Rangeland Health Assessments

2013 Supplement to the Wroten Rangeland Health Standards and Guidelines Assessment

Evaluation Reports and Determinations

Final

Rangeland Health Standards and Guidelines Assessment

For

Wroten Allotment (0597)

Owyhee Field Office
Dave Wolf, Field Manager

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

Loretta Chandler, Field Manager 2013

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The Rangeland Health Standards and Guidelines Assessment for the Wroten allotments was completed in 2006 as a portion of the grazing permit renewal process. Until 2013, no land 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 RHA, 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 determination for the Wroten allotment is found at the end of this document.

Standards for Rangeland Health and Guidelines for Livestock Grazing Management

I. Background

In 1997, in accordance with 43 CFR 4180 2(b), the Idaho BLM adopted rangeland health standards and guidelines for livestock grazing management (Appendix A-1), which were developed in coordination with the Resource Advisory Councils. There are eight standards, not all of which apply to any one parcel of land. The standards of 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. If the standards are met, nutrient and hydrologic cycling, and energy flow are adequate to sustain the rangeland.

Indicators are typical physical and biological factors and processes that can be measured or observed. This document examines the indicators for each standard and uses quantitative and qualitative information including inventory data, monitoring data, health assessment information, or other observations to evaluate the current status of the indicator relating to each standard. Condition ratings of indicators relating to each standard and trends in measured indicators are discussed below for all of the standards that are applicable to these allotments.

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.

Conclusions as to whether or not allotments are meeting, or making significant progress toward meeting the Standards and Guidelines will be provided in a separate evaluations and determinations document based on information provided in this document. Additional information will be considered in developing the evaluations and determinations if received in a timely manner.

II. Rangeland Health Assessment

Resource conditions are evaluated according to the Standards for Rangeland Health, as adopted by Idaho BLM in 1997. The following subsections discuss resource conditions, by allotment and pasture, as they relate to each standard.

A. WROTEN ALLOTMENT (0597)

Allotment Background Information

The Wroten Allotment is located approximately 10 miles south of Jordan Valley, Oregon (Map 1). It is located east of Parsnip Peak and northwest of South Mountain and is part of the South Mountain Core Area. Elevations range from 4,500 to 5,700 feet. The area is characterized by rolling terrain dominated by stands of sagebrush-bunchgrass communities intermingled with stands of antelope bitterbrush. Most landform features are rhyolitic in origin. Landforms consist of foothills, ridges, and perennial and ephemeral drainages. Approximately 1,200 acres burned in a 1999 wildfire; there were no post-fire rehabilitation efforts.

The allotment is within the USDA Major Land Resource Area D-25; Owyhee High Plateau (USDA NRCS 2006b). 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 was derived predominantly from welded rhyolitic tuff. The associated ecological sites consist primarily the following: Loamy 12-16”ecological sites with basin big sagebrush, Idaho fescue, and bluebunch wheatgrass plant communities; Loamy 13-16” ecological sites with mountain big sagebrush, Idaho fescue, and bluebunch wheatgrass plant communities; and Shallow Claypan 12-16” ecological sites with low sagebrush, Idaho fescue, and bluebunch wheatgrass communities.

The Wroten Allotment includes public and private lands totaling approximately 2,050 acres (Map 1).

Table 1: Wroten Allotment land status acres*

Pasture	Public	State	Private	Total
1	1,594	0	120	1,714
2	40	0	296	336
Total	1,634	0	416	2,050

**These numbers represent best available estimates*

Historically both cattle and sheep grazed the Wroten allotment but the area was divided into separate cattle and sheep allotments around 1937. Large bands of sheep grazed and trailed through the area each spring and fall. Since 1960, the area has been grazed only by cattle.

The Wroten Allotment is part of the historic South Mountain administrative unit. The South Mountain Unit was inventoried in 1963, and adjudicated in 1965. No reductions were imposed resulting in an allocation of 200 AUMs of permitted use, and was licensed at 100% federal range. A wildfire in 1999 burned the majority of the allotment. The native plant communities appear to have re-established.

Season of Use

From 1945 through 1978 the lands within the Wroten Allotment were grazed typically during the spring grazing period (4/1-5/31). Beginning in 1971, Marion Wroten began applying for Temporary Non-renewable (TNR) use during December in addition to the permitted spring use. BLM granted the application, but continued to reject applications for additional spring use until 1978. Wroten Land and Cattle Co. took over the permit from Marion Wroten in 1974.

On July 16, 1981, BLM issued a Proposed Decision that increased the permitted use to 355 AUMs effective March 1, 1982. Pasture 2, which included only 40 acres of public land, was to be authorized for (2% of the active preference) 5 AUMs. Pasture 1 was to be authorized for 350 AUMs (98% of the active preference). However, utilization limits of 50% on key perennial grasses were also imposed, and were to be the actual basis for any adjustments in permitted use. Livestock utilization of bitterbrush was not to exceed 30%. The Proposed Decision also contemplated additional permanent increases of permitted use in Pasture 1 as a result of improved management practices. That Decision was protested.

BLM issued a Final Decision on May 4, 1982, that increased the permitted use to 400 AUMs, effective April 1, 1982. The same utilization limits for perennial grasses and bitterbrush were retained as management objectives, and the same percentages of active preference were authorized in the two respective pastures of Wroten Allotment.

An Allotment Management Plan (AMP) was adopted for the Wroten Allotment on September 26, 1984. The amount of permitted use in the AMP was consistent with the 1992 Final Decision. The AMP granted after-the fact billing, however, the after-the fact billing privilege was cancelled in April 1988.

The 1982 Final Decision and the AMP specified an early spring (4/1-5/10), early spring (4/1 to 50% use) and summer (after 7/15) sequence of use in a 3 year deferred grazing system for Pasture 1. The second spring treatment was to end when utilization reached 50%, and the summer treatment was to begin after seed ripe. The grazing system was intended to eliminate same-season use every year and provide for reproduction of key species. Pasture 2 was still to be grazed at the permittee's discretion.

As a result, Mr. Wroten uses the allotment for an extended period during the summer, while deferring or at least avoiding critical growth period use on the uplands. Riparian areas along Cattle Creek were grazed during some part of late June, July, August, and early September each year. No other water sources are available.

The 1984 AMP suggested turnout at the permittee's discretion after April 15. Although the delay in spring turnout to May 1 was the major issue of protest of BLM's 1981 Proposed Decision, spring turnout has not occurred prior to April 1 since the AMP took effect.

Actual and Authorized use

Current permitted use in the allotment is 400 AUMs with an April 1 – September 30 season of use. Wroten Land and Cattle Co. is the lone permittee in this allotment. In addition to cattle use, horse use has also been permitted in the allotment during the 1990s and more recently, including 2004

Table 2: Total permitted use, active permitted use, suspended use, in the Wroten Allotment (1982 - present).

Allotment	Permittee	Active Use	Suspended Use	Total Use	% PL
Wroten (0597)	Wroten Land & Cattle	400	0	400	100

In addition to TNR use in the 1970's TNR was authorized in the Wroten Allotment occasionally from 1983 through 1993.

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Land Status

Land status has been updated to reflect what is happening on the allotment. Per conversations with the permittee and aerial photos, the Wroten allotment now consists of one pasture.

Table LVST-1: Land status

Pasture	Public	State	Private	Total
1	1710	0	135	1,845

Actual Use

Actual use ranged from 315 AUMs to 874 AUMs from 1997 to 2012, with average actual use of 458 AUMs (Table LVST-2).

Table LVST-2: Actual use Wroten allotment 1997-2012

Year	Date	AUMs
2012	4/15-5/15;6/15-10/01	402
2011	4/15-6/1; 6/10-9/20	442
2010	4/15-5/18; 6/28-9/28	416
2009	4/19-5/15; 5/26-9/9	874

2008	7/16-8/15; 9/1-11/29	398
2007	4/17-5/16; 6/10-9/19	416
2006	4/1-11/29	399
2000	Rest	Rest
1997	4/20-4/28	315

Utilization
Utilization data collected from 1979 to 1995 showed generally light to heavy use. Current utilization data collected in 2012 was light use (Table LVST-3).

Table LVST-3: Utilization on the Wroten allotment 1976 to 2012

Date	PSSP	FEID	SIHY	LECI
7/14/1976	13	15	53	90
9/11/1979	32	60	39	
10/23/1980	32	37	27	
7/8/1982	14	16	16	
8/26/1986	33			
10/4/1989	40	60		
10/31/1995		41		
12/7/2012	38			

Rangeland Health

In 2003, four rangeland health evaluations were completed in the Wroten allotment (Table 2, Appendix C). A long-term vegetation monitoring study (Trend) site was established in 1987 and re-read in 2003. Utilization data were collected from 1976 to 1989.

Standard 1: Watersheds

Rangeland Health Evaluation

During 2003, four Rangeland Health Evaluations were completed for this allotment. The following Table (A-1) provides a summary of the indicator ratings. Individual indicator rating by site are included in Appendix C. Rating categories represent the degree of departure from what is expected for the ecological site based on ecological site descriptions or nearby reference areas for that ecological site. Map 1 shows the locations where the rangeland health worksheets were completed in the allotment.

Table 1-1: Watershed Rangeland Health Evaluation Worksheet Summary

Standard 1-Watersheds	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme

Pasture 1[*]	33	12	2	1	0

[1*] Summarizes: 3 Shallow-Claypan 12-16" and 1 Loamy 13-16" ecological sites

Three rangeland health evaluations were completed in the Shallow Claypan 12-16" (RH1A-northern portion of allotment, RH1B-western portion of allotment which burned, and RH1D-southeastern portion of allotment) ecological site. One rangeland health evaluation was completed in the Loamy 13-16" (RH1C-eastern portion of allotment) ecological site, which had also burned in 1999.

Based on four rangeland health evaluations, the amount and distribution of ground cover, including litter, are overall adequate for site stability. The soil surface is stabilized by gravel, rock, vegetation, and litter at all evaluation locations. The amount and distribution of bare ground nearly reflects site potential, although there is slightly more bare ground than expected at site RH1D.

Evidence of accelerated erosion in the form of rills and/or gullies, erosional pedestals, flow patterns, and compaction layers below the soil surface is minimal for soil type and landform at most (3 out of 4) of the evaluation locations. There is evidence of accelerated erosion at site RH1D based on frequent and pronounced pedestals ('moderate to extreme' departure from reference condition) and common water flow patterns ('moderate' departure from reference condition) associated with cattle trailing. The grasses that are pedestalled tend to have their roots exposed, and some mortality is evident. This evaluation location is located on gentle slopes near Cattle Creek. RH1C, also on gentle slopes near Cattle Creek, shows more localized trailing, and substantial protection from annual grass and forb litter following the wildfire. The other two sites are located on steep slopes or ridgetops remote from water, and resemble reference conditions. The 1999 wildfire had little effect on site stability or hydrologic function at RH1B because it was nearly intact prior to the fire.

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Ground Cover Trend

Ground cover trend data were collected at the nested plot frequency transect (07S06W02) in 2003, 2009, and 2012 (Figure SOIL-1). Over the long term (2003 to 2012) and short term (2009 to 2012), rock, gravel, biological crust, and persistent litter (hereafter referred to as persistent cover), and basal cover have remained static. Bare ground shows a decrease over both the long and short term, with the latter being significant (Student's t-test; p-value <0.1). Basal vegetation and total vegetation are significantly increasing long- and short-term. Non-persistent litter shows a short-term decrease but is static over the long term.

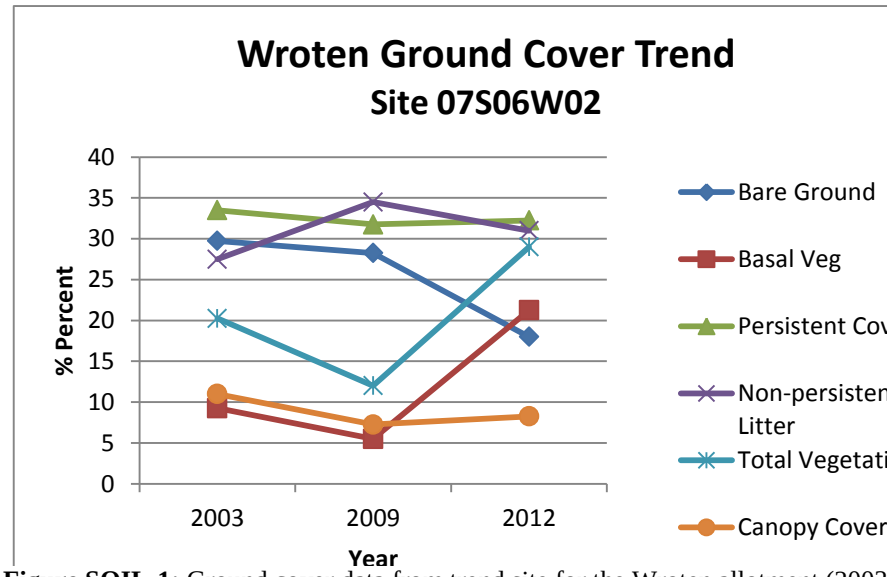

Figure SOIL-1: Ground cover data from trend site for the Wroten allotment (2003, 2009, 2012)

Ground cover data show that the site has been maintained and is reflecting an upward trend. Vegetative components have generally been improving for ground cover and positively affect the site by reducing bare ground to averages below the expected levels (40 to 50 percent) for Shallow Claypan 12-16" ecosites.

Shrub frequency and density data indicate that a decrease in low sagebrush took place until 2009 but has since remained static, which correlates to canopy cover trend. Grass frequency trend data (see Standard 4) indicate that the presence of invasive annuals is low, while shallow-rooted bunchgrasses are increasing at a higher rate than deep-rooted bunchgrasses, although they are well represented. Overall, interpretations of trend data indicate that ground cover conditions are improving, along with biotic conditions that maintain plant diversity.

2012 Sage-grouse Assessments

Sage-grouse assessments in 2012 have found favorable shallow claypan site conditions which is consistent with the available data for Standard 1; Standard 4 noted a shift in the plant community composition to the dominance of Sandberg bluegrass and an increase of annual invasive species, although the composition of bluebunch wheatgrass and Idaho fescue were near reference site conditions.

However, the loamy site assessments showed a significant absence of large perennial grasses and an increase in invasive annuals. While watershed health is still being met, this scenario signals that a transition in the plant community from reference site conditions is occurring and places the allotment at risk.

Standard 2: Riparian Areas and Wetlands

There are approximately 3.4 stream miles on BLM administered lands in the Wroten Allotment (Map 1) all within pasture 1. Riparian inventory data collected in 2000 by Riparian Resources

and other BLM monitoring data were used to assess functioning condition. Riparian areas on the Wroten allotment are discussed below, by stream.

Cattle Creek

Approximately 2.2 miles of Cattle Creek are located in the eastern portion of pasture 1. The lower segment (CTL-002) is an intermittent stream, with small portions supporting perennial flow; approximately 30% of the segment does not support riparian vegetation due to lack of water. Of areas supporting riparian vegetation, 70% is vegetated with a Baltic rush (*Juncus balticus*) Community Type (CT), and 30% with a Yellow willow (*Salix lutea*) CT. This segment was rated as Functioning at Risk (FAR) with no apparent trend in 2000 (Table 2-1). Understory vegetation in areas vegetated with Yellow willow CTs is dominated by upland species (soft brome and cheatgrass), with sword-leaf rush (*Juncus ensefolius*) also present. Riparian species do not exhibit high vigor, and cover of hydric vegetation is not adequate to protect banks and dissipate energy along the entire segment. Streambanks and stream channels are stabilized by extensive deposits of rock and cobble on about 20-25% of segment CTL-002 (Figure 1).

Figure 1. View of cobble-dominated F and B channels on the lower 0.2 miles of the CTL-002 (Cattle Creek) segment), 10/4/2000. .

The upper segment of Cattle Creek (CTL-003) typically has perennial surface flows. The upper portion of this segment is predominantly vegetated with a Yellow willow CT, while the lower portion of the segment is dominated by herbaceous riparian species (Baltic rush CT), with scattered areas vegetated with rose and hawthorne (Figure 2). This segment was rated as FAR with no apparent trend in 2000 (Table 2-1). The herbaceous riparian community on the lower

portion of CTL-003 is near Proper Functioning Condition (PFC), while the woody riparian community along the upper portion of CTL-003 is in poor condition. The segment supports a diverse composition of riparian vegetation with root masses capable of stabilizing streambanks, and the riparian area is widening. However, cover of hydric vegetation is not adequate to protect banks and dissipate energy along the entire segment. Willow recruitment is inadequate (young-aged plants comprised just 0.1-1% of the willow cover), and vigor is also low; mature willows are clubbed or umbrella-shaped.

Figure 2. General view of CTL-003 (Cattle Creek), 10/4/2000

Cattle Creek Tributary

Cattle Creek Tributary (CTT-001) has perennial surface water in approximately 60% of the segment and supports riparian vegetation throughout (Figure 3). Approximately 20% of the reach is seep-like, with standing or very slowly flowing water. The dominant riparian vegetation community types are a Baltic rush CT and a *Salix lasiandra* (Whiplash willow) CT. This segment was rated as FAR with no apparent trend in 2000. Portions of this segment have very narrow riparian zones dominated by Baltic rush, but overall the composition and age-structure of hydric vegetation on this reach is diverse. Vigor of willows is low, as the majority of willows are mature or decadent with a clubbed or umbrella-shaped growth form. Cover of stabilizing hydric species is not adequate to protect streambanks (Table 2-1), leaving the system vulnerable to further degradation. A wildfire in 1999 reduced cover from woody species along this segment.

Figure 3. CTT-001 (Cattle Creek Tributary) general view, 10/04/2000.

Minear Creek

Minear Creek has perennial surface water in approximately 10% of its length on this allotment, but supports riparian vegetation throughout (Figure 4). Riparian areas are dominated by Baltic rush and yellow willow CTs. However, disturbance induced CTs (dominated by Kentucky bluegrass, bulbous bluegrass, and cheatgrass) comprise 30% of the riparian vegetation on Minear Creek. A portion of the woody riparian vegetation along this segment burned in a 1999 wildfire (Figure 4). This reach was rated as FAR (Table 2-1). Stream channel and floodplain indicators (headcuts present, with a portion of the channel assessed as vertically unstable; Table 3-2) indicate an apparent trend of static to downward. The segment supports a diverse composition of riparian vegetation, but vigor and age-class structure are inadequate. No willow recruitment was recorded in 2000, and mature and decadent willows had clubbed and umbrella-shaped growth forms. Cover of hydric vegetation is not adequate to protect streambanks during high flow events, leaving the riparian area vulnerable to further degradation.

Figure 4. MIN-001 (Minear Creek) general view, 9/29/00 – the dark area in the foreground is where woody shrubs burned in a 1999 wildfire.

Table 2-1: Riparian Indicators and Functioning Condition Rating by Stream Segment

Riparian/Wetland Indicators:	BLM Stream Segment			
	CTL-002	CTL-003	CTT-001	MIN-001
Diverse age class/structure of hydric vegetation (6)	Y/N	Y/N	Y	Y/N
Diverse composition of hydric vegetation (7)	Y/N	Y	Y/N	Y
Vegetation reflects maintenance of soil moisture (8)	N	Y	Y	Y/N
Plant community comprised of bank stabilizing species (9)	Y/N	Y	Y	Y/N
Hydric vegetation exhibits high vigor (10)	N	Y/N	Y/N	Y/N
Adequate hydric vegetation cover to protect banks and dissipate energy (11)	Y/N	Y/N	Y/N	Y/N
Adequate large woody material (12)	N	Y/N	Y	Y
Point bars revegetating with hydric species (14)	N	Y/N	Y/N	Y/N
Noxious weeds are not increasing	Y	Y	Y	Y
Overall functioning condition*	FAR	FAR	FAR	FAR
Pasture	1	1	1	1
Stream miles in allotment	1.2	1.0	0.5	0.7

(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)

Riparian Utilization and Bank Alteration Data

Herbaceous stubble height was measured on Cattle Creek after the grazing period in 2000 and 2003. On August 3, 2000, median stubble height along Cattle Creek was 6.5 inches, and bank trampling was limited to some saturated banks. Streambank erosion was noted in drier areas. Median stubble height along Cattle Creek Tributary was 4.5 inches during this same time period. On November 6, 2003, median stubble height was measured at 5 inches at one site on the Cattle Creek Tributary, and estimated to be 1 inch at a second site, where severe hummocking and trampling was observed. On October 4, 2000, median stubble height on Cattle Creek Tributary was estimated at 4 inches (by Riparian Resources), with 20% of streambanks with heavy or significant pugging. On September 29, 2000, median stubble height on Minear Creek was estimated by Riparian Resources to be 3 inches, and 20% of the streambanks had pugging.

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In 2011, two MMIM sites were established on the reaches of Cattle and Minear Creeks that had been previously assessed. For the site established on the upper reach of Cattle Creek, the mean stubble height was 3.4 inches, there were not sufficient woody plants to measure, and the stream bank alteration was 38 percent. On Minear Creek, the mean stubble height was 4.4 inches, woody use was 20 percent, and the stream bank alteration was 44 percent.

Table RIPN-1 below represents a comprehensive summary of all the riparian information currently available in the BLM riparian database (also see Map RNGE-1)

Table RIPN-1: Wroten allotment riparian information summary – pasture 1

Stream Name	Miles Assessed	Assessment Issues/ Impacts Identified	Total Miles
Cattle Creek	1.0 (FARU- 2000/ FARU- 2003) 0.9 (FAR- 2000)	2000- inadequate vegetation and woody material present to protect stream banks/ point bars were not revegetating/ plants had low vigor 2003- bank alteration/ bare ground/ soughing banks/ heavy browse/ headcut present/ poor regeneration and recruitment/ incised channel	1.9
Cattle Creek Tributary	0.5 (FARS- 2000)	lack of hydric species composition to protect stream banks/ plants had low vigor/ point bars were not revegetating	0.5
Minear Creek	1.1 (FARU- 2000)	lack of hydric species composition to protect stream banks/ plants had low vigor/ point bars were not revegetating	1.1

MMIM Metrics

Stream Name	Assess Year	Mean Stubble Height (inches)	Woody Use (%)	Streambank Alteration (%)	Stable Bank (%)	Covered Bank (%)
Cattle Creek	2011	3.4	NA	38	70	100
Minear Creek	2011	4.4	20.4	44	79	98

Standard 3: Stream Channel/Floodplain

Cattle Creek

The Cattle Creek stream channel is comprised of mostly Rosgen F4b channel types in the incised stretches, and B4 channel types in the drier, rockier portions of Cattle Creek. Rosgen B channel types are stable, moderately entrenched streams with a moderate width/depth ratio. Rosgen F channel types are deeply entrenched, may have depositional features to aid in new floodplain formation inside the entrenchment, and are susceptible to shifts in both lateral and vertical stability caused by disturbance (Rosgen 1996). Stream bank material is dominated by gravel and smaller substrate. Normally, vegetation would play an important role in stabilizing this stream.

Floodplain inundation and water storage capabilities of Cattle Creek have been reduced due to the incised stream channel. The lower segment (CTL-002) has evidence of active lateral movement and is laterally unstable. Approximately 35-65% of banks have vegetation capable of stabilizing the stream; the drier reaches that are dominated by Baltic rush are stable (Table 3-1). About 20-25% of streambanks and stream channels in segment CTL-002 are stabilized by extensive deposits of rock and cobble (B3, F3, F2, B1, and F1b channels; Figure 1). Portions of this segment have downcut historically, but the stream channel is vertically stable at its present elevation. Sinuosity, width-depth ratio and gradient are out of balance with the landscape setting; the stream appears to have abandoned its previous channel and become straightened and overwidened in the lower 0.2 miles of the segment. The upper segment (CTL-003) has numerous head-cuts and is vertically unstable. Stream channel and floodplain characteristics are not adequate to dissipate periodic high flows along the length of the stream, and width-depth ratios are out of balance with the landscape setting. Both reaches were rated as FAR in 2000 (Table 3-2).

Cattle Creek Tributary

This creek is comprised of Rosgen F and B channel types. Stream bank material is dominated by fine gravel and silt, which is susceptible to erosion. Pugging was noted on approximately 20% of the streambanks along this reach. Bank erosion is common as are slumped banks. Due to historic incisement, floodplain inundation and water storage capabilities are reduced and the width/depth ratio is out of balance with the landscape setting. Approximately 40-60% of streambanks are stable (Table 3-1). Approximately 10% of the reach is vertically unstable; four headcuts were noted along the reach. This reach was rated as FAR in 2000 (Table 3-2).

Minear Creek

This stream is predominantly composed of Rosgen B channel types. Stream bank materials are predominantly silts. Approximately 50-70% of the stream banks are stable (Table 3-1). Three head-cuts were noted along this reach, and a portion of the stream was assessed as vertically unstable (Table 3-2). Minimal lateral movement was noted, and was associated with natural sinuosity. Access to the floodplain is somewhat limited due to incisement and current stream channel morphology. This reach was rated as FAR in 2000 (Table 3-2).

Table 3-1. Streambank stability

Stream Reach	Bank Stability Class			
	Uncovered Stable[1] (%)	Covered Stable[2] (%)	Uncovered Unstable[3] (%)	Covered Unstable[4] (%)
CTL-002	25-35	25-35	15-25	15-25

CTL-003	5-15	45-55	15-25	15-25
CTT-001	5-15	35-45	15-25	25-35
MIN-001	15-25	35-45	15-25	15-25

[1]**Uncovered and Stable (Vulnerable)** Less than 50% of the streambank surfaces are covered by vegetation in vigorous condition, or materials that do not allow bank erosion. Banks do not show indications breakdown, erosion, tension cracking, shearing or slumping.
[2]**Covered and Stable (Non-Erosional)** Over 50% of the streambank surfaces are covered by vegetation in vigorous condition, or materials that prevent bank erosion. Streambanks do not show indications breakdown, erosion, tension cracking, shearing or slumping.
[3]**Uncovered and Unstable (Erosional)** Less than 50% of the streambank surfaces are covered by vegetation in vigorous condition, or materials that do not allow bank erosion. Streambanks show indications of breakdown, erosion, tension cracking, shearing or slumping.
[4]**Covered and Unstable (Vulnerable)** Over 50% of the streambank surfaces are covered by vegetation in vigorous condition, or materials that prevent bank erosion. Streambanks are unstable, and show indications of breakdown, erosion, tension cracking, shearing or slumping.

Table 3-2: Stream Channel/Floodplain Indicators and Rating by Segment

Riparian/Wetland Indicators:	**BLM Stream Segment**			
	CTL-002	CTL-003	CTT-001	MIN-001
Floodplain inundated frequently (1)	Y/N	Y	Y/N	Y/N
Beaver dams are active and stable (2)	N	N	N	N
Sinuosity, w/d ratio, gradient in balance with landscape setting (3)	Y/N	Y/N	N	Y/N
Riparian area is widening or has achieved potential extent (4)	Y/N	Y	Y/N	Y/N
Upland watershed not contributing to riparian degradation (5)	Y/N	Y/N	Y/N	Y/N
Floodplain and channel characteristics dissipate energy (13)	Y/N	Y/N	Y/N	Y/N
Lateral stream movement associated with natural sinuosity (15)	N	Y	Y	Y
System is vertically stable (16)	Y	N	N	Y/N
No excessive erosion or deposition (17)	Y/N	Y	N	Y/N
Overall functioning condition*	FAR	FAR	FAR	FAR
Stream miles	1.2	1.0	0.5	0.7
Riparian acres	0.9	3.8	1.9	4.0

* 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 under Standard 2 above.

Standard 4: Native Plant Communities

Rangeland Health Evaluation

During 2003, four rangeland health evaluation worksheets were completed for this allotment. The field worksheets and site photographs indicate that the indicators relating to Standard 4 range from 'none to slight' to 'moderate to extreme' departure, with many indicators in the 'slight' range when compared to reference areas and/or ecological site guides for similar ecological types.

Table 4-1: Native Plant Community 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*	22	11	2	1	0

*Summarizes: 3 Shallow-Claypan 12-16" and 1 Loamy 13-16" ecological sites

Three rangeland health evaluations were conducted in the Shallow Claypan 12-16" (RH1A-U05971-090403-3A, RH1B-U05971-110603-1A, and RH1D-U05971-092203-2A) ecological site. One rangeland health evaluations was completed in the Loamy 13-16" (RH1C-U05971-090403-2A) ecological site. Refer to Map 1 for the location of the rangeland health evaluation worksheets, Appendix D for detailed indicator information, and Table 3 for a summary of the general condition at the evaluation sites.

Based on four rangeland health evaluations, the native plant communities resemble reference condition at the Shallow Claypan sites (RH1A, RH1B, RH1D) and do not resemble reference condition at the Loamy 13-16" site (RH1C). The Shallow Claypan sites nearly reflect potential in terms of plant composition and distribution. Decreaser bunchgrasses (bluebunch wheatgrass and Idaho fescue) are the dominant species onsite, present under the protective canopy cover of shrubs and in the shrub interspaces. The native plant communities, as represented by these evaluations, nearly match site potential.

At site RH1C, decreaser bunchgrasses are below potential resulting in a substantial shift in the expected plant community. The decrease of the larger, bunchgrasses has allowed the smaller, bunch grasses such as *Poa* species and squirreltail to expand into the vacant niches. *Poa* species and squirreltail are the dominant grass species present at site RH1C.

Plant vigor and seedstalk production at the Shallow Claypan sites appear adequate to enable reproduction and recruitment of plants in response to favorable climatic events. Plant vigor and seedstalk production are below expectations at the Loamy site (RH1C). At this site, there are dead and decadent plants found in the water flow paths. Crown die-out on the grasses is also noted. The indicators, *plant mortality and decadence* and *reproductive capability of perennial plants*, rated in the 'slight to moderate' category of departure from reference condition. Overall, the steeper slopes farther away from Cattle Creek possess more vigorous and reproductively capable plants. Diverse age classes of all species are present at all evaluation locations promoting proper ecological functioning in terms of nutrient cycling.

Invasive species include cheatgrass, bulbous bluegrass, and medusahead rye. These species are more common in the burned portion of the allotment, Ecological Site Loamy 13-16. Overall,

invasive species are a minor component in the plant communities in this allotment.

The Shallow Claypan sites nearly reflect site potential in that the soils are stabilized by litter, vegetative cover, and stones. In the Loamy site, species composition has shifted from the expected plant community resulting in changes in nutrient and energy cycles. The amount of bare ground is slightly higher than expected due to trailing; however, abundant litter and vegetative cover is present to aid in soil stability. Litter and standing dead plant material are present for site protection, although litter in some of the interspaces and flow paths is slightly below potential. Overall, the soils in this allotment are stable with the exception of small, isolated areas.

The main change from the potential plant community in this allotment is the reduction of perennial grasses in isolated areas where there is an increase in invasive species and increaser grasses. The Shallow Claypan sites are near their biotic potential; however, the Loamy site deviates slightly to moderately from site potential in terms of the expected plant community and related impacts to soil site stability.

Long-term Vegetation Study (Trend)
Map 1 shows the location of the trend site, Appendix E provides graphs of the frequency data, and Appendix C is a summary table of upland data collected in the allotment.

A nested plot frequency transect was established at T07S, R 06W Sec 02, in 1987 and was revisited in 2003. Sandberg bluegrass frequency remained somewhat stable with 93% frequency in 1987 and 82% frequency in 2003. Idaho fescue frequency was 73% in 1987 and 72% in 2003. Bluebunch wheatgrass frequency decreased significantly ($p = 0.02$) from 54% in 1987 to 36% in 2003. The frequency of squirreltail increased significantly ($p = 0.004$) from 3% in 1987 to 15% in 2003. Low sagebrush frequency was 38% in 1987 and 28% in 2003. Landscape and close up photographs show improved vigor and size of perennial grasses in 2003. Shrub occurrence appears similar in both years based on these photographs.

Shrub/Tree Density
Sagebrush density fluctuated only slightly with 5,850 mean plants per acre in 1987 and 5,000 mean plants per acre in 2003. These findings support NPFT data. Western juniper is noted in the landscape photographs but occurrence is very low.

Utilization
Refer to Appendix F for the graph of average utilization values. Utilization was measured on bluebunch wheatgrass, Idaho fescue, and bottlebrush squirreltail in 1976, 1979, 1980, 1981, 1982, 1986, and 1989. During this time, utilization averaged 32% on perennial grasses. Utilization data have been collected throughout Pasture 1 (Appendix F and Map 1). Utilization of bluebunch wheatgrass and Idaho fescue were typically slight to light, and were within the utilization limit under the AMP. Utilization of bitterbrush was slight, and were within the utilization limit under the AMP.

Partial use pattern maps were prepared in1995 and 1997 for pasture 1. Utilization in the mapped areas was light (21-39%) in 1995 and 1997. Pasture 1 is mountainous, which limits livestock use

of the uplands. Utilization along Cattle Creek, including the headwater spring, was heavy (60-80%) in 1995 and 1997.

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Background Information

The Horse Creek fire started on October 5, 1999, and burned 1,073 acres of the 1,845-acre Wroten allotment (58 percent). The allotment was rested from grazing for two full growing seasons. No rehabilitation seedings were administered. Some annual invasive plants are scattered throughout the allotment. Short-term trend compares the two most recent years; long-term trend compares the first against the last year.

Pasture 1

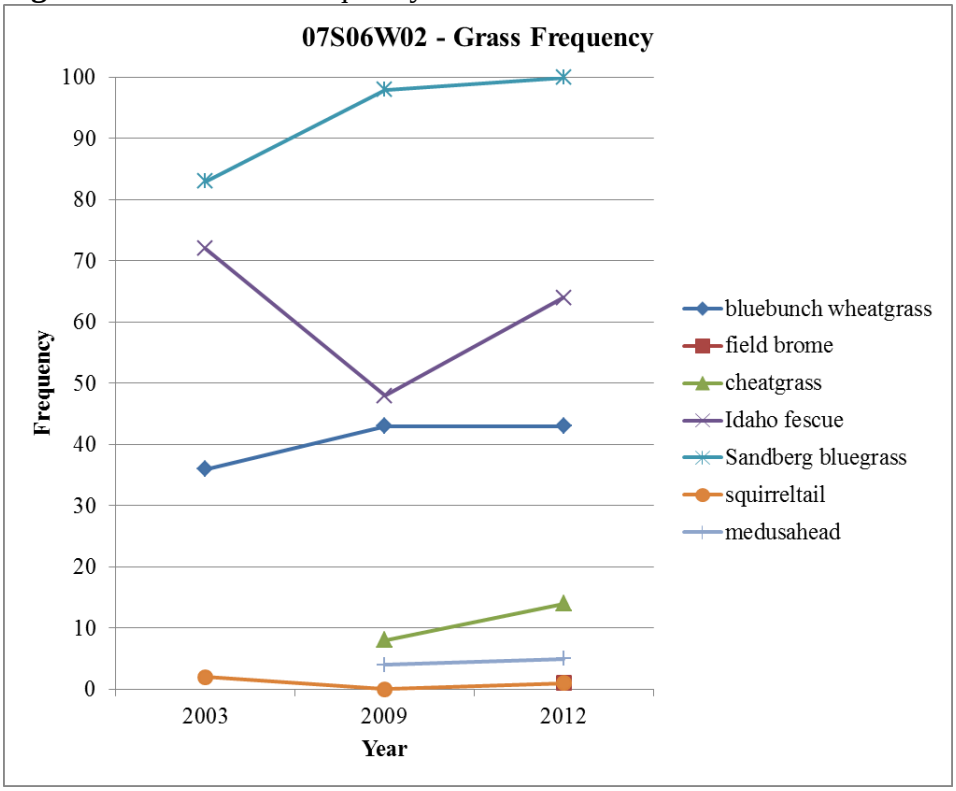
Grass frequency and shrub density trend data

Grass frequency trend data were collected at the nested plot frequency transect (07S06W02) in 2003, 2009, and 2012 (Table VEG-1 and Figure VEG-1). Over the long term bluebunch wheatgrass has increased and static in the short term. Annual invasives; medusahead, cheatgrass and field brome have increased slightly. Idaho fescue has significantly decreased long term and significantly increased in short term. Shrub density and frequency of low sagebrush has decreased.

Table VEG-1: Grass frequency data from trend site for the Wroten allotment

Species		**Percentage**		
		2003	**2009**	**2012**
AGSP	bluebunch wheatgrass	36	43	43
BRJA	field brome			1
BRTE	cheatgrass		8	14
FEID	Idaho fescue	72	48	64
POSE	Sandberg bluegrass	83	98	100
SIHY	squirreltail	2	0	1
TACA8	medusahead		4	5

Figure VEG-1: Grass frequency data from trend site for the Wroten allotment



Overall interpretations of trend data indicate that grass frequency data are maintained for continued productivity and diversity of native plant species. Annual invasive plants have been found at the sight. The diversity of the native species is maintained and plant vigor is adequate to enable reproduction and recruitment of plants when favorable climatic events occur.

Utilization

Recent utilization data were collected on bluebunch wheatgrass in 2012 and indicate 38 percent utilization, or 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

Approximately 3.2 miles of Cattle Creek and Minear Creek are on BLM administered lands in the Wroten Allotment. Both Cattle Creek and Minear Creek are tributaries 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 III 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 temperatures in Cattle Creek. Monitoring indicated Cattle Creek supported the cold-water biota beneficial use (Table 7-1). Water temperatures were monitored using automatic data-recording thermographs. The monitoring site was chosen at this location to gauge the effects of land use practices within this allotment on this stream.

Table 7-1: 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
Cattle Creek (05971)	4742694N/ 500807E	20.8	17.4	104	7/3/2003-10/14/2003	Fully Supported

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

Stream Sediment

Riparian inventories indicated that sediment levels may have been above that for full support of the cold-water beneficial use for portions of Cattle Creek (segment CTL-002) and Minear Creek (segment MIN-001). Excessive erosion or sediment deposition (Table 3-1) was noted by Riparian Resources on these stream segments.

Bacteria Monitoring

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

The 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. They 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 Wroten allotment contain approximately 3.0 miles of stream that are not supporting the watershed's beneficial uses. The allotment contains a portion of AU# ID17050108SW002_02 with associated beneficial uses and pollutants (Table RIPN-2). The AU 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: 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	[1]CWAL [2]SS [3]SCR	combined biota/ habitat bioassessment E.coli	No

[1]CWAL = cold-water aquatic life
[2]SS = salmonid spawning
[3]SCR = secondary contact recreation

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

A summary of Special Status Animal Species is located in Appendix G.

Special Status Plants

No federally listed plant species are known to occur in the South Dougal 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 populations of BLM Special Status plant species are known to occur within this allotment. Site specific inventories are conducted prior to construction of range projects.

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Botany
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 this allotment. Records show no reported special status plants in this allotment for this reason 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 (USDI USFWS, 2010). EOs are derived through completion and review of an Idaho rare plant observation report. Other sources that were used to assess and evaluate the composition and condition of SSP habitats within the Wroten 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
The habitats are mostly low sagebrush on the hills and ridges with big sagebrush in the bottoms. A large portion of the allotment burned in 1999 and the shrub community is still recovering. Cattle Creek provides shrub riparian habitat in its upper end and a more open wet meadow habitat in its lower end.

Sage-grouse
One habitat evaluation was completed which showed unsuitable breeding habitat due to lack of sagebrush after the fire. Perennial bunchgrasses are generally tall and vigorous; forbs are present but not abundant. Cattle Creek in the upper end potentially provides late summer brood-rearing habitat, however actual sage grouse observation have not been noted.

Table 8-2: Sage Grouse Habitat Evaluations, Wroten Allotment, 2003.

Pasture	Location	Rating*	Vegetation	Season	Rationale for Rating; Other comments
1	7S 6W 12 NWNE	U	Grass	Breeding	Sagebrush was burned off; forbs sparse but perennial grasses tall and vigorous.

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

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 Wroten allotment (100 percent) lies within PPH (Map WDLF-1). No active leks are known to occur within this allotment. Leks are recorded within adjacent allotments. This allotment provides seasonal breeding, summer upland, riparian, and winter habitat for sage-grouse.

Table WDLF-1: Acres[1] and portions of preliminary priority and general priority habitat within the Wroten allotment (Map WDLF-1)

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%)

[1]PPH/PGH habitat acreage totals include public lands, state lands, and private property.
[2]PPH sagebrush can also include small amounts of perennial grasslands, conifer encroachment, and non-habitat.

Three sage-grouse summer upland habitat assessments were conducted in this allotment on August 9 and August 13, 2012. One assessment was collected on a Shallow claypan 12-16" low sagebrush / Idaho fescue ecological site, the second was located on Loamy 12-16" Wyoming big sagebrush / bluebunch wheatgrass site, and the third was conducted on Loamy 13-16" mountain sagebrush / bluebunch wheatgrass – Idaho fescue site. This allotment is managed as a native plant community.

<u>Shallow claypan 12-16" Low sagebrush / Idaho fescue</u>

Breeding Habitat Assessment
This information was collected as part of a summer upland habitat assessment conducted on August 9, 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, although the forb information is not used because of the time year the data was collected.

The sagebrush overstory is characterized by a marginal canopy cover (10 percent) and suitable

height (51 cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by a suitable canopy cover of perennial grasses (44 percent) (Table WDLF-2). This site was burned by wildfire in 1999 and has reduced shrub cover with an abundance of perennial grasses. Overall, because this site appears to be still recovering from the effects of past wildfire that removed the overstory sagebrush component, the understory is vigorous, and with the limited number of shrubs in the area, is at this time providing limited (marginal) breeding habitat conditions for sage-grouse.

Summer Upland Habitat Assessment
The sagebrush overstory is characterized by a suitable canopy cover (10 percent) and suitable height (51.0 cm). The understory is characterized by a combined unsuitable canopy cover of perennial grasses and forbs (44 cm) (Table WDLF-2). The number of preferred forb species recorded (7) is suitable but the canopy cover is unsuitable along the transect line. Overall, the site is recovering from the 1999 wildfire, is supporting a vigorous understory of perennial grasses and a recovering but suitable sagebrush overstory, and is providing adequate (suitable) summer upland habitat conditions for late brood-rearing sage-grouse.

Winter Habitat Assessment
This information was collected as part of a summer upland habitat assessment conducted on August 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 sagebrush overstory is characterized by a marginal canopy cover (10 percent) and suitable height (51 cm). Overall, due to the reduced canopy cover of sagebrush, this site is providing marginal winter cover and forage conditions for sage-grouse. Conditions can be anticipated to improve in time (Table WDLF-2).

Table WDLF-2: Sage-grouse habitat indicators and pasture ratings (Refer to Appendix B for full habitat assessment review and habitat indicator value ranges)

Habitat Indicator	**Data**	**[1]Breeding**	**Upland Summer**	**[1]Winter**
Sagebrush Canopy Cover (%)	10	marginal	suitable	marginal
Sagebrush Height (cm)	51	suitable	suitable	suitable
Sagebrush Form	mixed	marginal		
[2]Perennial Grass Canopy Cover (%)	44	suitable		
Combined Grass/Forb Canopy Cover (%)	44		suitable	
Preferred Forb Availability (#)	7		suitable	
Overall Pasture Evaluation Rating		**marginal**	**suitable**	**marginal**

[1]Breeding and winter habitat ratings extrapolated from upland habitat assessment information collected on 8/9/13, 2012.
[2]Perennial grass canopy cover does not include Poa species.

Wyoming sagebrush / bluebunch wheat grass – Idaho fescue

Breeding Habitat Assessment
This information was collected as part of a summer upland habitat assessment conducted on August 9, 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, although the forb information is not used because of the time year the data was collected.

The sagebrush overstory is characterized by a marginal canopy cover (30 percent) and marginal height (130.5 cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by an unsuitable canopy cover of perennial grasses (2 percent) (Table WDLF-3). Overall, unsuitable understory story conditions for nesting and hiding sage-grouse are occurring due to the absence of perennial grasses required for adequate nesting and hiding cover.

Summer Upland Habitat Assessment
The sagebrush overstory is characterized by a marginal canopy cover (30 percent) and suitable height (130.5 cm). The understory is characterized by a combined unsuitable canopy cover of perennial grasses and forbs (4 percent) (Table WDLF-3). The number of preferred forbs recorded (5) is marginal; however, the canopy cover along the transect line in unsuitable. Overall, unsuitable understory hiding and escape cover and the rarity of forb diversity do not provide unsuitable habitat structure /function and forage for late brood-rearing sage-grouse.

Winter Habitat Assessment
This information was collected as part of a breeding habitat assessment conducted on August 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 sagebrush overstory is characterized by a marginal canopy cover (30 percent) and suitable height (130.5 cm). Overall, sagebrush occurrence and height are providing suitable winter cover and forage conditions for sage-grouse and are not limiting factors at this site (Table WDLF-3).

Table WDLF-3: Sage-grouse habitat indicators and pasture ratings (Refer to Appendix B for full habitat assessment review and habitat indicator value ranges)

Habitat Indicator	**Data**	**[1]Breeding**	**Upland Summer**	**[1]Winter**
Sagebrush Canopy Cover (%)	30	marginal	marginal	suitable
Sagebrush Height (cm)	130.5	marginal	marginal	suitable
Sagebrush Form	mixed	marginal		
[2]Perennial Grass Canopy Cover (%)	2	unsuitable		
Combined Grass/Forb Canopy Cover (%)	4		unsuitable	
Preferred Forb Availability (#)	5		marginal	
Overall Pasture Evaluation Rating		**unsuitable**	**unsuitable**	**suitable**

[1]Breeding and winter habitat ratings extrapolated from upland habitat assessment information collected on 8/9/2012.
[2]Perennial grass canopy cover does not include Poa species.

Loamy 13-16" Mountain big sagebrush / bluebunch wheatgrass – Idaho fescue

Breeding Habitat Assessment
This information was collected as part of a summer upland habitat assessment conducted on August 13, 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, although the forb information is not used because of the time year the data was collected.

The sagebrush overstory is characterized by a suitable canopy cover (24 percent) and marginal height (87.7 cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by an unsuitable canopy cover of perennial grasses (2 percent) (Table WDLF-4). Overall, unsuitable understory story conditions for nesting and hiding sage-grouse are occurring due to the absence of perennial grasses required for adequate nesting and hiding cover.

Summer Upland Habitat Assessment
The sagebrush overstory is characterized by a suitable canopy cover (24 percent) and marginal height (130.5 cm). The understory is characterized by a combined unsuitable canopy cover of perennial grasses and forbs (2 percent) (Table WDLF-4). The number of preferred forb species recorded (13) is suitable; however, the canopy cover along the transect line in unsuitable. Overall, unsuitable understory hiding and escape cover and the rarity of forb diversity are providing unsuitable habitat structure /function and forage for late brood-rearing sage-grouse.

Winter Habitat Assessment
This information was collected as part of a breeding habitat assessment conducted on August 13, 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 marginal canopy cover (24 percent) and suitable height (87.7 cm). Overall, sagebrush occurrence and height are providing suitable winter cover and forage conditions for sage-grouse and are not limiting factors at this site (Table WDLF-4).

Table WDLF-4: Sage-grouse habitat indicators and pasture ratings (Refer to Appendix B for full habitat assessment review and habitat indicator value ranges)

Habitat Indicator	Data	[1]Breeding	Upland Summer	[1]Winter
Sagebrush Canopy Cover (%)	24	suitable	marginal	suitable
Sagebrush Height (cm)	87.7	marginal	marginal	suitable
Sagebrush Form	mixed	marginal		
[2]Perennial Grass Canopy Cover (%)	2	unsuitable		
Combined Grass/Forb Canopy Cover (%)	2		unsuitable	
Preferred Forb Availability	13		marginal	

(#)				
Overall Pasture Evaluation Rating		**unsuitable**	**unsuitable**	**suitable**

[1]Breeding and winter habitat ratings extrapolated from upland habitat assessment information collected on 8/9/2012.
[2]Perennial grass canopy cover does not include Poa species.

Riparian Habitats

Cattle Creek in the upper end, where there is water and riparian shrub vegetation, has deep down-cut banks, and extensive fresh bank-shearing. Utilization levels recorded in 1995 and 1997, were heavy in this reach. In the lower end, which is dry most of the year, is dominant by Baltic Rush, and no apparent utilization was noted.

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Riparian

Standards 2 and 3 identified that Cattle Creek, a tributary to Cattle Creek, and Minear Creek, which flow within this allotment, have been assessed as functioning-at-risk. Riparian habitat issues included low vigor of riparian plant species and inadequate vegetation to stabilize banks.

Evaluation of Standard 7 identified streams on the IDEQ's 303(d) list of impaired steams, 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.

General Upland Habitat

Wroten Allotment contains flats that are dominated by low sage, and hillsides of mesic mountain sagebrush communities including bitterbrush, snowberry, rose, rabbitbrush, and golden current. 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 by perennial bunchgrasses for sage grouse and other ground nesting and foraging species. Bitterbrush is providing good late summer and winter deer forage and does not appear to be excessively browsed by cattle or big game ungulates.

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Upland

The Wroten allotment is managed as a native plant community. It is meeting Standard 4 and is providing for proper nutrient cycling, hydrologic cycling, and energy flow (Standard 4). Evaluation of Standard 4 noted a shift in the plant community composition to the dominance of Sandberg bluegrass and an increase of annual invasive species, although the composition of bluebunch wheatgrass and Idaho fescue were near reference site conditions.

This information is inconsistent with the data collected by the sage-grouse upland summer habitat assessments. Although assessments have found favorable shallow claypan site conditions, the loamy site assessments showed a significant absence of large perennial

grasses. This information is due to different transect locations that reveal the variability of the plant community.

However, although this condition may be meeting the minimums of Standard 4, this scenario signals that a transition in the plant community from reference site conditions is occurring. The transition will favor smaller-stature grasses that do not provide the understory composition and structure for security and escape cover for many sagebrush steppe wildlife species.

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V. Appendices and Maps

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

Idaho Standards for Rangeland Health

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.

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 Areas and Wetlands)
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 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.

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 (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.

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 (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 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)
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 (Water Quality)
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 (Threatened and Endangered Plants and Animals)
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

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 form 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
    d. Include a diversity of appropriate grasses, forbs, and shrubs in rehabilitation efforts.
16. 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.
17. Carefully consider the effects of new management facilities (e.g., water developments, fences) on healthy and properly functioning rangelands prior to implementation.
18. 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.

19. 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.
20. Design management fences to minimize adverse impacts, such as habitat fragmentation, to maintain habitat integrity and connectivity for native plants and animals.

APPENDIX B – METHODS OF USE TO EVALUATE RANGELAND HEALTH UPLANDS

Rangeland Health Evaluations

Rangeland Health Evaluations as outlined in *BLM technical reference 1734-6 Interpreting Indicators of Rangeland Health* and other available qualitative and quantitative data are used to assess rangeland health.

The rangeland health evaluation summary worksheet consists of 17 indicators, which are rated on the degree of departure from expected conditions based on the appropriate ecological site description and/or reference area. The 17 indicators are separated into three attributes; soil site stability, hydrologic functioning and biotic integrity, and are used in for Standards 1, 4, and 5. The preponderance of evidence from the indicators is used to assess the status of the site.

Nested Plot Frequency Transects and Photo Plots (Trend)

Trend data provides information pertaining to changes in the plant community, such as changes in plant occurrence, vigor, and/or health. Vegetation trend data are collected at permanently located nested plot frequency transect (NPFT) study sites. Frequency and cover data are collected, 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 illustrate changes in occurrences of plants and provides information on reproductive capabilities. Chi-square statistical analysis is performed on frequency data, the significance level for testing the data was set at P=0.05. The P-value represents the likelihood that the observed difference between two measurements is due to chance alone. A P-value of 0.05 (5%) indicates a 95% probability that the difference between the two frequency measures is indicative of an actual change in plant species frequency. Conversely, when P=0.05 there is a 5% chance of obtaining the observed result when no actual change in species frequency has occurred. (USDI BLM, 1998-1). The P-value is a measurement of statistical probability and does not necessarily reflect biological significance. Cover data describes the percent of ground covered by rooted, live plants, loose plant material, biological soil crusts, gravel, rock, and residual plant material (litter).

Photo-plots are established at NPFT sites and at Photo-Plot sites. A 3 ft x 3 ft plot is permanently marked with stakes to ensure photos are taken at the same spot. A minimum of three photographs are taken, two general view photos and one close-up photo of the photo plot. The contents of the plot are sketched to help verify species composition, size, and vigor of plants in the photograph.

Shrub density is collected if shrubs are present, in either 1/100th or 1/200th acre plots, depending on the distribution of the shrubs. Shrub density is calculated as plants per acre.

Utilization

Utilization data is used in evaluating the effects of grazing and browsing on specific species and areas within a pasture. Utilization refers to the percentage of annual production of forage that has been removed by animals during the grazing season. It is expressed as a percentage and is used to characterize the total use of vegetation in an area or of individual plant species.

Generally, utilization transects are located at pre-determined key use areas (permanent NPFT locations), however utilization information may be collected anywhere 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*). 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 assess riparian and wetland health. The standard 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 1737-11, "Process for assessing proper functioning condition for lentic riparian-wetland areas"* (USDI 1994). Lentic areas are defined as wetland-riparian areas adjacent to standing water habitats such as lakes, ponds, seeps, and meadows.

Special Status Animals

Riparian Habitat - Riparian special status species' habitats were assessed primarily using information obtained from the riparian/wetland methods described in the above section. While there is no direct correlation between stream functioning condition and special status species habitat, many of the indicators of riparian functionality are also crucial components of habitat for many of the special status and other wildlife species dependent on this habitat type, especially redband trout and neotropical migratory birds and amphibians. The indicators that assess structure, composition, and vigor of hydric (riparian) vegetation are especially important because they also assess the quality and quantity of shade, nesting/breeding habitat, forage, and escape cover.

Sage Grouse Habitat - 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" (USDI 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. In general, if the landscape-scale needs of sage grouse are met, then other sagebrush-obligates probably have adequate cover, food, and sagebrush distribution.

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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 experienced slight modifications from 2001 to 2013 as the BLM receives information and findings 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; 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.

2013 Supplement to Rangeland Health Standards and Guidelines Assessment

Form H-3	Sage-grouse Habitat Suitability Worksheet –		BREEDING	0597-1-07S06W01A-; Wroten			
Date:	8/9/2012	**County:**	Owyhee	**State:**	Idaho	**Subpopulation:**	NC NV/ SE OR/ SW ID
Evaluators:	B. Roseman, B. Carter					**Home Range Name:**	Pleasant Valley
Legal Description:	T07SR06WS01QSEQQSE					**Associated Leks:**	2O577, 2O711
Land Cover Type:	ARTRW8/POSE-BRTE					**Ecological Site:**	Loamy 12-16" ARTRW8/PS
Number of Transects:	1	**Area Sampled (ha):**	1.5			**Site Info:**	Mesic
List UTM Coordinates:							
Starting (NAD83)	501470E	4742857N					
Ending (NAD 83)	4742870N	501419E					

Habitat Indicator Suitability Range (Primary)

Habitat Indicator	x	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	**30.0**	15-25%		5-<15% or >25%	X	<5%	
Sagebrush Height Mesic Site (mean) Arid Site (mean)	**130.5**	 40-80 cm 30-80 cm		 20-<40 cm or >80 cm 20-<30 cm or >80 cm	X	 <20 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) Arid Site (mean)	**2.0**	 ≥15% ≥10%		 5-<15% 5-<10%		 <5% <5%	X
Perennial Forb Canopy Cover Mesic Site (mean) Arid Site (mean)		 ≥10% ≥5%		 5-<10% 3-<5%		 <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)	**20.0**	Suitable	Appropriate for reference site description.
Other Shrub Height (mean)	**59.7**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Canopy Cover (mean)	**50.0**	Marginal	Other shrubs are contributing to the increased density of the overstory.
Sagebrush and Other Shrub Height (mean)	**102.2**	Marginal	Height is mostly include by the sagebrush component. See habitat indicator above.
Perennial Grass Height (excluding Poa spp.) (mean)	**35.0**	Suitable	But is only generated by unsuitable perennial grass canopy cover (2.0%)
Poa Spp. Canopy Cover (mean)	**14.0**	Marginal	POSE is a sub-dominant species in this community.
Annual Grass Canopy Cover (mean)	**6.0**	Suitable	Annual grasses are present but are still a sub-dominant species in this community.
Annual Forb Canopy Cover (mean)			
Bare Ground Canopy Cover (relative to site potential) (mean)	**26.0**	Suitable	Bareground for this ESD ranges from 20-40%.

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?	None noted
Evidence of recent livestock use?	Cattle present

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 month and the data collection protocols are the same, this information can provide insight into breeding habitat conditions earlier in the spring; however, the forb information was not representative of this time period and was not applicable to this assessment. The overstory is characterized by a marginal canopy cover (30.0%) and height (130.5cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by an unsuitable canopy cover of perennial grasses (2.0%). Although the combined height of perennial grasses and forbs is suitable it is created by an unsuitable canopy of both species. Overall, because of the absence of perennial grasses and forbs in the understory, this site is not providing adequate (unsuitable)

	Suitable	**Marginal**	**Unsuitable**
Site-Scale Suitability			**X**

Form H-4	Sage-grouse Habitat Suitability Worksheet –		UPLAND SUMMER	0597-1-07S06W01A-2 Wroten			
Date:	8/9/2012	**County:**	Owyhee	**State:**	Idaho	**Subpopulation:**	NC NV/ SE OR/ SW ID
Evaluators:	B. Roseman, B. Carter					**Home Range Name:**	Pleasant Valley
Legal Description:	T07SR06WS01QSEQQSE					**Associated Leks:**	2O577, 2O711
Land Cover Type:	ARTRW8/POSE-BRTE					**Ecological Site:**	Loamy 12-16" ARTRW8/PS
Number of Transects:	1	**Area Sampled (ha):**	1.5			**Site Info:**	Mesic
List UTM Coordinates:							
Starting (NAD83)	501470E	4742857N					
Ending (NAD 83)	4742870N	501419E					

Habitat Indicator Suitability Range (Primary)

Habitat Indicator	χ	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	**30.0**	10-25%		5-<10% or >25%	X	<5%	
Sagebrush Height (mean)	**130.5**	40-80 cm		20-<40 cm or >80 cm	X	<20 cm	
Perennial Grass and Forb Canopy Cover (mean)	**4.0**	≥15%		5-15%		<5%	X
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	χ	Suitability	Rationale
Predominant Sagebrush Shape (mode)	**Mixed**	Marginal	Mixed spreading/columnar shape tends to open the overstory and expose the understory.
Perennial Grass and Forb Height (mean)	**22.0**	Suitable	But is created by an unsuitable canopy cover of perennial grasses and forbs.
Perennial Grass Canopy Cover (mean)	**2.0**	Unsuitable	Canopy cover is <5%.
Perennial Forb Canopy Cover (mean)	**2.0**	Unsuitable	Canopy cover is <5%.
Other Shrub Canopy Cover (mean)	**20.0**	Suitable	Appropriate for reference site description.
Other Shrub Height (mean)	**59.7**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Canopy Cover (mean)	**50.0**	Marginal	Other shrubs are contributing to the increased density of the overstory.
Sagebrush and Other Shrub Height (mean)	**102.2**	Marginal	Height is mostly include by the sagebrush component. See habitat indicator above.
Perennial Grass Height (excluding Poa spp.) (mean)	**35.0**	Suitable	But is only generated by unsuitable perennial grass canopy cover (2.0%)
Poa Spp. Canopy Cover (mean)	**14.0**	Marginal	POSE is a sub-dominant species in this community.
Annual Grass Canopy Cover (mean)	**6.0**	Suitable	Annual grasses are present but are still a sub-dominant species in this community.
Annual Forb Canopy Cover (mean)	**0.0**	Suitable	Appropriate for reference site description.
Bare Ground Canopy Cover (relative to site potential) (mean)	**26.0**	Suitable	Bareground for this ESD ranges from 20-40%.

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?	None noted
Evidence of recent livestock use?	Cattle present

Rationale for Overall Suitability Rating:	The sagebrush overstory is characterized by a marginal canopy cover (30.0%) and height (130.5cm.) The understory is characterized by an unsuitable combined canopy cover of perennial grasses/forbs (4.0%). Although the combined height of perennial grasses and forbs is suitable it is created by an unsuitable canopy of both species. Overall, because of the absence of perennial grasses and forbs in the understory, this site is not providing adequate (unsuitable) summer upland habitat conditions of late-brood rearing sage-grouse.

	Suitable	**Marginal**	**Unsuitable**
Site-Scale Suitability			**X**

Form H-6	Sage-grouse Habitat Suitability Worksheet –		WINTER	0597-1-07S06W01A-2 Wroten			
Date:	8/9/2012	**County:**	Owyhee	**State:**	Idaho	**Subpopulation:**	NC NV/ SE OR/ SW ID
Evaluators:	B. Roseman, B. Carter					**Home Range Name:**	Pleasant Valley
Legal Description:	T07SR06WS01QSEQQSE					**Associated Leks:**	2O577, 2O711
Land Cover Type:	ARTRW8/POSE-BRTE					**Ecological Site:**	amy 12-16" ARTRW8/PSSF
Number of Transects:	1	**Area Sampled (ha):**	1.5			**Site Info:**	Mesic
List UTM Coordinates:							
Starting (NAD83)	501470E	4742857N					
Ending (NAD 83)	4742870N	501419E					

Habitat Indicator Suitability Range (Primary)

Habitat Indicator	x	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	**30.0**	>10%	X	5-10%		<5%	
Sagebrush Height above Snow							
0 cm snow (annual mean)	**130.5**	>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 shape tends to open the overstory and expose the understory.
Other Shrub Canopy Cover (mean)	**20.0**	Suitable	Appropriate for reference site description.
Other Shrub Height (mean)	**59.7**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Canopy Cover (mean)	**50.0**	Marginal	Other shrubs are contributing to the increased density of the overstory.
Sagebrush and Other Shrub Height (mean)	**102.2**	Marginal	Height is mostly include by the sagebrush component. See habitat indicator above.

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?	Cattle present

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 month this information can provide insight into winter habitat conditions later in the year. The sagebrush overstory is characterized by a suitable canopy cover (30.0%) and height (130.5cm). Overall, the sagebrush occurrence and height are providing adequate winter habitat conditions for sage-grouse.

	Suitable	**Marginal**	**Unsuitable**
Site-Scale Suitability	**X**		

Form H-3	Sage-grouse Habitat Suitability Worksheet –		BREEDING	0597-1-07S06W12B-2 Wroten			
Date:	8/9/2012	**County:**	Owyhee	**State:**	Idaho	**Subpopulation:**	NC NV/ SE OR/ SW ID
Evaluators:	B. Carter, B. Roseman					**Home Range Name:**	Pleasant Valley
Legal Description:	T07SR06WS12QNEQQNE					**Associated Leks:**	2O577, 2O711
Land Cover Type:	ARAR8/PSSPS					**Ecological Site:**	ow Claypan 12-16" ARAR8/
Number of Transects:	1	**Area Sampled (ha):**	10			**Site Info:**	Mesic
List UTM Coordinates:							
Starting (NAD83)	501380E	4742329N					
Ending (NAD 83)	4742287N	501352E					

Habitat Indicator Suitability Range (Primary)

Habitat Indicator	x	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	**10.0**	15-25%		5-<15% or >25%	X	<5%	
Sagebrush Height Mesic Site (mean) Arid Site (mean)	**51.0**	 40-80 cm 30-80 cm	X	 20-<40 cm or >80 cm 20-<30 cm or >80 cm		 <20 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) Arid Site (mean)	**44.0**	 ≥15% ≥10%	X	 5-<15% 5-<10%		 <5% <5%	
Perennial Forb Canopy Cover Mesic Site (mean) Arid Site (mean)		 ≥10% ≥5%		 5-<10% 3-<5%		 <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)	**6.0**	Suitable	Appropriate for reference site description.
Other Shrub Height (mean)	**64.7**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Canopy Cover (mean)	**16.0**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Height (mean)	**56.1**	Suitable	Appropriate for reference site description.
Perennial Grass Height (excluding Poa spp.) (mean)	**29.7**	Suitable	Height is <18cm.
Poa Spp. Canopy Cover (mean)	**14.0**	Suitable	Appropriate for reference site description.
Annual Grass Canopy Cover (mean)	**16.0**	Marginal	Annual grasses are showing a greater occurrence in the community
Annual Forb Canopy Cover (mean)			
Bare Ground Canopy Cover (relative to site potential) (mean)	**32.0**	Suitable	Bareground on this ESD ranges from 40-50%

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?	Scat observed on hike in
Evidence of recent livestock use?	Some cattle and wildhorse use

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 month and the data collection protocols are the same, this information can provide insight into breeding habitat conditions earlier in the spring; however, forb information is not applicable to this assessment due to the time it was collected. The sagebrush overstory is characterized by a marginal canopy cover (10.0%) and suitable height (51.0cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by an suitable canopy cover of perennial grasses (44.0%). This site appears to have been burned in the past and has limited shrub cover with and abundance of perennial grasses. Overall, because this site appears to be still recovering from the effects of past wildfire that removed the overstory sagebrush component, the understory is vigorous and with the limited number of shrubs in the area, is at this time providing limited (marginal) breeding habitat conditions for sage-grouse.

	Suitable	**Marginal**	**Unsuitable**
Site-Scale Suitability		**X**	

**Wildfire is primary cause for limited breeding habitat.

Form H-4	Sage-grouse Habitat Suitability Worksheet –		UPLAND SUMMER	0597-1-07S06W12B-2 Wroten			
Date:	8/9/2012	**County:**	Owyhee	**State:**	Idaho	**Subpopulation:**	NC NV/ SE OR/ SW ID
Evaluators:	B. Carter, B. Roseman					**Home Range Name:**	Pleasant Valley
Legal Description:	T07SR06WS12QNEQQNE					**Associated Leks:**	2O577, 2O711
Land Cover Type:	ARAR8/PSSPS					**Ecological Site:**	ow Claypan 12-16" ARAR8/
Number of Transects:	1	**Area Sampled (ha):**	10			**Site Info:**	Mesic
List UTM Coordinates:							
Starting (NAD83)	501380E	4742329N					
Ending (NAD 83)	4742287N	501352E					

Habitat Indicator Suitability Range (Primary)

Habitat Indicator	χ	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	**10.0**	10-25%	X	5-<10% or >25%		<5%	
Sagebrush Height (mean)	**51.0**	40-80 cm	X	20-<40 cm or >80 cm		<20 cm	
Perennial Grass and Forb Canopy Cover (mean)	**44.0**	≥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*)	**7.0**						

Habitat Indicator Suitability Range (Supplemental)

Habitat Indicator	χ	Suitability	Rationale
Predominant Sagebrush Shape (mode)	**Mixed**	Marginal	Mixed spreading/columnar shape tends to open the overstory and expose the understory.
Perennial Grass and Forb Height (mean)	**29.7**	Suitable	Combined height is >18cm.
Perennial Grass Canopy Cover (mean)	**44.0**	Suitable	Canopy cover is >15%.
Perennial Forb Canopy Cover (mean)	**0.0**	Unsuitable	Canopy is <5%.
Other Shrub Canopy Cover (mean)	**6.0**	Suitable	Appropriate for reference site description.
Other Shrub Height (mean)	**64.7**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Canopy Cover (mean)	**16.0**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Height (mean)	**56.1**	Suitable	Appropriate for reference site description.
Perennial Grass Height (excluding Poa spp.) (mean)	**29.7**	Suitable	Height is <18cm.
Poa Spp. Canopy Cover (mean)	**14.0**	Suitable	Appropriate for reference site description.
Annual Grass Canopy Cover (mean)	**16.0**	Marginal	Annual grasses are showing a greater occurrence in the community
Annual Forb Canopy Cover (mean)	**0.0**	Suitable	Appropriate for reference site description.
Bare Ground Canopy Cover (relative to site potential) (mean)	**32.0**	Suitable	Bareground on this ESD ranges from 40-50%

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?	Scat observed on hike in
Evidence of recent livestock use?	Some cattle and wildhorse use

Rationale for Overall Suitability Rating:	The sagebrush overstory is characterized by a marginal canopy cover (10.0%) and suitable height (51.0cm). The understory is characterized by a suitable canopy cover of perennial grasses (44.0%). Forbs appeared common but were not well represented within the belt transect along the transect line. This site appears to have been burned in the past and has limited shrub cover with and abundance of perennial grasses. Overall, because this site appears to be still recovering from the effects of past wildfire that removed the overstory sagebrush component, the understory is vigorous and with the limited number of shrubs in the area, this site is providing adequate (suitable) summer upland habitat conditions for late brood-rearing sage-grouse.

	Suitable	**Marginal**	**Unsuitable**
Site-Scale Suitability	**X**		

Form H-6	Sage-grouse Habitat Suitability Worksheet –		WINTER	0597-1-07S06W12B-2	Wroten		
Date:	8/9/2012	**County:**	Owyhee	**State:**	Idaho	**Subpopulation:**	NC NV/ SE OR/ SW ID
Evaluators:	B. Carter, B. Roseman					**Home Range Name:**	Pleasant Valley
Legal Description:	T07SR06WS12QNEQQNE					**Associated Leks:**	2O577, 2O711
Land Cover Type:	ARAR8/PSSPS					**Ecological Site:**	ow Claypan 12-16" ARAR8/
Number of Transects:	1	**Area Sampled (ha):**	10			**Site Info:**	Mesic
List UTM Coordinates:							
Starting (NAD83)	501380E	4742329N					
Ending (NAD 83)	4742287N	501352E					

Habitat Indicator Suitability Range (Primary)

Habitat Indicator	x	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	**10.0**	>10%		5-10%	X	<5%	
Sagebrush Height above Snow							
0 cm snow (annual mean)	**51.0**	>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 shape tends to open the overstory and expose the understory.
Other Shrub Canopy Cover (mean)	**6.0**	Suitable	Appropriate for reference site description.
Other Shrub Height (mean)	**64.7**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Canopy Cover (mean)	**16.0**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Height (mean)	**56.1**	Suitable	Appropriate for reference site description.

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?	Scat observed on hike in
Evidence of recent livestock use?	Some cattle and wildhorse use

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 sagebrush overstory is characterized by a marginal canopy cover (10.0%) and suitable height (51.0cm). This site appears to have been burned in the past and has limited shrub cover with and abundance of perennial grasses. Overall, because this site appears to be still recovering from the effects of past wildfire that removed the overstory sagebrush component, this site is not providing adequate (unsuitable) winter habitat conditions for sage-grouse.

	Suitable	**Marginal**	**Unsuitable**
Site-Scale Suitability		x	

Form H-3	Sage-grouse Habitat Suitability Worksheet –		BREEDING	0597-1-07S06W12B-2 Wroten			
Date:	8/9/2012	**County:**	Owyhee	**State:**	Idaho	**Subpopulation:**	NC NV/ SE OR/ SW ID
Evaluators:	B. Carter, B. Roseman					**Home Range Name:**	Pleasant Valley
Legal Description:	T07SR06WS12QNEQQNE					**Associated Leks:**	2O577, 2O711
Land Cover Type:	ARAR8/PSSPS					**Ecological Site:**	ow Claypan 12-16" ARAR8/
Number of Transects:	1	**Area Sampled (ha):**	10			**Site Info:**	Mesic
List UTM Coordinates:							
Starting (NAD83)	501380E	4742329N					
Ending (NAD 83)	4742287N	501352E					

Habitat Indicator Suitability Range (Primary)

Habitat Indicator	X	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	**10.0**	15-25%		5-<15% or >25%	X	<5%	
Sagebrush Height Mesic Site (mean) Arid Site (mean)	**51.0**	 40-80 cm 30-80 cm	X	 20-<40 cm or >80 cm 20-<30 cm or >80 cm		 <20 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) Arid Site (mean)	**44.0**	 ≥15% ≥10%	X	 5-<15% 5-<10%		 <5% <5%	
Perennial Forb Canopy Cover Mesic Site (mean) Arid Site (mean)		 ≥10% ≥5%		 5-<10% 3-<5%		 <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)	**6.0**	Suitable	Appropriate for reference site description.
Other Shrub Height (mean)	**64.7**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Canopy Cover (mean)	**16.0**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Height (mean)	**56.1**	Suitable	Appropriate for reference site description.
Perennial Grass Height (excluding Poa spp.) (mean)	**29.7**	Suitable	Height is <18cm.
Poa Spp. Canopy Cover (mean)	**14.0**	Suitable	Appropriate for reference site description.
Annual Grass Canopy Cover (mean)	**16.0**	Marginal	Annual grasses are showing a greater occurrence in the community
Annual Forb Canopy Cover (mean)			
Bare Ground Canopy Cover (relative to site potential) (mean)	**32.0**	Suitable	Bareground on this ESD ranges from 40-50%

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?	Scat observed on hike in
Evidence of recent livestock use?	Some cattle and wildhorse use

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 month and the data collection protocols are the same, this information can provide insight into breeding habitat conditions earlier in the spring; however, forb information is not applicable to this assessment due to the time it was collected. The sagebrush overstory is characterized by a marginal canopy cover (10.0%) and suitable height (51.0cm) with a marginal mixed (spreading/columnar) shape. The understory is characterized by an suitable canopy cover of perennial grasses (44.0%). This site appears to have been burned in the past and has limited shrub cover with and abundance of perennial grasses. Overall, because this site appears to be still recovering from the effects of past wildfire that removed the overstory sagebrush component, the understory is vigorous and with the limited number of shrubs in the area, is at this time providing limited (marginal) breeding habitat conditions for sage-grouse.

	Suitable	**Marginal**	**Unsuitable**
Site-Scale Suitability		X	

**Wildfire is primary cause for limited breeding habitat.

Form H-4	Sage-grouse Habitat Suitability Worksheet –		UPLAND SUMMER	0597-1-07S06W12B-2 Wroten			
Date:	8/9/2012	**County:**	Owyhee	**State:**	Idaho	**Subpopulation:**	NC NV/ SE OR/ SW ID
Evaluators:	B. Carter, B. Roseman					**Home Range Name:**	Pleasant Valley
Legal Description:	T07SR06WS12QNEQQNE					**Associated Leks:**	2O577, 2O711
Land Cover Type:	ARAR8/PSSPS					**Ecological Site:**	ow Claypan 12-16" ARAR8/
Number of Transects:	1	**Area Sampled (ha):**	10			**Site Info:**	Mesic
List UTM Coordinates:							
Starting (NAD83)	501380E	4742329N					
Ending (NAD 83)	4742287N	501352E					

Habitat Indicator Suitability Range (Primary)

Habitat Indicator	x	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	**10.0**	10-25%	X	5-<10% or >25%		<5%	
Sagebrush Height (mean)	**51.0**	40-80 cm	X	20-<40 cm or >80 cm		<20 cm	
Perennial Grass and Forb Canopy Cover (mean)	**44.0**	≥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)*	**7.0**						

Habitat Indicator Suitability Range (Supplemental)

Habitat Indicator	x	Suitability	Rationale
Predominant Sagebrush Shape (mode)	**Mixed**	Marginal	Mixed spreading/columnar shape tends to open the overstory and expose the understory.
Perennial Grass and Forb Height (mean)	**29.7**	Suitable	Combined height is >18cm.
Perennial Grass Canopy Cover (mean)	**44.0**	Suitable	Canopy cover is >15%.
Perennial Forb Canopy Cover (mean)	**0.0**	Unsuitable	Canopy is <5%.
Other Shrub Canopy Cover (mean)	**6.0**	Suitable	Appropriate for reference site description.
Other Shrub Height (mean)	**64.7**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Canopy Cover (mean)	**16.0**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Height (mean)	**56.1**	Suitable	Appropriate for reference site description.
Perennial Grass Height (excluding Poa spp.) (mean)	**29.7**	Suitable	Height is <18cm.
Poa Spp. Canopy Cover (mean)	**14.0**	Suitable	Appropriate for reference site description.
Annual Grass Canopy Cover (mean)	**16.0**	Marginal	Annual grasses are showing a greater occurrence in the community
Annual Forb Canopy Cover (mean)	**0.0**	Suitable	Appropriate for reference site description.
Bare Ground Canopy Cover (relative to site potential) (mean)	**32.0**	Suitable	Bareground on this ESD ranges from 40-50%

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?	Scat observed on hike in
Evidence of recent livestock use?	Some cattle and wildhorse use

Rationale for Overall Suitability Rating:	The sagebrush overstory is characterized by a marginal canopy cover (10.0%) and suitable height (51.0cm). The understory is characterized by a suitable canopy cover of perennial grasses (44.0%). Forbs appeared common but were not well represented within the belt transect along the transect line. This site appears to have been burned in the past and has limited shrub cover with and abundance of perennial grasses. Overall, because this site appears to be still recovering from the effects of past wildfire that removed the overstory sagebrush component, the understory is vigorous and with the limited number of shrubs in the area, this site is providing adequate (suitable) summer upland habitat conditions for late brood-rearing sage-grouse.

	Suitable	**Marginal**	**Unsuitable**
Site-Scale Suitability	**X**		

Form H-6	Sage-grouse Habitat Suitability Worksheet –		WINTER	0597-1-07S06W12B-2 Wroten			
Date:	8/9/2012	**County:**	Owyhee	**State:**	Idaho	**Subpopulation:**	NC NV/ SE OR/ SW ID
Evaluators:	B. Carter, B. Roseman					**Home Range Name:**	Pleasant Valley
Legal Description:	T07SR06WS12QNEQQNE					**Associated Leks:**	2O577, 2O711
Land Cover Type:	ARAR8/PSSPS					**Ecological Site:**	ow Claypan 12-16" ARAR8/
Number of Transects:	1	**Area Sampled (ha):**	10			**Site Info:**	Mesic
List UTM Coordinates:							
Starting (NAD83)	501380E	4742329N					
Ending (NAD 83)	4742287N	501352E					

Habitat Indicator Suitability Range (Primary)

Habitat Indicator	x	Suitable	✓	Marginal	✓	Unsuitable	✓
Sagebrush Canopy Cover (mean)	**10.0**	>10%		5-10%	X	<5%	
Sagebrush Height above Snow							
0 cm snow (annual mean)	**51.0**	>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 shape tends to open the overstory and expose the understory.
Other Shrub Canopy Cover (mean)	**6.0**	Suitable	Appropriate for reference site description.
Other Shrub Height (mean)	**64.7**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Canopy Cover (mean)	**16.0**	Suitable	Appropriate for reference site description.
Sagebrush and Other Shrub Height (mean)	**56.1**	Suitable	Appropriate for reference site description.

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?	Scat observed on hike in
Evidence of recent livestock use?	Some cattle and wildhorse use

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 sagebrush overstory is characterized by a marginal canopy cover (10.0%) and suitable height (51.0cm). This site appears to have been burned in the past and has limited shrub cover with and abundance of perennial grasses. Overall, because this site appears to be still recovering from the effects of past wildfire that removed the overstory sagebrush component, this site is not providing adequate (unsuitable) winter habitat conditions for sage-grouse.

	Suitable	**Marginal**	**Unsuitable**
Site-Scale Suitability		x	

General Upland Habitat

The assessment of upland habitats for other special status animal species were conducted primarily using the same data that was obtained from the upland methods described above, which includes Rangeland Health Evaluation Worksheets, trend data (ground cover, species diversity, noxious and invasive plants) and utilization (vigor, production) data.

P**opulation Surveys and Other Monitoring** - Inventory and monitoring data are limited or absent for many of these species, therefore little is known about their distribution, population status or trend within the allotment. Their occurrence within the allotments has been verified through field observation or assumed likely because the allotment falls within the species known range and contains habitat types potentially capable of supporting viable populations of the

species. The following is a brief description of surveys and/or monitoring efforts that have been conducted for special status animal species within these allotments.

For pygmy rabbits, survey routes were walked in appropriate tall, thick big sage habitat, looking for burrows and pellets. Thick sagebrush and deep soils appear to be the major habitat necessities for these rabbits; the effect of the condition of grasses and forbs is not clear. Around the West, pygmy rabbits have been found in high densities in sagebrush habitats where the grass and forbs were in poor condition, as well as where they are in good condition.

For other sensitive species, no specific methods are established to evaluate habitat. We make the assumption 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 evaluations 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 for these allotments used in this assessment include:

Sage grouse lek (breeding ground) surveys by helicopter 1994 and 2001
IDFG sage grouse historical lek database, 2003
Sage grouse habitat assessments in 2003,
Fish and Game sage grouse telemetry study in Cow Cr, 1999-2003,
Pygmy rabbit surveys in 2003,
Columbia spotted frog survey in 1995 (Munger et al 1996)
General wildlife field observations in 2003 and 2004.

Special Status Plants

Systematic inventories are conducted by BLM botanical staff for site specific projects. Additionally databases maintained by the Conservation Data Center (CDC) are consulted for populations of special status plants

APPENDIX C – SUMMARY OF UPLAND DATA COLLECTED IN THE WROTEN ALLOTMENT

Table 3: Summary of upland data collected in the Wroten Allotment.

Pasture	Data Type[1]	Date of evaluation (s)	Site Number[2]	Legal Location	Ecological Site	General Condition
1	NPFT/PP	8/18/1987 8/07/2003	TR1A	07S06W02	Shallow Claypan 12-16" (Burned)	Perennial grasses are dominant and vigorous; Idaho fescue frequency is stable; low sagebrush frequency is stable; ridgetop
	RHE	9/04/2003	RH1A	07S06W01	Shallow Claypan 12-16"	Site near potential; decreaser grasses are dominant and vigorous; some historic soil loss/degradation; ground stabilized by stones and gravel; mountaintop distant from water
	RHE	9/04/2003	RH1B	07S06W11	Shallow Claypan 12-16" (Burned)	Site near potential; decreaser grasses are dominant and highly vigorous; cheatgrass common; ground stabilized by stones and gravel; steep slope
	RHE	11/06/2003	RH1C	07S06W12	Loamy 13-16" (Burned)	Shift in plant community; increaser grasses are dominant, decreaser grasses are limited with reduced vigor; soil loss/degradation assoc' with trailing (near Cattle Creek); bulbous bluegrass and cheatgrass are common; ground stabilized by stones and vegetation
	RHE	9/22/2003	RH1D	07S06W13	Shallow Claypan 12-16"	Slight shift in plant community; decreaser grasses are dominant but slightly below potential, reduced vigor on interspatial grasses; soil loss/degradation assoc' with trailing (near Cattle Creek), pedestals active, bare ground more than expected

--- [1] RHE – Rangeland Health Evaluation Summary Worksheets, NPFT – Nested Plot Frequency Transect, PP – Photo Plot.

--- [2] Site Numbers are the type of data collected (TR- Trend, RH- Rangeland Health Evaluation Summary Worksheets) followed by the Pasture number and a unique identifier (A-D).

APPENDIX D – RANGELAND HEALTH EVALUATIONS

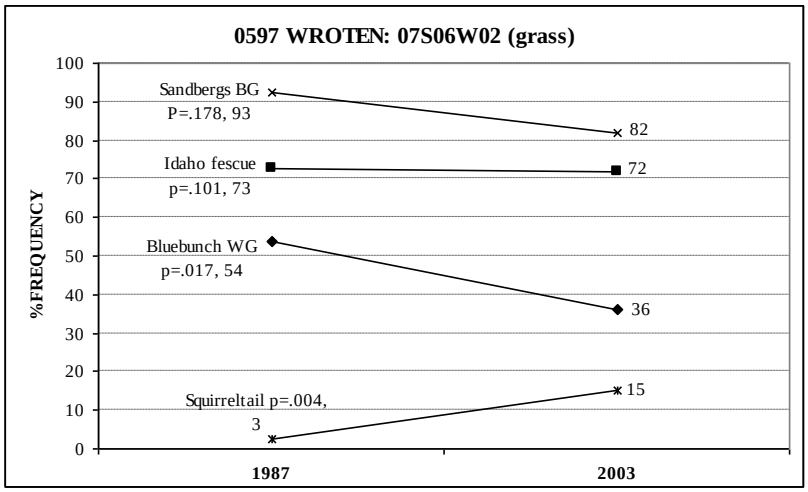
Rangeland Health Evaluation Summary Worksheets for Wroten Allotment (0597)

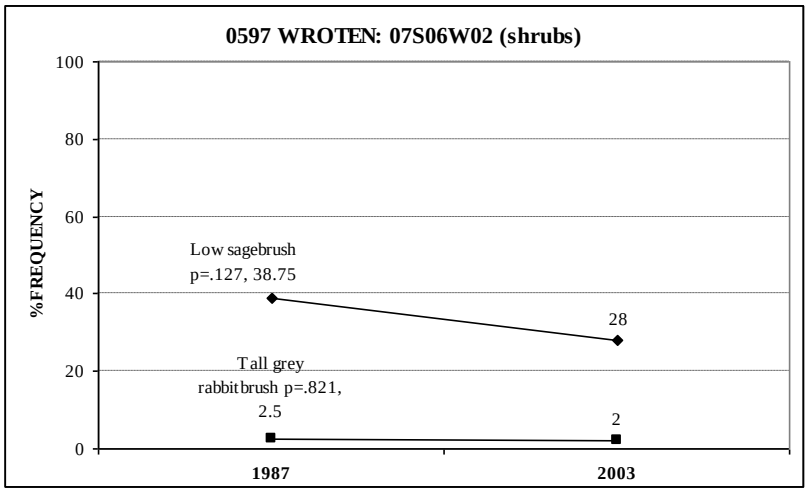
Attributes**			Indicators for Rangeland Health*	Pasture 1			
				RH1A	RH1B	RH1C	RH1D
S	H		**1**-Rills	n-s	n-s	n-s	n-s
S	H		**2**-Water Flow Pattern	s-m	n-s	n-s	m
S	H		**3**-Pedestals / Terracettes	s-m	s-m	s-m	m-e
S	H		**4**-Bare Ground	n-s	n-s	s-m	s-m
S	H		**5**-Gullies	n-s	n-s	n-s	n-s
S			**6**-Wind-scoured, blowouts/deposition	n-s	n-s	n-s	n-s
	H		**7**-Litter Movement	n-s	n-s	n-s	s-m
S	H	B	**8**-Soil Surface Resistance to Erosion	n-s	n-s	n-s	s-m
S	H	B	**9**-Soil Surface Loss or Degradation	s-m	n-s	s-m	m
	H		**10**-Plant Community Composition / Distribution Relative to infiltration and runoff	n-s	n-s	n-s	s-m
S	H	B	**11**-Compaction Layer	n-s	n-s	n-s	n-s
		B	**12**-Functional / Structural Groups	n-s	n-s	s-m	s-m
		B	**13**-Plant Mortality / Decadence	s-m	n-s	s-m	s-m
	H	B	**14**-Litter Amount	n-s	n-s	n-s	s-m
		B	**15**-Annual Production	n-s	n-s	n-s	n-s
		B	**16**-Invasive Plants	n-s	m-e	m	n-s
		B	**17**-Reproductive Capability of Perennial Plants	n-s	n-s	s-m	s-m

*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.

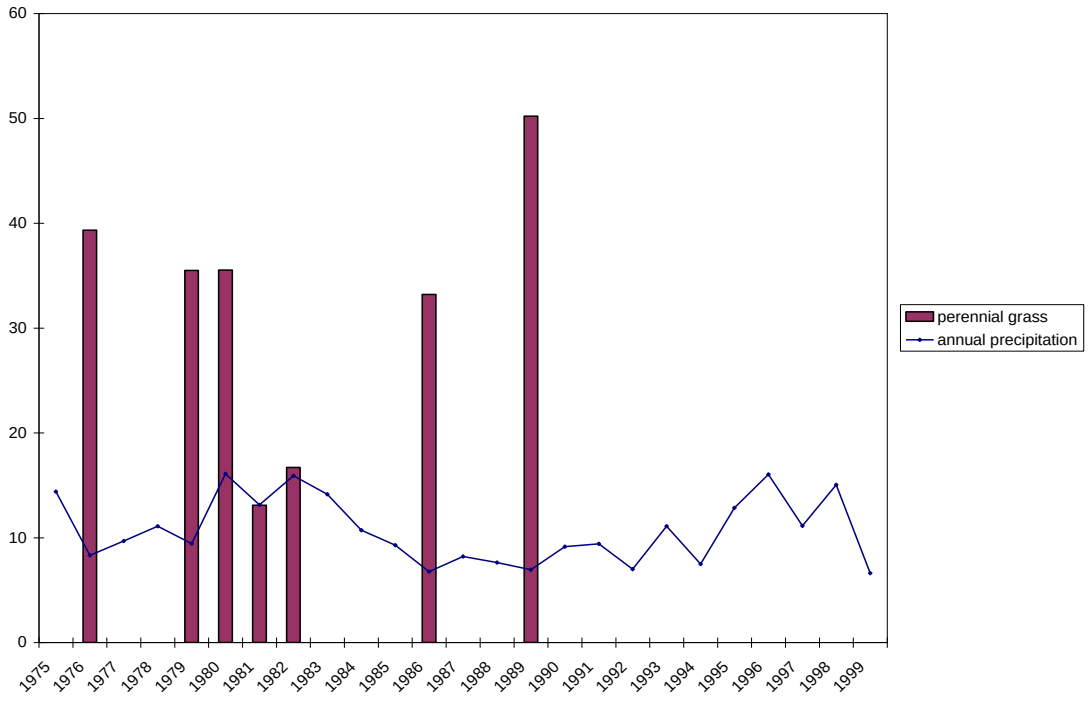
****S**= Soil Site Stability; **H**= Hydrologic Function; **B**= Biotic Integrity

APPENDIX E – TREND





APPENDIX F – UTILIZATION AND PRECIPITATION



Perennial Grasses

Precipitation data was obtained for the NOAA weather station 107648 (http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?idreyn)

APPENDIX G – SPECIAL STATUS ANIMAL SPECIES

Summary of Special Status Plant and Animal Species

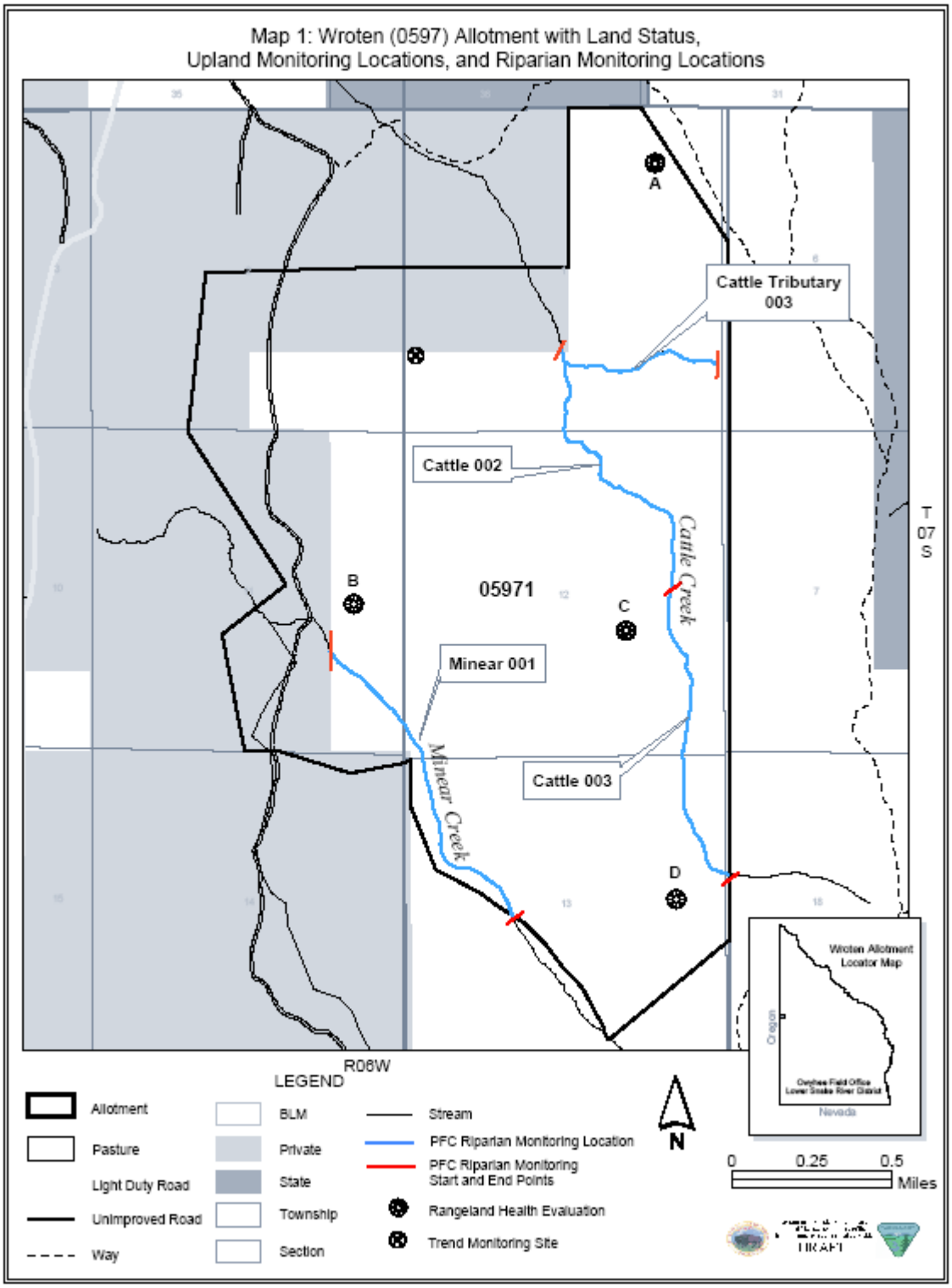
Wildlife
A number of species classified as BLM "Sensitive Species" and/or State of Idaho "Species of Special Concern" are known or likely to occur within these allotments. The following table lists these species, their legal status, and their key habitat associations.

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

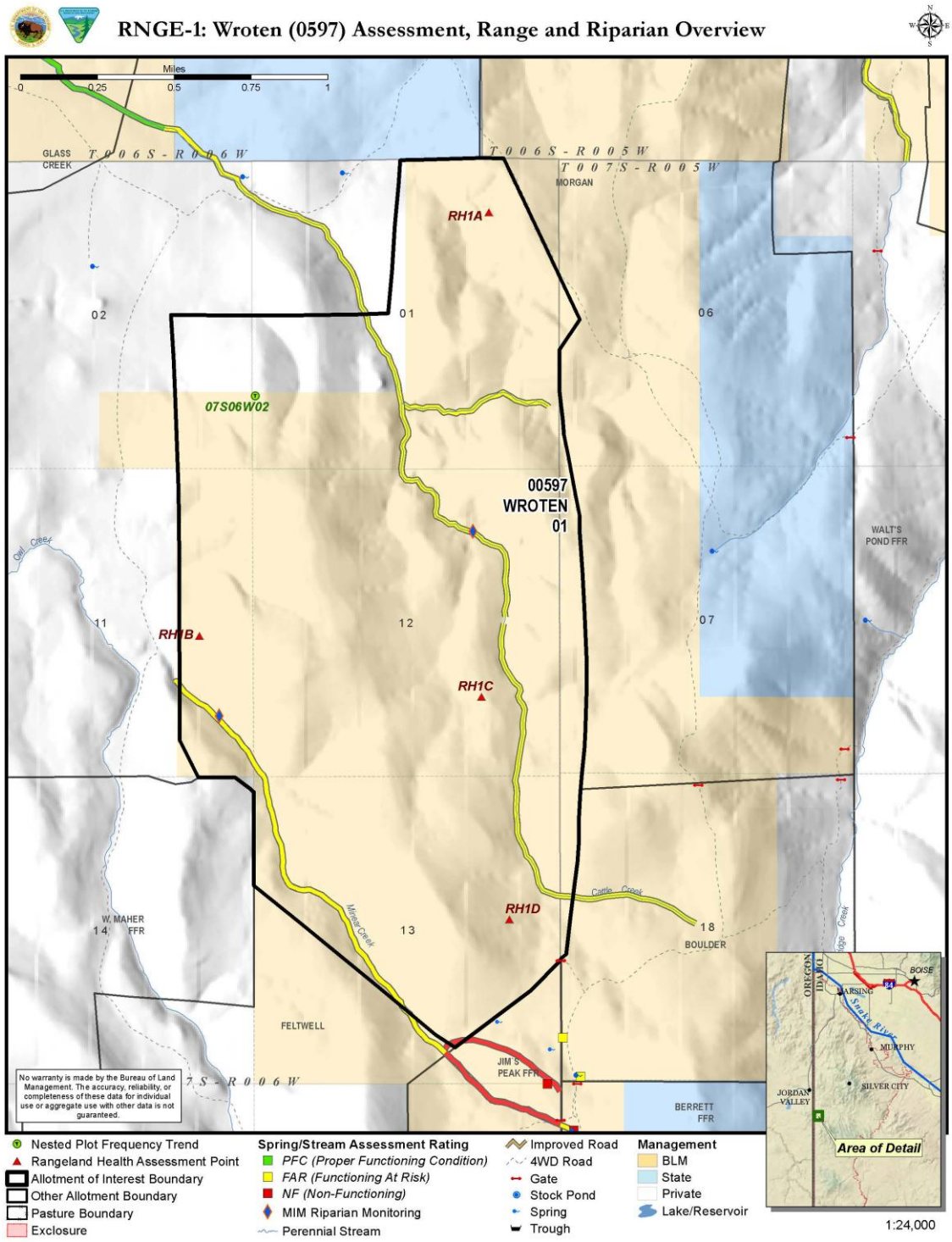
Species	Status	Key Habitat Associations
Western Toad (*Bufo boreas*)	S, SSC	Wetland/riparian, all upland habitats

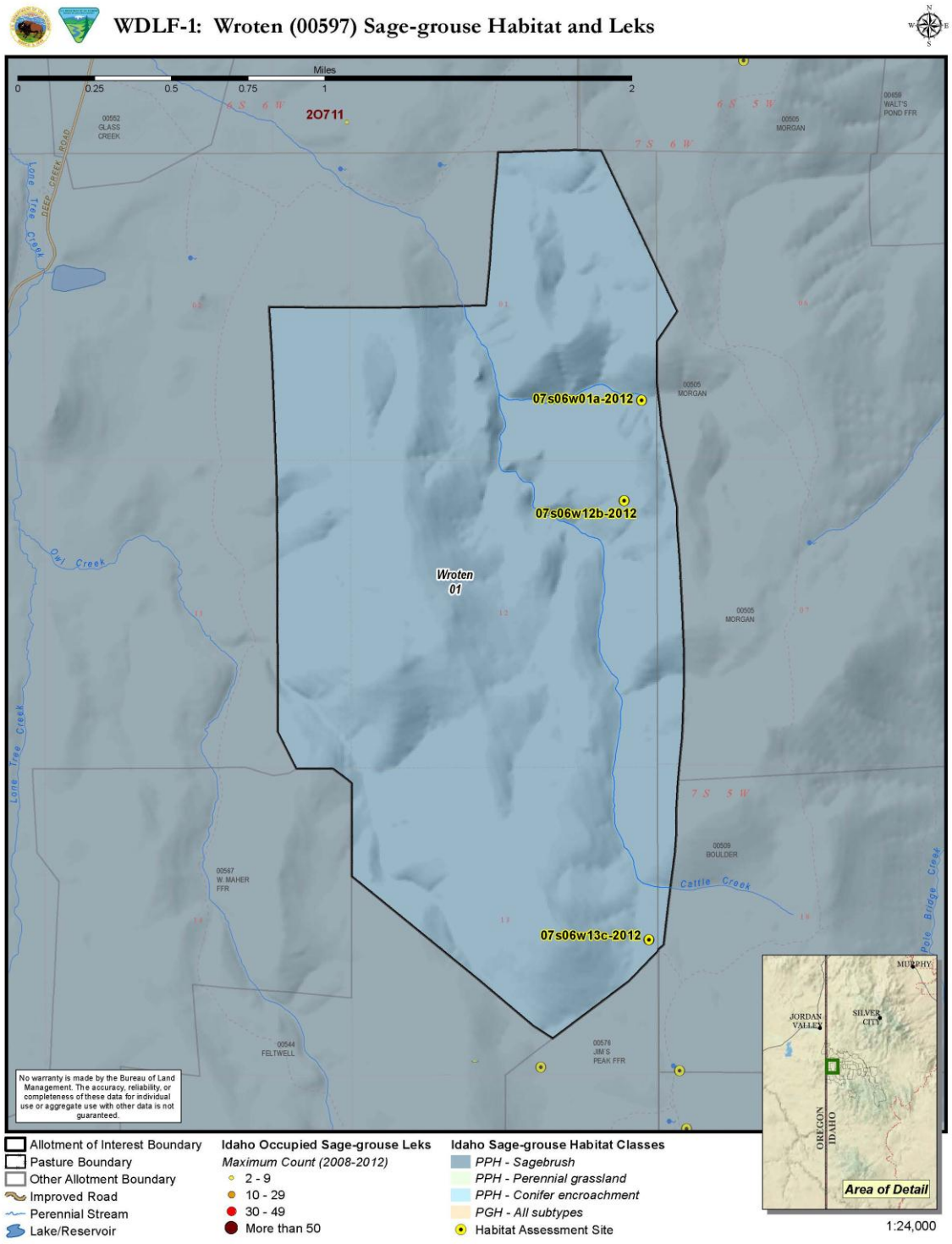
SC = State of Idaho Species of Special Concern, S = BLM Sensitive Species

APPENDIX H – MAPS



APPENDIX H – Maps (see below)


RNGE-1: Wroten (0597) Assessment, Range and Riparian Overview
Miles
0
0.25
0.5
0.75
1
GLASS CREEK
T 0 0 6 S - R 0 0 6 W
T 0 0 6 S - R 0 0 5 W
T 0 0 7 S - R 0 0 5 W
MORGAN
RH1A
02
01
06
07S06W02
00597
WROTEN
01
WALT'S POND FFR
Owl Creek
11
RH1B
12
07
RH1C
RH1D
Cattle Creek
Miner Creek
W. MAHER
14 FFR
13
18
BOULDER
FELTWELL
JIM S PEAK FFR
BERRETT FFR
7 S - R 0 0 6 W
No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.
OREGON
IDAHO
BOISE
MARSING
Snake River
MURPHY
SILVER CITY
JORDAN VALLEY
Area of Detail
1:24,000
Nested Plot Frequency Trend
Rangeland Health Assessment Point
Allotment of Interest Boundary
Other Allotment Boundary
Pasture Boundary
Exclosure
Spring/Stream Assessment Rating
PFC (Proper Functioning Condition)
FAR (Functioning At Risk)
NF (Non-Functioning)
MIM Riparian Monitoring
Perennial Stream
Improved Road
4WD Road
Gate
Stock Pond
Spring
Trough
Management
BLM
State
Private
Lake/Reservoir



APPENDIX I – 2013 DETERMINATION – 2013 SUPPLEMENT TO THE WROTEN RANGELAND HEALTH STANDARDS AND GUIDELINES ASSESSMENT

Standard 1: Watersheds

2013 Supplement to the Wrote 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). __

Rationale for Evaluation Finding and Determination

Watershed indicators show some departure from expected conditions for the ecological sites, though none were excessive enough to determine that Standard 1 would not be met in the Wroten allotment. Erosion relics are present but are primarily related to past grazing management 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 generally improving ground cover trend that has maintained. Biotic conditions reflect continued productivity and diversity of native plant species. Despite the continued presence of deep-rooted bunchgrasses, however, an increase in invasive annuals and shallow-rooted bunchgrasses is occurring so that the allotment is considered to be at risk.

An upward trend in ground cover, good representation of deep-rooted native bunchgrasses, and little departure from watershed reference conditions indicate that watershed function is maintained with proper nutrient and hydrologic cycling and energy flow. Although the allotment is at risk for invasive annuals, current livestock management remains compatible with attainment of Standard 1 and ORMP objectives for the Wroten allotment.

Standard 2: Riparian Areas and Wetlands

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

Evaluation Finding 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

The Wroten allotment is not meeting Standard 2. Three main drainages occur within the single pasture allotment: Cattle Creek, a tributary to Cattle Creek, and Minear Creek. All three streams were rated functioning-at-risk (FAR). There was inadequate vegetation and woody material present to protect stream banks, the point bars were not revegetating, and the plants present had low vigor. Also, on the tributary to Cattle Creek, there was a headcut present that caused vertical instability, and the channel was incised. Subsequent to the assessments, two MMIM sites were established and the short-term metrics collected indicate that Standards are not being met. For the site established on the upper reach of Cattle Creek, the mean stubble height was 3.4 inches, there were not sufficient woody plants to measure, and the stream bank alteration was 38 percent. On Minear Creek, the mean stubble height was 4.4 inches, woody use was 20 percent, and the stream bank alteration was 44 percent.

Current livestock grazing management practices are significant causal factors for failing to meet 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.

Standard 3: Stream Channel/ Floodplain

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

Evaluation Finding 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

The Wroten allotment is not meeting Standard 3. Three main drainages occur within the single pasture allotment: Cattle Creek, a tributary to Cattle Creek, and Minear Creek. All three streams were rated FAR, and 15 to 25 percent of the streambanks were uncovered and unstable. There was inadequate vegetation and woody material present to protect stream banks, the point bars were not revegetating, and the plants present had low vigor. Also, on the tributary to Cattle Creek, there was a headcut present, causing vertical instability; there was erosion and deposition occurring, and the channel was incised. Subsequent to the assessments, two MMIM sites were established and the short-term metrics collected indicate Standards are not being met. For the site established on the upper reach of Cattle Creek, the mean stubble height was 3.4 inches, there were not sufficient woody plants to measure, and the stream bank alteration was 38 percent. On Minear Creek, the mean stubble height was 4.4 inches, woody use was 20 percent, and the stream bank alteration was 44 percent.

Current livestock grazing management practices are significant causal factors for failing to meet 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.

Standard 4: Native Plant Communities

2013 Supplement to the Wroten 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 being met in the Wroten allotment. Although annual invasives are increasing on the site, which provide risk of 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 moderate departure of annual invasive plants, as concluded on the RHA. This conclusion supports the finding that the allotment is meeting the Standard.

Overall interpretations of trend data suggest that grass frequency are primarily static and biotic conditions are maintained with co-dominant shallow rooted bunchgrasses from historic livestock grazing; however, bluebunch wheatgrass remains static at 43 percent occurrence on the trend site and Idaho fescue is increasing significantly.

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.

Standard 6: Exotic Plant Communities

This standard does not apply.

Standard 7: Water Quality

2013 Supplement to the Wroten 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
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).

Current IDEQ information identifies that the BLM portions of the Wroten allotment contain approximately 3.0 miles of stream that are not supporting the watershed's beneficial uses. The allotment contains a portion of AU# ID17050108SW002_02 with associated beneficial uses and pollutants (Table RIPN-2 above). The AU 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 the table.

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

Standard 8: Threatened and Endangered Plants and Animals

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

Evaluation Finding 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 botany is being met in the Wroten allotment. There are no federally listed plant species and there is insufficient information to determine site-specific impacts of livestock grazing on any special status plants that occur in this allotment.

Upland Habitat
The Wroten allotment is managed as a native plant community and is determined to be meeting Standard 4 and providing for proper nutrient cycling, hydrologic cycling, and energy flow (see Standard 4). Evaluation of Standard 4 also noted a dominance of Sandberg bluegrass and an increase in annual invasive grass species, although bluebunch wheatgrass and Idaho fescue are near reference site conditions.

This information is inconsistent with vegetation data collected by sage-grouse assessments in 2012 that showed an absence of large perennial grasses. This discrepancy is due to the difference in data collection locations (e.g., shallow claypan sites vs.loamy sites), which reveals the

variability of site conditions in the allotment. However, evaluation of Standard 4 notes a shift in the plant community composition and the increase of invasive annual grass species. These species do not have the robust growth form or stature such as bluebunch wheatgrass and do not provide the understory plant composition, structure, and function for sagebrush steppe-dependent species. Because the plant community transition can be anticipated to deteriorate further overtime, this allotment therefore is failing to provide adequate upland habitat conditions for sagebrush steppe species and is not meeting Standard 8 due to historic grazing practices and the increase in annual invasive species.

Riparian Habitat
Evaluation of Standards 2, 3, and 7 identified streams and springs within this allotment that are not properly functioning or meeting water quality parameters due to historic and current grazing practices (see Standard 2, 3, and 7) and therefore do not meet Standard 8. Streams, springs, and wetlands that are FAR or development in disrepair are lacking adequate riparian vegetation composition and distribution to provide the structure and function to support a productive riparian environment. Because Standards 2, 3, and 7 are not being met, this allotment is failing to provide adequate riparian conditions to support viable aquatic and terrestrial species populations and therefore is not meeting Standard 8 due to historic and current grazing practices.

Focal Species
This allotment lies within mapped PPH habitat for sage-grouse. Both sage-grouse breeding and summer upland habitat conditions at two locations were found to be unsuitable. The habitat assessments recorded unsuitable habitat conditions on two out three assessment locations due to a substantial absence of large perennial grasses on the loamy sites. Because perennial grasses are absent in the understory and are critical for nesting and hiding structure, this allotment is therefore not meeting Standard 8 due to historic grazing practices.

This finding is inconsistent with the determination of Standard 4 that showed that this allotment was providing adequate nutrient cycling, hydrologic cycling, and energy flow. However, vegetation information recorded in sage-grouse assessments rated this allotment as not meeting Standard 8 due to the absence of large perennial grasses. This inconsistency is more than likely due to the variability in the data collection methods and/or locations that can influence the results of the information collected.

2013 Supplement to the Wroten Allotment Rangeland Health Standards and Guidelines Assessment – Field Manager's Determination

Determination

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

Lowell V Clark — 8/22/13

Field Manager
Owyhee Field Office

Date