

Amended Rangeland Health Assessments

2013 Supplement to the Dougal FFR, South Dougal, and Sheep Creek Rangeland Health Standards and Guidelines Assessments

Evaluation Reports and Determinations

For the Dougal FFR (0456), South Dougal (0536) and Sheep Creek (0559) Allotments

US Department of the Interior
Bureau of Land Management
Boise District
Owyhee Field Office



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<i>2013 Supplement to the Dougal FFR, South Dougal, and Sheep Creek Rangeland Health Standards and Guidelines Assessment – List of Reviewers</i>	
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Rangeland Health Standards and Guidelines Assessment

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Evaluation Reports and Determinations

For the Dougal FFR (0456), South Dougal (0561) and Sheep Creek (0559) Allotments

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The Rangeland Health Standards and Guidelines Assessment for the Dougal FFR, South Dougal, and Sheep Creek allotments were completed in 2006 as a portion of the grazing permit renewal process. Until 2013, no rangeland health determinations were completed and the permit authorizing grazing use in this allotment has not been fully processed for renewal. The current document consists of the 2006 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 determinations for the Dougal FFR, South Dougal and Sheep Creek allotments are found at the end of this document.

Standards for Rangeland Health and Guidelines for Livestock Grazing Management

I. Background

In 1997, the BLM in Idaho adopted rangeland health standards (Appendix A), 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. 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, there should be proper nutrient and hydrologic cycling, and energy flow.

Indicators are typical physical and biological factors and processes that can be measured or observed. The following Assessment considers the indicators for each standard and uses quantitative and/or qualitative information including inventory data, monitoring data, health assessment information, or other observations to evaluate the current status of resources for each standard. Observations of indicators, and trends of measured indicators, are discussed below for all of the standards that are applicable to this allotment.

Conclusions as to whether or not this allotment(s) is meeting or making significant progress toward meeting the standards will be provided in separate evaluation and determination documents for these allotments, based on information in this document.

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This document includes the 2013 evaluation and determination in one document.

II. Idaho Rangeland Health Standards Assessment

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

A. Dougal FFR Allotment (0456)

Physiography

The allotment is 28 miles southwest of Silver City, Idaho near the Idaho/Oregon stateline in Owyhee County. The elevations of the allotment range from 5,000 to 5,800 feet. The allotment is in USDA Natural Resource Conservation Service Major Land Resource Area D-25, Owyhee High Plateau (USDA, NRCS 2006).

The annual precipitation ranges from 11-17 inches and the frost-free period is 55 to 90 days. The major landforms for the public land in the area are categorized as foothills and mountains. The soils are loams with a slope of 1 to 40 percent. Soil depth ranges from hardpan to moderately deep. The hazard of water and wind erosion is slight or moderate. Common vegetation includes low sagebrush, Idaho fescue, bluebunch wheatgrass, and mountain big sagebrush with an occasional western juniper.

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Western juniper occurrence is discussed further in the document.

Table A1: Land Status Acreage*

Public	State	Private	Total
860	516	2,610	3,986

*Acreages represent best available estimates

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Updated land status acreage

Table ALLOT-1: Land status acreage* for the Dougal FFR allotment

Public	State	Private	Total
868	502	2,590	3,961

*Acreages represent best available estimates

The estimated land acreages are based on corrected fence locations and GIS mapping information.

Livestock Grazing Management

In the Owyhee Resource Management Plan (1999), the Dougal FFR Allotment was placed in Selective Management Category “Improve” with low priority. Improve allotments are managed with the objective to manage the public lands with adequate expenditure of funding and manpower to improve current unsatisfactory resource conditions. They must also meet or make progress in meeting the Idaho Standards for Rangeland Health. The RMP identified 90 animal unit months (AUMs) of active preference for livestock grazing

Livestock grazing is authorized by a term grazing permit issued to Frankie Dougal. Each year the permit authorizes the following livestock use on the Dougal FFR Allotment:

Table A-2: Permitted Livestock Use

Operator Name & No.	Livestock Kind & No.	Season of Use	Public Land	AUMs		
				Active	Suspended	Permitted
Frankie Dougal	88 Cattle	12/01 to 12/31	100	90	0	90

The allotment is a Fenced Federal Range Allotment. Generally, these allotments include less than 50 percent public lands intermingled with unfenced private and State lands. Livestock grazing is generally authorized at the grazing permittee's discretion, as long as grazing management guidelines are adhered to. Public land in the Dougal FFR Allotment accounts for approximately 22% of the total acreage.

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Within the Dougal FFR allotment are cross fences that divide the allotment into smaller pastures, an irrigation reservoir, and the ranch headquarters, which includes numerous out-buildings. The cross fences are used to manage livestock and the irrigation water is used to grow hay on private land.

Livestock numbers and season of use have varied within this allotment, but generally, in April approximately 250 cattle are moved from the Dougal FFR allotment to Oregon grazing lands. These same 250 cattle are then brought to the home ranch within the Dougal FFR allotment. In June, approximately 187 cattle are moved to the South Dougal allotment and the rest are grazed in the Dougal FFR allotment.

Because the home ranch is located within the Dougal FFR boundaries, most of the cattle they

own stay year-round within the FFR allotment and are grazed in the various pastures or fields.

In accordance with the grazing permit Terms and Conditions; the grazing permittee is required to submit Actual Use Reports at the conclusion of each grazing season annually.

Table A3 summarizes the total AUMs (Private, State and BLM) and the period of use as reported each year on Actual Use Reports.

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Information found in the table below will replace existing information found in original 2006 assessment Table A3 because it appears to be for the South Dougal allotment. The following updated actual use information was submitted without identification of individual pastures, which limits its contribution. Also, the AUMs are calculated as if the allotment were 100 percent public land, even though the allotment is a mixture of private, state, and BLM land. For this reason, actual use AUMs may exceed permitted AUMs.

Table LVST-1: Actual use on the Dougal FFR allotment

	Date	AUMs
2012	6/12-7/15	200
2011	5/12-6/13	28
2010	9/8-9/22	73
2009	No Data	No Data
2008	5/8-8/10	162
2007	No Data	No Data
2006	6/13-8/15	168
2005	No Data	No Data
2004	No Data	No Data
2003	No Data	No Data
2002	No Data	No Data
2001	No Data	No Data
2000	No Data	No Data
1999	No Data	No Data
1998	No Data	No Data
1997	No Data	No Data

Table A3: Actual Use from Actual Use Reports

Year	Livestock No. & Kind	Use Dates	AUMs
2001	187	7/15 – 8/15	
2002	187	7/15 –8/15	
2003	187	7/15 –8/15	200
2004	186	6/8 - 8/8	199
2005	87	8/1 - 9/1	92

Rangeland Health Standards

Standard 1. Watersheds

Four rangeland health evaluations (RH) were completed in the Dougal FFR Allotment in 2001. The procedure for conducting the evaluations is provided in Appendix B. The indicator ratings for the sites are summarized into attributes and expressed in degree of departure from an ecological site description or nearby reference site displaying a natural range of the expected physical and vegetative characteristics. The individual indicator ratings and the relationship of indicators and attributes are displayed in Appendix F of this Report

Sites RH1A and RH1B are located in T9S R6W Sec 23. RH1A represents a Loamy 13-16" ecological site with inclusions of Very Shallow Stony Loam 10-14" ecological site. The ecological site for RH1B was not provided, however based on the location, and plant species present this site represents a Shallow-claypan 12-16" ecological site. Sites RH1C and RH1D were located in T9S R6W Sec 12. Site RH1C represents a Loamy 13-16" ecological site and site RH1D represents a Shallow-claypan 12-16" ecological site.

At RH1A, water flow patterns were short, sometimes connected and tended to be on shallow soils and associated with trails. Pedestals were rated moderate, they appeared to be both active and historic and occurred on both shallow and deeper soils. Bare ground was slightly higher than expected, especially on shallow sites. Slight departure was observed in soil surface resistance to erosion but the soil was somewhat protected with good cover and minimum bare ground. A slight amount of historic soil loss was observed on pedestalled plants and in flow paths. A compaction layer was located approximately two-inches from the surface. The layer was platy and less friable than the soils above. The plant community composition was as expected.

On Site RH1B water flow patterns were short and unconnected and tended to be on shallow soils and common in interspaces. Pedestals were observed on both shallow and deeper soils and were very common between mounds. Bare ground was slightly higher than expected, especially on shallow sites. Slight departure was observed in soil surface resistance to erosion but was somewhat protected with good cover and minimum bare ground. A slight amount of historic soil loss was observed on pedestalled plants and in flow paths. A compaction layer was located approximately two-inches from the soil surface. The layer was platy and less friable than the soils above. The plant community composition was as expected.

The indicators relating to watershed function at RH1C were very close to reference conditions. Water flow patterns were numerous, but short and unconnected. Pedestals and terracettes were common but very short, some having biological crusts on them. The amount of bare ground and litter movement were appropriate for site stability. Some slight historic soil loss was observed. Slight departure was observed in the plant community. Bunchgrasses were as expected but Western junipers were slightly more than expected. No gullies, wind generated soil movement or litter movement were observed. All other indicators were as expected for the site.

On Site RH1D, the soil surface has good organic matter and no surface crusting. The water flow patterns were short and not often connected. Pedestals were common, but less than 1 inch high.

Soil surface resistance to erosion was near reference condition with abundant rock/gravel and vegetative cover. No gullies, wind generated soil movement or litter movement were observed. All other indicators were as expected for the site.

Based on this evaluation, the watershed was providing for the proper infiltration, retention, and release of water appropriate to soil type.

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The site visit of 2013 verified that the findings of rangeland health evaluations of 2001 were still valid with respect to watershed conditions. Soils in pasture 3 occur as a complex of shallow stony sites and loamy sites, too intricate to map at a useful scale. Indicators of soil instability were either not apparent or only slightly visible. Water flow patterns were of short duration when present. Plant pedestals were relatively short when present and mostly historic, suggesting no recent accelerated erosion. Although juniper trees were scattered on the landscape, the watershed still supports a vegetation community with the ability to interrupt overland flow and cycle nutrients and energy. There were no indications of recent accelerated erosion in pasture 3.

Soils in pasture 5 were a mosaic of deep loams and shallow stony sites. Indicators of erosion were within a reasonable range for the major ecological sites. Pedestals were either not apparent or not active. Water flow patterns were diffuse when present. Juniper encroachment was not evident in pasture 5. Some early seral vegetation was noted in patches, but these were not large enough to affect overall watershed health. The accumulation of litter on the soil surface was within a range reasonable enough to maintain soil and watershed health.

Standard 2. Riparian Areas and Wetlands

The following resources occur on BLM administered public lands in the allotment: Two segments of Cherry Creek (less than 0.2 mile in the southwest of the allotment and less than 0.1 mile in the northeast of the allotment); one spring; Dougal Reservoir; and Foster Reservoir. Cherry Creek riparian areas have not been assessed due to limited lengths. The northern segment of Cherry Creek flows along the boundary of public land and is less than 0.1 mile. The Owyhee Resource Management Plan (1999) Table RIPN-1 does not list Cherry Creek as having riparian or fish habitat.

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Approximately 0.2 mile of Cherry Creek that occurs in pasture 8 of the allotment was rated FAR in 2013 (Map RNGE-1A). The channel was deeply incised and the overall morphology had been altered. The floodplain is no longer accessible to flows; thus, hydric species are being eliminated. The stream is the outflow and is affected by Dougal reservoir. Therefore, the potential is low and the stream energy is also low, minimizing scour.

Standard 3. Stream Channel/Floodplain

Stream channel and floodplain resources on public land in the allotment are associated with two segments of Cherry Creek (less than 0.2 mi). The two reaches of Cherry Creek are less than 0.2 & 0.1 miles, therefore inventories and assessments have not been conducted. (See above)

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Approximately 0.2 mile of Cherry Creek that occurs in pasture 8 of the allotment was rated FAR in 2013 (Map RNGE-1A). The channel was deeply incised and the overall morphology had been altered. The floodplain is no longer accessible to flows; thus, hydric species are being eliminated. The stream is the outflow and is affected by Dougal reservoir. Therefore, the potential is low and the stream energy is also low, minimizing scour.

Standard 4. Native Plant Communities

Four rangeland health evaluations (RH) were completed in the Dougal FFR Allotment in 2001. The procedure for conducting the Evaluations is provided in Appendix B. The indicator ratings are summarized into attributes and expressed in degree of departure from the ecological site description or nearby reference area displaying a natural range of the expected physical and vegetative characteristics. The individual indicator ratings and the relationship of indicators and attributes are displayed in Appendix F of this Report. The allotment provides spring/summer/fall habitat for pronghorn antelope and Rocky Mountain elk. The allotment provides winter/yearlong habitat for mule deer (1999 Owyhee Resource Management Plan).

Sites RH1A and RH1B are located in T9S R6W Sec 23. RH1A represents a Loamy 13-16” ecological site with inclusions of Very Shallow Stony Loam 10-14” ecological site. The ecological site for RH1B was not provided, however based on the location, and plant species present this site represents a Shallow-claypan 12-16” ecological site. Sites RH1C and RH1D were located in T9S R6W Sec 12. Site RH1C represents a Loamy 13-16’ ecological site and site RH1D represents a Shallow-claypan 12-16” ecological site.

At RH1A, slight departure was observed in soil surface resistance to erosion but the soil was somewhat protected with good cover and minimum bare ground. Moderate departure was found in the functional/structural groups and was associated with more than expected Sandberg bluegrass. Idaho fescue had slightly more decadence than expected. Western junipers and cheatgrass were present in localized areas. Moderate departure was found in the reproductive capability of the perennial plants. Idaho fescue showed marginal ability for reproduction, all other species had good seedheads and recruitment.

AT RH1B, slight departure was observed in soil surface resistance to erosion but the soil was somewhat protected with good cover and minimum bare ground. Moderate departure was found in the functional/structural groups. This departure was associated with more than expected Sandberg bluegrass and very few bluebunch wheatgrass and Idaho fescue plants. Idaho fescue exhibited slight crown die-out. Cheatgrass and bulbous bluegrass were present but only slightly more than expected for the site. Reproductive capability of the perennial plants had moderate departure with few seed stalks on Idaho fescue.

At RH1C, Western junipers were common and bulbous bluegrass was frequent which was considered a moderate departure in invasive plants. All other indicators were as expected. Resistance to erosion was good with only slight historic soil loss. Antelope bitterbrush mortality occurred throughout the site but was not a serious problem. Good seedheads were present on bluebunch wheatgrass with high vigor. Antelope bitterbrush recruitment was low.

RHA1D had very similar conditions to RH1C with each indicator placed in the same departure category and with the same basic comments.

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The 2006 assessments consisted of four field evaluations conducted in 2001 within pastures 3 and 8 of the allotment. Overall departures from reference condition for all sites were slight to moderate. The strongest indication of the departure was a shift in species composition constituting the presence of invasive plants (cheatgrass, bulbous bluegrass, and juniper) and a reduction of deep-rooted bunchgrasses (bluebunch wheatgrass, Idaho fescue). Noted in pasture 8 were areas with compaction and a moderate departure for reproductive capability. Aerial imagery from 2011 (ESRI, 2013) display a strong presence of juniper outside of reference condition within pastures 1, 3, 4, and 8, representing a departure from the reference condition. Descriptions for the ecological sites present in these pastures (Loamy 13-16” and Shallow Claypan 12-16”) identify juniper as an invasive species that when dominant, results in a new state requiring management inputs to restore ecological function of the reference site sagebrush/bunchgrass state.

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In 2011, utilization was collected in pastures 3, 4, and 8, with two stops having no apparent use and one stop having 4 percent use of Idaho fescue.

Pasture 4: No apparent use

Pasture 3: No apparent use

Pasture 8: 4 percent FEID

An average residual stubble height of 24 inches was also noted in pasture 8.

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

This assessment includes a review of data collected and water quality standards established by Idaho Department of Environmental Quality (IDEQ). The State is divided into basins and sub-

basins and assessment units. The 2005 Integrated Report (303(d)/305(b)) uses “assessment units” within the sub-basin. Assessment units are groups of similar streams within a sub-basin that have similar land use practices, ownership, or land management. Assessment units are assessed for pollutants and assigned Beneficial Uses with associated Water Quality Standards. The Beneficial Use Reconnaissance Program (BURP) is a field assessment of stream segments (all IDEQ data and standards mentioned here are available on the IDEQ web site- see references listed in section IV of this document).

Additional information collected by the BLM includes riparian inventories, riparian Proper Functioning Condition (PFC) assessments, riparian habitat evaluation forms, stream survey forms, riparian aquatic data sheets, thermograph data and water quality monitoring data (BLM data are available at the Owyhee Field Office in Marsing, Idaho).

Cherry Creek flows through two parcels of public land for less than 0.2 miles. IDEQ has not assessed the assessment unit, has not assigned beneficial uses and has not listed pollutants. Two reservoirs, Foster and Dougal, occur partly on private and public lands. Cherry Creek riparian areas have not been assessed. The northern segment of Cherry Creek flows along the public land boundary line and if on public land would be shorter than 0.1 miles. The Owyhee Resource Management Plan (1999) Table RIPN-1 does not list Cherry Creek as having riparian or fish habitat.

Standard 8. Threatened and Endangered Plants and Animals

Botany

No federally listed plant species are known to occur in the Dougal FFR 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.

Two BLM special status plants are known to occur on the Dougal FFR Allotment. Bacigalupi's calico-flower (*Downingia bacigalupii*), is a BLM Type 4 species and occurs in marshes, wet meadows and streambanks. One-flowered goldenweed (*Pyrocoma uniflorus* var. *howellii*) is a BLM Type 5 special status species that occurs in wet or dry, and often on alkaline, meadows.

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Overview – Special Status Plants

No Federally listed Threatened or Endangered animals are known to occur in the Dougal FFR allotment. Two BLM special status plants have been located within this allotment, Bach's calicoflower (*Downingia bacigalupii*) and thinleaf goldenhead (*Pyrocoma linearis*) (formerly *Pyrocoma uniflorus* var. *howellii*).

Bach's calicoflower occurs in the shallow periphery and drying mud of vernal pools, muddy

margins of lakes, wet meadows, roadsides, irrigation ditches, and streambanks. Its primary concentration is in northern California and southern Oregon, with Idaho and Nevada encompassing the eastern extents (USDA NRCS, 2013). It is an herbaceous annual about 2 to 8 inches tall, germinates in late spring to early summer, and its flowering and fruiting period follows the receding waterline through the summer. It is most sensitive to grazing during critical growth and flowering. Cattle are typically drawn to this habitat type because it is a water source. Livestock impacts to this genus have been documented elsewhere as a result of trampling when soil was wet, although plants can apparently persist in areas subjected to some trampling, at least in the short term. Records of Bach's calicoflower in this allotment are from pastures 4 and 7.

The epicenter of the pasture 4 occurrence is at Dougal Reservoir in Dougal FFR with the eastern and western perimeter of the polygon stretching into South Dougal allotment and Wilson Creek FFR. Although a thorough botanical survey for this species within the broadly identified area of occurrence has not been performed, it is highly unlikely this occurrence goes beyond Dougal Reservoir habitat because the locality information on the 1977 observation report is Dougal Reservoir and there is a lack of suitable habitat within this polygon in adjacent allotments/pastures away from Dougal Reservoir. The pasture 7 occurrence is also broadly mapped with a location of Dougherty Creek. Within the project area, Dougherty Creek only occurs in pasture 7 of the Dougal FFR, and only on private land. This occurrence is not considered for the purpose of this analysis due to the lack of specific location information (public or private land) in addition to the extended period of time since last visited (circa 1977).

Thinleaf goldenhead occurs in wet or dry, often alkaline meadows, streambanks, or around springs. Its world-wide range is Owyhee County, Idaho, and Harney County, Oregon (USDA NRCS, 2013). It is an herbaceous perennial about 6 to 12 inches tall. It is most sensitive to grazing during critical spring growth (March-April) and flowering (May-June), but its subterranean, rhizomatous growing point is somewhat resistant to moderate trampling at other times of year (Beth Corbin May 22, 2013 personal communications; see notes in the Owyhee Field Office administrative record). The one known occurrence of thinleaf goldenhead occurs in pasture 4 and was recently extended from the west side of Dougal Reservoir to the east side.

Wildlife

A number of species classified as BLM "Sensitive Species" and/or State of Idaho "Species of Greatest Conservation Need" are known or likely to occur within the allotment. A summary of these species, their legal status, and their key habitat associations are included in Appendix C.

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Overview – Special Status Animals

No Federally listed threatened or endangered animals are known to occur in the Dougal FFR allotment. One candidate species, the greater sage-grouse, is known to occur within the allotment and a second candidate species, the Columbia spotted frog, could potentially occur in the allotment. As many as nine mammal, 13 bird, one amphibian and four reptile species with BLM special status (including Watch List Species) potentially may occur within the allotment. Special status species that have been documented in the Idaho Fish and Wildlife Information System (IDFG, 2011) within the allotment include ferruginous hawk, white-faced ibis, white-headed woodpecker, and western toad. Brewer's sparrow, a BLM sensitive species, has been

identified within 1 mile of the allotment.

Riparian Habitat

A segment of Cherry Creek flows through one parcel of public land for approximately 0.2 miles. Cherry Creek riparian areas have not been assessed. Assessment on the adjacent allotment up to the southern boundary indicates the creek is intermittent with 20 percent being riparian like. A second segment of Cherry Creek is along the boundary line of BLM and if on public land would be shorter than 0.1 miles. Two reservoirs, Foster and Dougal, occur partly on private and public lands. Cherry Creek has been diverted via irrigation canals into the reservoirs. Therefore Cherry Creek stream flows have been altered by diversions. This would have an adverse effect on Cherry Creek riparian area and dependant special status species and other wildlife, at least seasonally. The reservoirs and shores create a unique habitat for amphibians, shore birds and other waterfowl and sage grouse. The Owyhee Resource Management Plan (1999) (RMP) Table RIPN-1 does not list Cherry Creek as having riparian or fish habitat.

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Additional Columbia spotted frog surveys were conducted by Idaho Department of Fish and Game in 2008 and 2009 in limited areas of Dougal FFR; no frogs were detected.

General Upland Habitat Assessment

The functional and structural groups were generally close to what is expected for the site and were likely to be providing habitat that was marginally adequate for the needs of most dependant special status and other wildlife species. The localized lack of large bunchgrasses, reduced shrub cover and increased juniper were limiting cover, structure and forage for sage grouse, numerous songbirds, pygmy rabbits and others including a diversity of insects, rodents, birds and others that are critical prey for most raptors including prairie falcons, northern harriers and ferruginous hawks. Site stability was being provided by ground cover, litter and biological soil crusts.

Other Vertebrates

On portions of the allotment native perennial grass and forbs were slightly reduced in abundance and have been partially replaced locally by exotic annual grasses and encroachment of western juniper. The habitat of desirable native perennial grasses, forbs and shrubs was slightly reduced in ability to support forage and cover needs for these large ungulates and other smaller vertebrates. On other portions of the allotment native vegetation was at or near reference conditions and was providing cover and for needs of these large ungulates and other smaller vertebrates. Surveys from 2002 to 2005 did not find occupied Columbia spotted frog habitat.

Sage Grouse

The allotment has key sage grouse habitat. Sage grouse lek (breeding ground) surveys from 1994 to 2003 have not identified active leks within or in close proximity of this allotment.

Breeding habitat

Breeding habitat has been assessed in accordance with methodologies described in “A Framework to Assist in Making Sensitive Species Habitat Assessments for BLM-Administered Public Lands in Idaho” (as revised in May 2001). Refer to Appendix D for sage grouse habitat assessment worksheets that include specific rating criteria for each habitat indicator.

One breeding habitat assessment in 2004 found the site to be unsuitable habitat. The site was a mesic juniper cover type (9S6W23 SE¼NE¼). Table A4 portrays suitability by indicators. Most of the allotment was characterized by western juniper, low sagebrush, Idaho fescue, Thurber needlegrass and mountain brome. Bluebunch wheatgrass, Idaho fescue, Thurber needlegrass and mountain brome had good density in the interspaces (15 to 20 percent), although growth height averaged less than 6 inches. Forb diversity and abundance was good and included three species preferred by sage grouse. Overall, the site was unsuitable habitat for large ground nesting birds due to low grass height and shrub cover. The presence of two large reservoirs would make good brood-rearing habitat except for the lack of cover.

Table A4: Sage Grouse Breeding Habitat Assessment (2004) – Pasture 8

Habitat Indicator	Suitable Habitat	Marginal Habitat	Unsuitable Habitat
Average Sagebrush Canopy Cover *			
Average Sagebrush Height *			
Sagebrush Growth Form		X	
Average Grass and Forb Height		X	
Average Perennial Grass Canopy Cover	X		X
Average Forb Canopy Cover		X	
Preferred Forb Abundance and Diversity	X		
Overall Site Evaluation			X

*not recorded

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Subsequent to 2001, the status of greater sage-grouse changed from a BLM Sensitive Species to a Federal Candidate Species. Additionally, BLM adopted the concept of Preliminary Priority Habitat (PPH) as the most important sage-grouse habitat in affording conservation to the bird. The majority of the Dougal FFR allotment is identified as PPH for sage-grouse; however, the area is experiencing encroachment of western juniper, which reduces the quality of PPH. Additionally, much of the acreage identified as PPH is located on private lands or the site potential is low sagebrush, not big sagebrush. No sage-grouse leks are located within the allotment; however, several historic but unoccupied leks exist within 4 miles of the allotment in Idaho and Oregon.

Four additional greater sage-grouse breeding assessments were conducted in 2013 in pastures 3, 4, 5, and 8. Overall, data suggest inadequate big sagebrush acreages in the allotment due to both the encroachment of western juniper and the site potential. Due to the previously mentioned factors, sage-grouse nesting habitat is generally rated as marginal.

Although nesting habitat is limited in the Dougal FFR allotment, the allotment still provides suitable early and late brood-rearing habitat due to adequate preferred-forb cover and diversity.

Wet areas around the reservoirs likewise provide suitable late brood-rearing habitat for sage-grouse.

Table WDLF-1: Sage-grouse Breeding Habitat Assessment (2013) - pasture 3

Habitat Indicator	Suitable Habitat	Marginal Habitat	Unsuitable Habitat
Average Sagebrush Canopy Cover		X	
Average Sagebrush Height		X	
Sagebrush Growth Form	X		
Average Grass and Forb Height		X	
Average Perennial Grass Canopy Cover		X	
Average Forb Canopy Cover	X		
Preferred Forb Abundance and Diversity	X		
Overall Site Evaluation		X	

Table WDLF-2: Sage Grouse Breeding Habitat Assessment (2013) – pasture 4

Habitat Indicator	Suitable Habitat	Marginal Habitat	Unsuitable Habitat
Average Sagebrush Canopy Cover			X
Average Sagebrush Height	X		
Sagebrush Growth Form	X		
Average Grass and Forb Height			X
Average Perennial Grass Canopy Cover	X		X
Average Forb Canopy Cover	X		
Preferred Forb Abundance and Diversity	X		
Overall Site Evaluation		X	

Table WDLF-3: Sage Grouse Breeding Habitat Assessment (2013) – pasture 5

Habitat Indicator	Suitable Habitat	Marginal Habitat	Unsuitable Habitat
Average Sagebrush Canopy Cover		X	
Average Sagebrush Height	X		
Sagebrush Growth Form	X		
Average Grass and Forb Height	X		
Average Perennial Grass Canopy Cover		X	
Average Forb Canopy Cover		X	
Preferred Forb Abundance and Diversity	X		
Overall Site Evaluation		X	

Table WDLF-4: Sage Grouse Breeding Habitat Assessment (2013) – pasture 8

Habitat Indicator	Suitable Habitat	Marginal Habitat	Unsuitable Habitat
Average Sagebrush Canopy Cover		X	
Average Sagebrush Height	X		
Sagebrush Growth Form	X		
Average Grass and Forb Height			X
Average Perennial Grass Canopy Cover			X
Average Forb Canopy Cover	X		
Preferred Forb Abundance and Diversity	X		
Overall Site Evaluation		X	

B. South Dougal Allotment (0536)

Physiography

The South Dougal Allotment is located approximately 22 miles south of Jordan Valley, Oregon in Owyhee County, Idaho. Elevations range from approximately 4,900 to 6,000 feet. The soils are generally loams with varying amounts of silt, sand, and rock; are shallow to moderately deep and have a slight to moderate erosion potential from water and wind. The native plant communities are characterized by low sagebrush, with Idaho fescue, bluebunch wheatgrass, and Sandberg bluegrass.

Table B1: Land Status Acreages* of South Dougal Allotment

Pasture	Public	State	Private	Total
1	2,269	2	38	2,309
2	1,914	0	15	1,929
Total	4,183	2	53	4,238

*Acreages represent best available estimates

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Updated Land Status Acreage

Table ALLOT-2: Land status acreages* of the South Dougal allotment

Pasture	Public	State	Private	Total
1	2,261	9	30	2,300
2	1,919	2	10	1,931
Total	4,180	11	40	4,230

*Acreages represent best available estimates good numbers

The estimated land acreages are based on corrected fence locations and GIS mapping information.

Livestock Grazing Management

The 1999 Owyhee Resource Management Plan (Table LVST-1) identified the South Dougal Allotment as a ‘Maintain’ allotment. The main objective for ‘Maintain’ allotments is to manage the public lands with minimal expenditure of appropriated funds and maintain or improve current satisfactory resource conditions. The allotment must also meet or move toward meeting the Idaho Rangeland Health Standards. Livestock use was allocated at 374 animal unit months (AUMs) of forage for Active Permitted Use with cattle.

The Bureau of Land Management (BLM) authorizes livestock grazing with a term permit issued to Frankie Dougal which expires in 2013. The permit provides for the following use annually:

Table B-2: Permitted Livestock Use

Operator Name & No.	Livestock Kind & No.	Season of Use	Public Land	AUMs		
				Active	Suspended	Permitted
Frankie Dougal	106 Cattle	6/12 to 9/30	100	374	253	627

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The South Dougal Allotment Management Plan was approved by the BLM in September 1984. The plan objective was to improve rangeland condition by promoting livestock grazing distribution and proper range utilization through water developments, fence construction, and controlled season of use. The plan prescribed a two-pasture deferred rotation grazing system with flexibility, with alternating years of use deferred on each pasture until seed-ripe, which normally occurs the second or third week of July. Even though the plan recommended projects, no new projects were determined to be necessary, as the majority of the range improvement projects had been constructed.

As described in the Dougal FFR livestock section, the livestock that graze in this allotment come from Oregon. After the grazing season ends September 30 the cattle are then moved back to the Dougal FFR allotment.

Reported Actual Use

Each year the grazing permittee is requested to document the number, kinds and dates of use that is made in the allotment. The information from those reports is summarized in the following table.

Table B3: Reported Actual Use in AUMs

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
AUMs	363	374	368	388	395	372	■	347*	376*	■	399

■ No actual use reports are available for this year or information not complete

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Table LVST-2a: Reported actual use for the South Dougal allotment

Year	2006	2007	2008	2009	2010	2011	2012
AUMs	394	383	313	159	718	174	194

The following historical information has been updated to account for a lack of accuracy.

Table LVST-2b: Updated actual use for 1997 and 1999

Year	1997	1999
AUMs	381	390

Table B4: Pasture Use Schedule

Pasture	1991	1992	1993	1994	1995	1996	1997	1998	1999
1	6/05-7/11	7/11-7/31	6/20-8/11	6/14-6/19 7/22-8/15	6/15-7/22	7/23-8/15	6/15-7/22	6/15-7/21	6/15-7/19
2	7/12-8/6	5/30-7/10	8/2-8/15	6/19-7/22	7/23-8/15	6/15-7/22	7/23-8/15	7/22-8/15	7/20-8/15

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Table LVST-3: Pasture use schedule for the South Dougal allotment

Pasture	2000	2001	2002*	2003*	2004	2005*	2006	2007*	2008	2009	2010	2011	2012
1	7/10-8/13	--	6/13-8/15	6/13-8/15	--	6/12-8/15	6/13-7/15	6/14-8/15	6/13-7/14	7/15-8/18	6/12-7/31	7/15-8/15	7/15-8/15
2	6/13-7/9	--	6/13-8/15	6/13-8/15	--	6/12-8/15	7/15-8/15	6/14-8/15	7/15-8/16	6/20-7/14	8/1-9/30	6/15-7/14	Rested

The following historical information found in Table B4 of the 2006 original document has been updated to account for a lack of accuracy.

Table LVST-4: Updated pasture rotations for the South Dougal allotment

Pasture	1991	1992	1993	1994	1995	1996	1997	1998	1999*
1	6/06-7/05	7/5-8/8	6/20-8/1	7/22-8/15	6/15-7/13	6/15-7/13	6/15-7/22	7/12-8/15	6/14-8/19
2	7/7-8/6	5/30-7/4	8/2-8/16	6/13-7/22	7/14-8/14	7/14-8/14	7/23-8/15	6/13-7/11	6/14-8/19

-- No actual use reports are available for this year or information not complete

*pasture rotation not specified in actual use or unclear

Standards for Rangeland Health

Standard 1. Watersheds

During 2001, Rangeland Health Worksheets were completed at four locations in this allotment; however one of those locations was on private land, and therefore is not included in this assessment. Table B5 presents a summary of indicator ratings by pasture; Appendix F includes

indicator ratings by individual site. The locations of the rangeland health assessments are shown on the attached allotment map. The following table summarizes the indicators relative to watershed health and shows the number of indicators rated by the degree of departure from what is expected for the site's natural range of physical and vegetative characteristics.

Table B5: Summary of Rangeland Health Indicators

Standard 1-Watersheds	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Pasture 1*	11	13	0	0	0
Pasture 2†	4	8	0	0	0

*Summary of two evaluations. (one Very Shallow Stony Loam 10-14", and one Stony Clayey 12-16" ecological site)

†Summary of one evaluation (very shallow stony loam 10-14" ecological site)

Pasture 1

Indicators of Rangeland Health

RH1A represents a Stony Clayey 12-16" ecological site with inclusions of Loamy 13-16" ecological site in the northern portion of the pasture. The majority of watershed related indicators rated in the slight-to-moderate range of departure from expected conditions for this ecological site. The water flow patterns and pedestal and terracette indicators rated in the slight to moderate range, and described as common on the clayey sites, but not present on the loamy sites. The indicator for bare ground recorded more bare soil on the clayey sites also. Overall, the ecological processes that provide for watershed health appear to be functioning, although more deviation is evidenced on the clayey sites than the loamy sites.

At RH1B, representing a Very Shallow Stony Loam 10-14" ecological site in the southern portion of the pasture, the majority of watershed related indicators rated in the none-to-slight range of departure from expected conditions for the ecological site. The indicators for water flow patterns, pedestals and terracettes, soil surface resistance to erosion, and soil surface loss or degradation, and compaction layer all rated in the slight-to-moderate range of departure for expected conditions for this ecological site. Worksheet comments describe the water flow patterns as short and seldom connected. Pedestals were described as a combination of current and historic conditions less prominent on deeper soils, indicating some of the pedestaling may be attributed to frost heaving in the clay soils. A slight compaction layer was noted 1-3 inches below the soil surface.

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The site visit in 2013 verified different soil characteristics between pasture 1 and pasture 2, documented in the Owyhee County Soil Survey. In general, pasture 1 soils tend to be deeper, less rocky, and potentially more productive than pasture 2 soils, which are typically shallow, stony, and therefore have less water-holding capacity. Substantial areas of both pastures had dead or decadent stands of sagebrush, although the stands in pasture 2 were occasionally decadent, while those in pasture 1 were often dead. The most apparent area of shrub die-off appears to have occurred in the north eastern portion of pasture 1, although decadent shrub stands in other areas

of pastures 1 and 2 were also evident. Inspection of watershed conditions during the site visit revealed no observable evidence of accelerated erosion. Litter amounts were good. Bare ground was within a reasonable range. The plant community was healthy, except for the shrub component. A healthy shrub component is known to play a key functional role in semiarid shrub-steppe watersheds, resulting in more complete utilization of the water and nutrients available throughout the entire soil profile and a greater potential for energy flow (Prevéy, Germino, & Huntly, 2010) (National Research Council, 1994). The herbaceous plant community appeared healthy over a great majority of the allotment. Juniper tree cover appeared to be increasing in pasture 2 along the Cherry Creek drainage.

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Trend Data

Cover data at site 09S06W02 has been tracked since 1988, with repeated readings in 1995, 2001, 2007, and 2011 (Appendix H). Of all the cover categories, bare ground and non-persistent litter have fluctuated the most during that time. Although bare ground has increased slightly since 2007, the overall trend since 1988 has been a decrease in bare ground. Conversely, non-persistent litter decreased since 2007, but the trend since 1988 has been an increase in non-persistent litter. The apparent correlation between bare ground and non-persistent litter is not uncommon in sagebrush systems. Bare ground in sagebrush systems depends in large part on annual production and subsequent utilization levels. At approximately 22 percent, levels of bare ground at the site in 2011 were below reference conditions (40 to 50 percent) for the ecological site.

Ground cover by stable agents (i.e., litter, rock, or vegetation) has exceeded the 30 to 60 percent range suggested by the ecological site description since monitoring began at the site. Basal vegetation cover has remained relatively static since 1988, averaging somewhere between 5 and 10 percent, except for 2007 when basal vegetation decreased to nearly zero, then recovered. Canopy cover values on the other hand, have decreased since 2001 by approximately 10 percent.

Frequency data indicate a strong decline in shrubs (primarily mountain big sagebrush) beginning sometime after 1995, reaching near zero by 2007, with no recovery apparent since then. Shrub density data also document a strong decline in sagebrush at the site. Samples through 1995 averaged approximately 6,300 mature sagebrush stems per acre. By 2007, samples decreased by an order of magnitude, to approximately 400 stems per acre. Photo plot data support the decrease in canopy cover and frequency values between 2001 and 2007. Mature shrubs at the site apparently died off sometime between 2001 and 2007. By 2011, photographs show some recovery in the shrub component, though nowhere near pre-disturbance levels (Appendix J, Figures 1 and 2).

Grass species frequencies indicate general maintenance of the herbaceous understory necessary to prevent accelerated erosion. However, the strong increase in bulbous bluegrass from 10 percent in 1988 to 90 percent in 2011 may reduce the watershed's potential for nutrient cycling and energy flow if larger-statured grasses become depleted in the future. Bulbous bluegrass provides neither the root structures necessary to penetrate deeply into the soil profile nor the

ability to photosynthesize during the growing season that larger-statured native bunchgrass species do. Trend data suggest that the native deep rooted bunchgrass community is stable, despite the increase in bulbous bluegrass frequency.

Notable comments made by the field crew include the outstanding precipitation year of 1995 (Appendix G). That year, the crew noted the proximity of water to the study site and heavy utilization on Idaho fescue by July 11.

Pasture 2

Indicators of Rangeland Health

RH2A represents a Shallow Claypan 12-16" ecological site in the southern portion of the pasture. Indicator descriptions identified water flow patterns and pedestals on shallow soils. The indicator for bare ground rated in the slight-to-moderate range of departure due to an increase of litter. The indicator for the composition and distribution of the plant community rated in the slight-to-moderate range due to a slight decrease of the large, deep-rooted perennial grasses. Overall, the habitat in this area is intact and functioning adequately.

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Trend Data

Cover data at site 09S06W26 has been tracked since 1988, with repeated readings in 1995, 2001, 2007, and 2011 (Appendix H). Bare ground has decreased slowly but steadily during that time. Meanwhile, non-persistent litter cover increased from approximately 25 percent to approximately 50 percent for the same time period. The apparent inverse relationship between bare ground and non-persistent litter was also documented in pasture 1 of the allotment. At approximately 30 percent, the amount of bare ground measured at the site in 2011 borders on the 20 to 30 percent range suggested in the ecological site description.

Further ecological site reference information suggests that ground cover by litter and vegetation generally ranges between 20 percent and 35 percent at these types of sites. Measured values have consistently exceeded that range since 1988, due in large part to non-persistent litter cover. Basal vegetation cover has remained relatively static at the site since 1988, hovering around 10 percent. The apparent 7 percent decrease in canopy cover measured at the site between 2001 and 2011 was not statistically significant ($P = 0.15$, $n=5$, $\alpha=0.1$).

Although the sagebrush canopy cover decrease was not statistically significant, frequency data indicate a strong decline in the number of sagebrush plants at the site beginning in 1988, when frequency was measured at 90 percent and continuing until 2007. By 2011, low sagebrush frequency stabilized to approximately 20 percent. The decline in sagebrush frequency at this site is coincident with the declines at the trend site in pasture 1, suggesting a common disturbance factor between the two areas. Sagebrush declines in the region have been known to occur as a result of defoliation by Aroga moth, and infestations of Aroga moth are known to have occurred in parts of the greater Owyhee uplands in the spring and summer of 2012.

Grass species frequencies indicate general maintenance of the herbaceous understory necessary to prevent erosion, cycle nutrients, and provide pathways for energy flow. The deep-rooted

perennial grasses have been static or upward over the long term. As with the site in pasture 1, bulbous bluegrass is a concern, increasing by 70 percent since 2001.

Density data support frequency data in terms of the declining sagebrush component. The greatest decline in sagebrush density occurred sometime between 1988 and 1995, when the number of mature individuals per acre decreased by an order of magnitude from over 16,000 to 5,700, on average. More recent samples of sagebrush density at the site average 2,200 mature stems per acre, indicating further declines. Photographs from prior to 2007 indicate a fairly uniform sagebrush stand. Photographs from 2007 and later show sagebrush component more diffuse and patchy than earlier photographs. Shrub skeletons are clearly visible in the 2007 photos.

Standard 2. Riparian Areas and Wetlands

Cherry Creek is the primary riparian resource on public lands in the South Dougal Allotment. The 1999 Owyhee Resource Management Plan (Table RIPN-1) did not identify the South Dougal Allotment as having unsatisfactory riparian habitat conditions. The following is discussion of Cherry Creek riparian data.

Cherry Creek

Cherry Creek crosses the allotment on public land for 1.16 miles in Section 26 and 27 of Pasture 2. Cherry Creek is an intermittent stream with flows altered by upstream reservoirs and diversions. Portions of the stream are non-riparian. Typically by July approximately 80 percent of the stream channel may be without surface water. However, some pools may contain perennial water.

Cherry Creek was inventoried in July 2000 using the 1998 Owyhee and Bruneau Riparian Inventory Procedures (Appendix E; Map RNGE-1), it was assessed as Non-Functional. Fifty-five to sixty percent of the segment was classified as a Baltic Rush Community Type. Sandbar Willow Community Type represented the remaining 25-35 percent. Although the willows were not common, heavy browsing was observed. The riparian vegetation was not in good condition, and the composition, age class, and structural diversity of the riparian/wetland vegetation were not appropriate. Willows were generally missing or decadent and were not controlling erosion, stabilizing streambanks, or shading water areas. Riparian/wetland vegetation with deep, strong, binding roots was largely missing and not sufficient to stabilize streambanks and shorelines

Table B6: Riparian Indicators and Functioning Condition Rating for Cherry Creek

Riparian/Wetland Indicators:	CHE-001
Stream miles	1.16
Date of data collection	7/2000
Diverse age class/structure of hydric vegetation (6)	N
Diverse composition of hydric vegetation (7)	N
Vegetation reflects maintenance of soil moisture (8)	N
Plant community comprised of bank stabilizing species (9)	N
Hydric vegetation exhibits high vigor (10)	N

Adequate hydric vegetation cover to protect banks and dissipate energy (11)	N
Adequate large woody material (12)	N
Point bars re-vegetating with hydric species (14)	Y/N
Noxious weeds present	N
Overall functioning condition *	NF
Apparent trend	NA

- (Y=yes, N=no, Y/N =portions meet and portions do not meet)
- () - item # on Function/Health Assessment
- PFC- Proper Functioning Condition, FAR- Functional-At Risk, NF-Nonfunctional (overall rating determined from examination of both riparian and channel/floodplain indicators)
- UP – Upward, DN- Downward, S- Static, NA- Not Apparent or Identified

Livestock Use

Stubble height measurements are a simple and effective tool to monitor rangeland use in key areas. Individual plant measurements are collected from herbaceous vegetation such as grasses, sedges, and rushes. Generally stubble heights of 4 to 6 inches are an acceptable standard for effective streambank, protection, prevention of sedimentation, and maintenance of plant communities (USDI, BLM 1999). Table B7 displays information on utilization for the various riparian areas of the allotment.

Table B7: Riparian Utilization Monitoring and Stubble Heights

Location	Pasture	Date	Inches	Shrub Use
CHE-001	2	7/2000	3	>50%

Standard 3. Stream Channel/Floodplain

Cherry Creek crosses public land in the South Dougal Allotment for 1.16 miles. Cherry Creek is an intermittent stream. Water flow has been altered by upstream reservoirs and diversions. Portions of the stream are non-riparian. Typically by July approximately 80 percent of the stream channel has no surface water, however, some pools may be perennial.

Cherry Creek was inventoried in July 2000 using the 1998 Owyhee and Bruneau Riparian Inventory Procedures (Appendix E; Map RNGE-1). It was found to be Non-Functional. The stream segment was classified as a Rosgen B3c on 25 to 35 percent of the segment (Rosgen, 1996). B3 streams are typically developed in very coarse alluvial fans, lag deposits from stabilized slide debris, rock fall, talus and very coarse colluvial deposits and structurally controlled drainage ways. The bed and bank materials of B3 steam types are stable and contribute only small quantities of sediment during runoff events (Rosgen, 1996).

The stream channel for Cherry Creek was not entrenching; however, the channel is dished out and had poorly defined banks. The stream has eroded down to where it is fairly stable due to bed and bank materials. Vegetation with deep, binding root masses occurred on less than 64 percent of the stream. Pugging on steam banks was apparent on 15-25 percent of the segment. Noxious weeds were not observed on the segment.

Table B8: Stream Channel/Flood Plain Indicators and Functioning Condition rating by segment on Cherry Creek

Stream Channel/Flood Plain Indicator	CHE-001
Date of data collection	7/2000
Stream miles	1.16
Floodplain inundated frequently (1)	N/Y
Beaver dams are active and stable (2)	N
Sinuosity, w/d ratio, gradient in balance with landscape setting (3)	N
Upland watershed not contributing to riparian degradation (5)	Y/N
Adequate hydric vegetation cover to protect banks and dissipate energy (11)	N
Adequate large woody material (12)	N
Floodplain and channel characteristics dissipate energy (13)	Y
Point bars revegetating with hydric species (14)	Y/N
Lateral stream movement associated with natural sinuosity (15)	Y
System is vertically stable (16)	Y
No excessive erosion or deposition (17)	Y/N
Overall functioning condition*	NF
Apparent trend [■]	NA

(Y=yes, N=no, Y/N =portions meet and portions do not meet) () - item # on Function/Health Assessment

* PFC- Proper Functioning Condition, FAR- Functional-At Risk, NF- Nonfunctional (overall rating determined from examination of both riparian and channel/floodplain indicators)

■ UP- Upward, DN- Downward, S- Static, NA- Not Apparent or identified

Standard 4. Native Plant Communities

During 2001, four rangeland health assessments were completed in this allotment; however one site was located on private land and therefore is not included in this assessment. Table B9 summarizes the indicators by rating, for biotic integrity by pasture. Appendix F presents individual indicator ratings by site, and the allotment map shows the location of the assessments. The following table summarizes the indicators relative to watershed health and shows the number of indicators rated by the degree of departure from what is expected for the site.

Table B9: 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* ¹	8	10	0	0	0
Pasture 1* ²	4	5	0	0	0

*¹Summarizes: 1 Very Stony Shallow Loam 10-14", and 1 Stony Clayey 12-16" ecological sites

*²Summarizes: 1 Clayey, or Stony Clayey 12-16" ecological sites

Pasture 1

Indicators of Rangeland Health

RH1A represents a Stony Clayey 12-16” ecological site with inclusions of Loamy 13-16” ecological site in the northern portion of the pasture. Rangeland health indicators relating to biotic integrity rated in the none-to-slight or slight-to-moderate ranges of departure for this ecological site. The observed plant vigor was excellent, many large perennial grasses were observed throughout the plant community, and numerous seed stalks were present on perennial grasses. Overall, the plant community at this site is functioning and providing proper nutrient, energy, and hydrologic cycling.

RH1B, represents a Very Shallow Stony Loam 10-14” ecological site in the southern portion of the pasture. Rangeland health indicators relating to biotic integrity rated in the none-to-slight or slight-to-moderate ranges of departure for the ecological site. Some shrub decadence was attributed to insect damage, otherwise descriptions of the indicators show good plant vigor, adequate seed stalk production, and an appropriate balance of functional and structural vegetative groups. Overall, the plant community at this site is functioning and providing proper nutrient, energy, and hydrologic cycling.

Long-term Vegetation Study (Trend)

A nested plot frequency transect study is located at T09S, R06W Sec02. It was established in 1988 and re-read in 1995 and 2001. Data are shown graphically in Appendix H. At this site, the frequency of most perennial grasses remained stable over the time period. With the exception of bottlebrush squirreltail which declined from 83 percent in 1988, to 61 percent in 1995 and 51 percent in 2001. Bulbous bluegrass, an introduced perennial grass, exhibited a marked increase during this period; it was not recorded in 1995, and may not have been separated from Sandberg bluegrass. During certain phenological periods, these two bluegrasses are difficult to distinguish from each other. The frequency of shrubs at this site decreased between 1995 and 2001 from 44 percent to 16 percent, respectively.

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The 2006 Rangeland Health Assessments along with trend data, utilization and actual use were used to evaluate the Native Plant Communities Standard. The 2006 assessments consisted of three field evaluations conducted in 2001 within pastures 1 and 2 of the allotment. Pastures 1 and 2 are not meeting Standard 4 due to an imbalance in plant community composition which consists of a strong presence of invasive species and a lack of shrub cover. Trend data show some variation in ecological status relative to the 1999 estimate for the South Dougal allotment, as reported in the Proposed Owyhee Resource Management Plan and Final Environmental Impact Statement. In 1999, the allotment condition was reported to be 75 percent mid-seral and 25 percent early-seral (USDI BLM, 1999b Table VEG-2). It is unlikely the sagebrush die-off in the allotment was captured in its entirety in the 1999 ecological condition, considering sagebrush did not level off until 2007. In addition, as sagebrush declined, bulbous bluegrass increased maintaining a high frequency with few signs of sagebrush recovery. These changes in the plant community indicate a shift of mid-seral conditions to early-seral conditions.

Recent trend data are consistent with the rangeland health assessments both of which identify a change in species composition away from reference condition. Data show a relatively static trend for deep-rooted perennial grasses, a drop in shallow-rooted perennial grasses, and an increase in invasive grasses (cheatgrass, bulbous bluegrass).

It appears invasive grasses could potentially be taking advantage of resources left behind from sagebrush die-off and out-competing Sandberg bluegrass, which has a decreasing trend. These early seral

conditions compromise maintenance of the native plant population and overall proper functioning of ecological processes. Nutrient and hydrologic cycling has the potential to be interrupted with the vast loss of sagebrush, decrease of shallow-rooted perennial grasses, and high presence of invasive grasses.

The Boise District BLM works closely with the Idaho Department of Agriculture, Tribal governments, and county governments to combat noxious weeds. One population of Scotch thistle (*Onopordum acanthium*), treated mechanically in 2006, is known to occur in the northwest corner of pasture 1. This site is less than 0.1 acre and will continue to be treated as a portion of the Boise District weed program. There are no other recorded noxious weed sites within the allotment.

Utilization generally has been below the 50 percent allotted in the ORMP (USDI BLM, 1999a) except for 1997 in pasture 1 when utilization exceeded this by 7 percent. In 2011, stubble height measurements were collected in pasture 1 and 2. In pasture 1, Idaho fescue averaged 12 inches and bluebunch wheatgrass averaged 9 inches. In pasture 2, Idaho fescue averaged 13 inches and bluebunch wheatgrass averaged 12 inches. Actual use data for this allotment indicate a general use pattern of every other spring (critical growing season) and summer use; however, spring and summer use did occur simultaneously in some years. Current grazing management appears to have been effective in maintaining the functional structural groups of the plant community when no environmental stressors were present. However, the loss of sagebrush has decreased the resiliency of the native plant community and increased the susceptibility to invasive species. The lack of rest years in current livestock management is of concern due to the plant community being under stress and the need for recovery between grazing years.

Trend Data

Pasture 1

Figure VEG-1: Frequency of native and non-native grass species at the trend transect (T 09S, R 06W, Sec 02) in pasture 1 of the South Dougal allotment

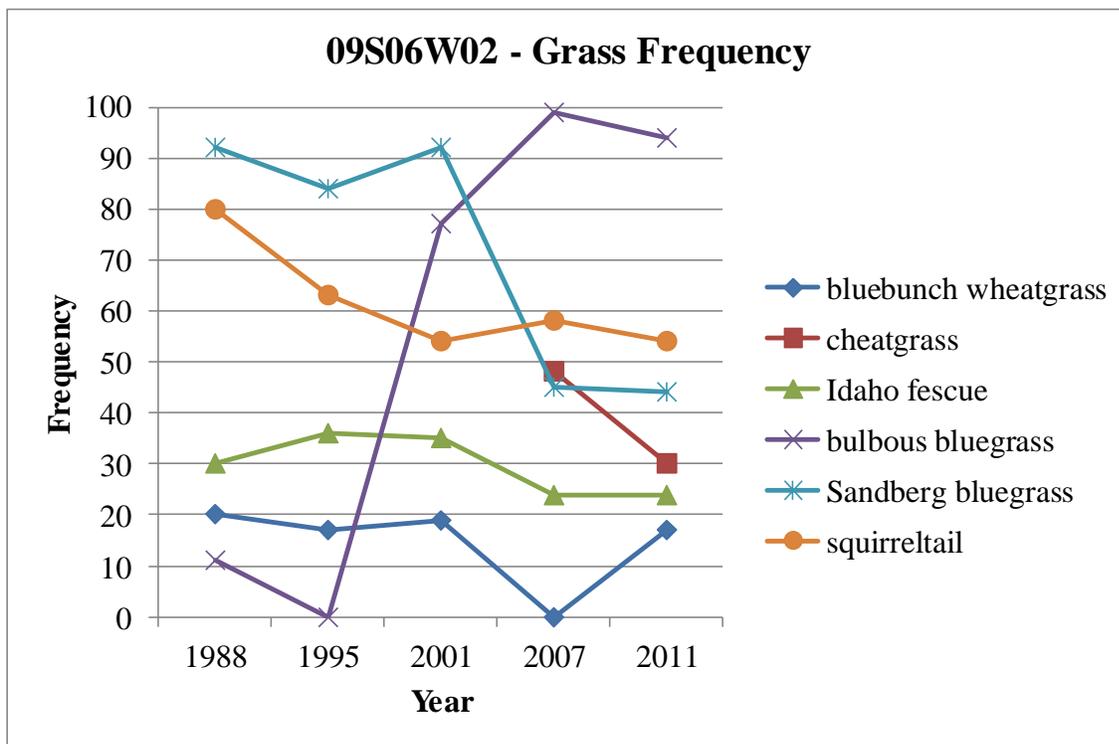
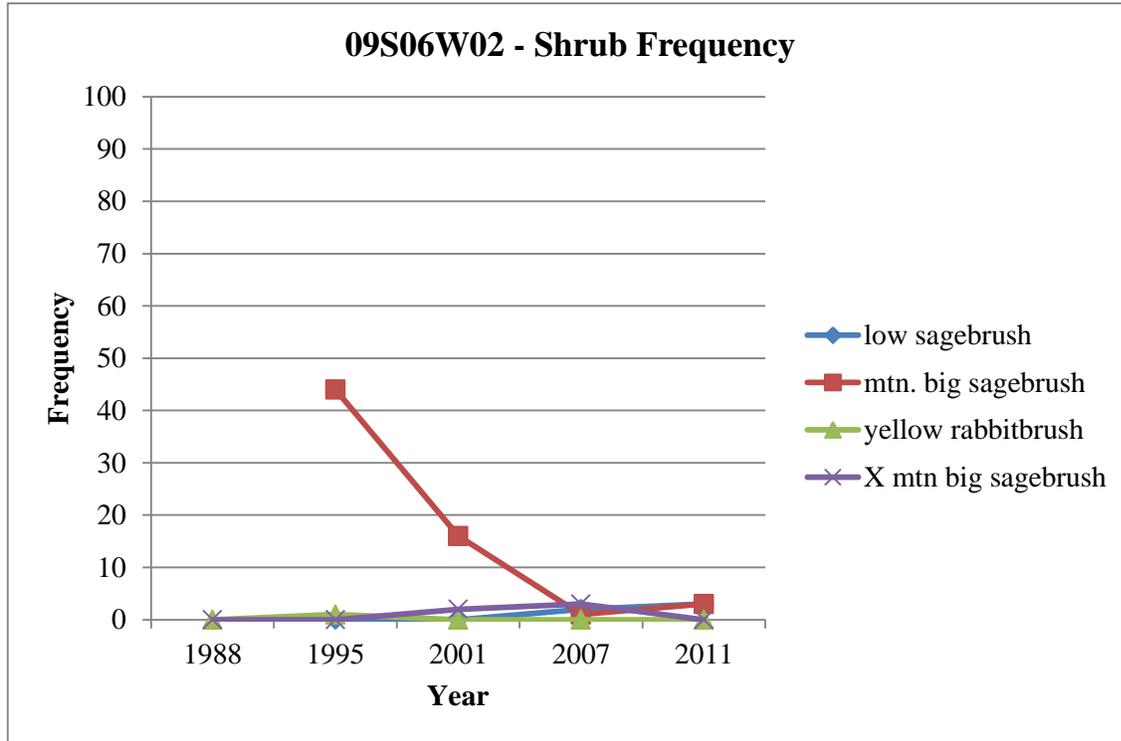


Figure VEG-2: Frequency of shrubs and tree species at the trend transect (T 09S, R 06W, Sec 02) in pasture 1 of the South Dougal allotment



Trend data were collected in 1988, 1995, 2001, 2007, and 2011 in pasture 1 (T 09S, R 06W, Sec 02) (Figure VEG-1). Frequency data for deep-rooted perennial grasses (bluebunch wheatgrass, Idaho fescue) are generally static over the long-term. The shallow-rooted grasses on site (Sandberg bluegrass, squirreltail) show a long-term decrease in frequency of 48 percent and 26 percent respectively. The invasive grass bulbous bluegrass has been noted at the site since initial establishment of the trend site in 1988. Since 1988, it has increased 83 percent. Cheatgrass was first recorded in 2007 at a frequency of 48 percent, which decrease to 30 percent in 2011.

Shrubs with low frequency of presence have a static long-term trend (low sagebrush, yellow rabbitbrush, and sagebrush seedlings) (Figure VEG-2). However, the long-term trend for mountain big sagebrush plummeted from a peak of 44 percent frequency in 1995 to 3 percent in 2011. This decrease is likely contributing to the 10 percent drop in canopy cover (see Standard 1: Watershed). Photo monitoring identifies a disturbance between 1995 and 2001, which left fully intact sagebrush skeletons throughout the landscape. This sagebrush die-off was field-verified in 2013.

Overall interpretations of trend and photo plot data suggest a native plant community in recovery from shrub loss and strong presence of invasive grasses such as bulbous bluegrass and cheatgrass. There is a temporal correlation between the die-off of sagebrush and the increase in bulbous bluegrass. The cause of sagebrush frequency decreasing 28 percent between 1995 and 2001 is not certain; however, photo documentation depicts intact dead standing shrubs, which could be an indicator of fatality due to insect infestation. Such a vast die-off of sagebrush would create a surplus of available moisture. It appears bulbous bluegrass, an early seral species, was opportunistic in colonizing the site post die-off with a frequency soaring to 77 percent in 2001 and climbing to 99 percent in 2007. In addition, the long-term decline in shallow-rooted grasses could be a slow response to the competition for interspatial moisture

and subsequent increase of bulbous bluegrass. Minimal recovery has been recorded in the shrub overstory.

Pasture 2

Indicators of Rangeland Health

RH2A represents a Shallow Claypan 12-16” ecological site in the southern portion of the pasture near the trend study site. The rangeland health indicators relating to biotic integrity rated in the none-to-slight and slight-to-moderate ranges of departure from expected conditions for this ecological site. Field worksheets report a slight decrease of large perennial bunchgrasses for the site as well as a slight decrease in biological soil crusts. Overall, plant vigor was good, with adequate seed stalks on Idaho fescue plants, and little evidence of mortality or decadence of perennial species. Although the worksheets do not identify western juniper, photographs show it being scattered to common at this site.

Long-term Vegetation Study (Trend)

A nested plot frequency transect study is located at T 09S, R 06W Sec 26. This study was established in 1988 and re-read in 1995 and 2001. Data are shown graphically in Appendix H. At this study site, frequency of most perennial grasses was stable or exhibited a slight increase. Low sagebrush frequency decreased from 82 percent in 1998, to 61 percent in 1995, and 42 percent in 2001. Landscape view photographs show evidence of a fire prior to 1995, which killed some Western juniper within the area.

Pasture 2

Figure VEG-3: Frequency of native and non-native grass species at the trend transect (T 09S, R 06W, Sec 26) in pasture 2 of the South Dougal allotment

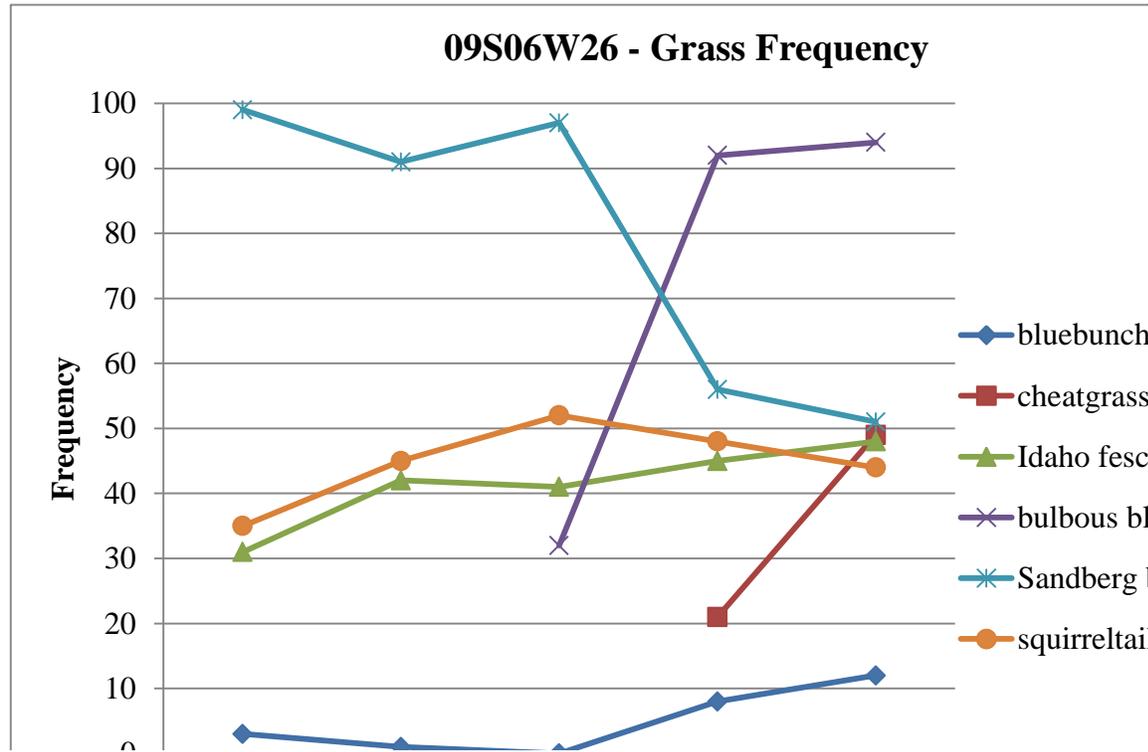
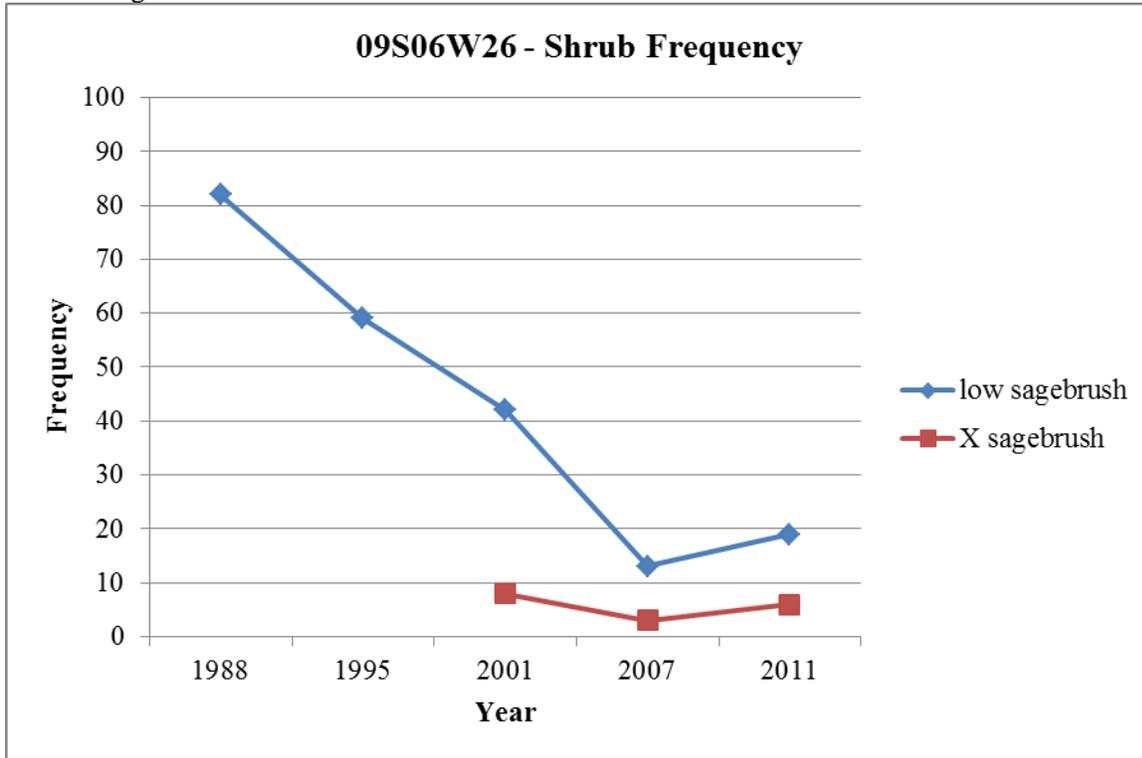


Figure VEG-4: Frequency of shrubs at the trend transect (T 09S, R 06W, Sec 26) in pasture 2 of the South Dougal allotment.



Trend data were collected in 1988, 1995, 2001, 2007, and 2011 in pasture 2 (T 09S, R 06W, Sec 26). These data are shown graphically in Figure VEG-3. Frequency data for deep-rooted perennial grasses and one shallow-rooted perennial, Sandberg bluegrass, are static or upward, with the latest reading in 2011 of Idaho fescue at 48 percent, bluebunch wheatgrass at 12 percent, and squirreltail at 44 percent. The shallow-rooted perennial Sandberg bluegrass was relatively static from 1988 through 2001, with frequency above 90 percent. Between 2001 and 2007, it declined to 41 percent and fell another 10 percent in 2011. Bulbous bluegrass was first recorded in 2001 at 32 percent frequency; by 2011, it had expanded to 94 percent frequency. Cheatgrass increased 30 percent in the short-term and was at 51 percent as of 2011.

Long-term trend for low sagebrush show a marked decrease since 1988, with density data supporting this finding (see Standard 1. Watersheds). Figure VEG-4 graphically depicts the 69 percent decrease in frequency from 1988 to 2007. Although photo monitoring does not show remnant skeletons on site, the drop in presence does correspond with the sagebrush decline at the pasture 1 trend site suggesting a common disturbance factor between the two areas. Sagebrush died-off within the pasture was verified during a 2013 site visit. Seedlings of sagebrush have a relatively static short-term trend.

Trend data suggest a native plant community in recovery from shrub loss with most perennial grasses being maintained and an influx of invasive grass species. Invasive grasses are of concern, particularly the high frequency of bulbous bluegrass and short-term increase of cheatgrass.

Upland Utilization

Upland utilization is collected using approved BLM methodologies and procedures. Table B10 displays a summary of utilization data from 1997 to 2012.

Table B10: Annual Percent Utilization by Pasture

Pasture	1992	1993	1994	1995	1996	1997
1	63	54	30	44	55-66	61-80
2	70	19	52	64	NA*	61-80

*Utilization not measured in this pasture this year

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Table VEG-1: Average annual percent utilization by pasture

Pasture	2007	2008	2012
1	No use collected	8% Pobu 16% Syhi	21% Feid 37% Agsp
2	15% Feid	No use collected	26% AgSp 14% Feid

Table VEG-2: Average annual stubble height by pasture

Pasture	2012
1	12" Feid 9" Agsp
2	13" Feid 12" Agsp

Actual use data noted that pasture 2 was rested in 2012; however, it appears that livestock use did occur within the pasture. It is unclear if this was incidental use by the permittee or trespass livestock.

Table VEG-3: Updated historical utilization information

Pasture	1997
1	57% Agsp
2	No use collected

Historical information from 1992 to 1997 represents an average use by key species combined.

Precipitation

The National Oceanic and Atmospheric Administrations (NOAA) at the Sheaville, Oregon weather station is the nearest weather station to the South Dougal Allotment. It is located at the western edge of the Owyhee Mountain range at a similar elevation. The average annual precipitation at this site is 12.89 inches (Appendix G).

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Revised precipitation data (Appendix G – Precipitation) from Sheaville, OR, shows a 32-year average of 14.3 inches. The new data is of greater accuracy, as the average does not include years of incomplete data, which erroneously lowered the 2006 average.

Standard 5. Rangeland Seeding

This standard does not apply to this allotment, native plant communities have become re-established in areas that were burned and re-seeded in the past.

Standard 6. Exotic Plant Communities

This standard does not apply to this allotment. Although some exotic plants do occur within the allotment, they do not occur to the extent that management of a pasture would depend on those species.

Standard 7. Surface and Ground Water Quality

This assessment includes a review of data collected and water quality standards established by Idaho Department of Environmental Quality (IDEQ). The State is broken into basins and sub-basins and assessment units. The new 2005 Integrated Report (303(d)/305(b)) uses “assessment units” within the sub-basin. Assessment units are groups of similar streams within a sub-basin that have similar land use practices, ownership, or land management. Assessment units are assessed for pollutants and assigned Beneficial Uses with associated Water Quality Standards. Beneficial Use Reconnaissance Program (BURP) is a field assessment of stream segments (all IDEQ data and standards mentioned here are available on the IDEQ web site- see references listed in section IV of this document).

Other data collected by the BLM may include riparian inventories, riparian Proper Functioning Condition (PFC) assessments, riparian habitat evaluation forms, stream survey forms, riparian aquatic data sheets, thermograph data and water quality monitoring data.

The South Dougal Allotment is within the Middle Fork Owyhee Sub-Basin (#107) of the South West Basin (#1705). Cherry Creek is the assessment unit, #17050107SW013. The IDEQ identified stream temperature data from water bodies within the Middle Fork Owyhee Sub-Basin. The data shows that many of the streams’ temperatures exceed the Idaho water quality temperature standards. They also note that many of the streams have altered flow.

There are 1.16-miles of Cherry Creek, an intermittent stream, on public land in the allotment. IDEQ has not assessed Cherry Creek nor has it assigned beneficial water quality standards. Upstream water diversions affect flows at least seasonally. Portions of the stream are non-riparian. By July, approximately 80 percent of the stream channel has no surface water. However, there are pools that may be perennial. Cherry Creek was assessed for Proper Functioning Condition in July of 2000; it was rated as Non-functional. The riparian vegetation was not in good condition and the stream did not support the appropriate riparian-wetland species. Vegetation with deep binding root mass occurred on less than 64 percent of the stream. Stream width/depth ratio, gradient, sinuosity and pool riffle and run frequency were not appropriate.

Current IDEQ information (2010 Integrated Report) identifies that they have not assessed the stream reaches that occur in the South Dougal allotment, nor has the BLM monitored the temperature or water quality of the streams within the allotment. Thus, Standard 7 does not apply within the allotment.

Standard 8. Threatened and Endangered Plants and Animals

Botany

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.

Two BLM Special Status Plant Species occur within the allotment. A population of flowered goldenweed occurs on the western side of Dougal reservoir. This species is a BLM type 5, or watch, species. Type 5 (Watch) species are those that may be added to the BLM Sensitive Species list pending new information. A population of Bacigalupi's calicoflower is identified on field office topographic maps, no new information about this population is available, but species information shows that it is tolerant of disturbance and likely is being maintained, based on information on conditions near the population. This is a BLM Type 4 species, which generally have small populations or localized distribution and may currently have low threat levels.

Overview – Special Status Plants

No Federally listed threatened or endangered plants are known to occur in the South Dougal allotment. The 2006 Rangeland Health Assessment identifies the presence of Bach's calicoflower in the allotment, although IFWIS (Idaho Fish and Wildlife Information System (IDFG, 2011)) has not confirmed its location. The latest record of this occurrence is from 1977 and was buffered with a 1.25-mile radius due to locational uncertainty. Given the lack of suitable lentic habitat within the delineated polygon of pasture 2 and the locational description of Dougherty Creek, which does not occur in pasture 2, it is highly unlikely this occurrence is located within the pasture and, therefore, is dismissed from further discussion.

Thinleaf goldenhead occurs in wet or dry, often alkaline meadows, streambanks, or around springs. Its world-wide range is Owyhee County, Idaho, and Harney County, Oregon (USDA NRCS, 2013). It is an herbaceous perennial about 6 to 12 inches tall. It is most sensitive to grazing during critical spring growth (March-April) and flowering (May-June), but its subterranean, rhizomatous growing point is somewhat resistant to moderate trampling at other times of year (Beth Corbin May 22, 2013 personal communications; see notes in the Owyhee Field Office administrative record). The one known occurrence of thinleaf goldenhead occurs in pasture 2. It is likely that additional habitat exists within the allotment.

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 the allotment. The table in Appendix C lists these species, their legal status, and their key habitat associations.

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Overview – Special Status Animals

No Federally listed threatened or endangered animals are known to occur in the South Dougal allotment. One candidate species, the greater sage-grouse, is known to occur within the allotment, and a second candidate species, the Columbia spotted frog could potentially occur. As many as seven mammal, 22 bird, one amphibian and four reptile species with BLM special status (including Watch List Species) potentially may occur within the allotment. Although potential habitat exists for pygmy rabbits, recent reductions in sagebrush cover reduce the likelihood of colonization by the species. Special status species that have been documented in the Idaho Fish and Wildlife Information System or within one mile of the allotment include spotted bat, white-headed woodpecker, ferruginous hawk, western toad, long-legged myotis, Yuma myotis, and white-faced ibis.

Riparian Habitats

Cherry Creek runs through the allotment on public land for 1.16 miles. IDEQ has not assessed Cherry Creek nor has it assigned beneficial water quality standards. Cherry Creek is an intermittent stream. Portions of the stream are non-riparian. By July, approximately 80 percent of the stream channel has no surface water. Upstream water diversions affect flow at least seasonally. However, there are pools that may be perennial. Cherry Creek was inventoried for Proper Functioning Condition in July of 2000. It was determined to be Non-functional. The riparian vegetation is not in good condition and does not have appropriate riparian-wetland species. Vegetation with deep binding root mass occurs on less than 64 percent of the stream. Stream width/depth ratio, gradient, sinuosity and pool riffle and run frequency are not appropriate. The creek is not meeting the needs of dependant special status species and other wildlife.

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Cherry Creek was revisited in May 2013 and conditions appear to be the same as rated in 2001. Riparian-dependent special status species would benefit from a system containing robust willows and deep-rooted soil-binding herbaceous plant species. Cherry Creek is within Columbia spotted frog range; however, no frogs have been observed in or near the stream. Western toads probably occur within the allotment along and near Cherry Creek, as may common garter snakes. (May, Writer, & Albeke, 2012), in their Redband Trout Status Update and Summary, designated Cherry Creek as historic distribution and not current range for redband trout.

Upland Habitats

Most of the uplands of the allotment are near reference conditions. The functional and structural groups are generally close to what is expected for the sites and are likely to be providing habitat that is adequate for the needs of most dependant special status and other wildlife species. The localized reduction of large bunchgrasses, reduced shrub cover and an increase juniper is limiting cover structure and forage for sage grouse, numerous song birds, pygmy rabbits and others

including a diversity of insects, rodents, birds and others that are critical prey for most raptors including prairie falcons, northern harriers and ferruginous hawks. Exotic bulbous bluegrass occurred at Rangeland Health Evaluations and on the trend plots. Site stability is being provided by ground cover, litter and microbiotic crusts.

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Pasture 1

Most of the non-juniper areas in the allotment were providing for the needs of upland-dependent wildlife species in 2001. Due to a continuing die-off of mountain big sagebrush between 1995 and 2011 in pasture 1, the structural habitat requirements for many special status animals, including sage-grouse, are not being met. The cause of reduced shrub frequency is not known, but insect kill is suspected. Due to the lack of sagebrush cover, needed nesting cover is absent for both shrub and ground nesting birds in pasture 1. Likewise, low sagebrush has recently seen a die-off in much of pasture 1, further reducing structure and hiding cover for many wildlife species, including sage-grouse.

In May 2013, a sage-grouse habitat assessment was conducted in the southern portion of the pasture at a randomly-designated point. Live sagebrush was not found at the site, while perennial grass cover and height were marginal for the needs of sage-grouse. Preferred forbs were abundant, diverse, and of adequate height to meet the needs of breeding and early brood-rearing sage-grouse. Annual grasses were not detected in the site transect. The overall limiting factor for sage-grouse in pasture 1 is the lack of sagebrush cover due to die-off in the late 1990s and 2000s. Current livestock grazing management is not believed to be the cause of reduced sagebrush abundance.

Pasture 2

Low sagebrush is the dominant sagebrush species in pasture 2 and is generally considered too short to support the nesting needs of shrub-nesting passerine bird species and sage-grouse. Although a reduction of low sagebrush has been documented, site visits in 2013, including a sage-grouse habitat assessment, indicate adequate shrub cover exists (10 percent) to support ground nesting birds other than sage-grouse. Herbaceous plant species are present in adequate frequency, height, and diversity to meet the needs of upland dependent animal species and both early and late brood-rearing sage-grouse.

Sage Grouse

South Dougal is identified as key habitat for sage grouse, however the area is experiencing encroachment of western juniper. Active leks are known to occur in the vicinity but not within the allotment. The allotment supports a relatively good diversity of forbs. A sage grouse habitat assessment has not been completed for this allotment.

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Subsequent to 2001, the status of greater sage-grouse changed from a BLM Sensitive Species to a Federal Candidate Species. Additionally, BLM adopted the concept of Preliminary Priority Habitat (PPH) as the most important sage-grouse habitat in affording conservation to the bird. Approximately 50 percent of South Dougal allotment is identified as PPH for sage-grouse; however, the area is experiencing encroachment of western juniper, which reduces the quality of

PPH. Active leks are known to occur within 3 miles, but not within the allotment. Several historic, but unoccupied, leks occur within 4 miles of the allotment in Idaho and Oregon.

Greater sage-grouse breeding assessments were conducted in pastures 1 and 2 in 2013. Data suggest inadequate big sagebrush acreages in pasture 1 due to site potential, sagebrush die-off, and encroachment of western juniper. Due to the lack of big sagebrush, the pasture does not provide suitable sage-grouse nesting habitat. Likewise, pasture 2 is generally lacking in big sagebrush due to juniper encroachment and site potential, with most of the pasture supporting low sagebrush. Current livestock grazing management is not a contributing factor in this conclusion.

Table WDLF-5: Sage Grouse Breeding Habitat Assessment – pasture 1

Habitat Indicator	Suitable Habitat	Marginal Habitat	Unsuitable Habitat
Average Sagebrush Canopy Cover			X
Average Sagebrush Height *			X
Sagebrush Growth Form *	N/A		
Average Grass and Forb Height		X	
Average Perennial Grass Canopy Cover		X	
Average Forb Canopy Cover	X		
Preferred Forb Abundance and Diversity	X		
Overall Site Evaluation			X

*not recorded

Table WDLF-6: Sage Grouse Breeding Habitat Assessment – pasture 2

Habitat Indicator	Suitable Habitat	Marginal Habitat	Unsuitable Habitat
Average Sagebrush Canopy Cover		X	
Average Sagebrush Height		X	
Sagebrush Growth Form	X		
Average Grass and Forb Height	X		
Average Perennial Grass Canopy Cover	X		
Average Forb Canopy Cover	X		
Preferred Forb Abundance and Diversity	X		
Overall Site Evaluation		X	

Other Species

Surveys and monitoring were conducted for the Columbia spotted frog. In 2005, surveys were conducted for the pygmy rabbit in both pastures; no evidence of the rabbit was found.

C. Sheep Creek Allotment (0559)

Physiography

The Sheep Creek Allotment is located on the Idaho/Oregon border approximately 24 miles southwest of Silver City, Idaho in Owyhee County. The elevation of the allotment is between

5,000 and 6,500 feet. The allotment is in USDA Natural Resource Conservation Service Major Land Resource Area 25, Owyhee High Plateau (USDA, NRCS 2004).

The range of annual precipitation is 13-20 inches and the frost-free period is 50-90 days. The major landforms in the area are categorized as foothills, mountains, drainages, and valleys. Soils are very shallow to very deep loams, stony loams and gravelly loams with slopes of 5 to 50 percent. The susceptibility to water erosion is slight to high. Susceptibility to wind erosion is slight to moderate. Common vegetation produced by the shallower soils is low sagebrush and Idaho fescue. Mountain big sagebrush, bluebunch wheatgrass, and Idaho fescue are common on deeper soils (USDA, NRCS 1990).

Table D1: Land Status Acreages by pasture

Pasture	Public	State	Private	Total
1	614	0	126	740
2	0	0	811	811
Total	614	0	937	1551

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Updated Land Status Acreage

Table ALLOT-3: Land status acreages by pasture for the Sheep Creek allotment

Pasture	Public	State	Private	Total
1	617	0	125	742
2	0	3	806	809
Total	617	3	931	1,550

The estimated land acreages are based on corrected fence locations and GIS mapping information.

Livestock Grazing Management

In the Owyhee Resource Management Plan (1999), the Sheep Creek Allotment is listed in Selective Management Category “Maintain.” Maintain allotments are managed with the objective to manage the public lands with minimal expenditure of appropriated funds and maintain current satisfactory resource conditions. They must also meet or make progress in meeting the Idaho Standards for Rangeland Health. The RMP identified 68 animal unit months (AUMs) of active preference for livestock grazing.

Livestock grazing is authorized by a term grazing permit issued to Larrusea Cattle Company. The permit expires on 02/28/2013. Each year, the permit authorizes the following livestock use on the Sheep Creek Allotment:

Table D-2: Permitted Livestock Use

Operator Name & No.	Livestock Kind & No.	Season of Use	Public Land	AUMs		
				Active	Suspended	Permitted
Larrusea Cattle Company	34 Cattle	08/16 to 10/15	100	68	0	68

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The allotment is subdivided into two pastures. Pasture 2 is 100 percent private land, while pasture 1 is approximately 80 percent public land. Actual use reports and grazing authorizations show use has consistently occurred from August 16 through October 15, with full use of active AUMs (Table LVST-5). The livestock that graze this allotment are part of a larger group of cattle that moved from lands in Oregon to private lands in Idaho around the first of August. On 8/16 the permittee moves 34 cattle from their private land onto BLM land within Sheep Creek allotment. Sometime after 10/15 all the cattle in Idaho are moved back to Oregon for the winter.

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Table LVST-5: Reported actual use for the Sheep Creek allotment

	Date	AUMS
2012	8/16-10/15	68
2011	8/16-10/1	46
2010	8/16- 10/15	68
2009	8/16-10/15	68
2008	Rest	0
2007	8/16-10/6	58
2006	8/16-10/15	68
2005	8/16-10/15	68
2004	No Data	No Data
2003	8/16-10/15	68
2002	No Data	No Data
2001	No Data	No Data
2000	8/16-10/16	69
1999	8/16-10/15	68
1998	8/19-10/15	68
1997	8/16-10/15	68

Standard 1. Watersheds

Three rangeland health worksheets (RH) were completed in the Sheep Creek Allotment. The procedure for conducting Rangeland Health Evaluations is provided in Appendix B of this report. The indicator ratings are summarized by attribute for the site and expressed by the degree of departure from the expected natural range of physical and vegetative characteristics. The summary of indicators and the relationship of indicators and attributes for the Sheep Creek Allotment are displayed in Appendix F of this Report. A summary of watershed-related indicator ratings is presented in Table D3.

Table D3. Rangeland Health Indicator Summary

Standard 1	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Pasture 1* ¹	27	8	1	0	0

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

Pasture 2 does not include any public land; therefore, the assessments for this allotment were only conducted in Pasture 1. Two evaluations (RH1A and RH1B) represent Loamy 13-16” ecological sites, the other assessment (RH C) represent the Shallow Claypan 12-16” ecological site. All evaluations were located in T8S R6W Sec 13.

RH1A, representing a Loamy 13-16” ecological site in the north-central portion of the pasture, had most indicators relating to site stability and hydrologic function rated in the “None-to-Slight” or “Slight-to-Moderate” ranges. The indicator for bare ground rated in the moderate range, the worksheets describe this indicator as occurring more than rarely, but less than common.

At RH1B, a Loamy 13-16” ecological site in the central portion of the pasture, all indicators relating to site stability and hydrologic functioning rated in the “None-to-Slight” range of departure.

At RH1C, the Shallow Claypan 12-16’ ecological site, most of the indicators rated in the “None-to-Slight” or “Slight-to-Moderate” ranges. Some water flow paths were present but unconnected with no cut banks or disposition areas. Some pedestals were observed. There was a slight departure in soil resistance to erosion, attributed to a slight reduction in biological crust. Litter amount was as expected. There were no rills, gullies or wind generated soil movement. Overall, the site was at near reference condition and providing for proper infiltration, retention, and release of water appropriate to soil type.

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The permanent photograph monitoring plot located in pasture 1 of the allotment was established in 2001. Subsequent readings in 2007 and 2011 depict the same location at about the same time of year; late June to early July. The site coincides with RH1A, located in a Loamy 13-16” ARTRW/PSSP-FEID ecological site. The site supports more bluebunch wheatgrass than Idaho fescue, indicating a slightly more xeric phase of the ecological site, consistent with the southwest aspect and steep slope.

Photograph monitoring depicts a moderately steep site, well vegetated with a relatively diverse assemblage of plant species, consistent with evaluation RH1A. Except for the presence of bulbous bluegrass and over-abundance of juniper in Sheep Creek draw, the 2001 photographs depict a plant community able to cycle nutrients, provide for energy flow, and proper hydrologic cycling. Little if any utilization is apparent in the June 20, 2001 photograph—the pasture was used after mid-August—and very little bare ground is visible.

Minor fluctuations in watershed attributes appear in the photo plot monitoring data. Although

the July 3, 2007, photographs depict no major change in the assemblage of vegetation on the site, the amount of standing biomass appears reduced from 2001. Bare ground appears to have increased and the vegetation appears less vigorous. The 2011 photographs depict a recovery in watershed attributes from 2007 photographs, resembling the 2001 conditions.

The 2011 photographs begin to depict two changes in the plant community with potentially adverse effects to the site hydrology. First, there is increasing cover of bulbous bluegrass and decreasing cover of bluebunch wheatgrass. Second, the juniper canopy in Sheep Creek draw appears to be increasing. These changes do not appear to have affected hydrology at the site. Signs of accelerated erosion are not apparent from photographs.

Standard 2. Riparian Areas and Wetlands

The riparian resources on the Sheep Creek Allotment are associated with Sheep Creek. The 1999 Owyhee Resource Management Plan Table RIPN-1 does not identify the Sheep Creek as having riparian resources on public land.

Sheep Creek

The allotment boundary on the east forms around the upper reaches of the Sheep Creek drainage and tributaries. Records are not clear on how much of the stream on public land supports riparian vegetation.

Approximately 1.3 miles of Sheep Creek were inventoried for Proper Functioning Condition using the Standard Checklist (Lotic) in October 2000 (Map RNGE-1C). This procedure is only a part of the 1998 Owyhee and Bruneau Riparian Inventory Procedures (Appendix E; Map RNGE-1). The Proper Functioning Condition assessment rated the stream as Functional-At Risk. The Apparent Trend was not identified.

Willows, rushes, and sedges were identified in the riparian zone. Table D4 displays the key riparian data from the assessment.

Table D4: Riparian Indicators and Functioning Condition Rating by Stream Segment – Sheep Creek

Riparian/Wetland Indicators:	SHE-2000
Stream miles (8)	1.3
Date of data collection	10/25/2000
Diverse age class/structure of hydric vegetation (6)	N
Diverse composition of hydric vegetation (7)	Y
Vegetation reflects maintenance of soil moisture (8)	Y
Plant community comprised of bank stabilizing species (9)	Y
Hydric vegetation exhibits high vigor (10)	Y
Adequate hydric vegetation cover to protect banks and dissipate energy (11)	N
Adequate large woody material (12)	Y
Point bars revegetating with hydric species (14)	*

Riparian/Wetland Indicators:	SHE-2000
Noxious weeds are present (24a)	*
Overall functioning condition	FAR
Apparent trend	NA
Pasture Number	1

- (Y=yes, N=no, Y/N = A portion meets and a portions does not meet)
- () - item # on the Inventory write-up or Proper Functioning Condition Assessment
- PFC- Proper Functioning Condition, FAR- Functional-At Risk, NF- Nonfunctional (overall rating determined from examination of both riparian and channel/floodplain indicators)
- UP- Upward, DN- Downward, S- Static, NA- Not Apparent or identified
- *Data is not appropriate for the site or not consistent with the assessment procedures.

Standard 3. Stream Channel/Floodplain

The stream channel and floodplain resources on the Sheep Creek Allotment are associated with Sheep Creek.

Sheep Creek

The allotment boundary on the east forms around the upper reaches of the Sheep Creek drainage and tributaries. Records are not clear on how much area on public land is perennial, intermittent, or ephemeral.

Approximately 1.3 miles of Sheep Creek were inventoried for Proper Functioning Condition using the Standard Checklist (Lotic) in October 2000 (Map RNGE-1C). This procedure is only a part of the 1998 Owyhee and Bruneau Riparian Inventory Procedures (Appendix E; Map RNGE-1). The Proper Functioning Condition assessment rated the stream as Functional-At Risk. The Apparent Trend was not identified. Table D5 displays key stream channel and floodplain indicators from the assessment.

The channel was poorly defined in most places. There were no active headcuts; however, the width to depth was not in balance on 80 percent of the inventory unit.

Table D5: Stream Channel/Floodplain Indicators and Functioning Condition Rating by Segment – Sheep Creek

Stream Channel/Floodplain Indicator	SHE-2000
Date of data collection	10/25/2000
Floodplain inundated frequently (1)	Y
Beaver dams are active and stable (2)	*
Sinuosity, w/d ratio, gradient in balance with landscape setting (3)	N
Upland watershed not contributing to riparian degradation (5)	Y
Adequate hydric vegetation cover to protect banks and dissipate energy (11)	N
Adequate large woody material (12)	Y
Floodplain and channel characteristics dissipate energy (13)	N
Point bars revegetating with hydric species (14)	*

Stream Channel/Floodplain Indicator	SHE-2000
Lateral stream movement associated with natural sinuosity (15)	Y
System is vertically stable (16)	Y
No excessive erosion or deposition (17)	Y
Overall functioning condition	FAR
Apparent trend	NA
Stream miles	1.3

- (Y=yes, N=no, Y/N = A portion meets and a portions does not meet)
- () - item # on the Inventory write-up or Proper Functioning Condition Assessment
- PFC- Proper Functioning Condition, FAR- Functional-At Risk, NF- Nonfunctional (overall rating determined from examination of both riparian and channel/floodplain indicators)
- UP- Upward, DN- Downward, S- Static, NA- Not Apparent or identified
- *Data not appropriate for the site or assessment procedures.

Standard 4. Native Plant Communities

Three qualitative Rangeland Health Evaluations (RH) were completed in the Sheep Creek Allotment. The procedure for conducting Rangeland Health Evaluations is provided in Appendix B of this Report. The ratings for the indicators are summarized by attribute for the site and expressed in the degree of departure from what is expected for the site. The summary of indicators and the relationship of indicators and attributes for the Sheep Creek Allotment are displayed in Appendix F of this Report. A summary of native plant community related indicator ratings is presented in Table D5.

Table D5. Summary of Indicator ratings for Sheep Creek

Standard 4-Native Plant Communities	Degree of Departure				
	None to Slight	Slight to Moderate	Moderate	Moderate to Extreme	Extreme
Pasture 1* ¹	20	5	1	1	0

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

Public land in this allotment only occurs in Pasture 1, therefore the assessments were only conducted in pasture 1, and do not reflect conditions in Pasture 2. Two evaluations (RH1A and RH1B) represent the Loamy 13-16” ecological site, the other assessment (RH1C) represents the Shallow Claypan 12-16” ecological site. All evaluations were located in T8S R6W Sec 13.

At RH1A, a Loamy 13-16” ecological site, there was a slight departure in resistance to erosion, but the site showed good organic matter, no surface crust, and moderate biological crust. Slight soil degradation was occurring in plant interspaces. Annual grasses were more common in the interspaces than perennial grasses. Invasive plants had considerable departure due to occurrence of cheatgrass, bulbous bluegrass, and western juniper on the site. There was adequate litter and vegetative cover present for site protection relative to site potential.

At RH1B, a Loamy 13-16’ ecological site, all indicators relating to biotic integrity rated near reference site condition, except for invasive plants. Bulbous bluegrass was common and western juniper was scattered on the site. Plant vigor and seed stalk production of perennial species

appeared to be adequate to enable reproduction and recruitment of plants in response to favorable climatic events. There was adequate litter and vegetation cover present for site protection relative to site potential.

At RH1C, a Shallow Claypan ecological site, all indicators rated in the none-to-slight range of departure from expected conditions for the ecological site. Slight departure was observed in resistance to erosion and invasive plants. Western junipers were present on the site. Plant vigor and seed stalk production of perennial species appeared to be adequate to enable reproduction and recruitment of plants in response to favorable climatic events. There was adequate litter and vegetation cover present for site protection relative to site potential.

The allotment provides habitat for antelope, elk and mule deer either seasonally or yearlong. The allotment is spring/summer/fall range for pronghorn antelope and elk. The allotment is winter and yearlong range for mule deer (1999 Owyhee Resource Management Plan).

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Table VEG-4: Average annual percent utilization by pasture on the Sheep Creek allotment

Pasture	2011	2012
1	25% Agsp	31% Agsp
2	No use collected	No use collected

Table VEG-5: Average stubble height by pasture on the Sheep Creek allotment

Pasture	2011	2012
1	19" Agsp	None collected
2	No use collected	No use collected

Because pasture 2 is all private land, no information was collected.

Long-term Vegetation Studies (Trend)

A photo-plot monitoring study was established in 2001, near the Loamy 13-16" Rangeland Health Evaluation site RH1A in the north-central portion of Pasture 1. In the future, this site will provide information on changes in the plant community composition and vigor.

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After establishment on June 20, 2001, the pasture 1 permanent photo monitoring plot was visited on July 3, 2007, and July 19, 2011.

The 2001 monitoring photographs are consistent with information reported in the rangeland health assessment. The site appears to be holding a diverse and strong presence of forbs and bunchgrasses. At the time of the photographs, no utilization appears to have occurred at this site. This is confirmed with numerous seedstalks and abundant production, which is providing adequate cover and limiting bare ground. The presence of bulbous bluegrass and higher than normal presence of juniper are of concern; however, the site is supporting a healthy plant

community for continued reproduction and recruitment of plants.

With below-average precipitation in 2007 and a site visit two weeks later than in 2001, many forbs and grasses likely would have completed their active growth period, leaving behind drier matter not as easily deciphered in photographs. Given these challenges, the diversity of species does not appear to have changed from 2001 to 2007.

In 2011, species diversity, cover, and low bare ground are easily deciphered from the photo monitoring and are generally very similar to 2001. Seed stalks/production are heavy throughout all photos and utilization does not appear to have occurred. It is difficult to decipher any trend on bluebunch wheatgrass from the photos.

Standard 5. Rangeland Seeding

Standard does not apply.

Standard 6. Exotic Plant Communities

Standard does not apply.

Standard 7. Surface and Ground Water Quality

This assessment includes a review of data collected and water quality standards established by Idaho Department of Environmental Quality (IDEQ). The State is divided into basins and sub-basins and assessment units. The 2005 Integrated Report (303(d)/305(b)) uses “assessment units” within the sub-basin. Assessment units are groups of similar streams within a sub-basin that have similar land use practices, ownership, or land management. Assessment units are assessed for pollutants and assigned Beneficial Uses with associated Water Quality Standards. The Beneficial Use Reconnaissance Program (BURP) is a field assessment of stream segments (all IDEQ data and standards mentioned here are available on the IDEQ web site- see references listed in section IV of this document).

Bureau of Land Management (BLM) also collects data that can include riparian inventories, riparian Proper Functioning Condition assessments, riparian habitat evaluation forms, stream survey forms, riparian aquatic data sheets, thermograph data and water quality monitoring data (BLM data are available at the Owyhee Field Office).

Sheep Creek and its tributary are seasonal or intermittent streams that cross public land for approximately 1.5 miles on the allotment. Sheep Creek is a tributary to the IDEQ Soldier Creek Assessment Unit. This unit has not been assessed and has not been assigned beneficial uses or water quality standards. Pollutants are not listed. A riparian assessment in 2000 found Sheep Creek to be Functional-At-Risk without indicated trend. Riparian vegetation was in fair condition, but with low level of willows.

Standard 8. Threatened and Endangered Plants and Animals

Botany

No federally listed plant species are known to occur in the Sheep Creek Allotment although the U.S. Fish and Wildlife Service (USFWS) considers all of Idaho to be within the potential range of Ute ladies'-tresses (*Spiranthes diluvialis*), a federally threatened orchid species. This plant occurs in spring, seep, and riparian habitats. Due to the difficulty in narrowly defining potential habitat for this species, USFWS has chosen to apply a loose definition and requires Section 7 consultation only in three counties of southeast Idaho or in areas where the plant is 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 on the Sheep Creek Allotment. Site-specific surveys are conducted prior to construction of range projects.

<i>2013 Supplement to the Sheep Creek Allotment Rangeland Health Standards and Guidelines Assessment</i>
Overview – Special Status Plants
To date, no Federally listed threatened or endangered plants or BLM special status plants are known to occur in the Sheep Creek allotment.

Wildlife

A number of species classified as Bureau of Land Management (BLM) "Sensitive Species" and/or State of Idaho "Species of Special Concern" are known or likely to occur within the allotment. A summary of these species, their legal status, and their key habitat associations is included in Appendix C.

<i>2013 Supplement to the Sheep Creek Allotment Rangeland Health Standards and Guidelines Assessment</i>
Overview – Special Status Animals
No Federally listed threatened or endangered animals are known to occur in the Sheep Creek allotment. One candidate species, the greater sage-grouse, is known to occur within the allotment and a second candidate species, the Columbia spotted frog, could potentially occur along riparian areas. As many as seven mammal, 17 bird, one amphibian, and four reptile species with BLM special status (including Watch List Species) potentially occur within the allotment. Although potential habitat exists for pygmy rabbits, encroachment by juniper and steep topography limit the extent. No special status species that have been documented in the Idaho Fish and Wildlife Information System within 4 miles of the allotment.

Riparian Habitat

Of the 1.5 miles of stream, 1.3 miles was assessed and found to be Functional-At Risk. Structural diversity, composition and vigor of hydric vegetation was partially lacking in these stream reaches resulting in habitat that was generally not adequately providing for the needs for dependant special status animals.

General Upland Habitat Assessment

The abundance and diversity of grasses, forbs and shrubs were generally as expected for the site and were likely to be providing habitat that was adequate for the needs of most dependant special status and other wildlife species. However, increased shrub densities and

reduced abundance of desirable bunchgrasses occur at some locations while the presence of exotic annuals and juniper encroachment has contributed to a reduction in shrubs and grasses at others. The localized lack of large bunchgrasses and reduced shrub cover is limiting cover, structure and forage for sage grouse, numerous song birds, pygmy rabbits and others including a diversity of insects, rodents, birds and others that are critical prey for most raptors including prairie falcons, northern harriers, and ferruginous hawks. While mature stands of western juniper provide high quality habitat for a large diversity of birds, bats and other species, increasing dense stands of young (seral) juniper have been shown to result in a reduced diversity and abundance of birds (Sauder 2002). A summary of threatened and sensitive species is included in Appendix C.

Other Vertebrates

Native perennial grass and forbs are reduced in abundance and have been replaced by exotic annual grasses and encroachment of western juniper. Native bunch grasses have adequate vigor and seedhead production for recruitment in favorable years. The habitat of desirable native perennial grasses, forbs and shrubs is slightly reduced in ability to support forage and cover needs for these large ungulates and other smaller vertebrates. Surveys from 2002 to 2005 did find occupied Columbia spotted frog habitat.

Sage Grouse

The allotment has key habitat for sage grouse with some juniper encroachment. Sage grouse lek surveys from 1994 to 2003 have identified active leks within and in close proximity to this allotment. A sage grouse habitat assessment has not been completed for this allotment.

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Subsequent to 2006, the status of greater sage-grouse changed from a BLM Sensitive Species to a Federal Candidate Species. Additionally, BLM adopted the concept of Preliminary Priority Habitat (PPH) as the most important sage-grouse habitat in affording conservation to the bird. The majority of Sheep Creek allotment is identified as PPH. Most of the allotment is mapped as having juniper, which will only return to suitable habitat through treatment or a natural fire. The few public land acres mapped as sagebrush PPH are too steep to serve as nesting habitat.

One active sage-grouse lek exists in Oregon within 1 mile of the allotment. Additionally, one historic, unoccupied lek is on private land in the Sheep Creek allotment and two leks of unknown status occur within 1 mile.

In May 2013, a site visit was conducted to evaluate sage-grouse breeding-habitat. Upon examination, designated PPH on public lands was either encroached by juniper to a density rendering the land unsuitable or topography was too steep to provide suitable breeding habitat. As such, no breeding assessments were conducted. However, the allotment does provide suitable early brood-rearing habitat, as adequate forb cover and diversity was noted. Riparian condition along Sheep Creek was rated as functioning-at-risk with no apparent trend in 2000. However, the site was rated as having a diverse composition of hydric vegetation with high vigor. These factors currently provide suitable late brood-rearing habitat for sage-grouse, which may be at risk if the functioning at risk condition continues and a downward trend begins.

III. 2013 Evaluation Findings and Determination

A. Dougal FFR Allotment (0456)

2013 Supplement to the Dougal FFR 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, Livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; 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

The allotment appears to meet the watershed standard. Field evaluation information from 2001 suggests that vegetative cover and plant vigor in the allotment were adequate for watershed function. A compaction layer around Foster Reservoir does not appear to be affecting plant productivity or energy flow. Indicators of accelerated erosion were generally not apparent, except for near Foster Reservoir, a likely congregation area for livestock. Erosional features were appropriate in terms of scale and magnitude for the major ecological sites in the allotment. Upland utilization data from 2011 documented light to no apparent use in portions of the allotment, with average stubble heights of upland bunch grasses at 24 inches. Current livestock management appears to be compatible with meeting the watershed standard.

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, Livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; 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

Standard 2 is not being met in pasture 8 of the Dougal FFR allotment. A negligible (0.1 miles) of Cherry Creek occurs within pasture 4 of the allotment. Two reaches (0.6 mile) of an unnamed creek that feed Dougal Reservoir also occur within pasture 4; however, they do not appear to support riparian vegetation (USDA FSA, 2011) and the PFC protocol was not applied. Pasture 6 is private land.

Pasture 8 contains 0.2 mile of Cherry Creek that also supports riparian vegetation and was rated functioning-at-risk (FAR) in 2013. The reach is associated with the outflow from Dougal reservoir that may have breached at one time. The channel is deeply incised with eroding banks and inadequate deep-rooted riparian species. The floodplain is not accessed by spring flows and riparian vegetation is sparse and has low vigor. Because the short reach of channel is influenced by the reservoir and other flow modifications, livestock grazing was not identified as the causal factor for not meeting the Standard.

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, Livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; 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

Standard 3 is not being met in pasture 8 of the Dougal FFR allotment. A negligible (0.1 miles) of Cherry Creek occurs within pasture 4 of the allotment. Two reaches (0.6 mile) of an unnamed creek that feed Dougal Reservoir also occur within pasture 4; however, they do not appear to support riparian vegetation (USDA FSA, 2011) and the PFC protocol was not applied. Pasture 6 is private land.

Pasture 8 contains 0.2 mile of Cherry Creek that also supports riparian vegetation and was rated FAR in 2013. The reach is associated with the outflow from a reservoir that may have breached at one time. The channel is deeply incised with eroding banks and inadequate deep-rooted riparian species. The floodplain is not accessed by spring flows and riparian vegetation is sparse and has low vigor. Because the short reach of channel is influenced by the reservoir and other flow modifications, livestock grazing was not identified as the causal factor for not meeting the Standard.

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

In accordance with RHA data and 2011 aerial imagery, Standard 4 is not being met in portions of pastures 1, 3, 4, and 8 due to altered fire regime and subsequent juniper invasion. Descriptions for the ecological sites present in these pastures (Loamy 13-16” and Shallow Claypan 12-16”) identify juniper as an invasive species that, when dominant, results in a new state requiring management inputs to restore ecological function of the reference site sagebrush/bunchgrass state. Areas in pastures 3 and 8 are also not meeting the Standard due to invasive grasses, as documented in the RHA.

The 2006 Rangeland Health Assessments, 2011 aerial imagery, and 2011 utilization and actual use data were used to evaluate the Native Plant Communities Standard. Overall departures from reference condition for all sites were slight to moderate, with juniper invasion resulting from an altered fire regime as the main issue and invasive grasses a concern. Aerial imagery from 2011 (ESRI, 2013) verifies the strong presence of juniper outside of reference condition. The current abundance of juniper is greater than one would find at reference condition.

The native plant community is not meeting Standard 4 due to altered fire regime and subsequent invasion of juniper. In addition, invasive grasses are of concern.

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.

Standard 5 does not apply to this allotment.

Standard 6 (Exotic Plant Communities, Other than Seedings)

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

Standard 6 does not apply to this allotment.

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

Rationale for Evaluation Finding and Determination

The IDEQ has not assessed the stream reaches that occur in the Dougal FFR allotment, nor has the BLM monitored the temperature or water quality of the streams within the allotment. Thus, Standard 7 does not apply within the allotment.

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).

Rationale for Evaluation Finding

Botany

Special status plant information is based on botanical surveys conducted in the allotment in 2013, BLM records, and data on file with the Idaho Fish and Wildlife Information System (IFWIS).

The botanical inventory for pasture 4 of the Dougal FFR allotment was conducted in May 2013, primarily at and adjacent to previously recorded occurrences where potential habitat occurs. This inventory is the basis for evaluation of the Special Status Plants portion of Standard 8. See the project file for lists of plant species identified during the surveys, and survey locations (2013 Special Status Plants Specialist Report).

Plants of thinleaf goldenhead in pasture 4 appeared healthy and with minimal impacts from livestock grazing. Population vigor was reported as excellent with over ninety percent of the population in flower. The ephemeral wet swales within the low sagebrush/Idaho fescue plant community were generally intact with low non-native plant cover (bulbous bluegrass). The surrounding landscape was partially fragmented due to roads, juniper and bulbous bluegrass invasion, with ecological and hydrological processes intact. Weeds were present, but competition with weeds was not a substantial impact to the species. Although the timing of use in pasture 4 is unknown, the 2011 utilization levels for pasture 4 were measured at 3.4 percent. This light level of use would not likely impact the species and, if this is typical, may be why grazing management does not appear to be significantly impacting thinleaf goldenhead. Also, this plant's growing points are at or below ground level, making it somewhat resilient to grazing and trampling effects after seed set. The 2013 survey extended the known occurrence to the eastside of the reservoir and it is likely additional undiscovered occurrences are present throughout the FFR allotment on public and private lands.

The Bach's calicoflower occurrence in pastures 4 and 8 (or suitable habitat near the recorded location) have not been relocated since 1977, so observations on grazing and trampling effects on this plant are lacking in this allotment. An attempt to locate the pasture 4 site in May 2013 was unsuccessful. With the location description of Dougherty Creek for the pasture 8 site, it is not likely the occurrence is on public land, although this has not been confirmed. Cattle are typically drawn to the habitat type of this species since it is a water source. Livestock impacts to this genus have been documented elsewhere as a result of trampling when the soil was wet, although plants can apparently persist in areas subjected to some trampling, at least in the short term.

Based on the limited available information on special status plants, Standard 8 is being met for thinleaf goldenhead and presumably for harlequin calicoflower (if present on public lands in the allotment). The thinleaf goldenhead occurrence and habitat does not appear limiting for this plant, as displayed by excellent vigor and light grazing use of its habitat. Recent information on harlequin calicoflower is incomplete, but it is likely that current use (assuming early removal) is not significantly affecting habitat because the plant has the opportunity to set at least some seed before the grazing period.

Animals

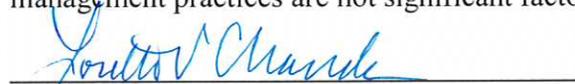
Data and site visits indicate uplands are functioning and providing the overall structural needs for special status animal species. Escape and thermal cover, as well as herbaceous components, are largely present. However, juniper has increased and is close to being a causal factor leading to a reduction in habitat quality. Many of the pastures visited had adequate forb cover and diversity, deep-rooted grasses, and sagebrush as expected for the site. Five sage-grouse habitat assessments revealed marginal breeding habitat largely due to site potential.

Riparian areas are a concern and were not meeting Standard 2; however, a wet meadow and margins of two reservoirs are providing for the needs of riparian-dependent special status animal species. Surveys for Columbia spotted frogs (a Federal candidate species) have failed to locate any individuals.

Based primarily on interpretations of data gathered in support of Standards 2 and 4, along with five sage-grouse breeding habitat assessments in four pastures, Standard 8 is being met for special status animal species. Riparian areas were found to not be meeting the standard and current livestock grazing management practices are not significant factors. However, the lengths of stream are short and other wetland areas in the allotment provide for the needs of wildlife.

Determination

I have determined that Standards 2, 3, and 4 of the applicable Standards for Rangeland Health are not being met in the Dougal FFR allotment, whereas Standard 1 and 8 are met and Standards 5, 6, and 7 are not applicable to resources present within the allotment. Current livestock grazing management practices are not significant factors in failing to meet Standards 2, 3, and 4.



Field Manager
Owyhee Field Office

8/22/2013

Date

B. South Dougal Allotment (0536)

2013 Supplement to the South Dougal 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, Livestock grazing management practices are significant factors
- Not Meeting the Standard; Making significant progress toward
- Not Meeting the Standard; 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

The allotment does not meet Standard 1 because the watershed lacks the shrub community necessary for proper hydrologic function, energy flow, and nutrient cycling. The over-abundance of bulbous bluegrass further amplifies depressed watershed conditions. Livestock grazing is not a significant factor in the allotment's failure to meet the watershed standard because livestock do not graze sagebrush in watersheds with a healthy herbaceous component during the season of use. Livestock favor herbaceous vegetation in this context, so a lack of shrubs cannot be explained by livestock grazing. Bulbous bluegrass was likely aerially seeded by the U.S. Soil Conservation Service prior to the 1950s. Bulbous bluegrass can be expected to persist in this watershed, with or without grazing livestock.

The allotment partially meets the Standard but areas of decadent and deceased shrub stands prevent the entire allotment from meeting the Standard. The majority of water for this area comes from winter snow and subsequent spring runoff. Without sagebrush, the watershed's potential to capture and retain blowing snow is depressed. Energy flow is also depressed in areas where sagebrush has been removed. By mid-August, as grasses and herbs senesce or go dormant, photosynthesis declines sharply in this watershed. The effects of nutrient cycling in watersheds where sagebrush has been largely removed are less clear, although a negative inference is reasonable here too, since sagebrush represents such a dominant structural/functional vegetative group in this watershed under reference conditions. Increasing levels of bulbous bluegrass raise the prospect of some reduction in water storage and energy flow potential, but only to the extent that bluegrass excludes deep-rooted perennial bunchgrasses and/or prevent shrub stands from regenerating.

Long-term trend data suggest maintenance of the deep-rooted perennial grass group. Decreases in bare ground and the continued presence of non-persistent litter further suggest that residual vegetation is left each year to decompose in place, aiding soil stability and watershed function. Despite areas of low shrub cover and bulbous bluegrass invasion, qualitative evaluations in 2001 and 2013 demonstrate no accelerated erosional processes for the dominant ecological sites in the allotment.

Although depressed in the autumn and winter, the watershed in this allotment cycles nutrients and provides pathways for energy flow. The magnitude changes in the watershed's attributes and vegetation communities have promoted no physical instability. Accelerated erosion is not apparent. With a healthy shrub component, the watershed in this allotment would capture and retain more moisture, provide for greater energy flow, and better nutrient cycling.

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

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). 4,5

Rationale for Evaluation Finding and Determination

Standard 2 is not being met in pasture 2 of the South Dougal allotment, and livestock grazing is a significant factor limiting stream recovery. Cherry Creek is the main drainage that traverses the allotment. Although the stream is intermittently riparian, it was assessed and rated NF. Riparian/wetland vegetation with deep-rooted, binding ability was largely missing and not sufficient to stabilize streambanks. The riparian vegetation had low vigor, and the composition, age class, and structural diversity were not appropriate. Although the reach is also affected by flow alteration associated with the reservoir, the PFC indicators identify direct impacts associated with grazing.

BLM has not assessed any of the intermittent streams that occur in pasture 1; however, the reaches in the northern portion of the allotment appear to support riparian vegetation (NAIP, 2011).

Recent actual use information indicate livestock occupy the allotment during the summer months; therefore, riparian species are not allowed sufficient time to re-grow and achieve or maintain healthy properly functioning conditions. For these reasons grazing practices do not conform to Guideline #4.

Heavy utilization by livestock along streams does not provide sufficient residual vegetation to improve, restore or maintain healthy riparian functions, and therefore grazing practices do not conform to Guideline #5.

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

Guidelines

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

7

Rationale for Evaluation Finding and Determination

Standard 3 is not being met in pasture 2 of the South Dougal allotment, and livestock grazing is a significant factor limiting stream recovery. Cherry Creek was rated non-functioning (NF), and the stream segment was classified as a Rosgen B3c on 25 to 35 percent of the segment (Rosgen, 1996). The stream had poorly defined banks, and vegetation with deep, binding root masses occurred on less than 64 percent of the stream causing bank instability. Although the reach is also affected by flow alteration associated with the reservoir, the PFC indicators identify direct impacts associated with grazing.

BLM has not assessed any of the intermittent streams that occur in pasture 1; however, the reaches in the northern portion of the allotment appear to support riparian vegetation (NAIP, 2011).

The grazing management practices do not promote progress toward appropriate stream channel and stream bank morphology and functions; therefore, grazing practices do not conform to Guideline #7.

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

South Dougal pastures 1 and 2 are not meeting Standard 4 due to the loss of sagebrush and invasive species. Currently the native plant community in this allotment is recovering from sagebrush die-off, with most perennial grasses being maintained and an influx of invasive grass species; in particular, the high frequency of bulbous bluegrass and short-term increase of cheatgrass are of concern. The loss of a dominant species such as sagebrush from a plant community could increase community invisibility by increasing resource availability to the advantage of exotic invaders (Prevéy, Germino, & Huntly, 2010).

The effects of current livestock grazing do not seem to be causing any additional negative effects to the native vegetation. This is based on upland utilization at or below 40 percent for 3 of 4 years, and both pastures have been provided deferment during the critical growth period, as required in the Allotment Management Plan. Under the Allotment Management Plan, deferment was identified by seed set (the second or third week in July), being influenced to a large extent by weather conditions. Actual use data since 2006 has shown that the allotment has generally followed this deferred rotation grazing system. From 1997 to 2006, actual use data has not been accurate enough to identify if the permittee followed the Allotment Management Plan, so a long-term trend is not possible. In addition, current livestock stocking rate (11 acres/AUM) for this allotment seems appropriate. This stocking rate is based on the ESD for the allotment and was also compared to similar stocking rates for allotments within the area.

Invasive grasses (bulbous bluegrass, cheatgrass) will occur in this allotment with or without grazing. Generally invasive species are not dominating the landscape. However, additional stress to the native plant community from fire, drought and climatic change could cause the remaining native vegetation to decrease in number allowing for an increase in these species. Despite the increase in bulbous bluegrass frequency, trend data suggest that the native deep-rooted bunchgrass community is stable. Periodic rest may provide for further protection.

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.

Standard 5 does not apply to this allotment.

Standard 6 (Exotic Plant Communities, Other than Seedings)

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

Standard 6 does not apply to this allotment.

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

Rationale for Evaluation Finding and Determination

The IDEQ has not assessed the stream reaches that occur in the South Dougal allotment, nor has the BLM monitored the temperature or water quality of the streams within the allotment. Thus, Standard 7 does not apply within the allotment.

Standard 8 (Threatened and Endangered Plants and Animals)

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

Standard

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

Guidelines

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

7

Rationale for Evaluation Finding and Determination

Botany

Based on the limited available information on thinleaf goldenhead, Standard 8 is being met. The thinleaf goldenhead occurrence and habitat condition does not appear limiting for this plant, as displayed by its excellent vigor and apparent resilience to the minimal disturbances that are present.

Special status plant information is based on botanical surveys conducted in the allotment in

2013, BLM records, and data on file with the Idaho Fish and Wildlife Information System (IFWIS). The botanical inventory for pasture 1 of the South Dougal allotment was conducted in May 2013, primarily at and adjacent to the previously recorded occurrence of thinleaf goldenhead, where potential habitat occurs. This inventory is the basis for evaluation of the Special Status Plants portion of Standard 8. See the project file for lists of plant species identified during the surveys, and survey locations (2013 Special Status Plants Specialist Report).

During the recent site visit of thinleaf goldenhead in pasture 1, observations of healthy vigorous plants were made with minimal competition from weeds. Even though reported use in this pasture has been during critical growing season for 9 of the last 13 years, no significant impacts from livestock grazing or trampling were observed. This could be due to the growing points of the plant being at or below ground level, making it somewhat resilient to grazing and trampling effects and allowing at least some plants to set seed in years when grazing occurs.

Wildlife

The South Dougal allotment is not meeting Standard 8 for special status animal species due primarily to non-functioning riparian conditions that do not support riparian-dependent animals. Current livestock grazing management practices are significant factors in leading to this determination. Additionally, the South Dougal allotment has suffered a loss of sagebrush through die-off and an increase in invasive plants, including juniper. For upland habitats, current livestock grazing management practices are not significant factors in producing low-quality upland habitat.

Cherry Creek is non-functioning due to a lack of vigorous bank stabilizing vegetation, diverse vegetation, and adequate large woody debris. Riparian/wetland vegetation with deep-rooted, binding ability was largely missing and not sufficient to stabilize stream banks. The lack of woody structure is not providing nesting areas for riparian-dependent bird species or adequate shelter and substrate for aquatic species.

Data, along with site visits to the allotment, found upland areas to have lost much of the shrub component and has seen an increase in invasive grasses. However, deep-rooted perennial grasses still maintain a foothold in the allotment and native perennial forbs are diverse and abundant. Additionally, western juniper is encroaching into the allotment, displacing more desirable vegetation. The needs of upland-dependent special status species are not being met due to low amounts of shrubs that serve as insect producers, nesting substrate, escape cover, and thermal cover.

Determination

I have determined that Standards 1, 2, 3, 4, and 8 of the applicable Standards for Rangeland Health are not being met in the South Dougal allotment; Standards 5, 6, and 7 are not applicable to resources present within the allotment. Current livestock grazing management practices are a significant factor in failing to meet Standards 2, 3, and 8, whereas current livestock grazing management practices are not a significant factor in failing to meet Standards 1 and 4. Livestock management practices do not conform with the applicable Livestock Grazing Management Guidelines 4, 5, and 7 for several Standards.


Field Manager
Owyhee Field Office

8/29/2013
Date

C. Sheep Creek Allotment (0559)

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

Evaluation Findings and Determination

Standard 1 (Watersheds)

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

Standard

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

Bare ground is at or below reference conditions for the dominant ecological sites in the pasture. Signs of accelerated erosion are not apparent from photographs and rangeland health evaluations document only slight departure from reference conditions, if any. The plant community includes an assemblage of species that dissipate overland flow, promote infiltration, limit run-off, capture and hold moisture, cycle nutrients, and photosynthesize appropriately for the ecological sites. Increases in bulbous bluegrass and juniper have been documented since 2007.

Although the apparent increase in bulbous bluegrass and juniper in the pasture could be adverse for the upper Sheep Creek watershed in theory, these changes have not affected soil stability, hydrology, nutrient cycling, or energy flow in a measurable or observable way. Some form of juniper treatment along the margins of Sheep Creek could enhance watershed conditions in this pasture, if the treatment did not adversely affect vegetation in the surrounding uplands.

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

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s).
4, 5

Rationale for Evaluation Finding and Determination

Standard 2 is not being met in pasture 1 of the Sheep Creek allotment because approximately 1.3 miles of Sheep Creek that occurs in the pasture were assessed FAR. Issues identified relating to the condition of the riparian-wetland areas included concerns with the lack of a diverse age class of riparian vegetation, bank instability, and heavy livestock use of riparian vegetation.

Riparian plant species have not been allowed sufficient time to re-grow and achieve or maintain healthy properly functioning conditions. For these reasons grazing practices do not conform to Guideline #4.

Livestock use along streams has not provided sufficient residual vegetation to improve, restore or maintain healthy riparian functions, and therefore grazing practices do not conform to Guideline #5.

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

Guidelines

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

Rationale for Evaluation Finding and Determination

Standard 3 is not being met in pasture 1 of the Sheep Creek allotment because approximately 1.3 miles of Sheep Creek that occur in the pasture were assessed FAR. Issues identified relating to the condition of the riparian-wetland areas included concerns with the presence of deposition and erosion, over-wide and shallow channel, a poorly defined stream channel, and channel incision.

The grazing management practices do not promote progress toward appropriate stream channel and stream bank morphology and functions; therefore, grazing practices do not conform to Guideline #7.

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

The 2006 Rangeland Health Assessments along with photo monitoring, utilization, and actual use were used to evaluate the Native Plant Communities Standard. The 2006 assessments consisted of three field evaluations conducted in 2000 and 2001 within pasture 2 of the

allotment. Pasture 2 does not consist of any BLM-managed lands and therefore is not part of this evaluation.

Based on photo monitoring, it appears species diversity is similar to the 2000/2001 assessments other than the increased presence of invasive species (bulbous bluegrass, cheatgrass, juniper). The Rangeland Health Assessment that was conducted on deeper loamy soils noted that invasive species (cheatgrass, bulbous bluegrass, and juniper) were at a moderate to extreme departure from reference condition, and that the plant community departed moderately from reference condition with few biological soil crusts, higher than expected shallow-rooted perennial grasses and invasive species. The deeper loamy soil types that show these ecological departures account for approximately 16 percent of the pasture and are not meeting Standard 4.

Utilization for 2011 and 2012 was below the 50 percent allotted in the ORMP (USDI BLM, 1999a), with no individual site exceeding 33 percent. In 2011, stubble height was collected and bluebunch wheatgrass averaged 19 inches. All years of reported livestock use were after the growing season. One year of rest has been incorporated since 2005.

Standard 4 is not met in the Sheep Creek allotment, with a shift in species composition away from reference condition. The increasing juniper and increased dominance of invasive grasses accompanied by the reduction in deep-rooted native perennial bunchgrass species contribute to the failure to meet the standard. This shift alters energy flow of the system by introducing gaps in time and space which equate to resource availability for invasive species (Reisner, Grace, Pyke, & Doescher, 2013), ultimately compromising the ecological integrity of the allotment. Historic livestock grazing and an altered fire regime that has led to juniper invasion are the causal factors for the failure to meet the Standard.

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.

Standard 5 does not apply to this allotment.

Standard 6 (Exotic Plant Communities, Other than Seedings)

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

Standard 6 does not apply to this allotment.

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

Rationale for Evaluation Finding and Determination

The IDEQ has not assessed the stream reaches that occur in the Sheep Creek allotment, nor has the BLM monitored the temperature or water quality of the streams within the allotment. Thus, Standard 7 does not apply within the allotment.

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).
4, 5, 7

Rationale for Evaluation Finding and Determination

Botany

No federally listed plant species or special status plant species are known to occur in the Sheep Creek allotment.

Animals

The Sheep Creek allotment is not meeting Standard 8 for special status animal species due primarily to non-functioning riparian conditions that do not support riparian-dependent animals. Upland habitats have shifted away from sagebrush communities towards juniper woodlands and current livestock grazing management practices are not significant factors because recorded plant utilization is well within acceptable limits and grazing occurs after seed-ripe for upland grasses.

Upland habitats have been converted to juniper woodlands with an associated reduction in sagebrush and desirable grasses and forbs for special status species. Juniper woodlands, however, do benefit a number of special status species such as passerine birds many raptors, and several bat species. The conversion to juniper is detrimental to sage-grouse and a reduction of

suitable breeding habitat is apparent.

Current late-season grazing practices favor upland plant species, as detected with acceptable utilization levels on upland plants. Conversely, permitted grazing use in the late-season shifts grazing pressure to moist areas that contain green vegetation such as Sheep Creek. Sheep Creek was rated as functioning-at-risk, and grazing occurs late in the season not allowing for regrowth of hydric vegetation, which places sage-grouse late brood-rearing habitat at risk. Additionally, the needs of riparian-dependent species such as passerine birds are not being met.

Current livestock grazing management practices are significant factors contributing to this determination. If grazing occurred earlier in the season and then livestock were removed, regrowth of riparian-dependent vegetation could occur allowing for bank stabilizing vegetation to improve.

Determination

I have determined that Standards 2, 3, 4, and 8 of the applicable Standards for Rangeland Health are not being met in the Sheep Creek allotment, whereas Standard 1 is meeting and Standards 5, 6 and 7 are not applicable to resources present within the allotment. Current livestock grazing management practices are a significant factor in failing to meet Standards 2, 3, and 8, whereas current livestock grazing management practices are not a significant factor in failing to meet Standard 4. Livestock management practices do not conform with the applicable Livestock Grazing Management Guidelines 4, 5, and 7 for several Standards.



Field Manager
Owyhee Field Office

8/29/2013
Date

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V. APPENDICES AND MAPS

APPENDIX A - Idaho Standards and Guidelines

Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management

Standard 1: Watersheds provide for the proper infiltration, retention, and release of water appropriate to soil type, vegetation, climate, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

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

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

Standard 2: Riparian-wetland areas are in proper functioning condition appropriate to soil type, climate, geology, and landform to provide for proper nutrient cycling, hydrologic cycling and energy flow.

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

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

Standard 3: Stream channels and floodplains are properly functioning relative to the geomorphology (e.g., gradient, size, shape, roughness, confinement, and sinuosity) and climate to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

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

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

5. Streambanks are within an appropriate range of stability according to site potential.
6. Noxious weeds are not increasing.

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

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

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

Standard 5: Rangelands seeded with mixtures, including predominately non-native plants, are functioning to maintain life form diversity, production, native animal habitat, nutrient cycling, energy flow and the hydrologic cycle.

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

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

Standard 6: Exotic plant communities, other than seedings, will meet minimum requirements of soil stability and maintenance of existing native and seeded plants. These communities will be rehabilitated to perennial communities when feasible cost effective methods are developed.

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

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

Standard 7: Surface and groundwater on public lands comply with the Idaho Water Quality Standards.

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

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

Standard 8: Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species.

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

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

Guidelines:

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

and amounts of soil organisms, plants and animals appropriate to soil type, climate and landform.

9. Apply grazing management practices to maintain adequate plant vigor for seed production, seed dispersal, and seedling survival of desired species relative to soil type, climate and landform.
10. Implement grazing management practices and/or facilities that provide for complying with the Idaho Water Quality Standards.
11. Use grazing management practices developed in recovery plans, conservation agreements, and Endangered Species Act, Section 7 consultations to maintain or improve habitat for federally listed threatened, endangered, and sensitive plants and animals.
12. Apply grazing management practices and/or facilities that maintain or promote the physical and biological conditions necessary to sustain native plant populations and wildlife habitats in native plant communities.
13. On areas seeded predominantly with non-native plants, use grazing management practices to maintain or promote the physical and biological conditions to achieve healthy rangelands.
14. Where native communities exist, the conversion to exotic communities after disturbance will be minimized.
15. Use non-native plant species for rehabilitation only in those situations where:
 - a. native species are not readily available in sufficient quantities;
 - b. native plant species cannot maintain or achieve the standards; or
 - c. non-native plant species provide for management and protection of native rangelandsInclude 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

Methods Used to Evaluate Rangeland Health

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

Uplands

Rangeland Health 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 determine if rangelands are meeting or making significant progress toward meeting the Standards for Rangeland Health.

The rangeland health evaluation summary worksheet consists of 17 indicators, each of which is rated on the degree of departure from the appropriate ecological site description or ecological reference area. Areas without a nearby reference site are evaluated using familiarity of the area and incorporating the best professional judgment of the evaluators.

The 17 indicators from the summary worksheet are compiled into categories relating to upland areas by Standards 1, 4, and 5. The preponderance of evidence determines the condition 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) monitoring 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. Cover data describes the percent of ground covered by plant material, biological soil crusts, gravel, rock, and litter (the uppermost layer of organic debris on the soil surface, essentially the freshly fallen or slightly decomposed vegetative material).

Photographs are taken at NPFT sites and at other sites permanently marked for photo plots. At NPFT and photo plot sites, a minimum of three photographs are taken, two general view photos and one close-up photo of the photo plot. The photo plot is sketched to help illustrate species composition, size, and vigor, and is used to verify the photograph.

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

Utilization

Utilization data is important in evaluating the effects of grazing and browsing on specific areas of rangeland. Utilization refers to the percentage of annual production (current year's growth) of forage that has been removed by animals throughout 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 determine if riparian areas are meeting Rangeland Health Standards.

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

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.

Upland

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. Sage grouse breeding and brood-rearing habitat evaluations were conducted using methodology described in the draft document entitled “*A Framework to Assist in Making Sensitive Species Habitat Assessments for BLM-Administered Public Lands in Idaho*” (as revised in May, 2001), primarily as a means of evaluating the suitability of the assessment areas as habitat for sage grouse. Although this methodology specifically addresses the habitat requirements of sage grouse, it is also useful in assessing the general health of sagebrush steppe ecosystems and their suitability as habitat for a diversity of other dependent special status species.

Population Surveys and Other Monitoring

Inventory and monitoring data are limited or absent for many special status animal 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.

Sage Grouse - Sage grouse lek (breeding ground) surveys/counts have been conducted periodically by BLM and Idaho Department of Fish and Game biologists since the late 1970s.

Pygmy Rabbits – These surveys consisted of walking through tall, thick big sage habitat looking for burrows and pellets.

Special Status Plants

BLM botany files, maps, and databases are reviewed for known populations of special status plants. Additionally, Idaho Conservation Data Center database is consulted for populations. Site-specific botanical surveys are conducted prior to construction of range projects for project clearance.

APPENDIX C – Special Status Animal Species
Summary of Special Status Species for the South Dougal, Feltwell and Sheep Creek Allotments

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

Species	Status	Key Habitat Associations
Prairie Falcon (<i>Falco mexicanus</i>)	S	Cliff/canyon, big sagebrush, low sagebrush
Ferruginous Hawk (<i>Buteo regalis</i>)	S	Cliff, rock outcrop, open juniper, big sagebrush, low sagebrush
Sage Grouse (<i>Centrocercus urophasianus</i>)	S	Big sagebrush, low sagebrush, meadow, riparian
Calliope Hummingbird (<i>Stellula calliope</i>)	S	Woody riparian, big sagebrush, mountain shrub
Willow Flycatcher (<i>Empidonax trailii</i>)	S	Woody riparian, mountain shrub, juniper, big sagebrush
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	S, SC	Big sagebrush, open juniper
Brewer's Sparrow (<i>Spizella breweri</i>)	S	Big sagebrush
Sage Sparrow (<i>Amphispiza belli</i>)	S	Big sagebrush
Spotted Bat (<i>Euderma maculatum</i>)	S, SC	Roosting/hibernation: Cliffs, canyons, rock outcrops Foraging: Juniper, sagebrush
Fringed Myotis (<i>Myotis thysanodes</i>)	S, SC	Roosting/hibernation: Caves, rock outcrops Foraging: Juniper, sagebrush, meadow
Townsend's Big-eared Bat (<i>Plecotus townsendii</i>)	S, SC	Roosting/hibernation: Caves, trees. Foraging: Juniper, sagebrush, canyon.
Western Pipestrelle (<i>Pipistrellus hesperus</i>)	SC	Roosting/hibernation: Caves, rock outcrops, burrows near water Foraging: Juniper, sagebrush, canyon
Pygmy Rabbit (<i>Brachylagus idahoensis</i>)	S, SC	Big sagebrush.
Piute Ground Squirrel (<i>Spermophilus mollis</i>)	S	Big sagebrush
Common Garter Snake (<i>Thamnophis sirtalis</i>)	S	Aquatic/riparian
Western Toad (<i>Bufo boreas</i>)	S, SC	Wetland/riparian, all upland habitats
Redband Trout (<i>Oncorhynchus mykiss gibbsi</i>)	S, SC	Aquatic

C = Federal Candidate for Listing, S = BLM Sensitive Species, SC = State of Idaho Species of Special Concern

APPENDIX D – Sage Grouse Habitat Assessments

Breeding Habitat (5/23/01)

Date:		Project or Allotment Name/				
		#:				
Pasture Name/#:			Site #:		FO:	
Legal Description: T. R. Section , 1/4, 1/4			GPS File #:			
Evaluator(s):			Ecological Site:			
Site Info. (circle one): Arid Site, Mesic Site		UTM:				
Landscape Site (circle one): Key Habitat , R1, R2, R3						
Cover Type (circle one): Sagebrush, Perennial Grassland (native, introduced), Annual Grassland with Sagebrush, Annual Grassland, Juniper Area						
Habitat Indicator	Suitable Habitat	✓	Marginal Habitat	✓	Unsuitable Habitat	✓
Average Sagebrush Canopy Cover	≥ 15% but ≤ 25%		10-<15% or >25%		<10%	
Average Sagebrush Height Mesic Site	15-30"		10-14" or > 30"		<10"	
Arid Site	12-30"		10-11" or >30"		<10"	
Sagebrush Growth Form	Spreading form, few, if any, dead branches for most plants		Mix of spreading and columnar growth forms present		Tall, columnar growth form with dead branches for most plants	
Average Grass and Forb Height	≥ 7"		5 - < 7"		< 5"	
Average Perennial Grass Canopy Cover Mesic Site	≥ 15%		5 - <15%		<5%	
Arid Site	≥ 10%		5 - <10%		< 5%	
Average Forb Canopy Cover Mesic Site	≥ 10%		5 - <10%		< 5%	
Arid Site	≥ 5%		3 - <5%		< 3%	
Preferred Forb Abundance and Diversity ¹	Forbs common with at least a few preferred species present		Forbs common but only 1 or 2 preferred species present		Forbs rare to sparsely present	
Overall Site Evaluation						

Rationale for Overall Rating and Comments:

Comments on Restoration Potential:

Sage Grouse Habitat Assessment Worksheet - Late Brood-rearing

Date:		Project or Allotment Name/#:					
Pasture Name/#:			Site #:		FO:		
Legal Description: T.		R.		Section		, 1/4, 1/4	GPS File #:
Evaluator(s):			Ecological Site:			UTM #	
Landscape Site (circle one): Key Habitat , R1, R2, R3							
Site Description (circle one): riparian area/perennial stream, riparian area/intermittent stream, wet meadow, lakebed, upland sagebrush site							
Habitat Indicator	Suitable Habitat	<input checked="" type="checkbox"/>	Marginal Habitat	<input checked="" type="checkbox"/>	Unsuitable Habitat	<input checked="" type="checkbox"/>	
Riparian and Wet Meadow Communities:							
Riparian and wet meadow plant community	Mesic or wetland plant species dominate wet meadow or riparian area	<input type="checkbox"/>	Xeric plant species invading wet meadow or riparian area	<input type="checkbox"/>	Xeric plant species along water's edge or near center of wet meadow	<input type="checkbox"/>	
Riparian and wet meadow stability	No erosion evident; some bare ground may be evident but vegetative cover dominates the site	<input type="checkbox"/>	Minor erosion occurring and bare ground may be evident but vegetative cover dominates the site	<input type="checkbox"/>	Major erosion evident; large patches of bare ground	<input type="checkbox"/>	
Forb availability	Succulent, green forbs are readily available in terms of distribution and plant structure	<input type="checkbox"/>	Succulent, green forbs are available though distribution is spotty or plant structure limits effective use	<input type="checkbox"/>	Succulent, green forbs are scarce or not available	<input type="checkbox"/>	
Proximity of sagebrush cover	Sagebrush cover is adjacent to brood-rearing area (<100 yards)	<input type="checkbox"/>	Sagebrush cover is in close proximity (> 100 yards but < 300 yards) of brood-rearing areas	<input type="checkbox"/>	Sagebrush cover is unavailable (> 300 yards)	<input type="checkbox"/>	
Overall Riparian/Wet Meadow Site Evaluation		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
Upland Sagebrush Communities:							
Forb availability	Succulent, green forbs are readily available in terms of distribution and plant structure	<input type="checkbox"/>	Succulent, green forbs are available though distribution is spotty or plant structure limits effective use	<input type="checkbox"/>	Succulent, green forbs are scarce or not available despite favorable growing conditions	<input type="checkbox"/>	

Overall Upland Site Evaluation				
Comments:				

APPENDIX E – Riparian Assessments

Standard 2 Riparian and wetland inventories

The riparian and wetland inventories on the Owyhee Resource Area were conducted under the 1998 Owyhee and Bruneau Riparian Inventory Procedures. These specific instructions and procedures are available from the Owyhee Field Office of the Bureau of Land Management. The following table demonstrates the relationship of key specific elements of the inventory to the indicators for Idaho Standard 2.

Riparian/Wetland Inventory Indicator	Standard Indicator 1	Standard Indicator 2	Standard Indicator 3	Standard Indicator 4
Stream miles	X	X	X	X
Date of data collection	X	X	X	X
Diverse age class/structure of hydric vegetation (6)	X	X	X	
Diverse composition of hydric vegetation (7)	X	X		
Vegetation reflects maintenance of soil moisture (8)	X	X		
Plant community comprised of bank stabilizing species (9)	X	X		
Hydric vegetation exhibits high vigor (10)	X	X		
Adequate hydric vegetation cover to protect banks and dissipate energy (11)	X	X		
Adequate large woody material (12)	X	X		
Point bars re-vegetating with hydric species (14)	X	X		
Noxious weeds are present				X
Overall functioning condition*	X	X	X	X
Stubble height (inches)	X			

Riparian/Wetland Inventory Indicator	Standard Indicator 1	Standard Indicator 2	Standard Indicator 3	Standard Indicator 4
Percent of streambanks accessible by livestock	X			

Standard 3 Stream channels and floodplains inventories

The riparian and wetland inventories on the Owyhee Resource Area were conducted under the 1998 Owyhee and Bruneau Riparian Inventory Procedures. These inventory procedures include information regarding stream channel and floodplain conditions. The specific instructions and procedures are available from the Owyhee Field Office of the Bureau of Land Management. The following table demonstrates the relationship of key specific elements of the inventory to the indicators for Idaho Standard 3.

Inventory Indicator	Standard Indicators					
	1	2	3	4	5	6
Date of data collection	X	X	X	X	X	X
Stream miles	X	X	X	X	X	X
Floodplain inundated frequently (1)			X			
Beaver dams are active and stable (2)		X				
Sinuosity, w/d ratio, gradient in balance with landscape setting (3)		X	X			
Upland watershed not contributing to riparian degradation (5)	X					
Diverse age class/structure of hydric vegetation (6)	X					
Diverse composition of hydric vegetation (7)	X					
Plant community comprised of bank stabilizing species (9)	X					
Hydric vegetation exhibits high vigor (10)	X					
Adequate hydric vegetation cover to protect banks and dissipate energy (11)	X					
Adequate large woody material (12)	X					
Floodplain and channel characteristics dissipate energy (13)	X					
Point bars revegetating with hydric species (14)	X					
Lateral stream movement associated with natural sinuosity (15)		X			X	
System is vertically stable (16)	X				X	
No excessive erosion or deposition (17)			X			
Overall functioning condition*	X	X	X	X	X	X
Apparent trend	X	X	X	X	X	X
Percent of streambank accessible to livestock	X	X	X	X	X	X
Percent with pugging				X		
Noxious weeds present						X

APPENDIX F – Rangeland Health Evaluations

* Attributes: S - soil stability, H - hydrologic function, B – biotic integrity

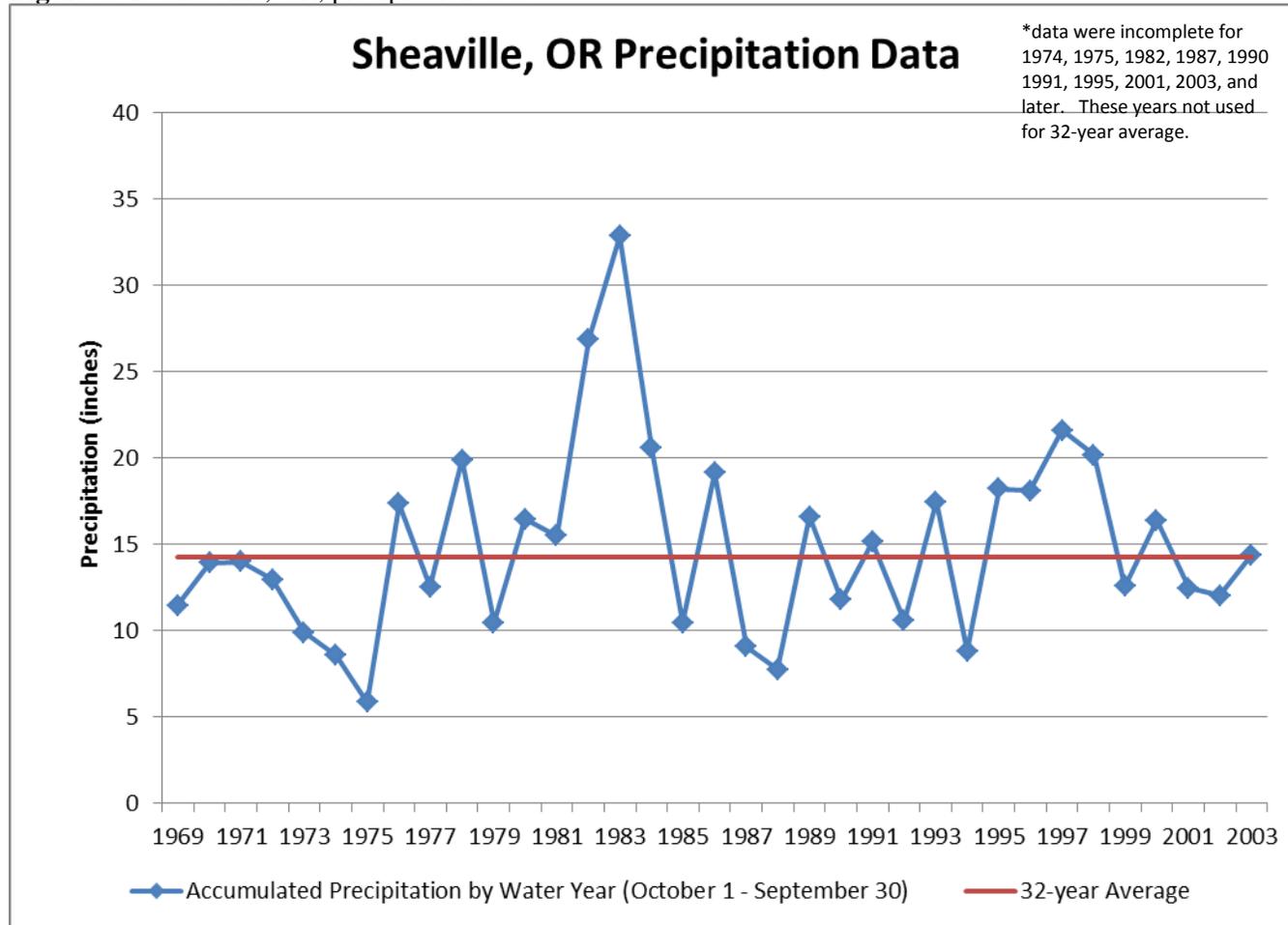
Attributes	Allotment	Dougal FFR			
	Pasture	1	1	1	1
	Legal	9S6W23	9S6W23	9S6W12	9S6W12
	Ecological site	Loamy 13-16	Shallow Claypan 12-16”	Loamy 13-16	Shallow Claypan 12-16”
S-H	1-Rills	n-s	n-s	n-s	n-s
S-H	2-Water Flow Patterns	s-m	s-m	s-m	s-m
S-H	3-Pedestals /Terracettes	s-m	m	s-m	s-m
S-H	4-Bare Ground	s-m	s-m	n-s	n-s
S-H	5-Gullies	n-s	n-s	n-s	n-s
S	6-Wind-scoured blowouts /depositions	n-s	n-s	n-s	n-s
H	7-Litter Movement	n-s	n-s	n-s	n-s
S-H-B	8-Soil Surface Resistance to Erosion	s-m	s-m	n-s	n-s
S-H-B	9-Soil Surface Loss or Degradation	s-m	s-m	n-s	s-m
H	10-Plant Community comp/distrib rel.to infiltration and runoff	n-s	n-s	s-m	n-s
S-H-B	11-Compaction Layer	m	m	n-s	n-s
B	12-Functional /Structural Groups	m	m	n-s	n-s
B	13-Plant Mortality /Decadence	s-m	s-m	n-s	n-s
H-B	14-Litter Amount	n-s	n-s	n-s	n-s
B	15-Annual Production	n-s	n-s	n-s	n-s
B	16-Invasive Plants	s-m	s-m	m	s-m
B	17-Reproductive Capability of Perennial Plants	m	m	n-s	n-s
	Standard 1				
	n-s	6	6	9	9
	s-m	5	4	3	3
	m	1	2	0	0
	m-e	0	0	0	0
	e	0	0	0	0
	Standard 4,5				
	n-s	2	2	8	7
	s-m	4	4	0	2
	m	3	3	1	0
	m-e	0	0	0	0
	e	0	0	0	0

Allotment	South Dougal		
	1	1	2
Pasture			
Legal	09S06W02	09S06W14	09S06W26
Ecological site	Shallow Claypan 12-16	Very Shallow Stony Loam 10-14	Very Shallow Stony Loam 10- 14
1-Rills	n-s	n-s	n-s
2-Water Flow Patterns	s-m	s-m	s-m
3-Pedestals /Terracettes	s-m	s-m	s-m
4-Bare Ground	s-m	n-s	s-m
5-Gullies	n-s	n-s	n-s
6-Wind-scoured blowouts /depositions	n-s	n-s	n-s
7-Litter Movement	s-m	n-s	s-m
8-Soil Surface Resistance to Erosion	s-m	s-m	s-m
9-Soil Surface Loss or Degradation	s-m	s-m	s-m
10-Plant Community comp/distrib relative to infiltration and runoff	s-m	n-s	s-m
11-Compaction Layer	n-s	s-m	n-s
12-Functional /Structural Groups	s-m	s-m	s-m
13-Plant Mortality /Decadence	n-s	n-s	n-s
14-Litter Amount	s-m	n-s	s-m
15-Annual Production	n-s	n-s	n-s
16-Invasive Plants	s-m	s-m	s-m
17-Reproductive Capability of Perennial Plants	n-s	n-s	n-s
Standard 1			
n-s	4	7	4
s-m	8	5	8
m	0	0	0
m-e	0	0	0
e	0	0	0
Standard 4,5			
n-s	4	4	4
s-m	5	5	5
m	0	0	0
m-e	0	0	0
e	0	0	0

Attribute	Allotment	Sheep Creek			Feltwell	
	Pasture	1	1	1	1	1
	Legal	8S6W13	8S6W13	8S6W13	7S6W25	7S6W25
	Ecological site	Loamy 13-16	Shallow Claypan12-16	Loamy 13-16	Shallow Claypan 12-16	Loamy 13-16
S-H	1-Rills	n-s	n-s	n-s	n-s	n-s
S-H	2-Water Flow Patterns	n-s	s-m	s-m	s-m	n-s
S-H	3-Pedestals /Terracettes	n-s	n-s	s-m	s-m	n-s
S-H	4-Bare Ground	n-s	s-m	m	s-m	s-m
S-H	5-Gullies	n-s	n-s	n-s	n-s	n-s
S	6-Wind-scoured blowouts /depositions	n-s	n-s	n-s	n-s	n-s
H	7-Litter Movement	n-s	n-s	n-s	n-s	n-s
S-H-B	8-Soil Surface Resistance to Erosion	n-s	s-m	s-m	n-s	n-s
S-H-B	9-Soil Surface Loss or Degradation	n-s	n-s	s-m	s-m	n-s
H	10-Plant Community comp/distrib relative to infiltration and runoff	n-s	n-s	s-m	n-s	n-s
S-H-B	11-Compaction Layer	n-s	n-s	n-s	n-s	n-s
B	12-Functional /Structural Groups	n-s	n-s	m	n-s	m
B	13-Plant Mortality /Decadence	n-s	n-s	n-s	s-m	n-s
H-B	14-Litter Amount	n-s	n-s	n-s	n-s	n-s
B	15-Annual Production	n-s	n-s	n-s	n-s	n-s
B	16-Invasive Plants	s-m	s-m	m-e	n-s	m-e
B	17-Reproductive Capability of Perennial Plants	n-s	n-s	n-s	n-s	n-s
	Standard 1					
	n-s	12	9	6	8	11
	s-m	0	3	5	4	1
	m	0	0	1	0	0
	m-e	0	0	0	0	0
	e	0	0	0	0	0
	Standard 4,5					
	n-s	8	7	5	7	7
	s-m	1	2	2	2	0
	m	0	0	1	0	1
	m-e	0	0	1	0	1
	e	0	0	0	0	0

APPENDIX G – Precipitation

Figure G-1: Sheaville, OR, precipitation data



APPENDIX H – Nested Plot Frequency & Ground Cover Data (Trend)

Figure H-1: Pasture 1 shrub and tree frequency

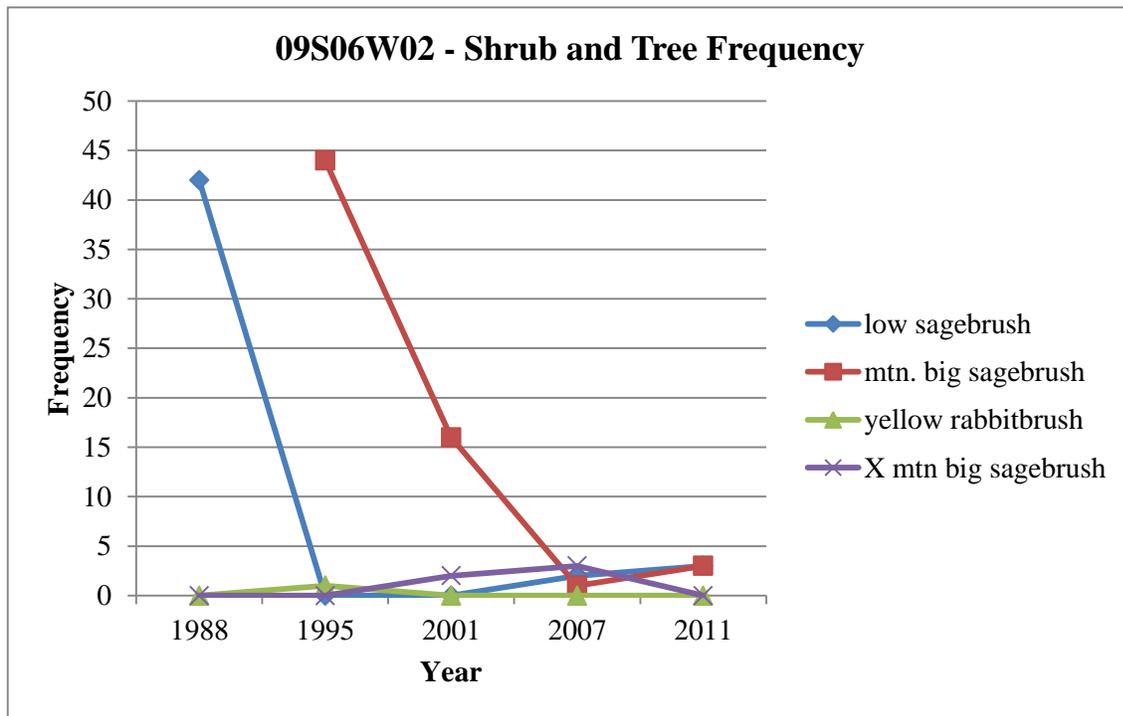


Figure H-2: Pasture 1 grass frequency

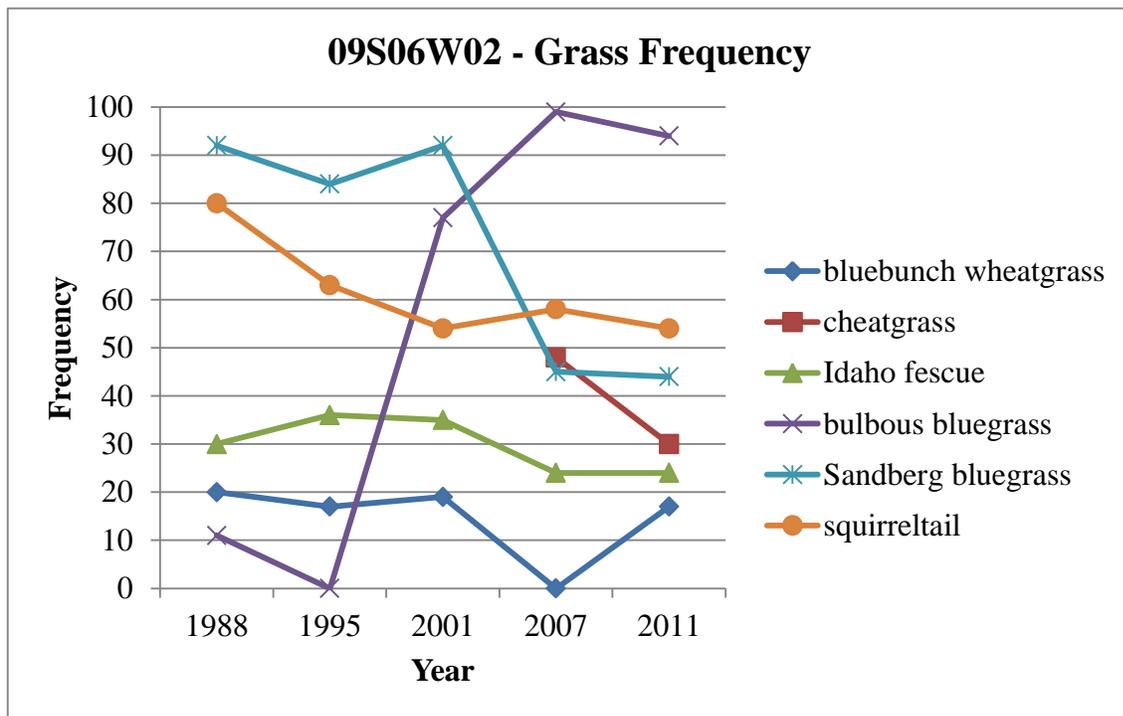


Figure H-3: Ground cover data

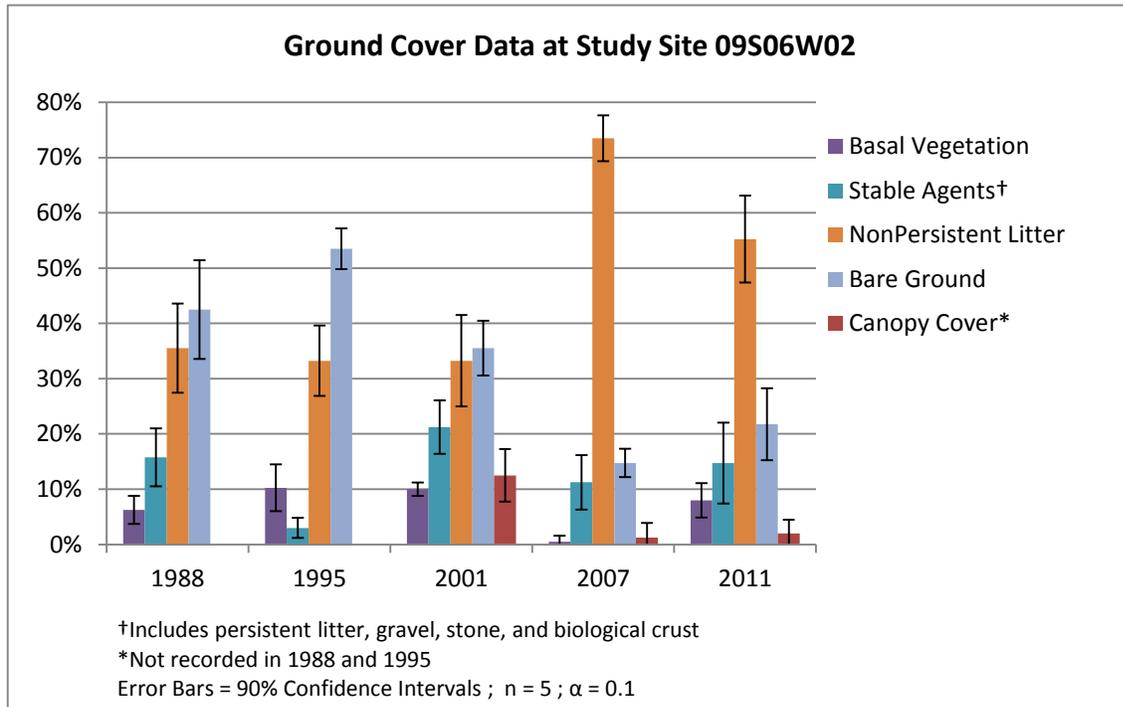


Figure H-4: Pasture 2 shrub and tree frequency

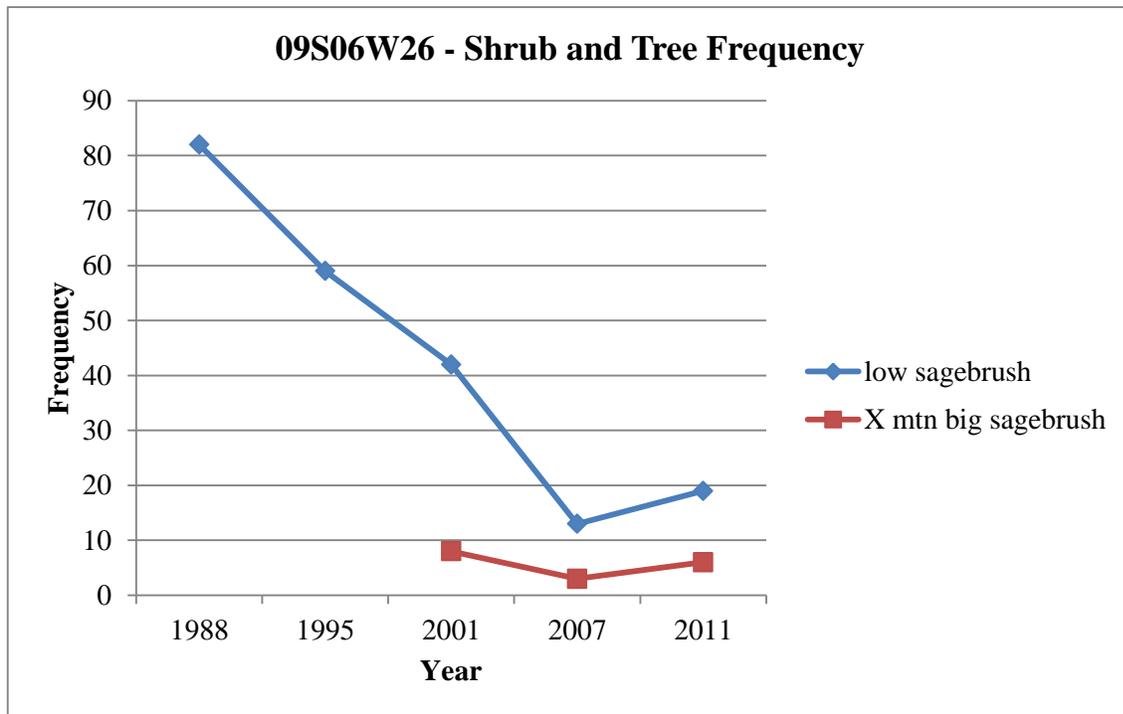


Figure H-5: Pasture 2 grass frequency

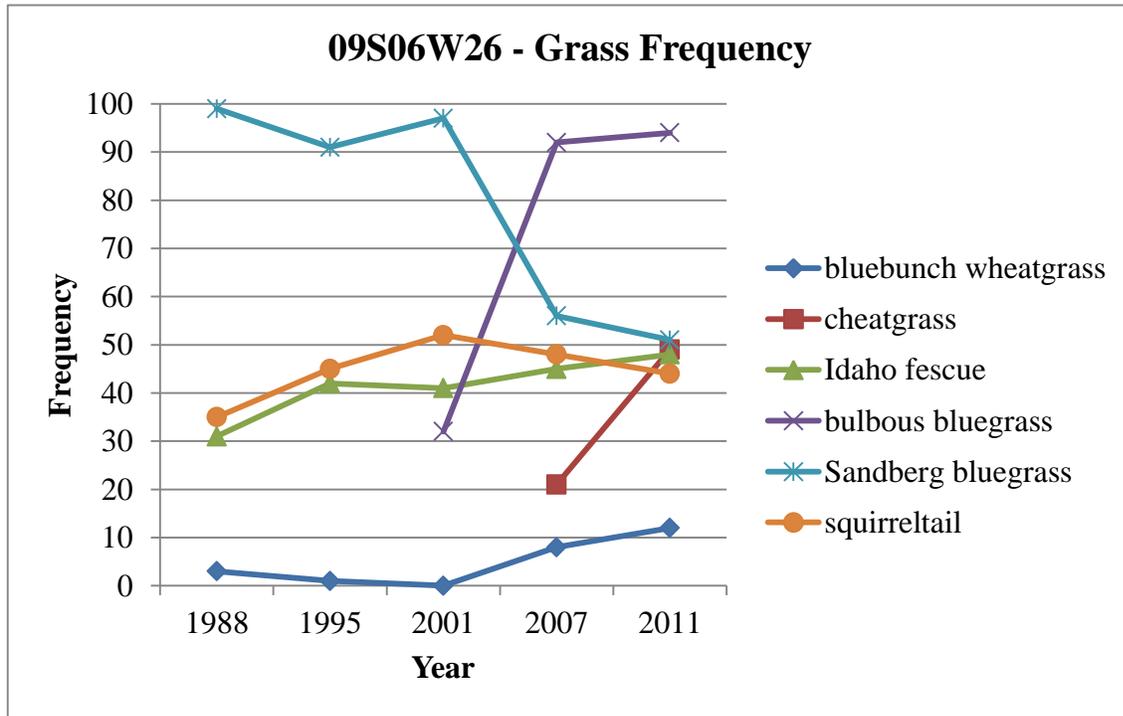
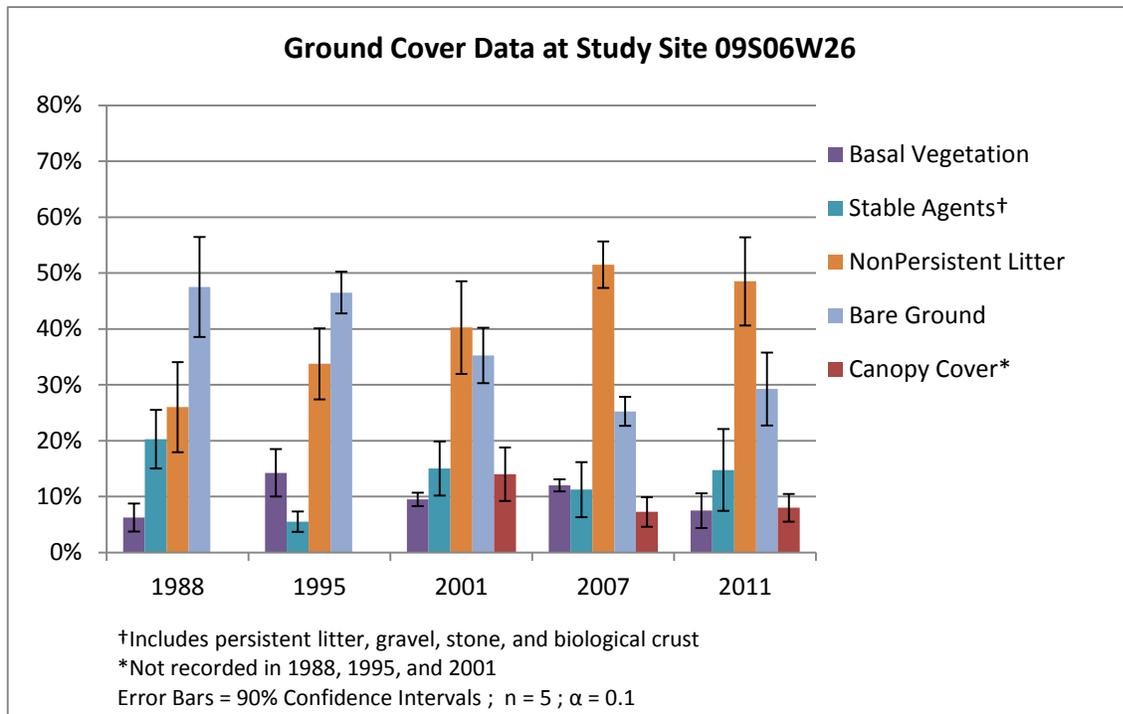
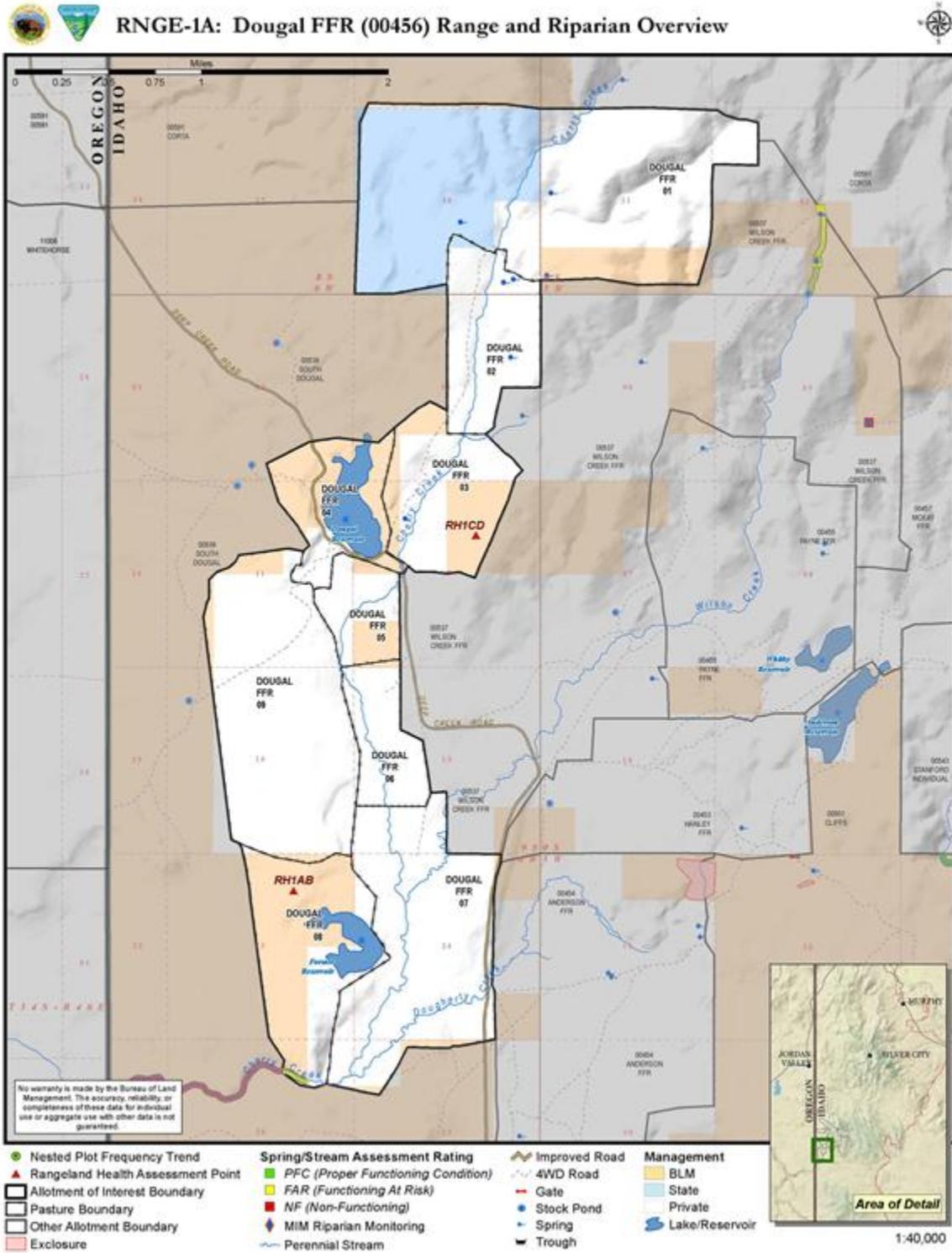


Figure H-6: Ground cover data

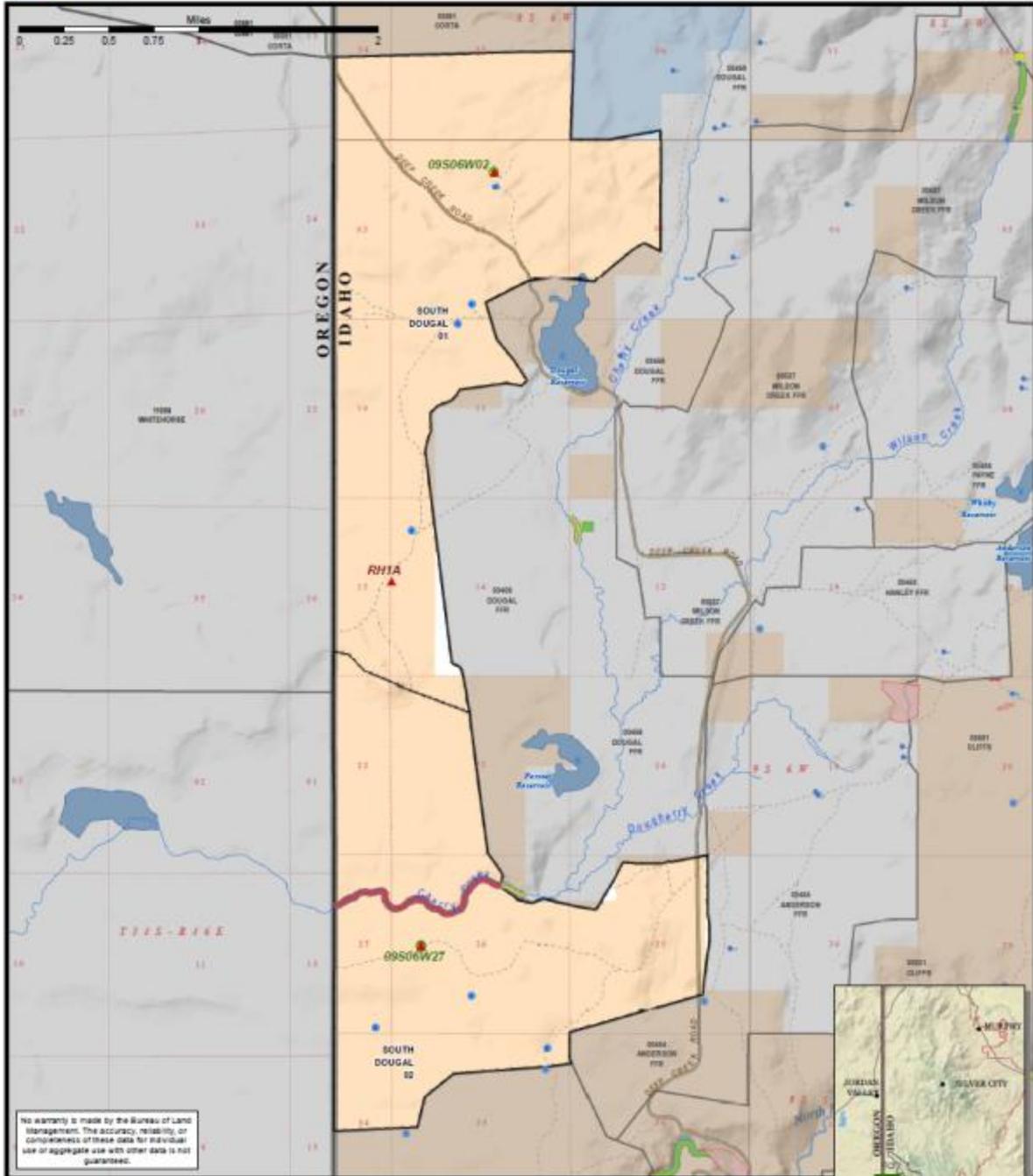


APPENDIX I – Maps





RNGE-1B: South Dougal (00536) Range and Riparian Overview



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.

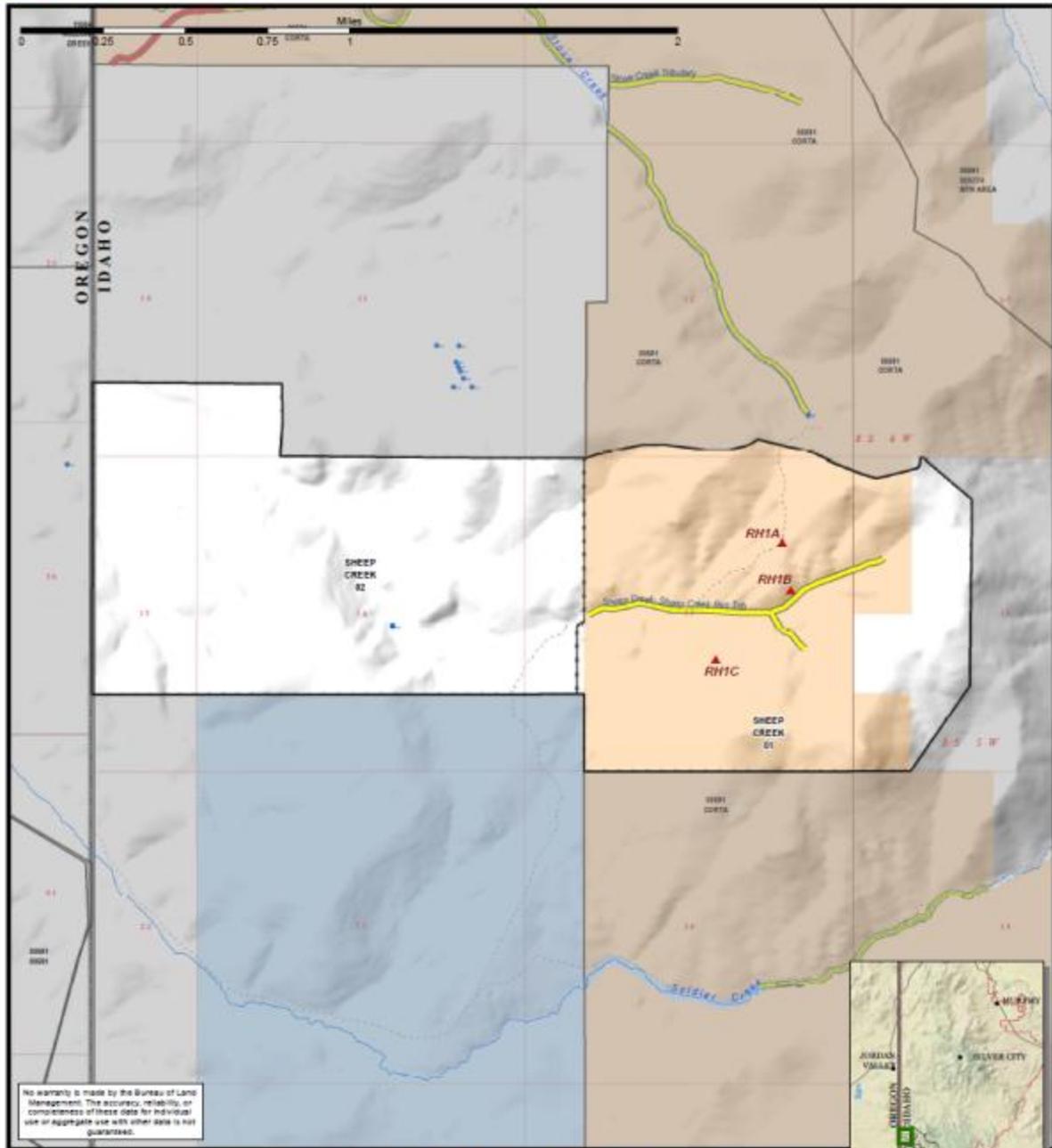
- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> Nested Plot Frequency Trend Rangeland Health Assessment Point Allotment of Interest Boundary Pasture Boundary Other Allotment Boundary Exclosure | <ul style="list-style-type: none"> PFC (Proper Functioning Condition) FAR (Functioning At Risk) NF (Non-Functioning) MIM Riparian Monitoring Perennial Stream | <ul style="list-style-type: none"> Improved Road 4WD Road Gate Stock Pond Spring Trough | <ul style="list-style-type: none"> BLM State Private Lake/Reservoir |
|---|---|---|---|



1:45,000



RNGE-1C: Sheep Creek (00559) Range and Riparian Overview



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.

- | | | | |
|---|--|--|--|
| <ul style="list-style-type: none"> ● Nested Plot Frequency Trend ▲ Rangeland Health Assessment Point Allotment of Interest Boundary Pasture Boundary Other Allotment Boundary Exclosure | <p>Spring/Stream Assessment Rating</p> <ul style="list-style-type: none"> PFC (Proper Functioning Condition) FAR (Functioning At Risk) NF (Non-Functioning) ◆ MIM Riparian Monitoring — Perennial Stream | <ul style="list-style-type: none"> — Improved Road - - - 4WD Road — Gate ● Stock Pond + Spring Trough | <p>Management</p> <ul style="list-style-type: none"> BLM State Private — Lake/Reservoir |
|---|--|--|--|



1:25,000

APPENDIX J – Photographs

Figure J-1: Trend Site 09S06W02, June 20, 2001 (Note live sagebrush)



Figure J-2: Trend Site 09S06W02, June 20, 2007 (Note sagebrush skeletons)

