher FFR		
Date:	8/8/2012	County:	Owyhee	State:	Idaho	Subpopulation:	NC NV/ SE OR/ SW ID
Evaluators:	Roseman, Ferguson			Home Range Name:	Pleasant Valley		
Legal Description:	T07SR06WS27QSEQQNE			Associated Leaks:	0		
Land Cover Type:	ARTRT/PSSPS-ELELS-POSE-BRTE			Ecological Site:	oamy 11-13" ARTRT/PSSPS		
Number of Transects:	1	Area Sampled (ha):	1.5	Site Info:	Arid		
List UTM Coordinates:							
Starting (NAD83)	497964	4736660					
Ending (NAD 83)	4736708	497957					
Habitat Indicator Suitability Range (Primary)							
Habitat Indicator	\bar{x}	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	58.0	10-25%		5-<10% or >25%	X	<5%	
Sagebrush Height (mean)	137.5	40-80 cm		20-<40 cm or >80 cm	X	<20 cm	
Perennial Grass and Forb Canopy Cover (mean)	40.0	≥15%	X	5-15%		<5%	
Preferred Forb Availability (relative to site potential)	Common	Preferred forbs are common with several species present		Preferred forbs are common but only a few species are present	X	Preferred forbs are rare	
Number of Preferred Forb Species (n)	5.0						
Habitat Indicator Suitability Range (Supplemental)							
Habitat Indicator	\bar{x}	Suitability	Rationale				
Predominant Sagebrush Shape (mode)	Mixed	Marginal	Predominantly a mix of spreading/columnar sagebrush shape.				
Perennial Grass and Forb Height (mean)	26.3	Suitable	Perennial grass and forb height is >18cm.				
Perennial Grass Canopy Cover (mean)	28.0	Suitable	Perennial grass canopy cover is >10%				
Perennial Forb Canopy Cover (mean)	12.0	Suitable	Perennial forb canopy cover >5%. Five species of preferred forbs were recorded assessed to be common in occurrence.				
Other Shrub Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Other Shrub Height (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Height (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Perennial Grass Height (excluding Poa spp.) (mean)	26.1	Suitable	Perennial grass height is >18cm.				
Poa Spp. Canopy Cover (mean)	4.0	Suitable	Appropriate for reference site conditions.				
Annual Grass Canopy Cover (mean)	36.0	Unsuitable	BRTE is a co-dominant species on this site.				
Annual Forb Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Bare Ground Canopy Cover (relative to site potential) (mean)	6.0	Unsuitable	Bareground for this site identified by the ESD ranges from 30-40%.				
Does ecological site potential limit suitability potential?							
		YES	NO				
			X				
Drought Condition:	Extreme Drought	Severe Drought	Moderate Drought	Mid-Range	Moderately Moist	Very Moist	Extremely Moist
			X				
Evidence of sage-grouse use?	Sage-grouse feathers found						
Evidence of recent livestock use?	None noted						
Rationale for Overall Suitability Rating:	This information was collected during a sage-grouse summer riparian habitat assessment (corrected to a summer upland habitat assessment due to transect location on the uplands). Overstory conditions in the pasture are characterized by marginal sagebrush canopy cover (58%), height (122.5cm) and growth form (predominantly spreading/columnar). The understory is characterized by suitable canopy cover of perennial grasses (28%) and height (26.1cm). The canopy cover of perennial forbs (12%) is suitable and 5 preferred species were common in distribution and availability. Overall, although the understory is providing adequate canopy cover and height perennial grasses and forbs, the overstory conditions are heavily stocked and a mixed growth form (predominantly spreading/columnar) tends to open up the canopy and expose the understory reducing security cover for brooding sage-grouse; therefore this pasture is considered to be providing marginal summer upland habitat conditions for sage-grouse.						
Site-Scale Suitability	Suitable		Marginal		Unsuitable		
			X				

Form H-6	Sage-grouse Habitat Suitability Worksheet –		WINTER	0567-3-07S06W27a-2W. Maher FFR			
Date:	8/8/2012	County:	Owyhee	State:	Idaho	Subpopulation:	NC NV/ SE OR/ SW ID
Evaluators:	Roseman, Ferguson					Home Range Name:	Pleasant Valley
Legal Description:	T07SR06WS27QSEQQNE					Associated Leaks:	0
Land Cover Type:	ARTRT/PSSPS-ELEL5-POSE-BRTE					Ecological Site:	oamy 11-13" ARTRT/PSSPS
Number of Transects:	1	Area Sampled (ha):	1.5			Site Info:	Arid
List UTM Coordinates:							
Starting (NAD83)	497964	4736660					
Ending (NAD 83)	4736708	497957					
Habitat Indicator Suitability Range (Primary)							
Habitat Indicator	X	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	58.0	>10%	X	5-10%		<5%	
Sagebrush Height above Snow							
0 cm snow (annual mean)	137.5	>25 cm	X	10-25 cm		<10 cm	
15 cm snow (annual mean)		>40 cm		25-40 cm		<25 cm	
30 cm snow (annual mean)		>55 cm		40-55 cm		<40 cm	
Habitat Indicator Suitability Range (Supplemental)							
Habitat Indicator	X	Suitability	Rationale				
Predominant Sagebrush Shape (mode)	Mixed	Marginal	Predominantly a mix of spreading/columnar sagebrush shape.				
Other Shrub Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Other Shrub Height (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Sagebrush and Other Shrub Height (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Does ecological site potential limit suitability potential?				YES	NO		
				X			
Drought Condition:	Extreme Drought	Severe Drought	Moderate Drought	Mid-Range	Moderately Moist	Very Moist	Extremely Moist
			X				
Evidence of sage-grouse use?	Sage-grouse feathers found						
Evidence of recent livestock use?	None noted						
Rationale for Overall Suitability Rating:	<p>This information was collected during a sage-grouse summer upland habitat assessment. This pasture is also within the range of winter habitat for sage-grouse. Because the canopy cover and height of sagebrush is not expected to change significantly over the course of a few months, in the absence of a winter habitat assessment, the information collected for the summer upland habitat assessment can provide insight to potential winter habitat conditions as well. The overstory is characterized by a suitable canopy cover and height of sagebrush, however, the mixed growth form of the sagebrush creating a more open structure may make the sagebrush inaccessible for winter forage. Overall, although suitable sagebrush canopy cover and height are present, the accessibility of forage due to height and mixed shape of the sagebrush makes this site marginal as sage-grouse winter habitat.</p>						
Site-Scale Suitability	Suitable		Marginal		Unsuitable		
		X					

Figure WDLF-1E: Warn allotment sage-grouse assessments 2012

Form H-3 Sage-grouse Habitat Suitability Worksheet -- BREEDING		R025XY0311D					
Allotment-Pasture Names: Warn		Allotment-Pasture Number: 1		Number of Transects: 2		Subpopulation: NC NV/ SE OR/ SW ID	
Ecological Site ID: R025XY0311D		Ecological Site Name: Loamy 12-16" ARTRW8/PSSP		Home Range Name: Pleasant Valley		Associated Leaks: 20293, 20292	
Site IDs:		Land Cover Type/s:		Area Sampled (ha):		Date:	
0596-1-07506W34a-2012		ARTRW/PUTR/PSSP/POSE		10		8/8/2012	
0596-1-07506W35B-2012		ARTRW/PUTR/PSSP/POSE		10		8/8/2012	
						Site Info: Mesic	
Habitat Indicator Suitability Range (Primary)							
Habitat Indicator	X	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	24.0	15-25%	X	5-<15% or >25%		<5%	
Sagebrush Height Mesic Site (mean)	122.5	40-80 cm		20-<40 cm or >80 cm	X	<20 cm	
Arid Site (mean)		30-80 cm		20-<30 cm or >80 cm		<20 cm	
Predominant Sagebrush Shape (mode)	Mixed	Spreading		Mix of Spreading and Columnar	X	Columnar	
Perennial Grass and Forb Height (mean)		≥18 cm		10-18 cm		<10 cm	
Perennial Grass Canopy Cover Mesic Site (mean)		≥15%		5-<15%		<5%	
Arid Site (mean)		≥10%		5-<10%		<5%	
Perennial Forb Canopy Cover Mesic Site (mean)		≥10%		5-<10%		<5%	
Arid Site (mean)		≥5%		3-<5%		<3%	
Preferred Forb Availability (relative to site potential)		Preferred forbs are common with several species present		Preferred forbs are common but only a few species are present		Preferred forbs are rare	
Number of Preferred Forb Species (n)							
Habitat Indicator Suitability Range (Supplemental)							
Habitat Indicator	X	Suitability	Rationale				
Other Shrub Canopy Cover (mean)	21.0	Suitable	Appropriate for reference site conditions.				
Other Shrub Height (mean)	137.5	Marginal	PUTR is on this site and is as taller and taller than the ARTRW.				
Sagebrush and Other Shrub Canopy Cover (mean)	45.0	Marginal	PUTR contributes to the high occurrence of overall shrubs in the pasture.				
Sagebrush and Other Shrub Height (mean)	129.2	Marginal	PUTR is on this site and is as taller and taller than the ARTRW.				
Perennial Grass Height (excluding Poa spp.) (mean)	20.9	Suitable	Perennial grasses is >18cm.				
Poa Spp. Canopy Cover (mean)	29.0	Marginal	29% canopy cover of POSE is a departure from reference site conditions and suggests POSE is a co-dominant species in this community.				
Annual Grass Canopy Cover (mean)	45.0	Unsuitable	Annual grasses are a co-dominant herbaceous species and indicative of reference site community shift in species composition and distribution.				
Annual Forb Canopy Cover (mean)							
Bare Ground Canopy Cover (relative to site potential) (mean)	23.0	Suitable	Bareground ranges from 20-40% for this ESD.				
Does ecological site potential limit suitability potential?				YES		NO	
				<input type="checkbox"/>		<input checked="" type="checkbox"/>	
Drought Condition:	Extreme Drought	Severe Drought	Moderate Drought	Mid-Range	Moderately Moist	Very Moist	Extremely Moist
			X				
Evidence of sage-grouse use?	Sage-grouse scat observed						
Evidence of recent livestock use?	Livestock use early in the year.						
Rationale for Overall Suitability Rating:	<p>This information was collected as part of a summer upland habitat assessment conducted on 8/8/2012. Because the sagebrush community is not expected to change substantially over the course of a few months and the data collection protocols are the same, this information can provide insight into breeding habitat conditions earlier in the spring. Due to the time of year this data was collected, the forb information was not used in this assessment.</p> <p>The sagebrush overstory is characterized by a suitable canopy cover (24.0%) and marginal height (98.5cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by a suitable canopy cover of perennial grasses (8.0%) and unsuitable canopy of perennial forbs (0.0%) with a combined perennial grass/forb height of (20.9cm). Overall, because of the combined occurrence of sagebrush as well as the occurrence and height of perennial grasses are favorable, based on the 2012 summer upland habitat assessment data, this pasture is providing suitable overstory/understory composition and structure for sage-grouse nesting and hiding cover.</p>						
Site-Scale Suitability	Suitable		Marginal		Unsuitable		
	X						

Form H-4 Sage-grouse Habitat Suitability Worksheet –		UPLAND SUMMER		R025XY0311D			
Allotment-Pasture Names Warn		Allotment-Pasture Number: 1		Number of Transects: 2		Subpopulation: NC NV/ SE OR/ SW ID	
Ecological Site ID: R025XY0311D		Ecological Site Name: Loamy 12-16" ARTRW8/PSSP		Home Range Name: Pleasant Valley		Associated Leks: 20293, 20292	
Site IDs:		Land Cover Type/s:		Area Sampled (ha):		Date:	
0596-1-07S06W34a-2012		ARTRW/PUTR/PSSP/POSE		10		8/8/2012	
0596-1-07S06W35B-2012		ARTRW/PUTR/PSSP/POSE		10		8/8/2012	
						Site Info: Mesic	
Habitat Indicator Suitability Range (Primary)							
Habitat Indicator	\bar{x}	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	24.0	10-25%	X	5-<10% or >25%		<5%	
Sagebrush Height (mean)	122.5	40-80 cm		20-<40 cm or >80 cm	X	<20 cm	
Perennial Grass and Forb Canopy Cover (mean)	18.0	≥15%	X	5-15%		<5%	
Preferred Forb Availability (relative to site potential)		Preferred forbs are common with several species present		Preferred forbs are common but only a few species are present		Preferred forbs are rare	X
Number of Preferred Forb Species (n)	5.0						
Habitat Indicator Suitability Range (Supplemental)							
Habitat Indicator	\bar{x}	Suitability	Rationale				
Predominant Sagebrush Shape (mode)	Mixed	Marginal	Sagebrush shape is predominantly a mix of spreading/columnar structure.				
Perennial Grass and Forb Height (mean)	20.9	Suitable	Perennial grass and forb height is >18cm.				
Perennial Grass Canopy Cover (mean)	18.0	Suitable	Perennial grass canopy cover is >15%.				
Perennial Forb Canopy Cover (mean)	0.0	Unsuitable	Forbs are fairly rare for this ESD and can be expected to be less available.				
Other Shrub Canopy Cover (mean)	21.0	Suitable	PUTR is a contributing species on this reference site.				
Other Shrub Height (mean)	137.5	Marginal	PUTR is as tall or taller than the ARTRW.				
Sagebrush and Other Shrub Canopy Cover (mean)	45.0	Marginal	The contribution of PUTR to this ESD pushed the overall shrub to marginal.				
Sagebrush and Other Shrub Height (mean)	129.2	Unsuitable	PUTR is a primary contributor to the overall shrub height.				
Perennial Grass Height (excluding Poa spp.) (mean)	20.9	Suitable	Appropriate for reference site conditions.				
Poa Spp. Canopy Cover (mean)	29.0	Marginal	29% canopy cover of POSE is a departure from reference site conditions and suggests POSE is a co-dominant species in this community.				
Annual Grass Canopy Cover (mean)	45.0	Unsuitable	Annual grasses are a co-dominant herbaceous species and indicative of reference site community shift in species composition and distribution.				
Annual Forb Canopy Cover (mean)	0.0	Suitable	Appropriate for reference site conditions.				
Bare Ground Canopy Cover (relative to site potential) (mean)	23.0	Suitable	Bareground ranges from 20-40% for this ESD.				
Does ecological site potential limit suitability potential?				YES		NO	
						X	
Drought Condition:		Extreme Drought	Severe Drought	Moderate Drought	Mid-Range	Moderately Moist	Very Moist
				X			
Evidence of sage-grouse use?		Sage-grouse scat observed					
Evidence of recent livestock use?		Livestock use early in the year.					
Rationale for Overall Suitability Rating:		The sagebrush overstory is characterized by a suitable canopy cover (24.0%) and marginal height (98.5cm). The understory is characterized by a combined suitable canopy cover of perennial grasses and forbs (18.0%). The occurrence of forbs is rare and those that do occur are not well represented. Overall, although sagebrush occurrence and perennial grass occurrence and height are favorable, the availability of forbs is a critical forage component this time of year and are not well represented. Due to the rarity of forbs, this allotment is only providing marginal summer upland habitat conditions for late brood-rearing sage-grouse.					
Site-Scale Suitability		Suitable		Marginal		Unsuitable	
				X			

Form H-6 Sage-grouse Habitat Suitability Worksheet –		WINTER		R025XY031D			
Allotment-Pasture Names: Warn		Allotment-Pasture Number: 1		Number of Transects: 2		Subpopulation: NC NV/ SE OR/ SW ID	
Ecological Site ID: R025XY031D		Ecological Site Name: Loamy 12-16" ARTRW8/PSSP				Home Range Name: Pleasant Valley	
Site IDs:		Land Cover Type/s:		Area Sampled (ha):		Date:	
0596-1-07S06W34a-2012		ARTRW/PUTR/PSSP/POSE		10		8/8/2012	
0596-1-07S06W35B-2012		ARTRW/PUTR/PSSP/POSE		10		8/8/2012	
						Associated Leks: 20293, 20292	
						Site Info: Mesic	
Habitat Indicator Suitability Range (Primary)							
Habitat Indicator	x	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	24.0	>10%	X	5-10%		<5%	
Sagebrush Height above Snow		>25 cm		10-25 cm		<10 cm	
0 cm snow (annual mean)	122.5	>40 cm	X	25-40 cm		<25 cm	
15 cm snow (annual mean)		>55 cm		40-55 cm		<40 cm	
30 cm snow (annual mean)							
Habitat Indicator Suitability Range (Supplemental)							
Habitat Indicator	x	Suitability	Rationale				
Predominant Sagebrush Shape (mode)	Mixed	Marginal	Sagebrush shape is predominantly a mix of spreading/columnar structure.				
Other Shrub Canopy Cover (mean)	21.0	Suitable	Appropriate for reference site conditions.				
Other Shrub Height (mean)	137.5	Marginal	PUTR is on this site and is as taller and taller than the ARTRW.				
Sagebrush and Other Shrub Canopy Cover (mean)	45.0	Marginal	The contribution of PUTR to this ESD pushed the overall shrub to marginal.				
Sagebrush and Other Shrub Height (mean)	129.2	Unsuitable	PUTR is a primary contributor to the overall shrub height.				
Does ecological site potential limit suitability potential?				YES	NO		
					X		
Drought Condition:	Extreme Drought	Severe Drought	Moderate Drought	Mid-Range	Moderately Moist	Very Moist	Extremely Moist
			X				
Evidence of sage-grouse use?	Sage-grouse scat observed						
Evidence of recent livestock use?	Livestock use early in the year.						
Rationale for Overall Suitability Rating:		This information was collected during a sage-grouse summer upland habitat assessment. This pasture is also within the range of winter habitat for sage-grouse. Because the canopy cover and height of sagebrush is not expected to change significantly over the course of a few months, in the absence of a winter habitat assessment, the information collected for the summer upland habitat assessment can provide insight to potential winter habitat conditions as well. Overall, due to suitable sagebrush canopy cover and height, adequate thermal and hiding cover and forage availability are being provided in this pasture for wintering sage-grouse.					
		Suitable		Marginal		Unsuitable	
Site-Scale Suitability		X					

Pygmy rabbit habitat was evaluated by walking survey routes in appropriate tall, thick mountain big sagebrush habitat, looking for burrows and pellets. Although pygmy rabbits do occur in areas where herbaceous understory vegetation has been degraded by livestock grazing, at least one recent study found that ungrazed areas contained significantly more pygmy rabbit burrows than grazed areas (Thines et al, 2004).

For many other sensitive species (see Appendix C), specific methods have not been established to evaluate habitat. The assumption is made that the general health of upland and riparian communities is important for the broad diversity of wildlife, including sensitive species. Therefore, habitat was evaluated using either riparian information (Standard 2) or native upland plant community information (Standard 4), combined with the sage grouse habitat assessments

and knowledge of wildlife for the area. These assessments used information on abundance, diversity, vigor, cover of plants, structure and trend of plant communities, grazing utilization, and weed presence.

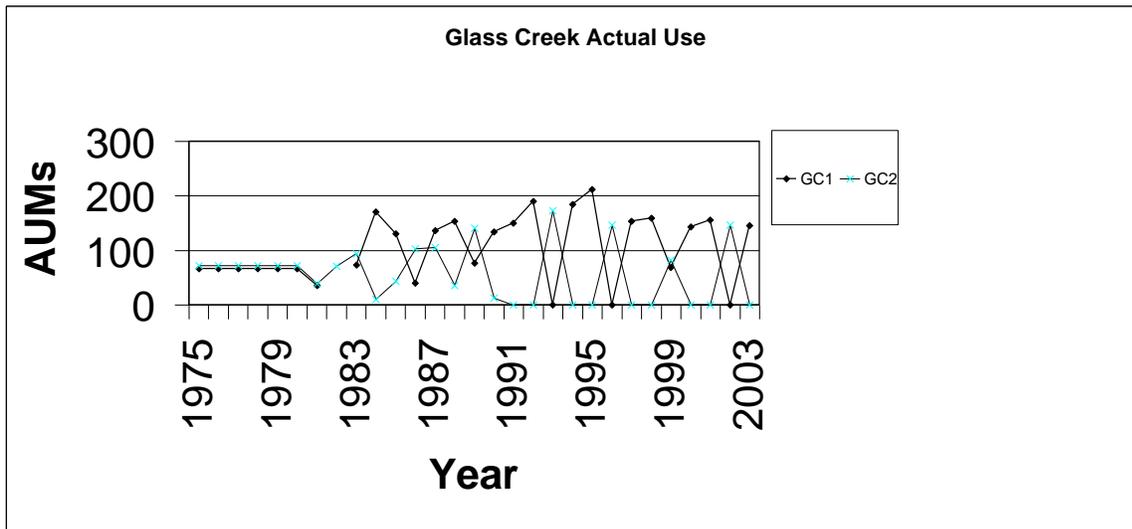
Sources for wildlife information within these allotments include:

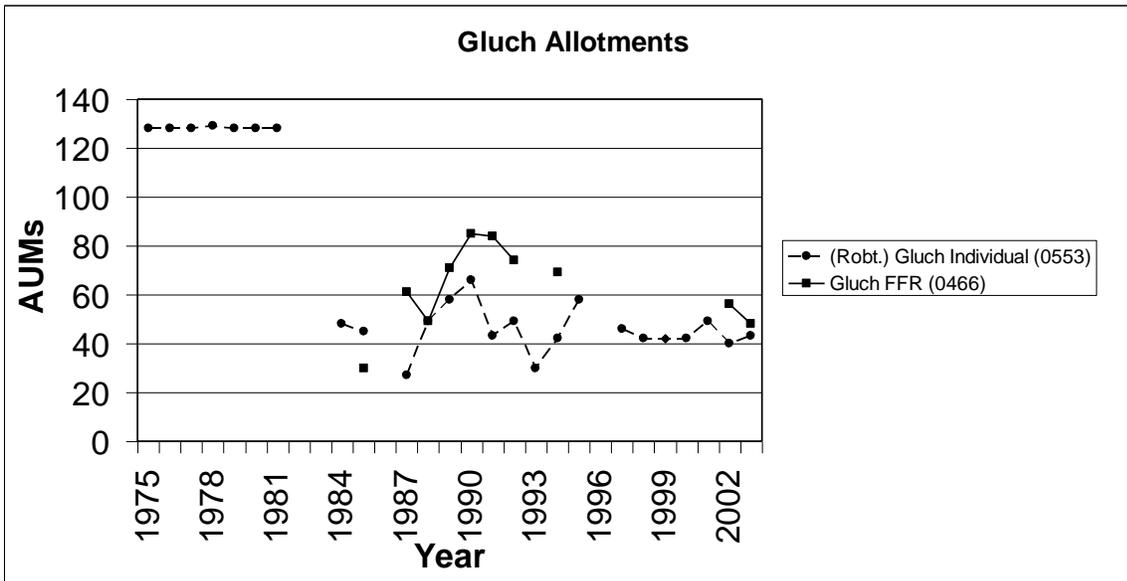
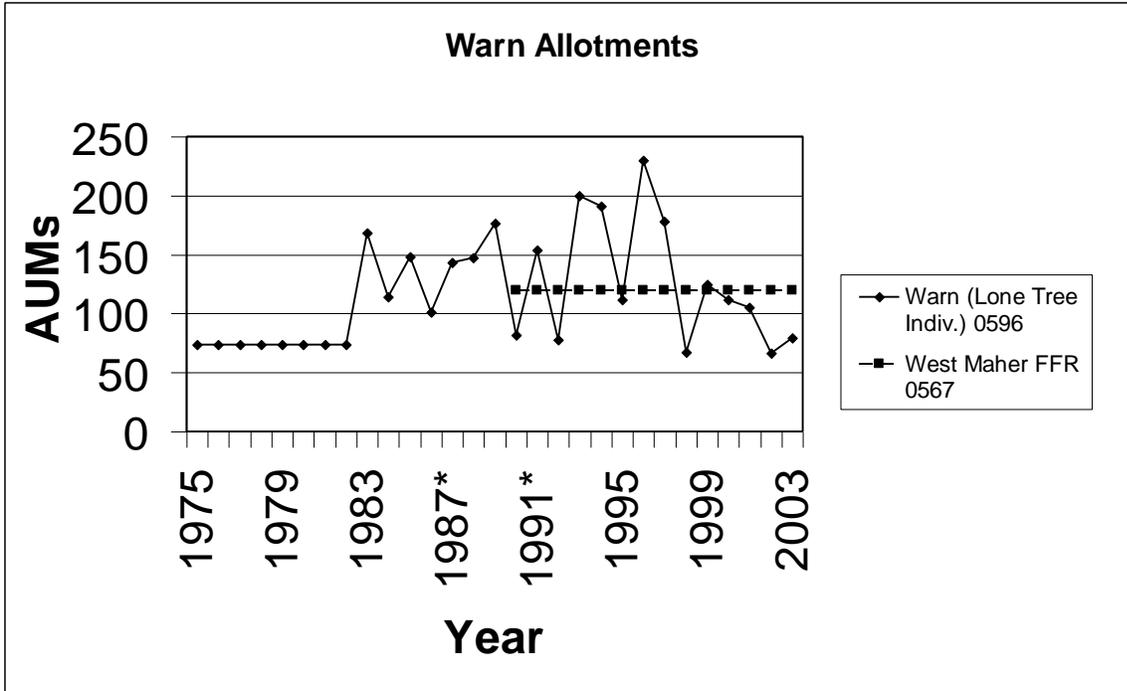
- Sage grouse lek (breeding ground) surveys by helicopter, 2001
- IDFG sage grouse historical lek database, 2003
- Sage grouse habitat assessments, 2003
- Fish and Game sage grouse telemetry study in Cow Cr, 1999-2003
- Pygmy rabbit surveys, 2003 & 2005
- Conservation Data Center database
- General wildlife field observations, 2003

Botany - Special status plant populations are tracked by both the BLM and the Idaho Conservation Data Center (CDC). BLM databases and files, and CDC databases are consulted for known occurrences of special status plants. Additional inventories are conducted on an ongoing basis for range projects. Monitoring of known populations occurs as time and staff allow.

APPENDIX C – ACTUAL USE

Actual Use

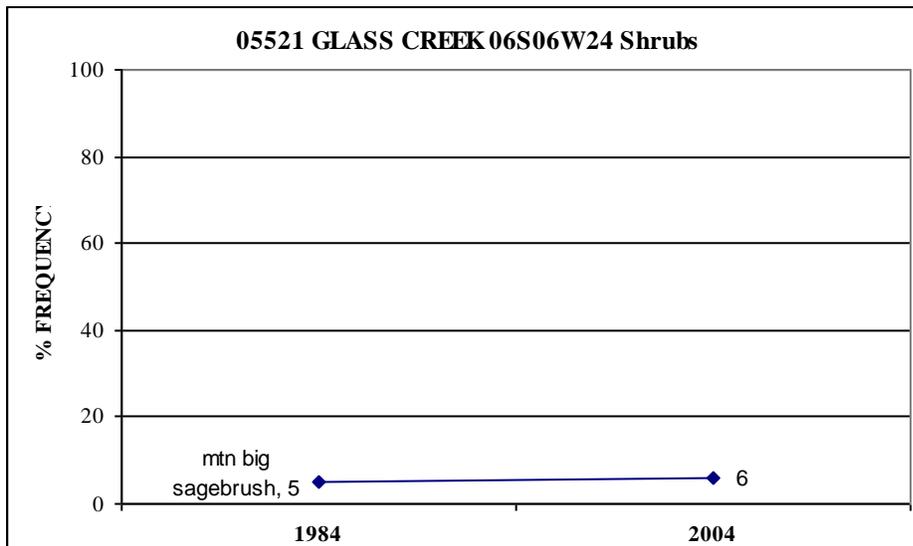
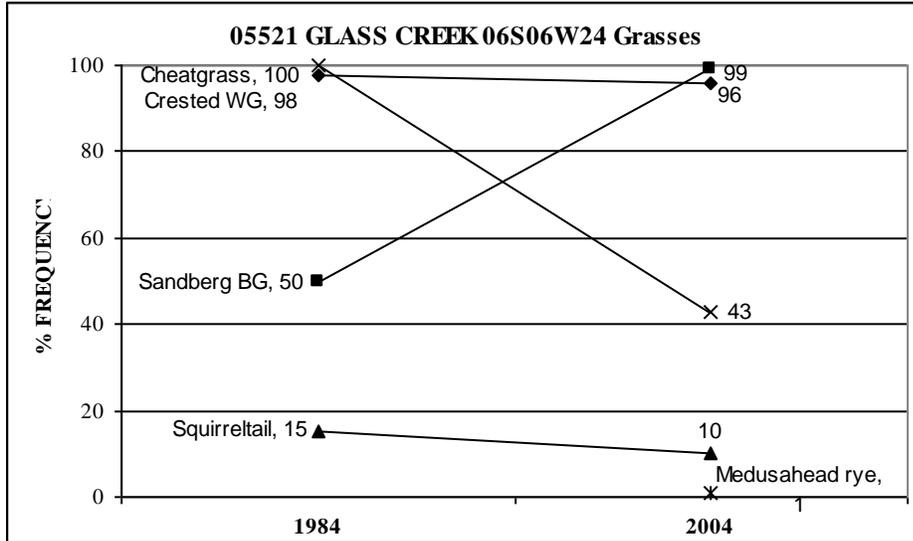




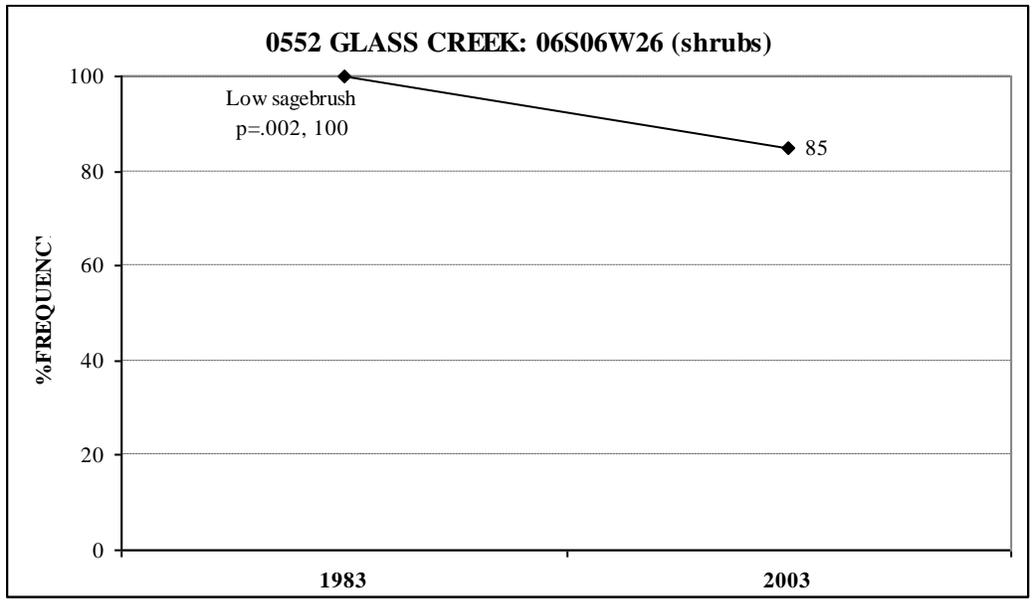
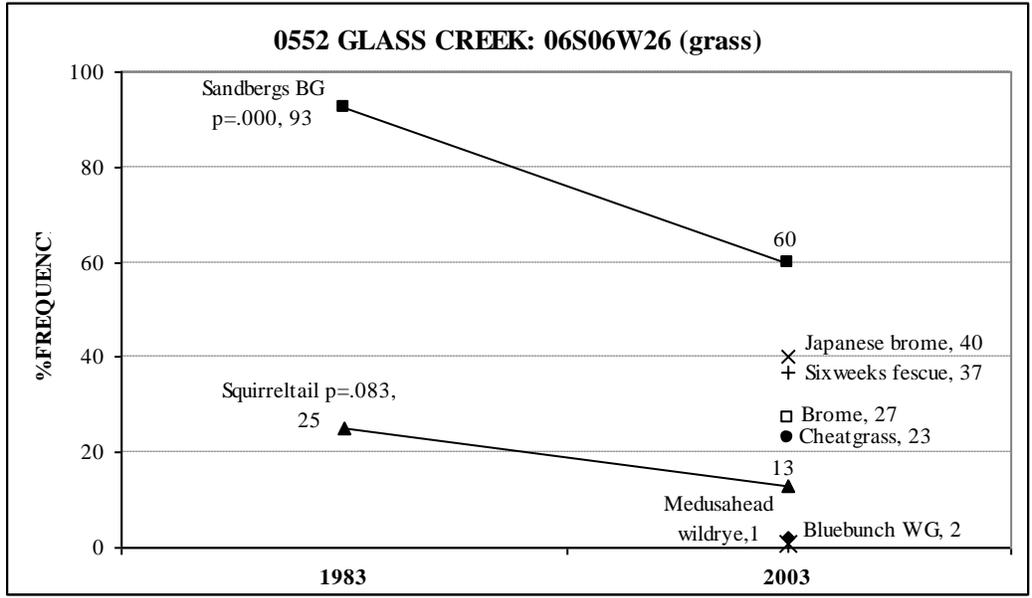
APPENDIX D – TREND

- Glass Creek Allotment 0552

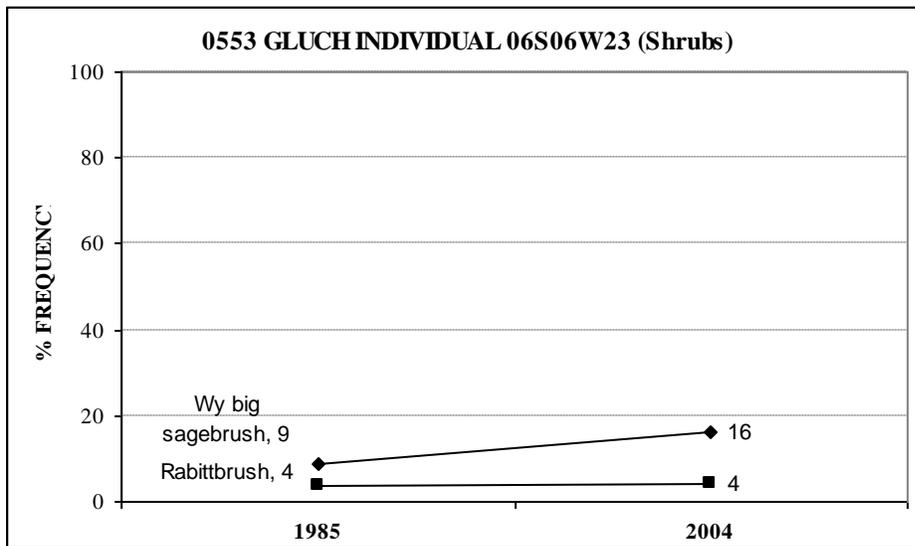
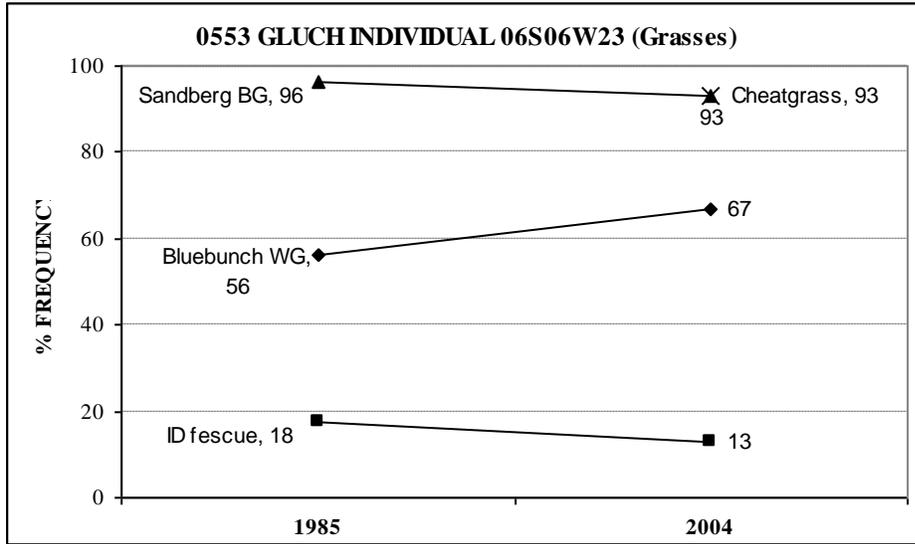
Pasture 1

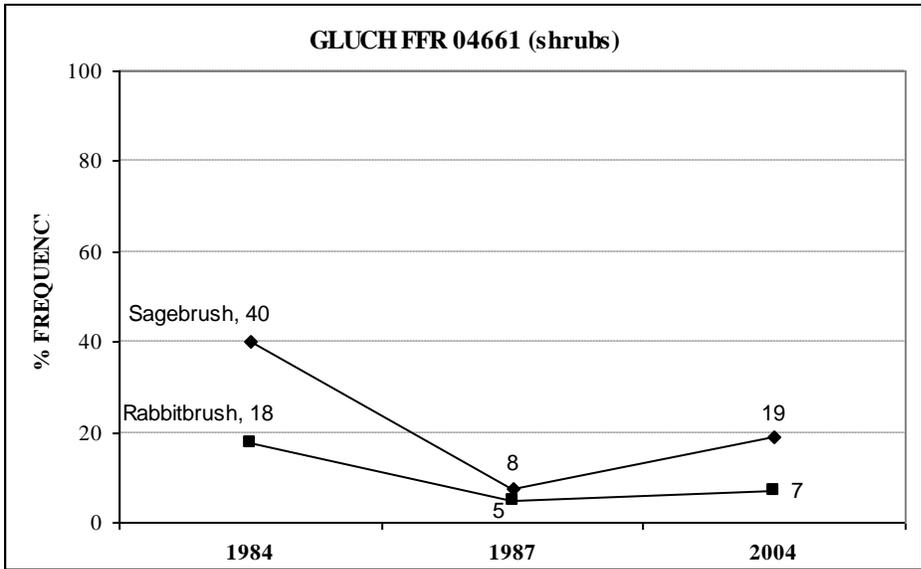
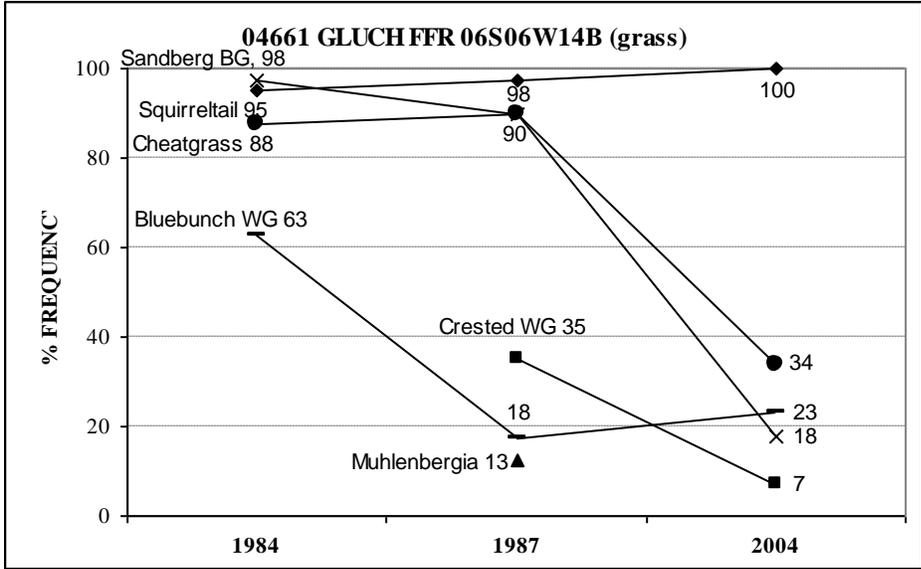


Pasture 2



- **Gluch Allotment 0533**

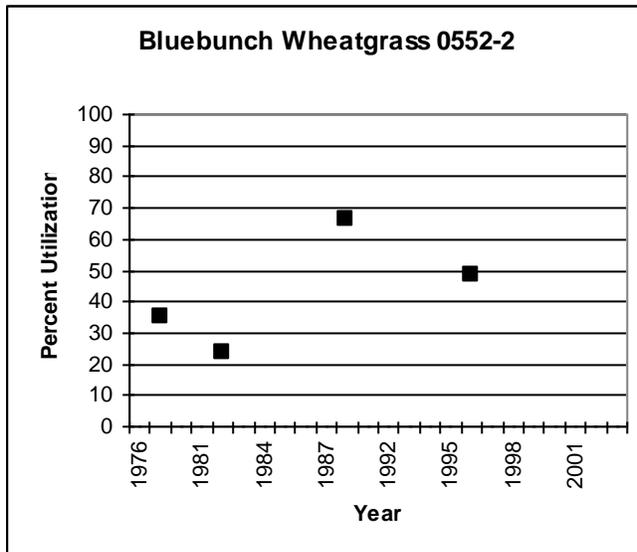
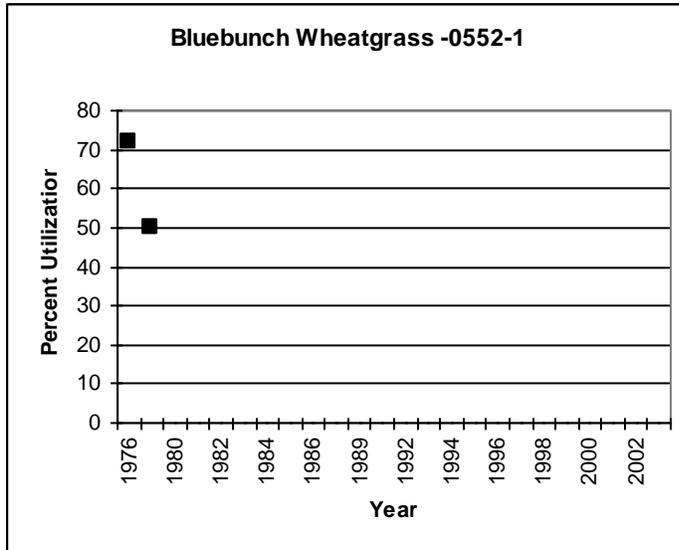


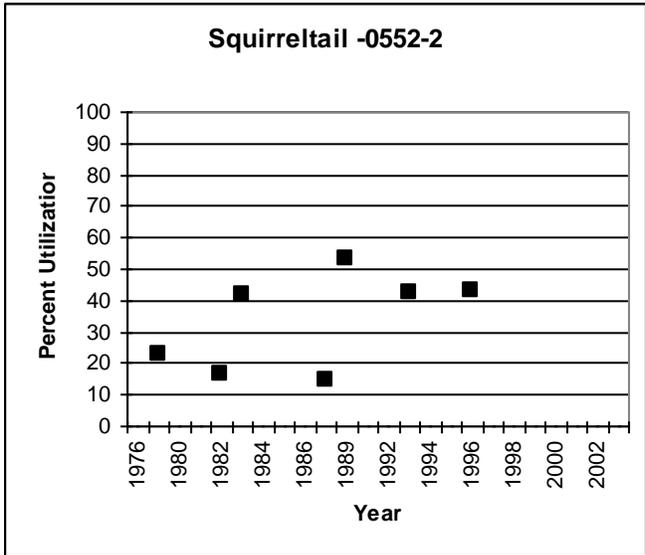
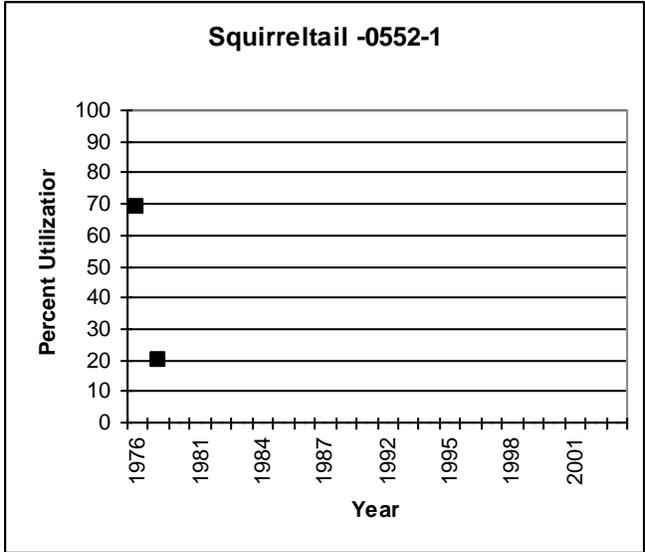


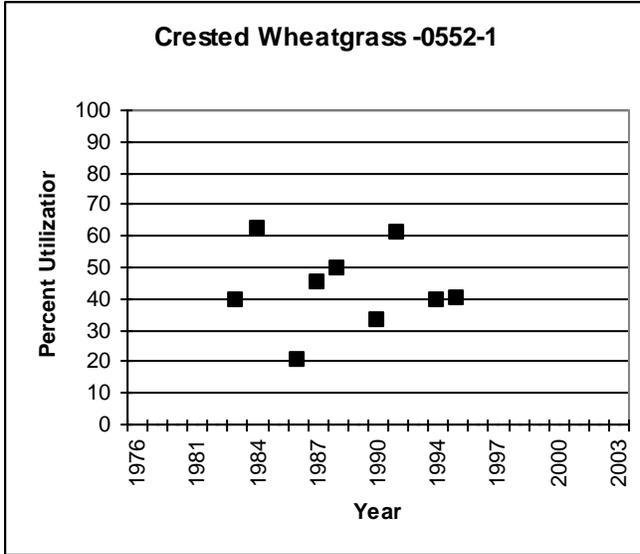
APPENDIX E – UTILIZATION

Utilization

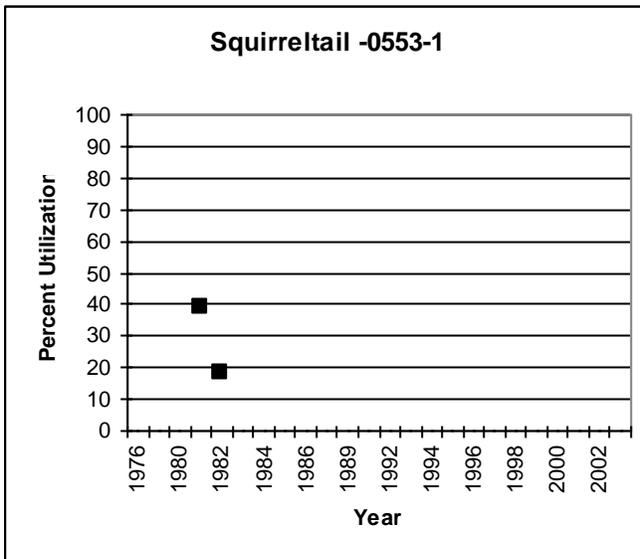
A. Glass Creek Allotment



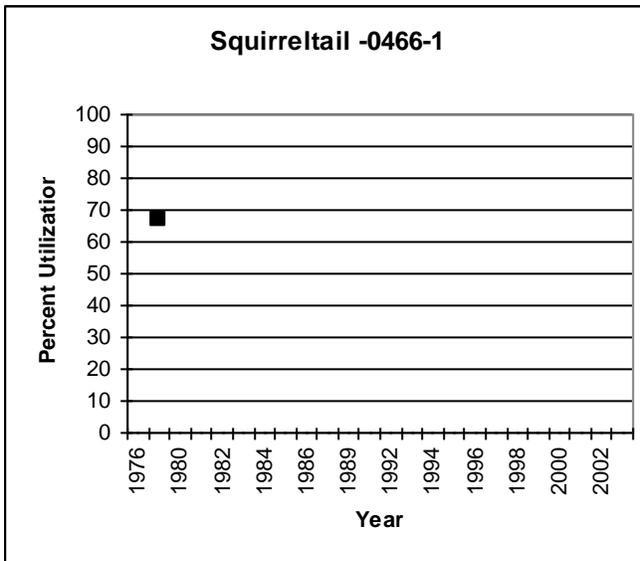
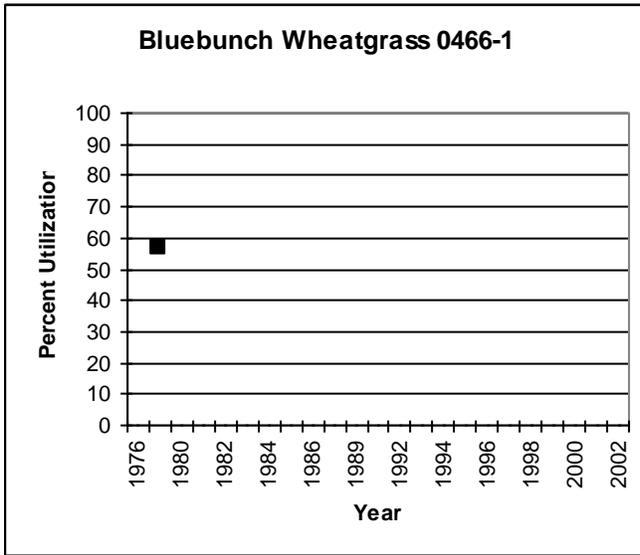




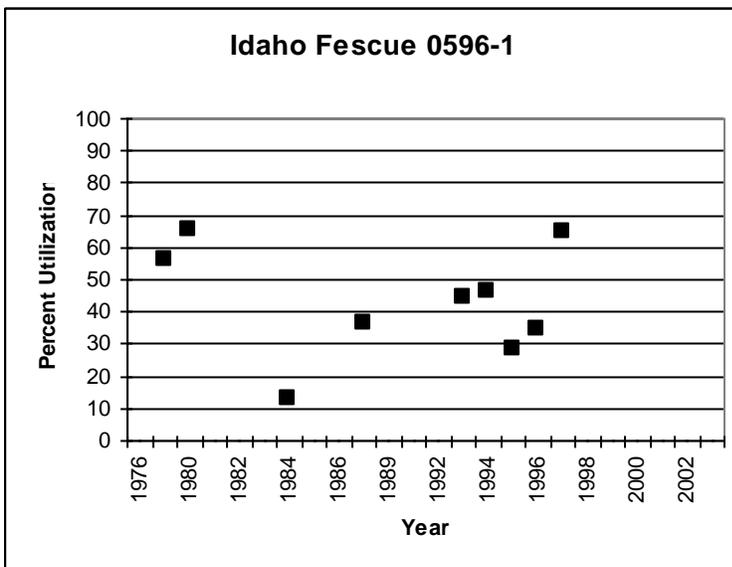
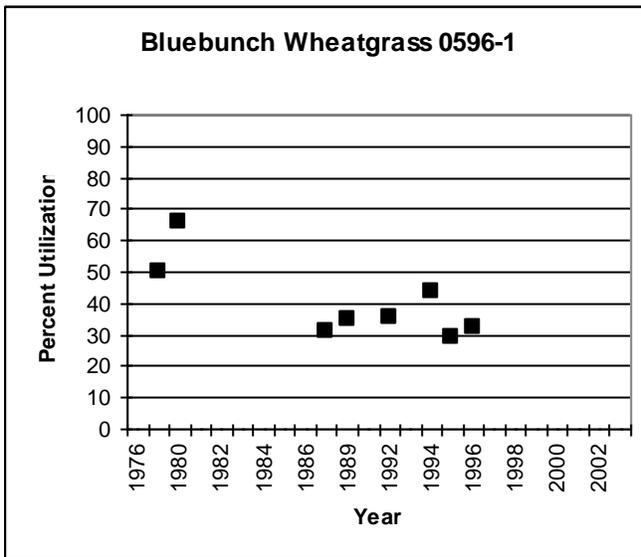
B. Gluch Allotment

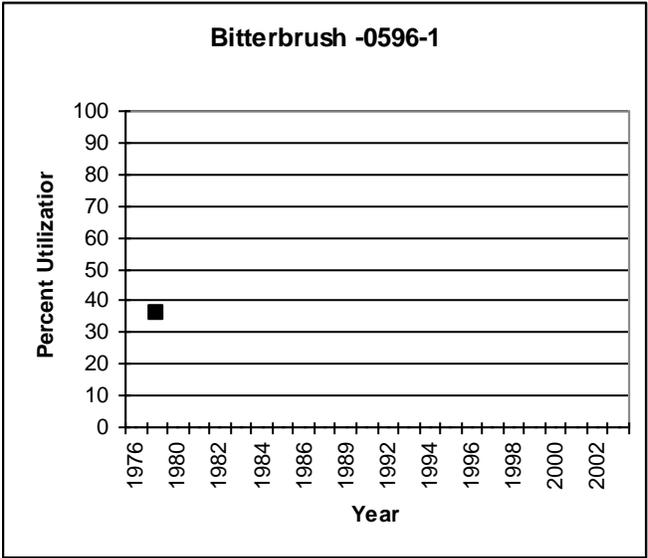
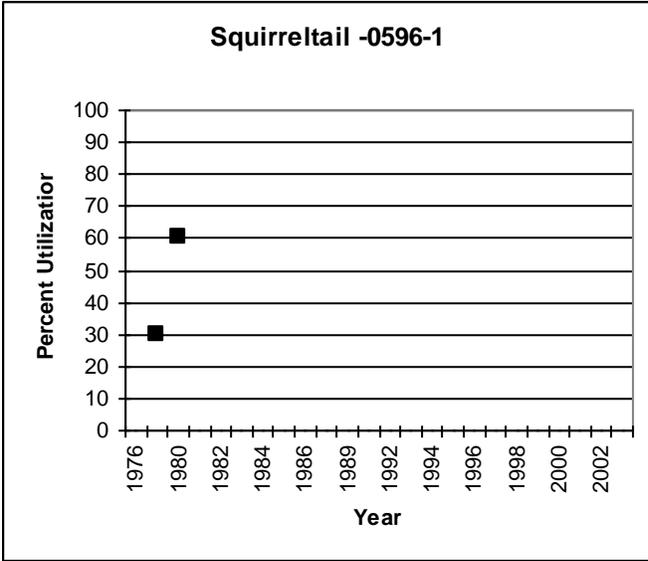


C. Gluch FFR

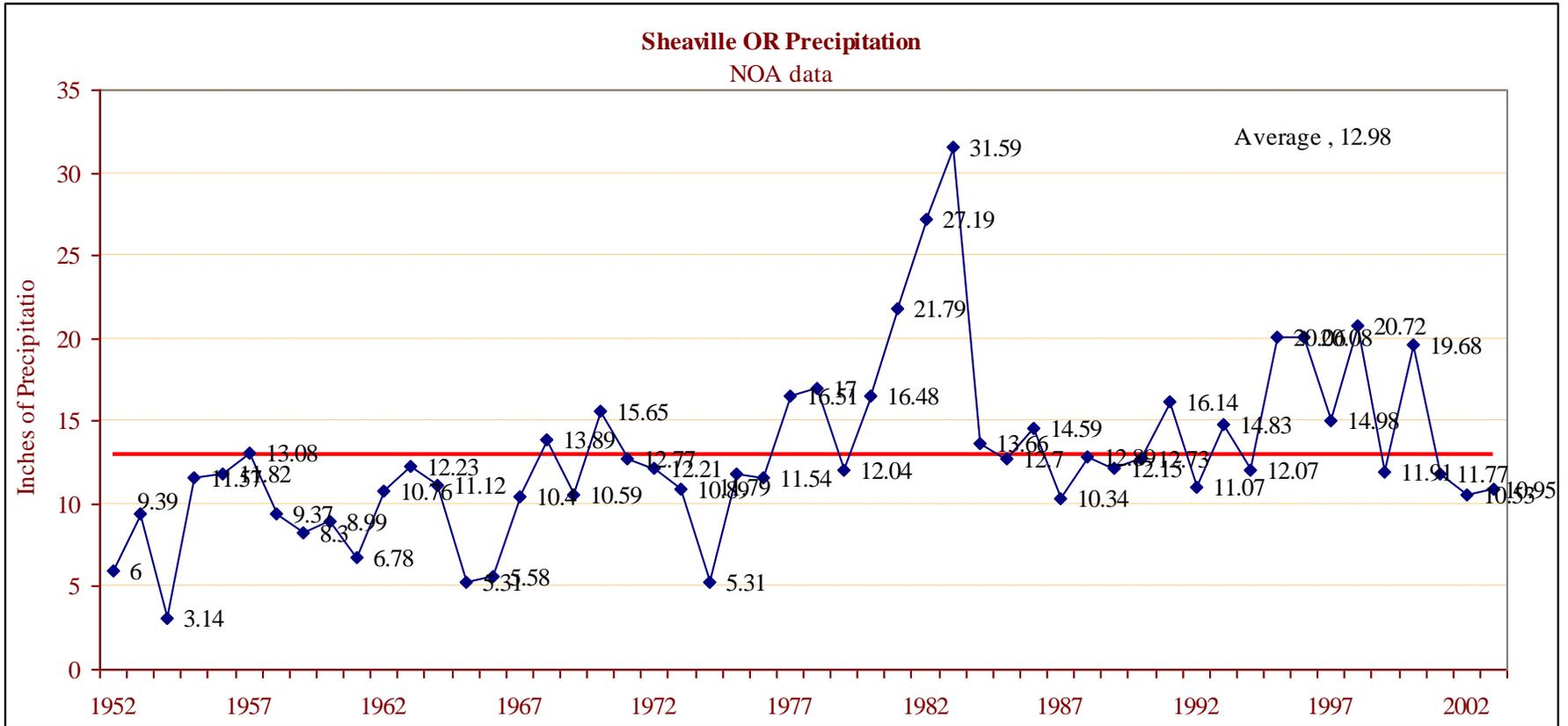


D. Warn Allotment





APPENDIX F – PRECIPITATION



APPENDIX G – SPECIAL STATUS PLANT AND ANIMAL SPECIES

Wildlife

A number of species classified as BLM "Sensitive Species" and/or State of Idaho "Species of Special Concern" are known or likely to occur within these allotments. The following table lists these species, their legal status, and their key habitat associations.

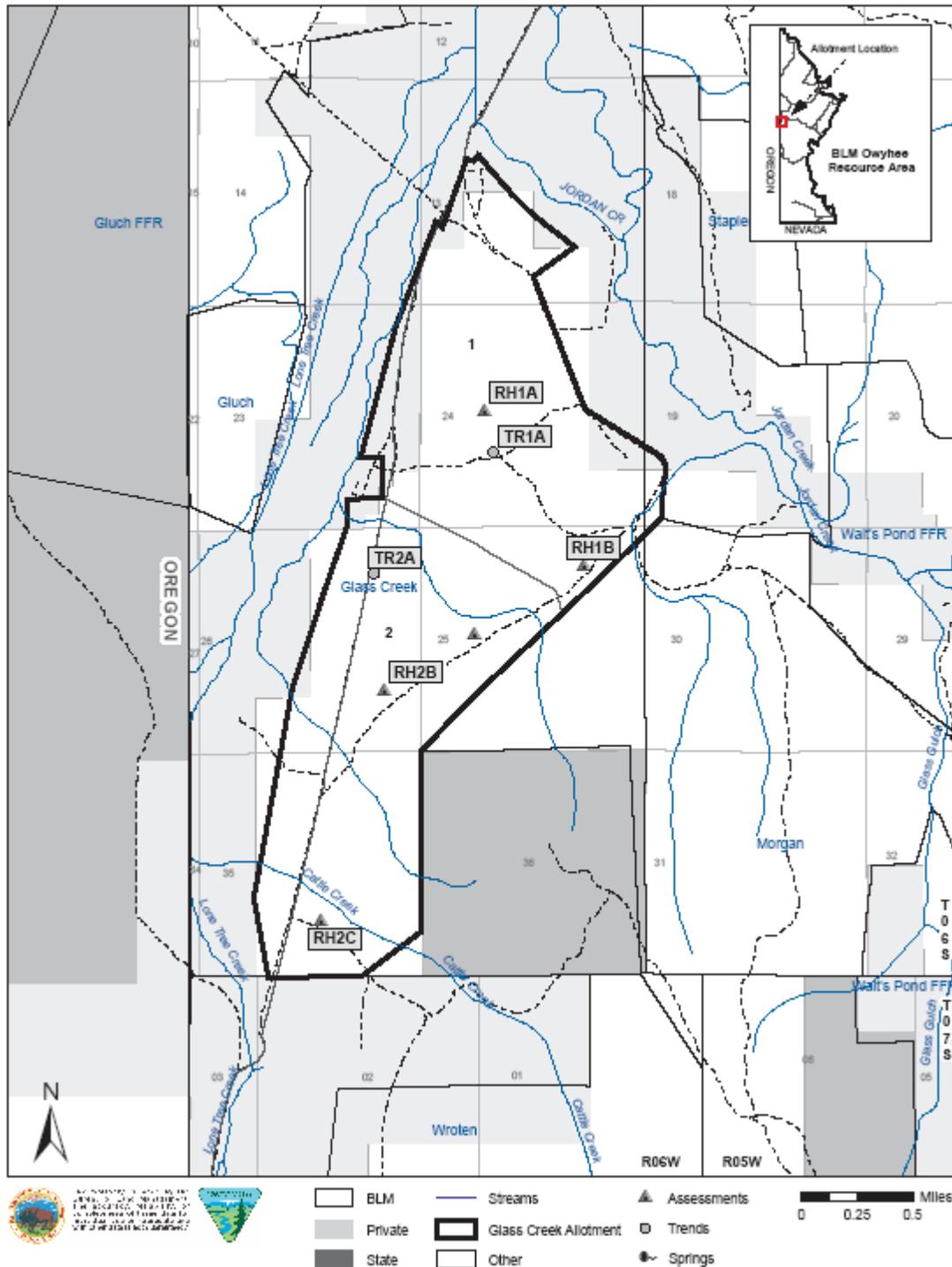
Species	Status	Key Habitat Associations
Prairie Falcon (<i>Falco mexicanus</i>)	S	Cliff/canyon, big sagebrush, low sagebrush
Ferruginous Hawk (<i>Buteo regalis</i>)	S	Cliff, rock outcrop, open juniper, big sagebrush, low sagebrush
Sage Grouse (<i>Centrocercus urophasianus</i>)	S	Big sagebrush, low sagebrush, meadow, riparian
<i>2013 Supplemental Rangeland Health Standards and Guidelines Assessment</i>		
Sage Grouse (<i>Centrocercus urophasianus</i>)	C, SC	Broad sagebrush valleys and foothills interspersed with wet meadows
Calliope Hummingbird (<i>Stellula calliope</i>)	S	Woody riparian, big sagebrush, mountain shrub
Willow Flycatcher (<i>Empidonax trailii</i>)	S	Woody riparian, mountain shrub, juniper, big sagebrush
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	S, SC	Big sagebrush, open juniper
Brewer's Sparrow (<i>Spizella breweri</i>)	S	Big sagebrush
Sage Sparrow (<i>Amphispiza belli</i>)	S	Big sagebrush
Spotted Bat (<i>Euderma maculatum</i>)	S, SC	Roosting/hibernation: Cliffs, canyons, rock outcrops Foraging: Juniper, sagebrush
Fringed Myotis (<i>Myotis thysanodes</i>)	S, SC	Roosting/hibernation: Caves, rock outcrops Foraging: Juniper, sagebrush, meadow
Townsend's Big-eared Bat (<i>Plecotus townsendii</i>)	S, SC	Roosting/hibernation: Caves, trees. Foraging: Juniper, sagebrush, canyon.
Western Pipestrelle (<i>Pipistrellus hesperus</i>)	SC	Roosting/hibernation: Caves, rock outcrops, burrows near water Foraging: Juniper, sagebrush, canyon
Piute Ground Squirrel (<i>Spermophilus mollis</i>)	S	Big sagebrush
Pygmy Rabbit (<i>Brachylagus idahoensis</i>)	S, SC	Big sagebrush.
Common Garter Snake (<i>Thamnophis sirtalis</i>)	S	Aquatic/riparian

Species	Status	Key Habitat Associations
Western Toad (<i>Bufo boreas</i>)	S, SSC	Wetland/riparian, all upland habitats
Redband Trout (<i>Oncorhynchus mykiss gibbsi</i>)	S, SC	Aquatic

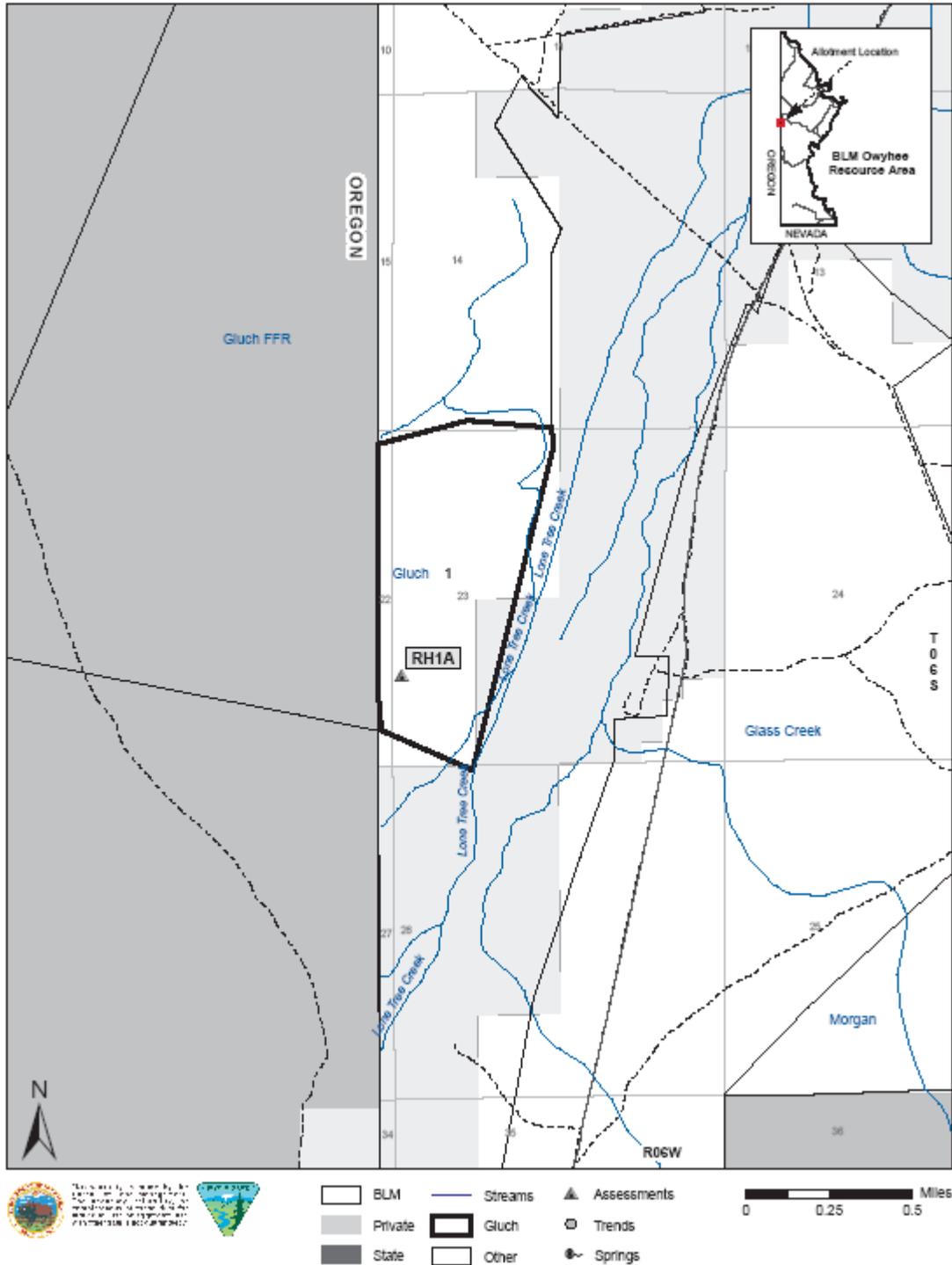
SC = State of Idaho Species of Special Concern, S = BLM Sensitive Species

APPENDIX H – MAPS

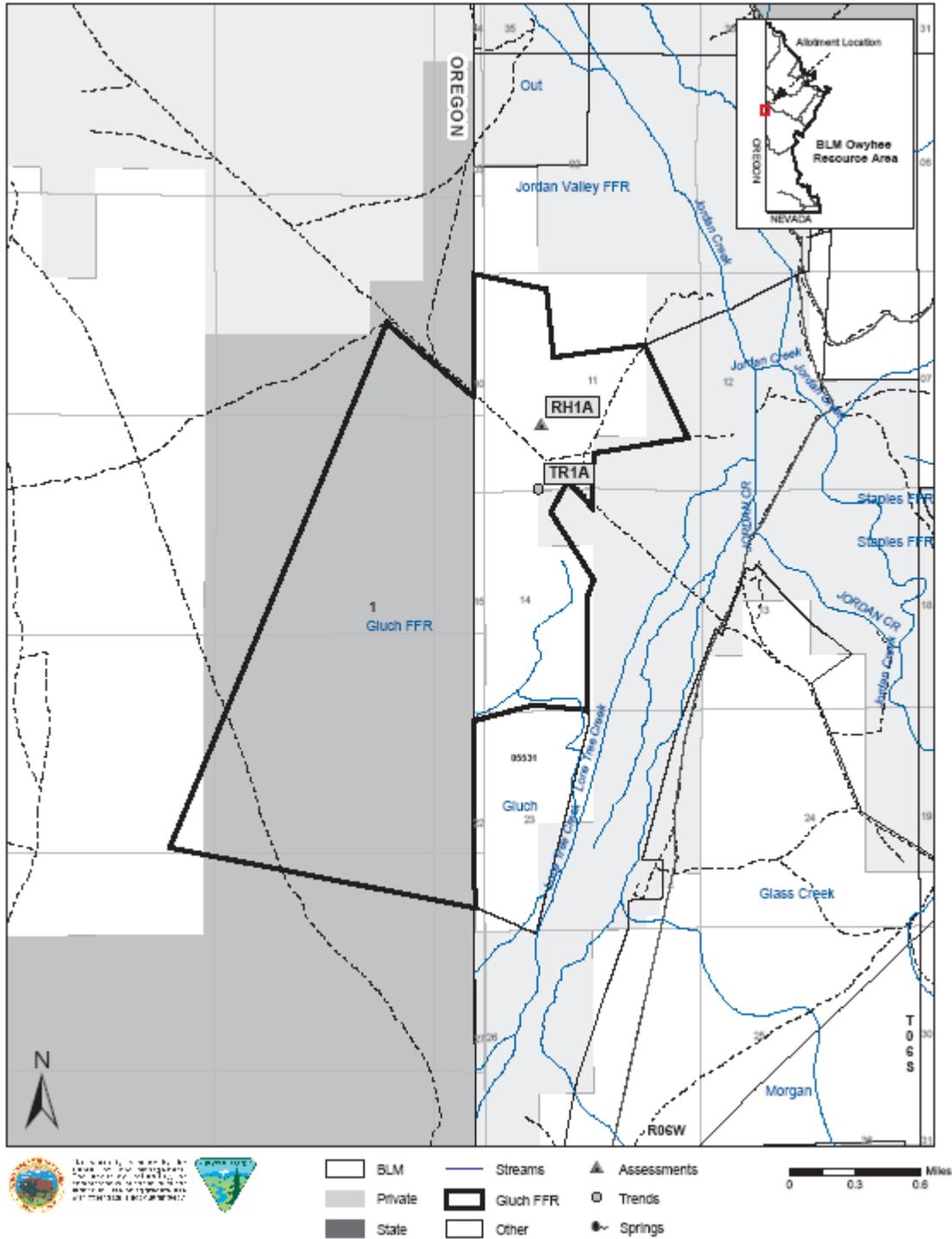
Glass Creek 0552



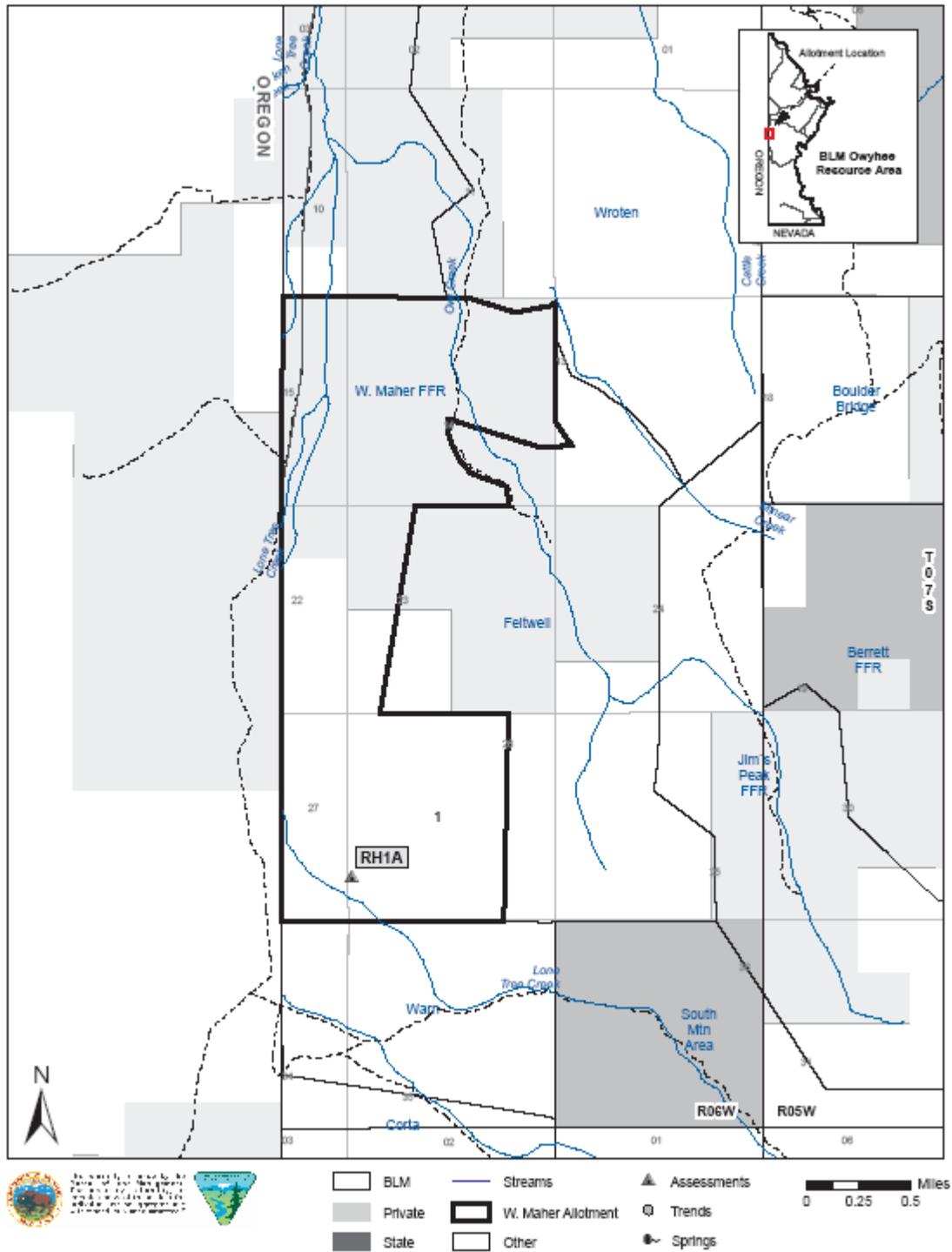
Gluch 0553



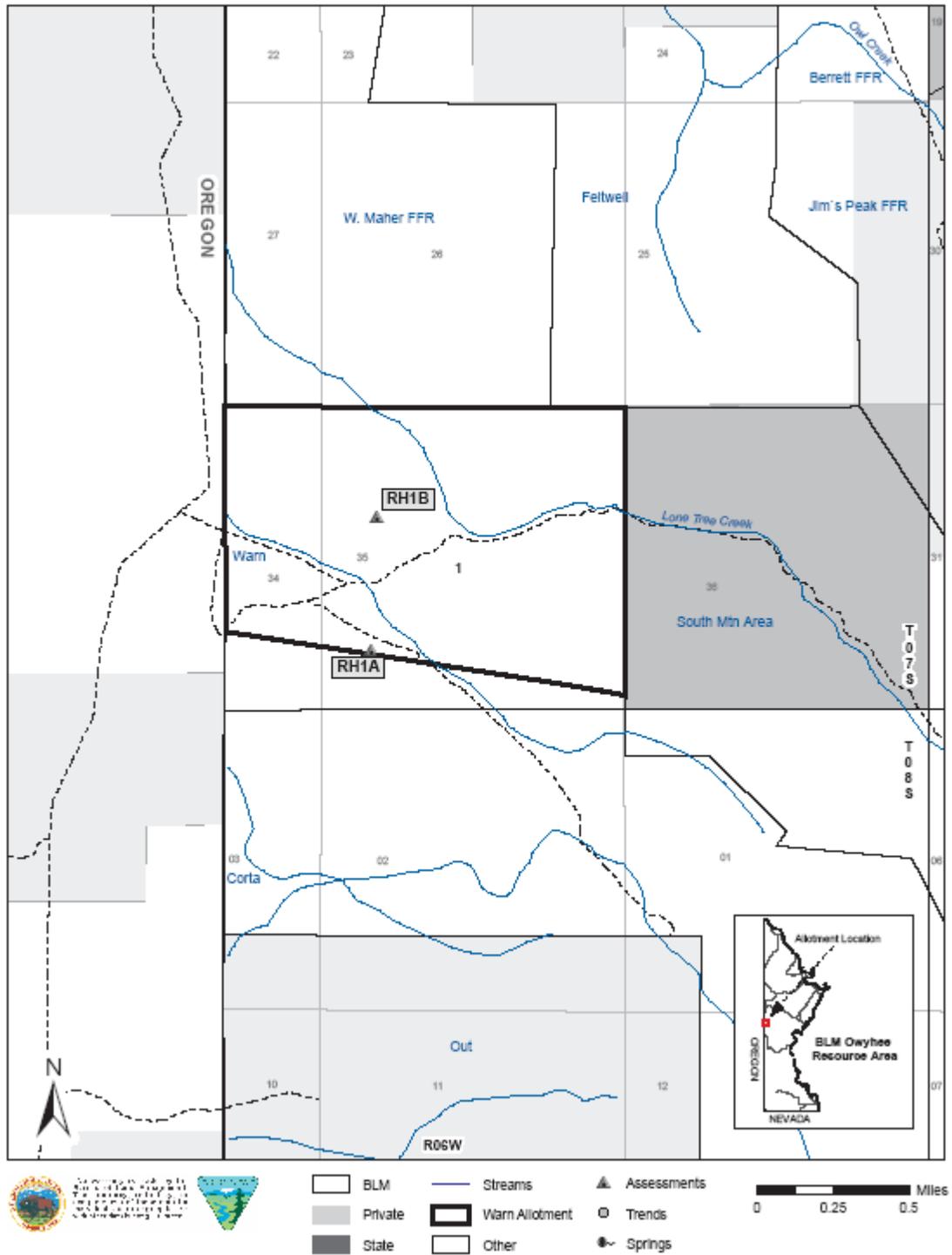
Gluch FFR 0466



W. Maher FFR 0567



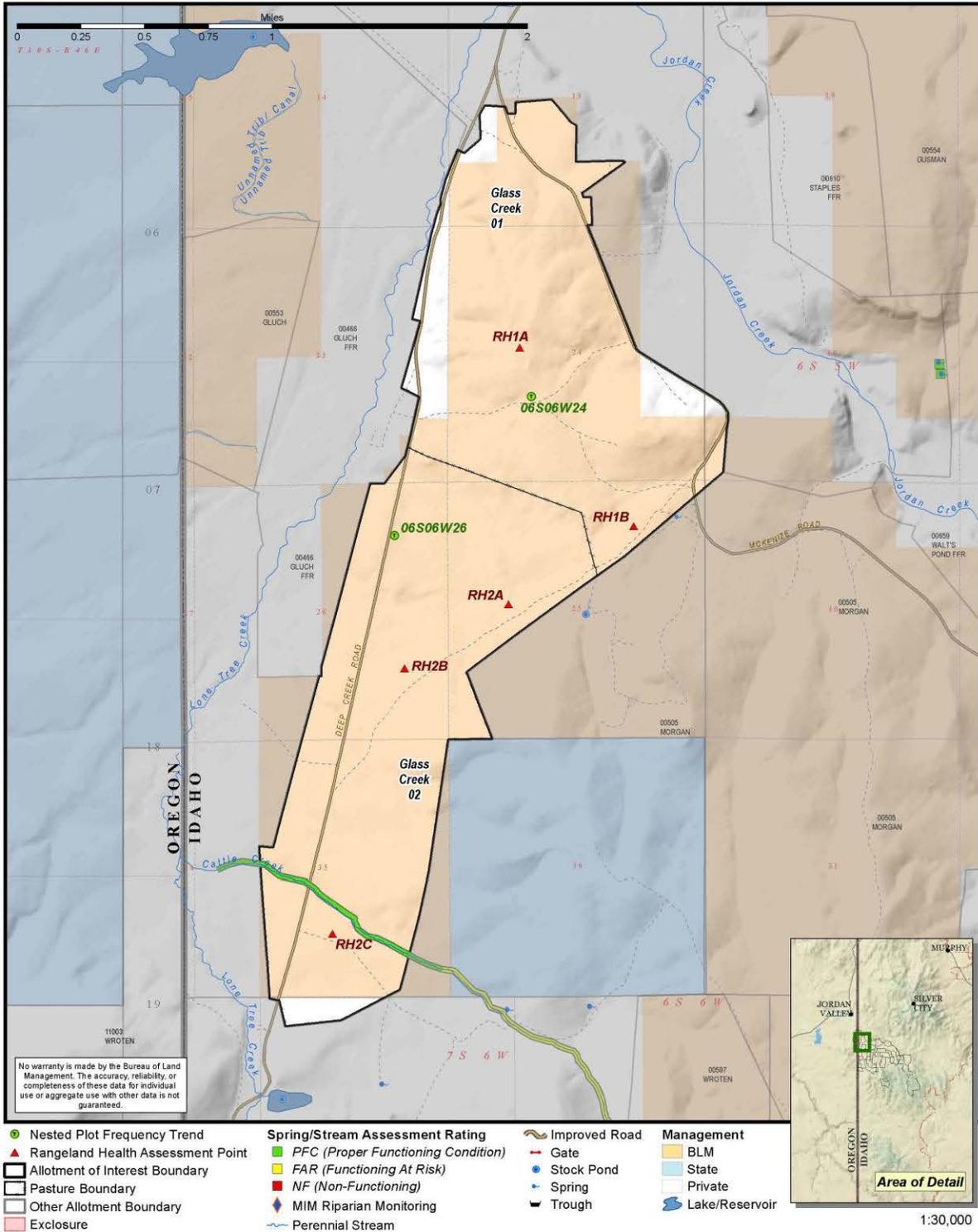
Warn 0596



APPENDIX H: MAPS

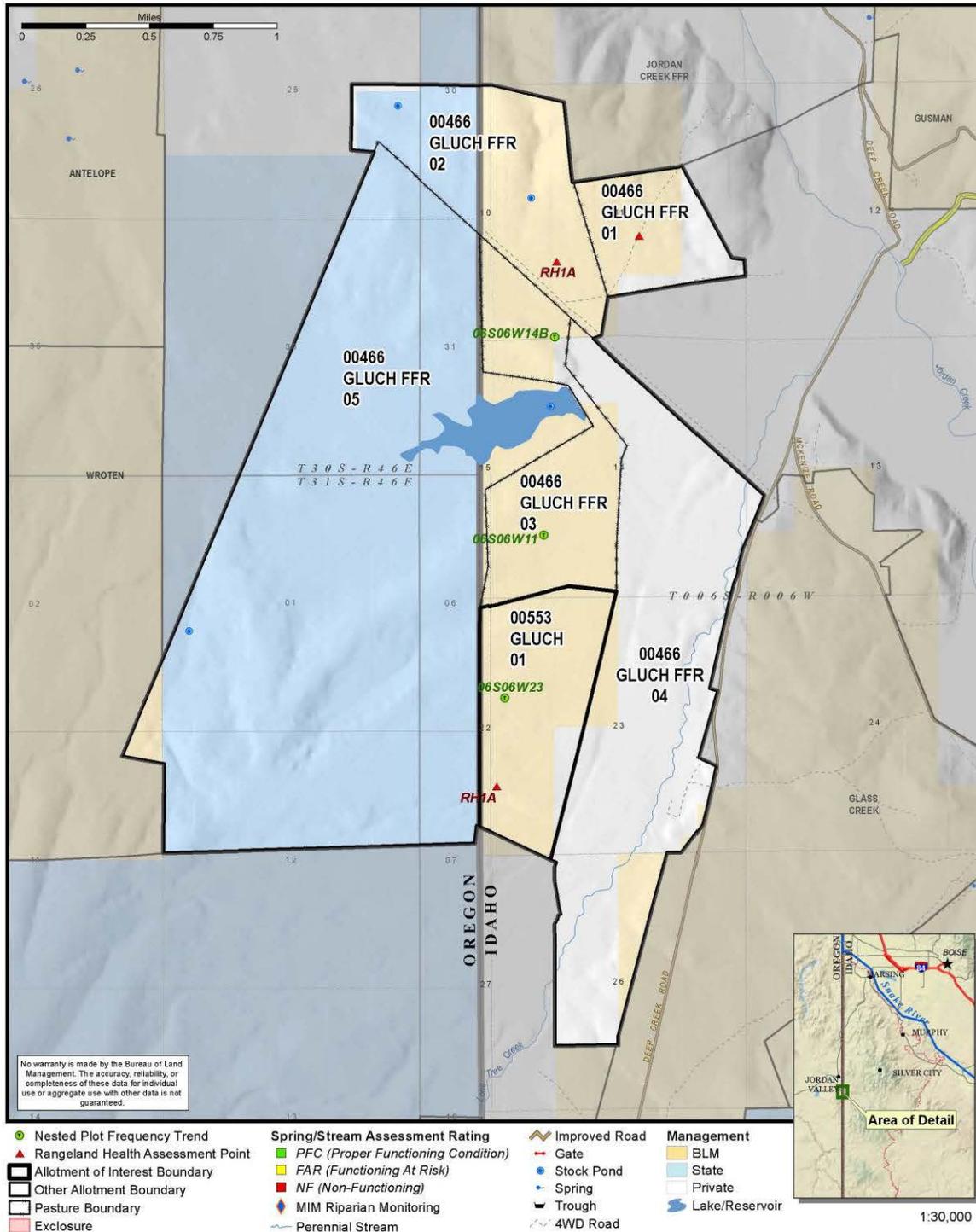


RNGE-1A: Glass Creek (00552) Range and Riparian Overview



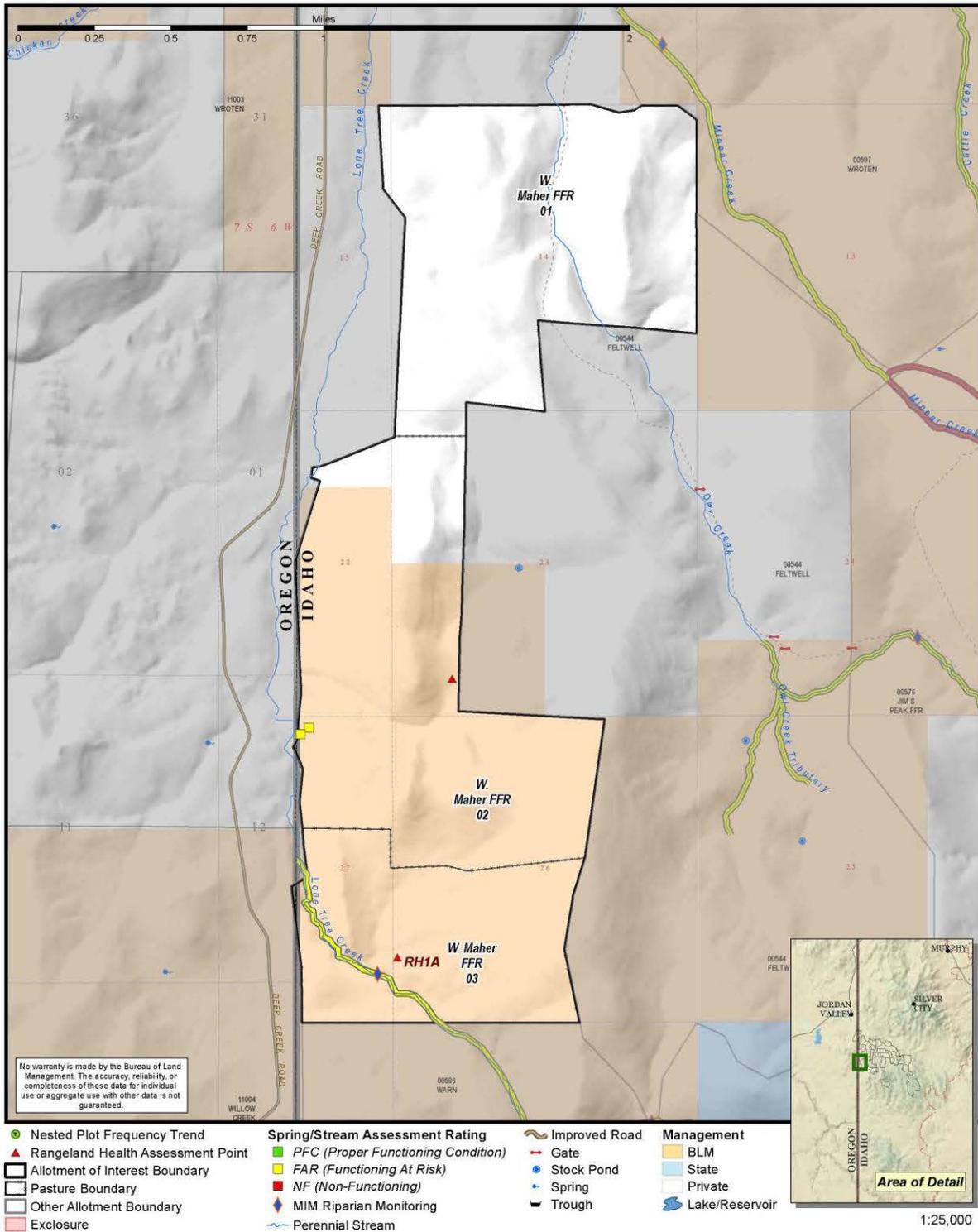


RNGE-1B: Gluch (0553) and Gluch FFR (0466) Range and Riparian Overview



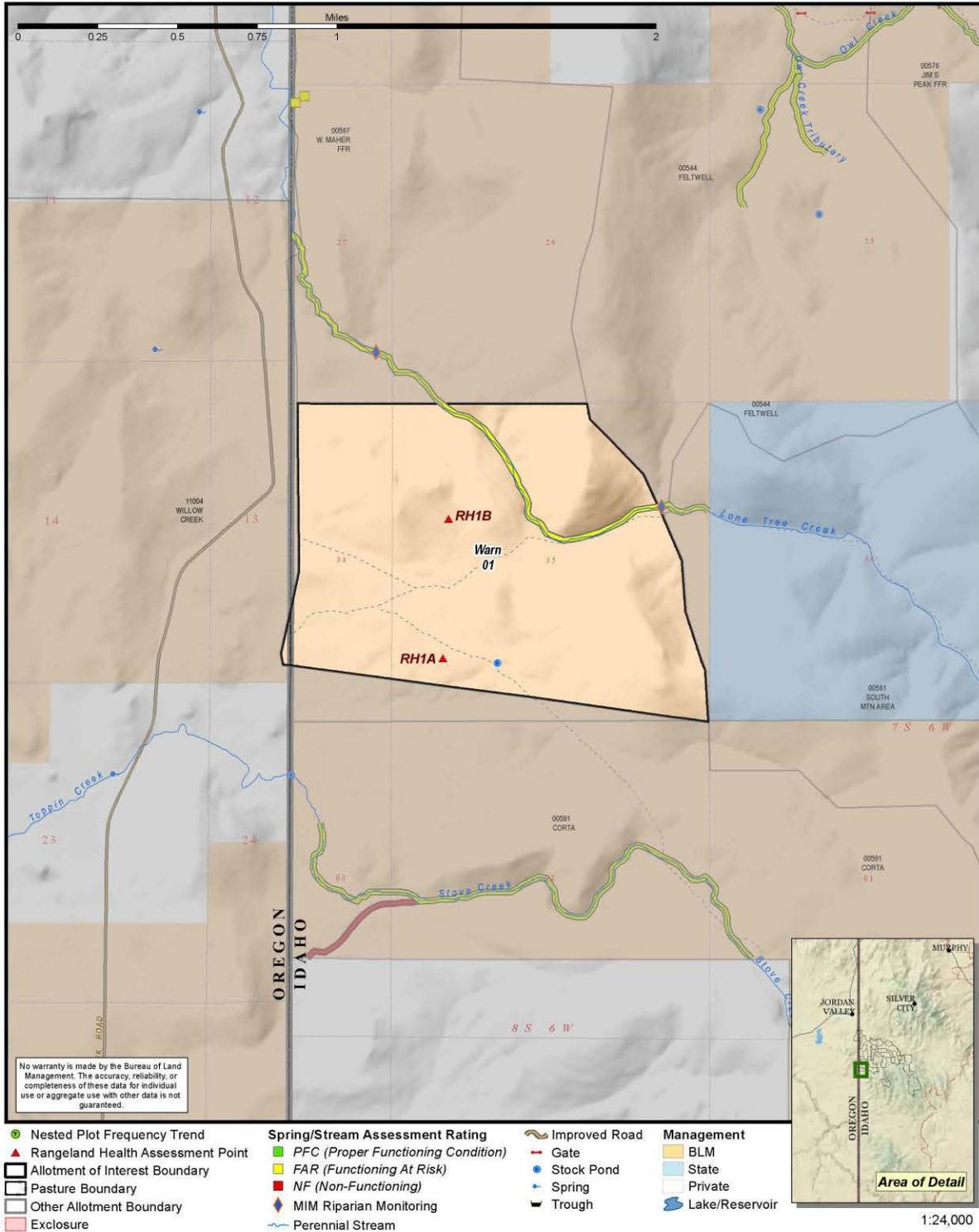


RNGE-1D: W. Maher FFR (00567) Range and Riparian Overview



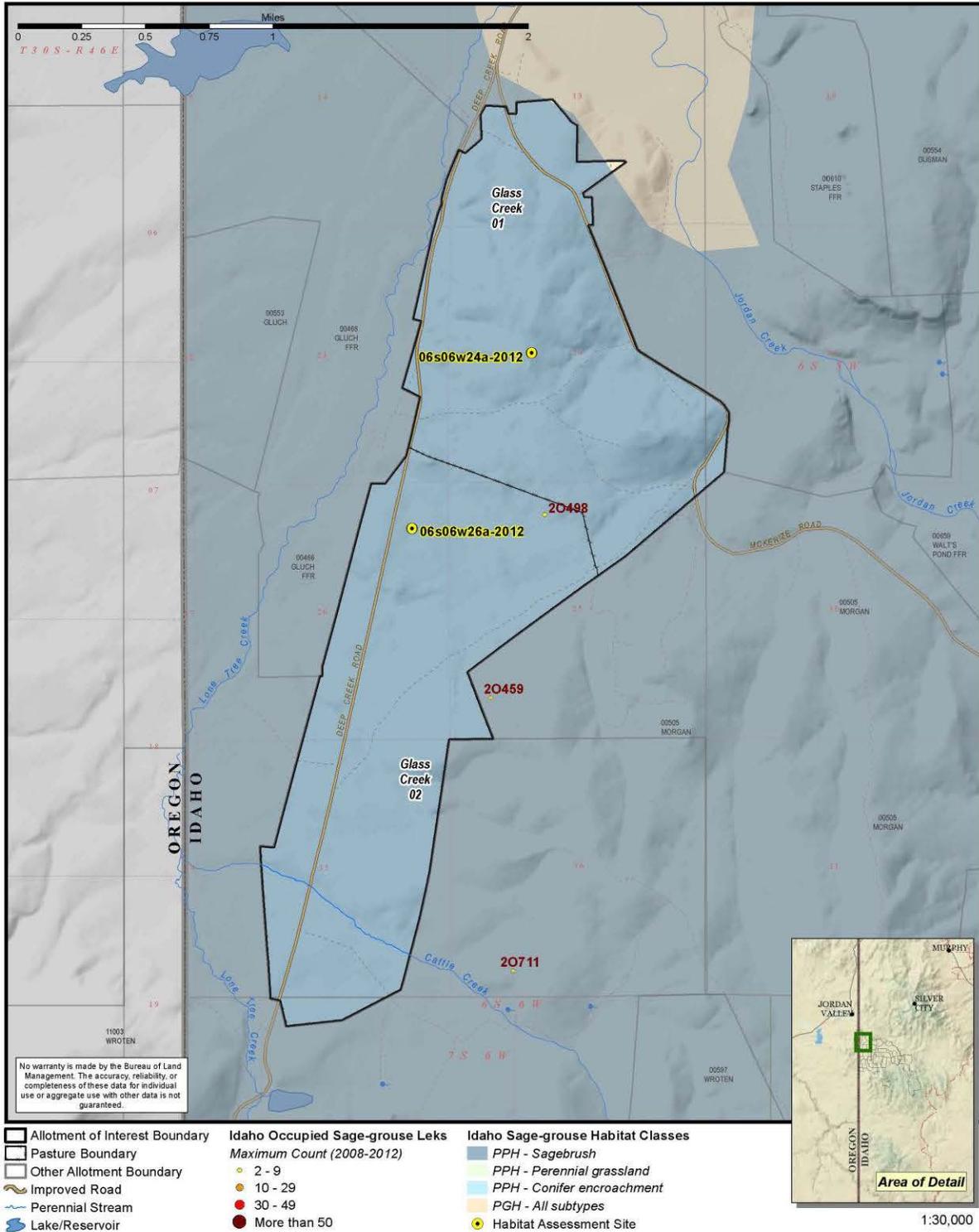


RNGE-1E: Warn (00596) Range and Riparian Overview



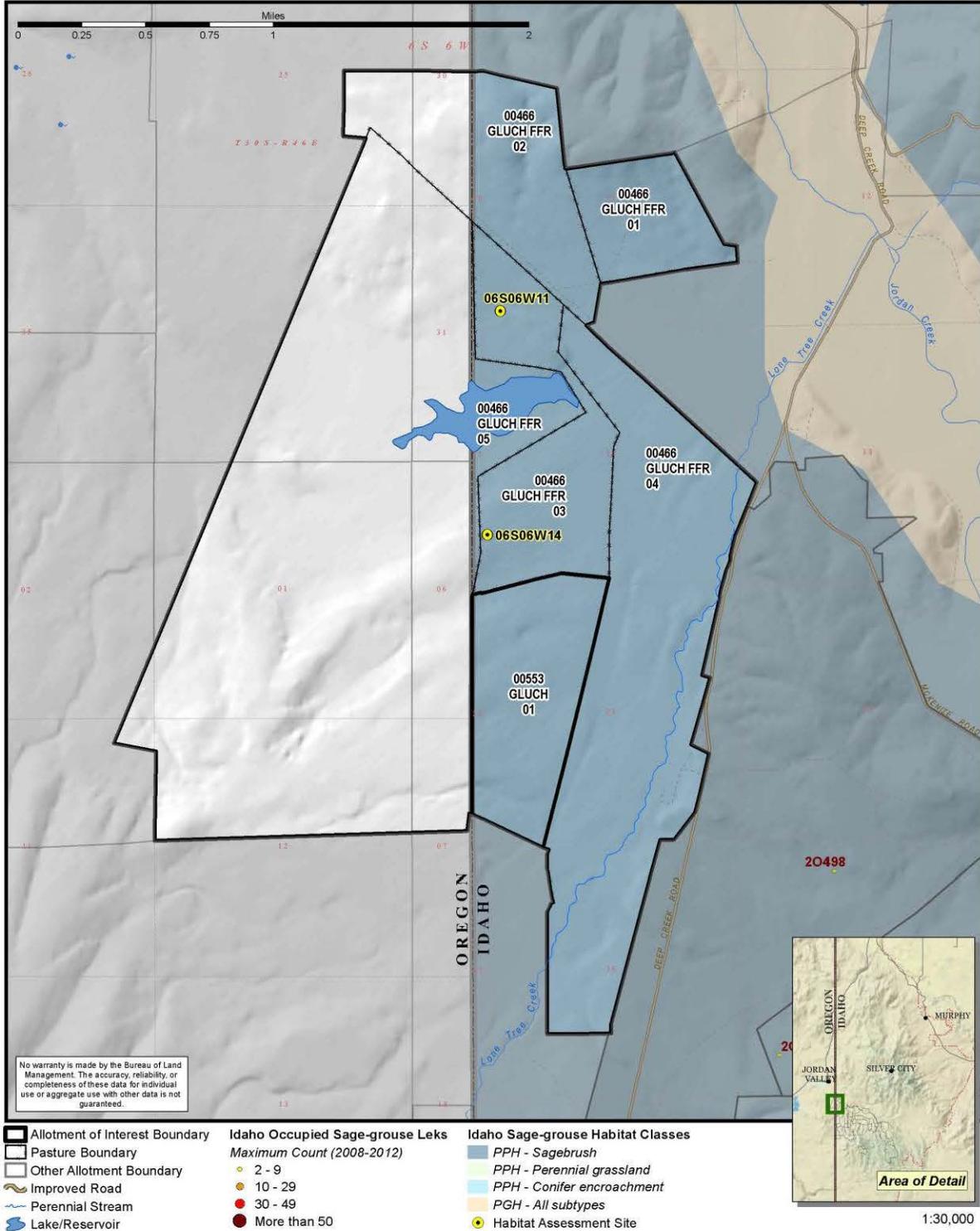


WDLF-1A: Glass Creek (00552) Sage-grouse Habitat and Leks



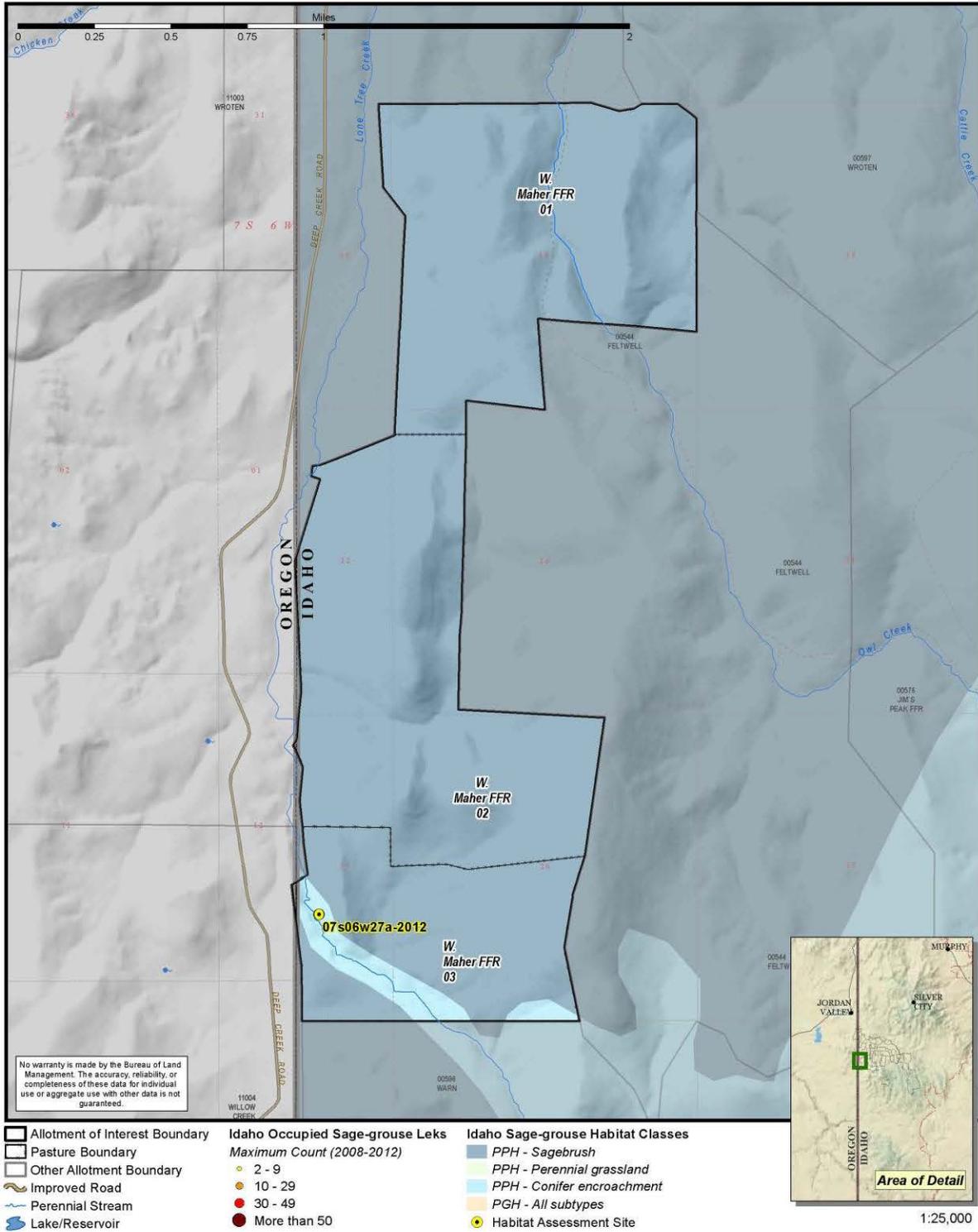


WDLF-1B, Gluch (00553) and Gluch FFR (0466) Sage-Grouse Habitat and Leks



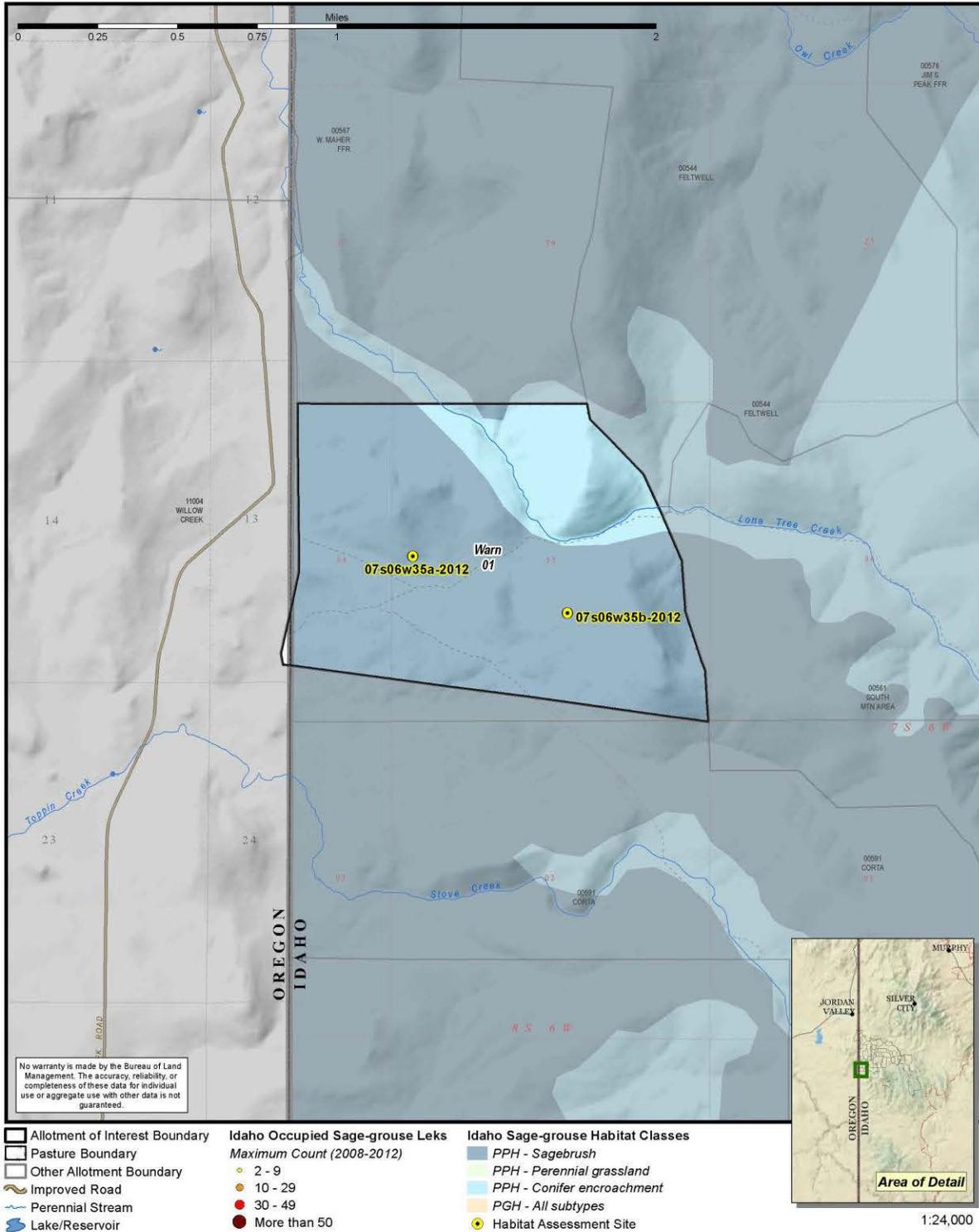


WDLF-1D: W. Maher FFR (00567) Sage-grouse Habitat and Leks



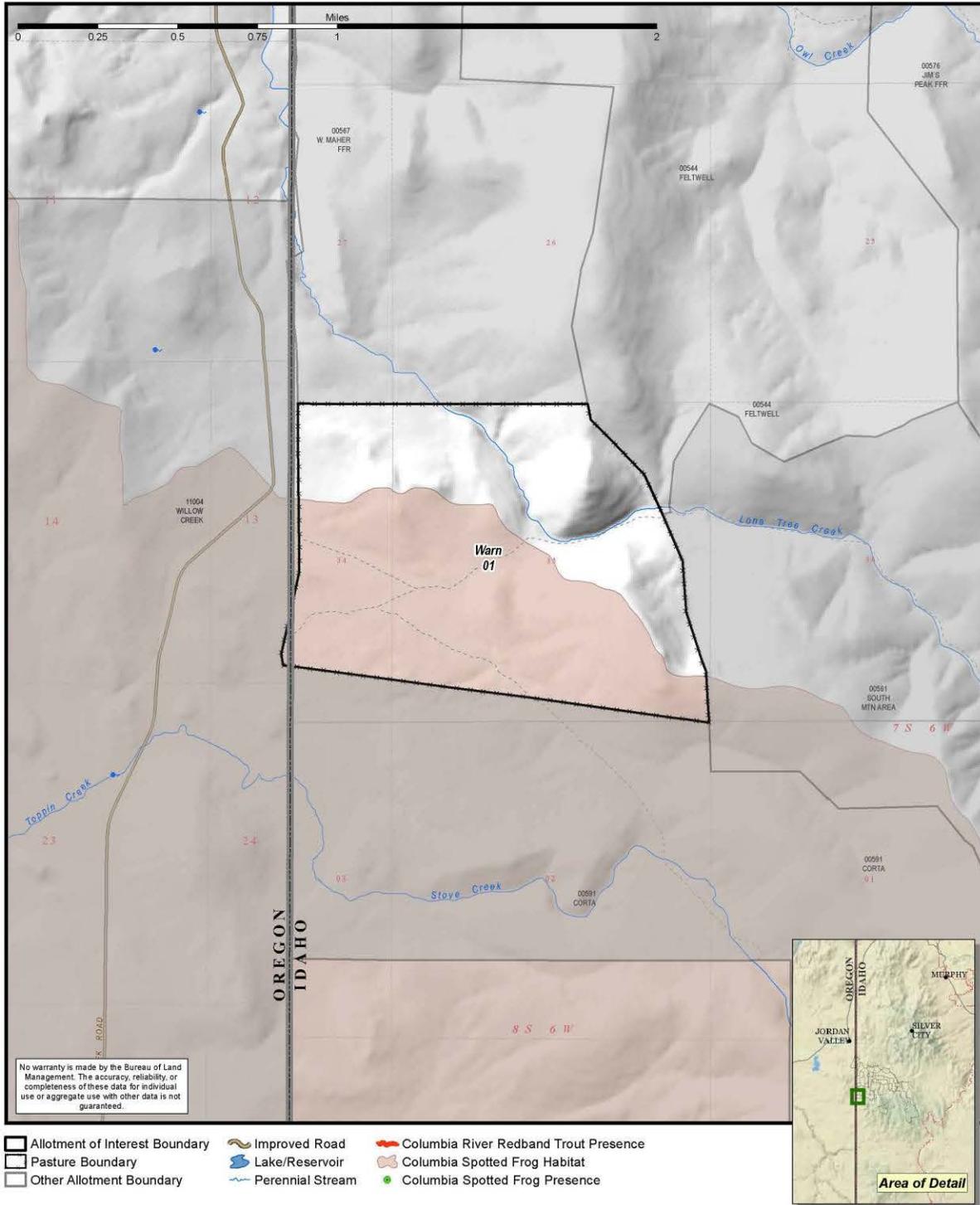


WDLF-1E: Warn (00596) Sage-grouse Habitat and Leks





WDLF-2E: Warn (00596) Columbia Spotted Frog Distribution and Columbia River Redband Trout Presence



Determinations: 2013 Supplement to the Glass Creek, Gluch, Gluch FFR, West Maher, and Warn allotments- Rangeland Health Standards and Guidelines Assessment

GLASS CREEK ALLOTMENT EVALUATION FINDINGS AND DETERMINATION

2013 Supplement to the Glass Creek Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 1, 3, 4, 8

Rationale for Evaluation Finding and Determination

Current and past livestock grazing management practices are significant causal factors for not meeting upland watershed Standard 1 in pastures 1 and 2 of the Glass Creek allotment; a lack of post-fire recovery from past seeding efforts in pasture 1, and invasive annuals, especially in pasture 2, also contribute to not meeting the standard.

Localized soil impacts were recorded in pastures 1 and 2 and include mechanical impacts from hoof action associated with current spring grazing. In pasture 1, however, this is not the only determining factor for impaired upland watershed integrity. Where past drill seeding occurred, bare ground continues to be elevated and flow paths and pedestaling have increased. Long-term ground cover shows no improvement and does not meet ORMP objectives.

The reduction in soil and hydrologic function is associated with post-fire altered plant community composition and distribution due to decreased relative abundance of large, deep-rooted native perennial bunchgrasses and an increase in invasive species. Sagebrush has established after the seeding but has a relatively low presence in this prescribed burned area. Cheatgrass has been on a significant increase and contributes to an ongoing decline in hydrologic function and nutrient availability.

Invasive annuals are also the cause for a decline in soil conditions in pasture 2. Frequency trend data displays the continuous deterioration of biotic conditions due to the near absence of deep-rooted bunchgrasses and invasion of annuals. Over the long term, the long-lasting negative impacts of invasive annuals to hydrologic function and soil productivity cause a decline in soil and do not meet ORMP objectives.

The decreased ecological function and impaired soils indicate that soil and hydrologic function are compromised due to mechanical impacts from spring grazing, a lack of post-fire soil recovery within the seeding, and declining biotic conditions from the continued spread of invasive annuals. The ability for proper nutrient cycling, hydrologic cycling, and energy flow is impaired so that Standard 1 and ORMP soil management objectives of improving unsatisfactory watershed health/conditions are not met in the Glass Creek allotment.

2013 Supplement to the Glass Creek Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 2 (Riparian Areas and Wetlands)

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current Livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

Rationale for Evaluation Finding and Determination

There is a short reach (0.9 mile) of Cattle Creek that traverses pasture 2 of the Glass Creek allotment. The stream has been assessed twice. In 2000 it was FAR with an upward trend; there were areas along the stream that did not have adequate vegetation present to protect the stream banks and some lateral instability was observed. In 2011, the reach was in PFC because there was a functional floodplain, the riparian species were adequate and vigorous, and there was woody species regeneration.

Since the allotment is meeting the Standard, current livestock grazing management practices conform with the Idaho Guidelines for Livestock Grazing Management applicable to Standard 2.

Evaluation Findings and Determination

Standard 3 (Stream Channel/Floodplain)

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

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Rationale for Evaluation Finding and Determination

See description for Standard 2.

Since the allotment is meeting the Standard, current livestock grazing management practices conform with the Idaho Guidelines for Livestock Grazing Management applicable to Standard 2.

Evaluation Findings and Determination

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward

_ Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 4, 9

Rationale for Evaluation Finding and Determination

Rangeland Health Standard 4 is not met in pasture 2 of the Glass Creek allotment; pasture 1 is a seeding and is meeting and is evaluated under Standard 5 below. Evidence of historic grazing impacts are present throughout the allotment, with the reduced composition of deep-rooted native perennial bunchgrasses (e.g., bluebunch wheatgrass and Idaho fescue) from reference site conditions and a greater dominance by increaser species (e.g., Sandberg bluegrass and squirreltail), including invasive annuals. However, current repeated spring grazing in pasture 2 during the active growing season (April 11 – June 6) is a causal factor for not meeting Standard 4. Idaho fescue no longer occurs at the trend site, possibly due to heavy utilization, as recorded in 1999.

Qualitative rangeland health assessment data indicate that Standard 4 is not met due to the departure of functional-structural groups in three RHAs dominated by shallow-rooted bunchgrass and invasive annuals, rather than the ecological reference site conditions with dominance by deep-rooted species (bluebunch wheatgrass and Idaho fescue). This conclusion is supported by current ecological site descriptions and correlation to vegetation inventories.

Overall interpretations of trend data suggest that the continuing deterioration of biotic conditions due to the near-absence of deep-rooted bunchgrasses and increasing annual invasive plants on the site has compromised the biotic integrity of the site.

The Owyhee Resource Management Plan management objective to improve unsatisfactory and maintain satisfactory vegetation health/condition on all areas is also not met within pasture 2. Trend data show a lack of improvement in vegetation communities dominated by shallow-rooted bunchgrasses in pasture 2, along with the expansion of annual invasive grasses, which has led to a conclusion that the vegetation management objective is not met.

2013 Supplement to the Glass Creek Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 5 (Seedings)

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 hydrologic cycle.

Standard

- Standard does not apply

- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

—

Rationale for Evaluation Finding and Determination

Rangeland Health Standard 5 is being met in pasture 1 of the Glass Creek allotment. Although annual invasive plants are increasing on the site, making it at risk for future disturbance activities, all other indicators for seeding are maintained as appropriate to provide for proper nutrient cycling, hydrologic cycling, and energy flow on the allotment. Overall interpretations of trend data suggest that grass frequency conditions are primarily static. Frequency trend data show that biotic conditions and diversity of perennial species are not diminishing over time.

Qualitative rangeland health assessment data indicate that Standard 5 is met. Overall, the plant community at this site is adequate both in structure and function to support a diversity of perennial plant species.

The Owyhee Resource Management Plan management objective to improve unsatisfactory and maintain satisfactory vegetation health/condition on all areas is also are met within pasture 1. Maintaining the seeding in pasture 1 lead to a conclusion that the vegetation management objective is being met, by maintaining life form diversity, production, nutrient cycling, energy flow and the hydrologic cycle.

Standard 6: Exotic Plant Communities

This standard does not apply.

2013 Supplement to the Glass Creek Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 7 (Water Quality)

Surface and ground water on public lands comply with the Idaho Water Quality Standards.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward

- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 10

Rationale for Evaluation Finding and Determination

Current IDEQ information identifies that the BLM portions of the two pastures of the Glass Creek allotment contain approximately 0.7 mile of stream that are not supporting the watershed's beneficial uses, and 2.2 miles that have not been assessed. The allotment contains portions of two AUs with associated beneficial uses and pollutants. AU # ID17050108SW002_02 is currently not supporting the beneficial uses, and all of the streams that occur within the AU are on the 303(d) list of impaired waters based on the pollutants listed below.

Standard 7 is not being met in the Glass Creek allotment and the allotment is not in conformance with the Guidelines for Livestock Grazing Management because livestock contribute to the pollutants identified.

2013 Supplement to the Gluch Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 8 (Threatened and Endangered Plants and Animals)

Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 5, 7, 8, 10, 11, and 12

Rationale for Evaluation Finding and Determination

Botany

Standard 8 for special status plant species is met in this allotment for plants. No population of

special status plant species are known to occur in this allotment. There is insufficient information to determine site-specific impacts of livestock grazing on any special status plants that may occur in the Glass Creek allotment. Records show no reported special status plants in this allotment, so this standard is not applicable.

Upland Habitat

Pasture 2 is managed as native plant community and has been determined to be not meeting Standard 4 due to past and current livestock grazing practices (see Standard 4). Currently, the herbaceous understory component is transitioning from a bluebunch wheatgrass reference community to a Sandberg bluegrass-cheatgrass community. These species do not have the robust growth form or stature and do not provide the plant composition, structure, and function for sagebrush steppe dependent species. Due to the downward trend in the plant community, it can be anticipated that upland habitat conditions will deteriorate further overtime; therefore, this allotment is failing to provide adequate upland habitat conditions for sagebrush steppe species and is not meeting Standard 8 due to past and current livestock practices.

Riparian Habitat

Evaluation of Standard 7 determined that 0.7 miles of streams within this allotment is not meeting water quality standards for Rangeland Health Standards (see Standard 7). Beneficial uses of these streams include water quality parameters that support cold-water aquatic species. Because Standard 7 has identified streams that are not meeting water quality parameters and that livestock grazing is a casual factor, these riparian conditions are therefore not meeting Standard 8 for wildlife due to historic and current grazing practices.

Focal Species

Sage-grouse

Breeding and upland summer habitat conditions for sage-grouse in the Glass Creek allotment were found to be unsuitable. Both habitat assessments showed that marginal conditions exist in Pasture 1 (a seeding) and unsuitable conditions exist in Pasture 2 (a native plant community) due to the decreased occurrence of perennial grasses that are a critical component to understory structure and function during all phases of the year. Because of the reduced occurrence and absence of perennial grasses in pasture 1 and 2, this allotment is not providing adequate nesting, hiding, and escape cover for sage-grouse during the breeding and late-brood rearing periods and is therefore not meeting Standard 8 due to past and current livestock grazing practices.

Determination

I have determined that Standards 1, 4, 7, and 8 of the applicable Standards for Rangeland Health are not meeting in the Glass Creek allotment, while Standards 2, 3, and 5 are being met. Standard 6 is not applicable to this allotment. Current livestock grazing management practices are significant factors in not meeting Standards 1, 4, 7, and 8. Livestock management practices do not conform with the applicable Livestock Grazing Management Guidelines 1, 3, 4, 5, 7, 8, 9, 10, 11, and 12.



Field Manager
Owyhee Field Office

8/22/13
Date

GLUCH ALLOTMENT EVALUATION FINDINGS AND DETERMINATION

Evaluation Findings and Determination

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

Rationale for Evaluation Finding and Determination

Watershed indicators show some departure from expected conditions for the ecological site, though none were excessive enough to determine that Standard 1 would not be met in the Gluch

allotment. Erosion relics rated in the moderate range of departure but appear to be historic, as gravel, vegetative cover, biological soil crusts, and plant litter stabilize the soil surface. The Owyhee Resource Management Plan management objective to improve unsatisfactory and maintain satisfactory watershed health/condition is also met, as indicators of bare ground, persistent cover, and canopy cover indicate a general improving ground cover trend that has maintained.

Despite the continued presence of deep-rooted bunchgrasses, an increase in invasive annuals is occurring so that the allotment is considered to be at risk, as biotic conditions are not improving. However, soil and hydrologic indicators show that watershed function is still maintained with proper nutrient and hydrologic cycling, and energy flow. Overall, current livestock management remains compatible with attainment of Standard 1 and ORMP objectives for the Gluch allotment.

2013 Supplement to the Gluch allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 2 (Riparian Areas and Wetlands)

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Rationale for Evaluation Finding and Determination

Although there are approximately 0.5 miles of NHD identified streams that traverse BLM lands within the Gluch allotment, the reach is ephemeral and the PFC protocol was not applied. Therefore, Standard 2 is not applicable for the allotment.

2013 Supplement to the Gluch allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 3 (Stream Channel/Floodplain)

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Rationale for Evaluation Finding and Determination

See rationale for Standard 2.

*2013 Supplement to the Gluch Allotment Rangeland Health Standards and Guidelines Assessment***Evaluation Findings and Determination****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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

—

Rationale for Evaluation Finding and Determination

Rangeland Health Standard 4 is met in the Gluch allotment. Although annual invasive plants are increasing on the site, making it at risk for future disturbance activities, all other indicators for productive native plants are maintained as appropriate to provide for proper nutrient cycling, hydrologic cycling, and energy flow on the allotment.

Qualitative rangeland health assessment data indicate that Standard 4 is met with slight to moderate departure of annual invasives, as concluded in 2006 on the RHA. This supports the conclusion that the allotment is meeting the standard.

Overall interpretations of trend data suggest that grass frequencies are primarily static and biotic conditions are maintained with a shift to shallow rooted bunchgrasses from historic livestock grazing; however, bluebunch wheatgrass remains at 65 percent occurrence on the trend site and Idaho fescue is increasing.

The Owyhee Resource Management Plan management objective to improve unsatisfactory and maintain satisfactory vegetation health/condition on all areas is also met. Static and short-term upward trend recorded in the vegetation communities lead to a conclusion that the vegetation management objective is being met.

Standard 5: Rangeland Seeding

This standard does not apply to this allotment.

Standard 6: Exotic Plant Communities

This standard does not apply to this allotment.

2013 Supplement to the Gluch allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 7 (Water Quality)

Surface and ground water on public lands comply with the Idaho Water Quality Standards.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).
10

Rationale for Evaluation Finding and Determination

Current IDEQ information identifies that the BLM portions of the Gluch allotment contains approximately 0.6 mile of stream that is not supporting the watershed's beneficial uses. The allotment contains a portion of AU #ID17050108SW002_02 with associated beneficial uses and pollutants. The AU is currently not supporting the beneficial uses, and all of the streams that occur within the allotment are on the 303(d) list of impaired waters.

Standard 7 is not being met in the Gluch allotment and the allotment is not in conformance with

the Guidelines for Livestock Grazing Management because livestock contribute to the pollutants identified.

2013 Supplement to the Gluch FFR Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 8 (Threatened and Endangered Plants and Animals)

Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 7 and 10

Rationale for Evaluation Finding and Determination

Riparian Habitat

Evaluation of Standard 7 determined that 0.6 miles of streams within this allotment are not meeting water quality standards for Rangeland Health Standards (see Standard 7). Beneficial uses of these streams include water quality parameters that support cold-water aquatic species. Because Standard 7 has identified streams that are not meeting water quality parameters and that livestock grazing is a casual factor, these riparian conditions are therefore not meeting Standard 8 for wildlife due to historic and current grazing practices.

Determination

I have determined that Standards 7 and 8 of the applicable Standards for Rangeland Health are not meeting in the Gluch allotment, while Standards 1, 2, 3, and 4 are being met. Standards 5 and 6 are not applicable to this allotment. Current livestock grazing management practices are significant factors in not meeting Standards 7 and 8. Livestock management practices do not conform to applicable Livestock Grazing Management Guidelines 7 and 10.



Field Manager
Owyhee Field Office

8/22/13
Date

GLUCH FFR ALLOTMENT EVALUATION FINDINGS AND DETERMINATION

Evaluation Findings and Determination

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s) 1, 3, 4, 8

Rationale for Evaluation Finding and Determination

Current livestock grazing management practices are significant causal factors for not meeting upland watershed Standard 1 in pastures 1 and 2 of the Gluch FFR allotment; pasture 3 is not

meeting the Standard due to historic livestock practices while the ORMP watershed health objective is not met in pasture 5 due to impacts from man-made disturbances at a reservoir. Pasture 4 is meeting the Standard.

The reduction in soil and hydrologic function in pastures 1, 2, and 3 is associated with physical soil disturbance and an altered plant community composition and distribution from decreased relative abundance of large, deep-rooted native perennial bunchgrasses. Pasture 1 has been utilized as a winter and early spring pasture where feeding and the continuous early use under wet conditions has contributed to extensive physical soil impacts, primarily compaction and localized pugging. Litter is almost absent.

Indicators of erosion and soil loss and degradation are also present in pasture 2 and are related to mechanical soil disturbance. An increase in invasive species contributes to an ongoing decline in hydrologic function and nutrient availability. Although mats of invasive annuals provide for cover, they result in undesirable soil productivity changes and reflect a departure in reference conditions.

Historic livestock management has impacted pasture 3, although ground cover trend and grass frequency trend show slight improving to static conditions and inconclusive changes in bare ground. The ORMP management objectives are not met in pasture 5, where disturbance from heavy equipment has left localized impacts to soils from dredging at a reservoir.

The decreased ecological function and impaired soils indicate that soil and hydrologic function are compromised from continued winter and spring grazing in the absence of rest. Current and past livestock management is the primary contributing factor for not meeting Standard 1 and the ORMP soil management objectives for the Gluch FFR allotment.

2013 Supplement to the Gluch FFR allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 2 (Riparian Areas and Wetlands)

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Rationale for Evaluation Finding and Determination

Although there are approximately 0.6 miles of NHD identified streams that traverse BLM lands within the Gluch FFR allotment, the reach is ephemeral and the PFC protocol was not applied. Therefore, Standard 2 is not applicable for the allotment.

2013 Supplement to the Gluch FFR Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 3 (Stream Channel/Floodplain)

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Rationale for Evaluation Finding and Determination

See the rationale for Standard 2.

2013 Supplement to the Gluch FFR Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- ___ Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

Rationale for Evaluation Finding and Determination

Rangeland Health Standard 4 is not met in pasture 2 and 3 but is met in pastures 4 and 5 of the Gluch FFR allotment; pasture 1 is not meeting and is evaluated under Standard 5. Evidence of historic grazing impacts are present throughout the allotment, with the reduced composition of deep-rooted native perennial bunchgrasses (e.g., bluebunch wheatgrass and Idaho fescue) from reference site conditions and a greater dominance by increaser species (e.g., Sandberg bluegrass and squirreltail). Historic grazing and invasive annuals in pasture 2 and 3 are causal factors in not meeting Standard 4.

Qualitative rangeland health assessment data indicate that Standard 4 is not being met in pasture 2, with departure of functional-structural groups in the RHAs dominated by shallow-rooted bunchgrass and invasive annuals, rather than the ecological reference site conditions with dominance by deep-rooted species (bluebunch wheatgrass and Idaho fescue). This conclusion is supported by current ecological site descriptions and correlation to vegetation inventories.

Overall interpretations of trend data in pasture 3 suggest that the continuous deterioration of biotic conditions due to lack of deep-rooted bunchgrasses and increasing annual invasives on the site have compromised the biotic integrity of the site.

The Owyhee Resource Management Plan management objective to improve unsatisfactory and maintain satisfactory vegetation health/condition on all areas is also not met within pastures 2 and 3. Vegetation communities dominated by shallow-rooted bunchgrasses in pastures 2 and 3, with the expansion of annual invasive grasses, lead to a conclusion that the vegetation management objective is not met.

Standard 5: Rangeland Seeding

This standard does not apply.

2013 Supplement to the Gluch FFR Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 6 (Exotic Plant Communities, other than seedings)

Exotic plant communities, other than seedings, will meet minimum requirements of soil stability and maintenance of existing native and seeded plants. These communities will be rehabilitated to perennial communities when feasible cost effective methods are developed.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors

- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 4 and 9

Rationale for Evaluation Finding and Determination

Rangeland Health Standard 6 is not met in pasture 1 of the Gluch FFR allotment. Evidence of historic grazing impacts is present throughout the allotment, with the reduced composition of deep-rooted native perennial bunchgrasses (e.g., bluebunch wheatgrass and Idaho fescue) from reference site conditions and a greater dominance by increaser species (e.g., Sandberg bluegrass and squirreltail). Current grazing and soil compaction in pasture 1 are causal factors in not meeting Standard 4, as are repeated winter and spring use.

Qualitative rangeland health assessment data indicate that Standard 6 is not met in pasture 1 due to the departure of functional-structural groups in the RHAs dominated by shallow-rooted bunchgrass and invasive annuals, rather than the ecological reference site conditions dominated by deep-rooted species (bluebunch wheatgrass and Idaho fescue). This conclusion is supported by current ecological site descriptions and correlation to vegetation inventories.

The Owyhee Resource Management Plan management objective to improve unsatisfactory and maintain satisfactory vegetation health/condition on all areas is also not met within pasture 1. Vegetation communities dominated by annual invasives and shallow-rooted bunchgrasses in pasture 1, with the expansion of soil compaction, lead to a conclusion that the vegetation management objective is not met.

Evaluation Findings and Determination

Standard 7 (Water Quality)

Surface and ground water on public lands comply with the Idaho Water Quality Standards.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).
10

Rationale for Evaluation Finding and Determination

Current IDEQ information identifies that the BLM portions of the five pastures within the Gluch FFR allotment contain approximately 1.5 miles of stream that are not supporting the watershed's beneficial uses, and 0.3 mile that have not been assessed. The allotment contains portions of three AUs with associated beneficial uses and pollutants. AU # ID17050108SW002_02 is currently not supporting the beneficial uses, and all of the streams that occur within the allotment are on the 303(d) list of impaired waters based on the pollutants listed below.

Standard 7 is not being met in pastures 3 and 4 of the Gluch FFR allotment and the allotment is not in conformance with the Guidelines for Livestock Grazing Management because livestock contribute to the pollutants identified.

2013 Supplement to the Gluch FFR Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination**Standard 8 (Threatened and Endangered Plants and Animals)**

Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).
5, 7, 8, 10, 11, and 12

Rationale for Evaluation Finding and Determination**Botany**

Standard 8 for special status plants is met in this allotment. No populations of special status plant species are known to occur in this allotment. There is insufficient information to determine site-specific impacts of livestock grazing on any special status plants that may occur in the Gluch

FFR allotment. Records show no reported special status plants in this allotment, so this standard is not applicable.

Upland Habitat

Pasture 1 is managed as an exotic plant community and is determined to be not meeting Standard 6 (see Standard 6). Upland habitats managed under Standard 6 do not meet the requirements of Standard 8. Vegetation composition, structure, and function are lacking or absent in these communities substantially reducing effective nesting, hiding, escape, travel, and foraging cover values for all upland wildlife species. These exotic communities further create large open spaces, diminish habitat connectivity, and increase sagebrush community fragmentation; therefore this pasture is not meeting Standard 8 due to past and current grazing practices and dominance of exotic vegetation.

Pastures 2 and 3 are managed as native plant communities and have been determined to be not meeting Standard 4 due to past livestock grazing practices and annual invasive species (see Standard 4). Currently, the herbaceous understory component is transitioning from basin Big sagebrush/bluebunch wheatgrass reference community to a basin big sagebrush/Sandberg bluegrass-cheatgrass community. The downward trend in the plant community composition is favoring more grazing tolerant, shallow rooted grass species. These species do not have the robust growth form or stature such as bluebunch wheatgrass and do not provide the plant composition, structure, and function for sagebrush steppe dependent species. Due to the downward trend and transition in the plant community, it can be anticipated that upland habitat conditions will deteriorate further overtime; therefore, this allotment is failing to provide adequate upland habitat conditions for sagebrush steppe species, and therefore is not meeting Standard 8 due to past grazing practices and invasive annuals.

Riparian Habitat

Evaluation of Standard 7 determined that 1.5 miles of streams within this allotment are not meeting water quality standards for Rangeland Health Standards (see Standard 7). Beneficial uses of these streams include water quality parameters that support cold-water aquatic species. Because Standard 7 has identified streams that are not meeting water quality parameters and that livestock grazing is a casual factor, these riparian conditions are therefore not meeting Standard 8 for wildlife due to historic and current grazing practices.

Focal Species

Sage-grouse

Breeding habitat conditions for sage-grouse in the Gluch FFR allotment were found to be marginal. The breeding habitat assessments showed that the occurrence of sagebrush is satisfactory but the overstory structure is taller than desired with a mixed spreading/columnar physical shape. Combined with reduced occurrence of perennial grasses in the understory and the marginal height and shape of the sagebrush, nesting, hiding, and escape cover created by appropriate vegetation composition and structure does not adequately occur. Therefore, this pasture is not meeting Standard 8 due to marginal breeding habitat conditions caused by past grazing practices.

Upland summer habitat provides important cover and forage for late brood-rearing sage-grouse

as the season becomes drier and birds seek out vegetation communities with an abundance of forbs such as mesic areas and riparian zones. Inferring from the breeding habitat assessment, except for the forb information, conditions for sage-grouse in Pasture 3 are found to be marginal. The assessment showed that sagebrush occurrence is satisfactory but that the height is taller than desired and combined with the less than favorable occurrence of understory perennial grasses; hiding and escape cover are not being adequately provided. Therefore this pasture is not meeting Standard 8 due to the marginal upland summer habitat conditions caused by past grazing practices.

2013 Supplement to the Gluch FFR Allotment Rangeland Health Standards and Guidelines Assessment - Field Manager's Determination

Determination

I have determined that Standards 1, 4, 6, 7, and 8 of the applicable Standards for Rangeland Health are not being met in the Gluch FFR Allotment, while Standards 2, 3, 5, and 7 are not applicable for this allotment. Current livestock grazing management practices are significant factors in not meeting Standard 1, 6, 7, and 8 whereas current livestock management practices are not significant factors for not meeting Standard 4. Livestock management practices do not conform with the applicable Livestock Grazing Management Guidelines 1, 3, 4, 7, 8, 9, 10, 11, and 12.



Field Manager
 Owyhee Field Office

8/22/13

Date

WEST MAHER ALLOTMENT EVALUATION FINDINGS AND DETERMINATION

2013 Supplement to the West Maher FFR Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not

significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 1, 3, 4, 8

Rationale for Evaluation Finding and Determination

Current livestock grazing management practices are significant causal factors for not meeting upland watershed Standard 1 in pastures 2 and 3 of the West Maher allotment; pasture 1 is private, and therefore is not evaluated here. Conditions in pastures 2 and 3 are deteriorated by commonly observed loss of the soil surface horizon, active erosional features, extensive bare ground, and physical impacts from increased amounts of trails. In the broader basin of pasture 3, the trails have resulted in churned soils, while pasture 2 mostly reflects disturbances from compaction and soil loss along extensive networks of side hill trails.

The reduction in soil and hydrologic function is associated with the removal of vegetation and an altered plant community composition and distribution due to a decrease of large, deep-rooted native perennial bunchgrasses. As a result, historic and active accelerated erosional processes have increased pedestaling of plants that, along with accelerated physical damage from hoof action and mechanical damage to soils by livestock, have also affected the biological soil crust component, especially in the interspatial areas. A network of trails has increased bare soil exposure and affects soil stability, especially on steeper slopes.

Degraded ecological conditions under current management schemes do not project improvement in watershed health, especially with spring grazing and limited rest. The decreased ability for proper nutrient cycling, hydrologic cycling, and energy flow due to reduced soil and hydrologic function lead to the conclusion that current livestock management is the primary causal factor in not meeting Standard 1 and ORMP soil management objectives of improving unsatisfactory watershed health/conditions for the West Maher allotment.

2013 Supplement to the West Maher FFR Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 2 (Riparian Areas and Wetlands)

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors

- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).
5

Rationale for Evaluation Finding and Determination

Standard 2 is not being met in pasture 3 of the West Maher allotment. Approximately 0.8 mile of Lone Tree Creek has twice been assessed FAR, primarily based on vegetation concerns; there was inadequate woody regeneration and the understory of herbaceous vegetation was composed of upland species. A MMIM site was established and the metrics collected identify short-term indicators that are not meeting Standards: mean stubble height of 4.3 inches, 21 percent woody species use, and 46 percent bank alteration.

Current livestock grazing management practices are significant causal factors for not meeting Standard 2. Residual vegetation has not been sufficient to maintain or improve riparian-wetland function, and the recent grazing schedule has not allowed for rest years. Therefore, current livestock grazing management practices do not conform with the Idaho Guidelines for Livestock Grazing Management applicable to Standard 2.

Evaluation Findings and Determination

Standard 3 (Stream Channel/Floodplain)

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

7

Rationale for Evaluation Finding and Determination

See the rationale for Standard 2.

2013 Supplement to the West Maher FFR Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

Rationale for Evaluation Finding and Determination

Rangeland Health Standard 4 is met in pasture 2 and not met in pasture 3 (pasture 1 is all private) of the West Maher FFR allotment. Although evidence of historic grazing impacts are present throughout the allotment with the reduced composition of deep-rooted native perennial bunchgrasses (e.g., bluebunch wheatgrass and Idaho fescue) from reference site conditions and juniper encroachment, presence of annual invasive plants is the causal factor in not meeting Standard 4.

Qualitative rangeland health assessment data indicate that Standard 4 is not met in pasture 3, with moderate departure of plant mortality and plant community composition in the RHA dominated by shallow-rooted bunchgrass and juniper, rather than the ecological reference site conditions dominated by deep-rooted species (bluebunch wheatgrass and Idaho fescue). This conclusion is supported by current ecological site descriptions and correlation to vegetation inventories.

The Owyhee Resource Management Plan management objective to improve unsatisfactory and maintain satisfactory vegetation health/condition on all areas is also not met within the West Maher FFR allotment. Vegetation communities dominated by shallow-rooted bunchgrasses and juniper encroachment lead to a conclusion that the vegetation management objective is not met.

Standard 5: Rangeland Seeding

This standard does not apply.

Standard 6: Exotic Plant Communities

This standard does not apply.

Evaluation Findings and Determination

Standard 7 (Water Quality)

Surface and ground water on public lands comply with the Idaho Water Quality Standards.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

10

Rationale for Evaluation Finding and Determination

Current IDEQ information identifies that the BLM portion of pasture 3 within the West Maher allotment contains approximately 0.7 mile of stream that is not supporting the watershed’s beneficial uses. The allotment contains a portion of AU #ID17050108SW002_02 with associated beneficial uses and pollutants. The AU is currently not supporting the beneficial uses, and all of the streams that occur within the allotment are on the 303(d) list of impaired waters based on the pollutants listed below.

Standard 7 is not being met in pasture 3 of the West Maher allotment and the allotment is not in conformance with the Guidelines for Livestock Grazing Management because livestock contribute to the pollutants identified.

Evaluation Findings and Determination

Standard 8 (Threatened and Endangered Plants and Animals)

Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 5, 7, 8, 10, 11, and 12

Rationale for Evaluation Finding and Determination

Botany

Standard 8 for special status plant species is met in this allotment. No population of special status plant species are known to occur in this allotment. There is insufficient information to determine site-specific impacts of livestock grazing on any special status plants that may occur in the West Maher FFR allotment. Records show no reported special status plants in this allotment, so this standard is not applicable.

Upland Habitat

Standard 4 determined that pasture 3 of the West Maher allotment is not meeting Rangeland Health Standards due to invasive annuals (see Standard 4) and therefore is not meeting Standard 8. This is inconsistent with the sage-grouse habitat assessment that showed a productive understory of large perennial grasses. This is because the rangeland health assessment was conducted on a Shallow Claypan site and the sage-grouse assessment was conducted on Loamy site, which produced different results. Therefore, because annual species do not provide adequate habitat composition and structure for sagebrush steppe dependent species, this allotment therefore is not meeting Standard 8 due to the increased dominance of annual invasive species in the uplands.

Riparian Habitat

Evaluation of Standards 2 and 3 determined that a reach of Lone Creek within this allotment is functioning-at-risk (FAR). Streams that are FAR are lacking adequate riparian vegetation composition and distribution to provide the structure and function to support a productive environment. Evaluation of Standard 7 also determined that IDEQ water quality parameters and beneficial uses for cold-water aquatic species were also not meeting Rangeland Health Standards. Because Standards 2, 3, and 7 are not being met, stream, spring, and wetland habitat conditions are not adequate to support viable terrestrial, avian, and aquatic species populations and therefore this allotment is not meeting Standard 8 due to current livestock grazing practices.

Focal Species

Sage-grouse

Breeding habitat conditions for sage-grouse in pasture 3 in the West Maher FFR allotment were found to be marginal. The breeding habitat assessments showed that the occurrence of perennial grass and height are favorable but that the canopy cover, height, and physical shape of the sagebrush overstory does not interface with the herbaceous understory adequately and reduces required nesting and hiding cover values. Because of the less-than-desirable breeding habitat conditions created by the sagebrush overstory, this allotment is providing less-than-adequate (marginal) nesting and early brood-rearing habitat conditions for sage-grouse and therefore is not meeting Standard 8 due to past grazing and annual invasive species.

Upland summer habitat provides important cover and forage for late brood-rearing sage-grouse as the season becomes drier and birds seek out vegetation communities with an abundance of forbs such as mesic areas and riparian zones. The assessment showed that combined canopy cover of perennial grasses and forbs was favorable but that the canopy cover and height of the sagebrush overstory does not interface with the herbaceous understory adequately and reduces required hiding and escape cover for late brood-rearing sage-grouse; therefore, this allotment does not meet Standard 8 due to past grazing and annual invasive species.

2013 Supplement to the West Maher Allotment Rangeland Health Standards and Guidelines Assessment – Field Manager’s Determination

Determination

I have determined that Standards 1, 2, 3, 4, 7, and 8 of the applicable Standards for Rangeland Health are not being met in the West Maher allotment, while Standards 5 and 6 are not applicable for this allotment. Current livestock grazing management practices are significant factors in not meeting Standards 1, 2, 3, 7, and 8, whereas current livestock management practices are not significant factors for not meeting Standard 4. Livestock management practices do not conform with the applicable Livestock Grazing Management Guidelines 1, 3, 4, 5, 7, 8, 10, 11, and 12.



Field Manager
Owyhee Field Office

8/22/13

Date

WARN ALLOTMENT EVALUATION FINDINGS AND DETERMINATION

2013 Supplement to the Warn Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 1, 3, 4, 8

Rationale for Evaluation Finding and Determination

Current and past livestock grazing management practices are significant causal factors for not meeting upland watershed Standard 1 in the Warn allotment. The reduction in soil and hydrologic function is associated with physical soil disturbance, a reduction in vegetative cover, and an altered plant community composition due to invasive annuals and dominance of shallow-rooted bunchgrasses.

Although only a slight shift in the plant community from reference conditions has been noted, an increase in invasive species and shallow-rooted bunchgrasses contributes to an ongoing decline in hydrologic function and nutrient availability. The presence of severe erosion relics and the removal of surface soils have reduced vegetative cover as bare soils and flow paths display variable stages of stabilization. Localized gullies and compaction are present and biological soil crusts are reduced in interspaces. While much of the pedestalling of bunchgrasses is historic, recent mechanical damage has been caused by spring use when soils are wet, even if grazing periods are short.

The decreased ecological function and impaired soils indicate that soil and hydrologic function are compromised. Current and past livestock management are the primary contributing factors for not meeting Standard 1 and ORMP soil management objectives of improving unsatisfactory watershed health/conditions for the Warn allotment.

2013 Supplement to the Warn Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 2 (Riparian Areas and Wetlands)

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

5

Rationale for Evaluation Finding and Determination

Standard 2 is not being met in the Warn allotment. The reach of Lone Tree Creek that traverses the single pasture allotment has twice been rated FAR. Riparian area condition issues included that vegetation present did not reflect the maintenance of soil moisture to support riparian vegetation, the vegetation present was inadequate to protect stream banks, and there were noxious weeds present. Additionally, in 2011, a MMIM site was established and the short-term indicators that were measured did not meet Standards. The mean stubble height was 4.4 inches, woody use was 28 percent, and stream bank alteration was 32 percent.

Current livestock grazing management practices are significant causal factors for not meeting Standard 2. Residual vegetation has not been sufficient to maintain or improve riparian-wetland function, and the recent grazing schedule has not allowed for rest years. Therefore, current livestock grazing management practices do not conform with the Idaho Guidelines for Livestock Grazing Management applicable to Standard 2.

2013 Supplement to the Warn Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 3 (Stream Channel/Floodplain)

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward

- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 7

Rationale for Evaluation Finding and Determination

Standard 3 is not being met in the Warn allotment. The reach of Lone Tree Creek that traverses the allotment has twice been assessed FAR. Issues associated with Standard 3 that were noted include inadequate floodplain inundation and a lack of channel roughness present to dissipate energy during high flow events. In addition, in 2011, a MMIM site was established on the same reach of Lone Tree Creek. The mean stubble height was 4.4 inches, woody use was 28 percent, and stream bank alteration was 32 percent.

Current livestock grazing management practices are significant causal factors for not meeting Standard 3. Residual vegetation has not been sufficient to maintain or improve riparian-wetland function, the recent grazing schedule has not allowed for rest years, and the management has not allowed progress toward appropriate stream channel and stream bank morphology and function. Therefore, current livestock grazing management practices do not conform with the Idaho Guidelines for Livestock Grazing Management applicable to Standard 3.

Evaluation Findings and Determination

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.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).
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Rationale for Evaluation Finding and Determination

Rangeland Health Standard 4 is met in the Warn allotment. Although annual invasive plants and soil disturbance are increasing on the site, making it at risk for future disturbance activities, all other indicators for productive native plants are maintained as appropriate to provide for proper nutrient cycling, hydrologic cycling, and energy flow on the allotment.

Qualitative rangeland health assessment data indicate that Standard 4 is met, with slight to moderate departure from functional structural groups and biotic vegetation is at or near potential. This supports the conclusion that the allotment is meeting the Standard.

The Owyhee Resource Management Plan management objective to improve unsatisfactory and maintain satisfactory vegetation health/condition on all areas is also met. Near potential vegetation communities lead to a conclusion that the vegetation management objective is being met.

Standard 5: Rangeland Seeding

This standard does not apply.

Standard 6: Exotic Plant Communities

This standard does not apply.

2013 Supplement to the Warn Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 7 (Water Quality)

Surface and ground water on public lands comply with the Idaho Water Quality Standards.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

10

Rationale for Evaluation Finding and Determination

Current IDEQ information identifies that the BLM portions of the Warn allotment contain approximately 0.9 mile of stream that is not supporting the watershed’s beneficial uses, and 1.0

mile that has not been assessed. The allotment contains portions of two AUs with associated beneficial uses and pollutants. AU #ID17050108SW002_02 is currently not supporting the beneficial uses, and all of the streams that occur within the allotment are on the 303(d) list of impaired waters based on the pollutants listed below.

Standard 7 is not being met in the Warn allotment and the allotment is not in conformance with the Guidelines for Livestock Grazing Management because livestock contribute to the pollutants identified.

2013 Supplement to the Warn Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 8 (Threatened and Endangered Plants and Animals)

Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species.

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 5, 8, 10, 11, and 12

Rationale for Evaluation Finding and Determination

Botany

Standard 8 for special status plant species is met in this allotment. No populations of special status plant species are known to occur in this allotment. There is insufficient information to determine site-specific impacts of livestock grazing on any special status plants that may occur in the Warn allotment. Records show no reported special status plants in this allotment, so this standard is not applicable.

Riparian Habitat

Evaluation of Standards 2, 3, and 7 determined that a reach of Lone Creek within this allotment is functioning-at-risk (FAR) (see Standards 2, 3, and 7). Streams that are FAR are lacking adequate riparian vegetation composition and distribution to provide the structure and function to support a productive environment. Evaluation of Standard 7 also determined that IDEQ water quality parameters and beneficial uses for cold-water aquatic species were also not meeting

Rangeland Health Standards. Because Standards 2, 3, and 7 are not being met, stream, spring, and wetland habitat conditions are not adequate to support viable terrestrial, avian, and aquatic species populations and therefore this allotment is not meeting Standard 8 due to current livestock grazing practices.

2013 Supplement to the Warn Allotment Rangeland Health Standards and Guidelines Assessment – Field Manager’s Determination

Determination

I have determined that Standards 1, 2, 3, 7, and 8 of the applicable Standards for Rangeland Health are not being met in the Warn Allotment, while Standard 4 is being met. Standards 5 and 6 are not applicable for this allotment. Current livestock grazing management practices are significant factors in not meeting Standards 1, 2, 3, 7, and 8. Livestock management practices do not conform with the applicable Livestock Grazing Management Guidelines 1, 3, 4, 5, 7, 8, 10, 11, and 12.



Field Manager
Owyhee Field Office



Date

Determination Errata for the Gluch and Gluch FFR Allotments

Gluch Allotment

Pg. 155 Standard 7 Evaluation Findings and Determination - replace with the following:

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

Pg. 155 last paragraph - replace with the following:

Standard 7 is not being met in the Gluch allotment. However, because the BLM did not identify any streams that the PFC protocol would apply to and Standards 2 and 3 are not applicable, it was determined that current livestock are not the causal factor for not meeting Standard 7 and the allotment is therefore in conformance with the Guidelines for Livestock Grazing Management.

Pg. 156 Standard 8 Evaluation Finding and Determination - replace with the following:

Standard 8 (Threatened and Endangered Plants and Animals)

Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species.

Standard

- Standard does not apply

10/29/2013

Errata to the Rangeland Health Assessments, Evaluation Reports and Determinations for the Glass Creek (0552), Gluch (0533), Gluch FFR (0466), West Maher (0567), and Warn (0596) Allotments

Page 1

- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

Rationale for Evaluation Finding and Determination

Riparian Habitat

Evaluation of Standard 7 determined that 0.6 miles of streams within this allotment are not meeting water quality standards for Rangeland Health Standards (see Standard 7). Beneficial uses of these streams include water quality parameters that support cold-water aquatic species. Because Standard 7 has identified streams that are not meeting water quality parameters, these riparian conditions are therefore not meeting Standard 8 for wildlife. However, the causal factor was not identified as current livestock grazing and the allotment therefore is in conformance with the Guidelines for Livestock Grazing Management.

Pg. 157 Field Manager’s Determination- replace with the following:

I have determined that Standards 7 and 8 of the applicable Standards for Rangeland Health are **not** meeting in the Gluch allotment, while Standards 1, 2, 3, and 4 are being met. Standards 5 and 6 are not applicable to this allotment. Current livestock grazing management practices are not significant factors in not meeting the Standards.

Gluch FFR Allotment

Pg. 161 Standard 7 Evaluation Findings and Determination - replace with the following:

Standard 7:

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current livestock grazing management practices are significant factors

- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; Current livestock grazing management practices are not significant factors

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).

Pg. 162 last paragraph - replace with the following:

Standard 7 is not being met in pastures 3 and 4 of the Gluch FFR allotment. However, because the BLM did not identify any streams that the PFC protocol would apply to and Standards 2 and 3 are not applicable, it was determined that **current livestock are not the causal factor** for not meeting Standard 7 and the allotment is therefore in conformance with the Guidelines for Livestock Grazing Management.

Pg. 163 last sentence under Riparian Habitat - replace with the following:

Because Standard 7 has identified streams that are not meeting water quality parameters, these riparian conditions are therefore not meeting Standard 8 for wildlife. However, the causal factor was not identified as current livestock grazing and the allotment therefore is in conformance with the Guidelines for Livestock Grazing Management.

Pg. 164 Field Manager's Determination - replace with the following:

I have determined that Standards 1, 4, 6, 7, and 8 of the applicable Standards for Rangeland Health are not being met in the Gluch FFR Allotment, while Standards 2, 3, and 5 are not applicable for this allotment. Current livestock grazing management practices are significant factors in not meeting Standards 1, 6, and 8 whereas current livestock management practices **are not significant factors** for not meeting Standards 4 and 7. Livestock management practices do not conform with the applicable Livestock Grazing Management Guidelines 1, 3, 4, 7, 8, 9, 11, and 12.



Field Manager
Owyhee Field Office

10 | 30 | 13

Date

Determination Errata for the West Maher FFR Allotment

West Maher FFR Allotment

Pg. 71, 2013 Supplement to the *Riparian Habitat* in the Wildlife section- replace with the following:

2013 Supplement to the West Maher FFR Allotment Rangeland Health Standards and Guidelines Assessment

Riparian Habitat

Evaluation of Standards 2 and 3 determined that a reach of Lone Creek within this allotment is functioning-at-risk (FAR). Streams that are FAR are lacking adequate riparian vegetation composition and distribution to provide the structure and function to support a productive environment. Evaluation of Standard 7 also determined that IDEQ water quality parameters and beneficial uses for cold-water aquatic species were also not meeting Rangeland Health Standards.



Field Manager
Owyhee Field Office

10 | 30 | 2013
Date