

BUREAU OF LAND MANAGEMENT

Specialist Report - Riparian/ Water Resource
May 2012

Specialist Report – Water and Riparian Resources

Field Office: Owyhee Field Office

Allotment Name/Number: Group 2 – Jump Creek: Alkali-Wildcat (514), Elephant Butte (513), Poison Creek (603), Rats Nest (522), Sands Basin (521)

Names of Permittees: Ted Blackstock (1389) and Chipmunk Grazing Assn. (1395)

Standards for Rangeland Health

In 1997, the Idaho BLM adopted rangeland health standards (Appendix A - *Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management*), which were developed in coordination with the agency's three Resource Advisory Councils during the previous two years. The Standards outline the Bureau of Land Management's rangeland management goals for the betterment of the environment and sustained productivity of the range. They were developed with the specific intent of providing for the multiple uses of public lands managed by the BLM within Idaho. Application of the standards should involve collaboration between the authorized officer, interested publics, and resource users.

The eight standards of rangeland health are expressions of the level of physical and biological condition or degree of function required for healthy, sustainable rangelands, based on a number of indicators of rangeland health. Rangelands should be meeting or making significant progress toward meeting the standards through proper nutrient and hydrologic cycling and energy flow.

Appropriate to soil type, climate, and landform, indicators are a list of typical physical and biological factors and processes that can be measured and/or observed (e.g., photographic monitoring). They are used in combination to provide information necessary to determine the health and condition of the rangelands. Usually, no single indicator provides sufficient information to determine rangeland health, and only those indicators appropriate to a particular site are to be used. The indicators listed below each standard are not intended to be all-inclusive, and the issue of scale must be considered when evaluating each indicator. In some cases, individual isolated sites within a landscape may not be meeting the standards, but broader areas must be in proper functioning condition. Furthermore, fragmentation of habitat that reduces the effective size of large areas must also be evaluated for its consequences.

Rangeland Health and Evaluation

The Rangeland Health Assessment (RHA) is a compilation and analysis of all data and information available for an allotment or group of allotments that describes the current rangeland health conditions and identifies changes or trends in rangeland health over time. Permittees, interested publics, tribes, and state agencies were given an opportunity to provide information

and data to be considered in the RHA. Rangeland Health Assessments are used in association with other quantitative monitoring and inventory information as a qualitative evaluation tool to provide early warnings of resource problems in rangeland uplands. The RHA procedure used for assessing the ISRH standards 1, 4, 5, and 6 compares 17 indicators to a reference state or Ecological Site Descriptions (USDA NRCS 2006 and 2010) and expresses a degree of departure from what is expected.

The Evaluation Report draws on monitoring reports on representative sites to determine rangeland health, condition and trend based on a number of indicators of rangeland health. It answers two major questions:

1. Is the allotment meeting the Idaho Standards for Rangeland Health (ISRH)?
2. If the allotment is not meeting the ISRH, is it making significant progress toward meeting the ISRH?

The analysis in the RHA is the basis for completing the Evaluation Report (ER). Some of the factors that might influence the current conditions include livestock grazing management, off-highway vehicles (OHV), wildlife concentration, roads, and trails. Current livestock grazing management and other uses are evaluated to conclude causes of any unsatisfactory conditions. Conclusions reached in the evaluation should describe all the factors and indicators and the scientific basis for each conclusion. The evaluation rationale should contain descriptions of each attribute or indicator that contributes to allotment(s) meeting or not meeting the standards.

Allotment and Livestock Grazing Management

The Jump Creek allotments are located in Owyhee County, Idaho, approximately 5 miles south-southwest of Marsing, Idaho. The area lies along the western front of the foothills of the Owyhee Mountains. It runs from just east of Highway 95 west to the border with Oregon. The Jump Creek area encompasses approximately 35,461 acres of public land, and it contains five livestock grazing allotments. Elevations range from around 2,500 feet along northern edge at the base of the foothills to over 4,500 feet in the southeastern portion of the area. See Map X for location of the assessment area and allotments within the assessment area.

The major landforms in the allotments are rolling to steep foothills with some steep to very steep rocky drainages which bisect the area. On the northern edge are lower elevation toe slopes and alluvial fan terraces. The major streams that flow across public lands are Jump Creek and Squaw Creek. Additionally, the Squaw Creek Research Natural Area (RNA)/Area of Critical Environmental Concern (ACEC) and the Jump Creek ACEC are located within the assessment area. The Sands Basin Wild Horse Herd Management area and a portion of the Hard Trigger Wild Horse Herd Management area are also within the assessment area.

The soils in the Jump Creek watershed include Sandy Loam 8-12", Calcareous Loam 7-10", Loamy 10-13", Loamy 11-13" with areas of Shallow Claypan ecological sites dispersed throughout the watershed (USDA NRCS 2005, 2006 and 2010).

Table ALLOT-1: Total acres, active use and class of livestock within Group 2 Jump Creek allotments in 2012 (Taken from 1999 Owyhee Resource Management Plan ORMP and 2012 GIS data)

Allotment Name/#	Class of Livestock	Acres per AUM	Active Permitted Use (AUMs)	Public Acres	State Acres	Private Acres	Total Acres
Alkali-Wildcat (514)	C	10	624	6,210	0	0	6,210
Elephant Butte (513)	C	22	412	6,939	0	2,235	9,174
Poison Creek (603)	C,H,S	7	761	5,248	0	32	5,280
Rats Nest (522)	C	10	557	4,891	640	0	5,531
Sands Basin (521)	C	14	999	10,854	1,280	1,389	13,523
Total Acres		12	3,353	34,142	1,920	3,656	39,718

Table ALLOT-2: Permitted use for individual permittees in the Group 2 Jump Creek allotments

ALLOTMENT(S)	Permittee(s)/Operator No.	Active AUMs	Susp. AUMs	Temp. Susp. AUMs	Permitted Use
Alkali-Wildcat (514)	Ted Blackstock (1389)	155	0	0	155
	Chipmunk Grazing Assn. (1395)	469	0	0	469
Elephant Butte (513)	Ted Blackstock (1389)	305	0	0	305
	Chipmunk Grazing Assn. (1395)	85	0	0	85
Poison Creek (603)	Poison Creek Grazing Assn. (3987)	761	0	0	761
Rats Nest (522)	Chipmunk Grazing Assn. (1395)	557	160	0	717
Sands Basin (521)	Chipmunk Grazing Assn. (1395)	999	0	0	999

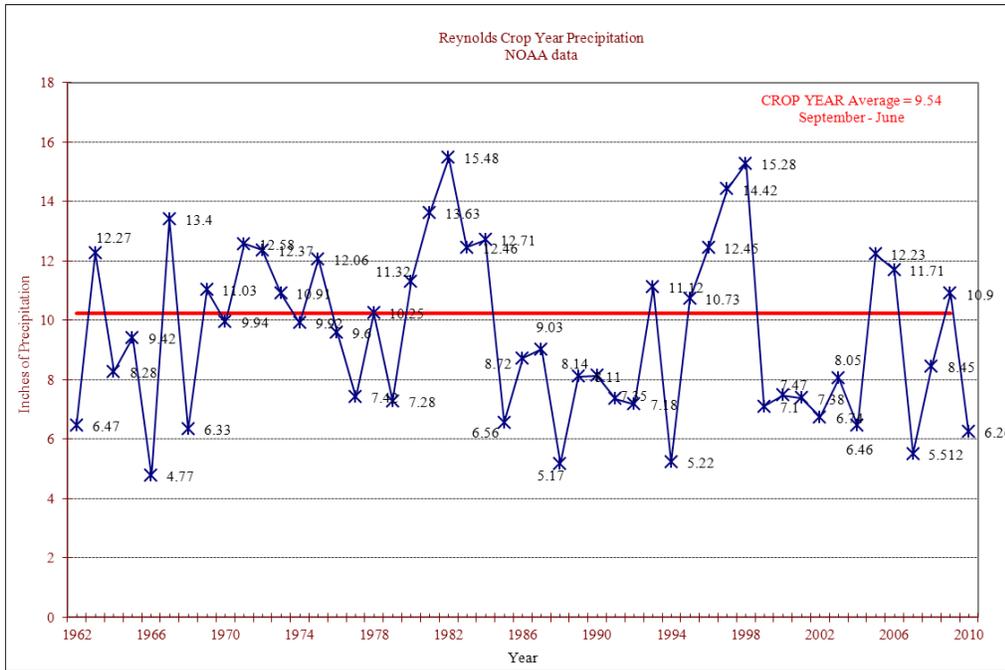
Table ALLOT-3: Actual use for individual permittees in the Group 2 Jump Creek allotments

ALLOTMENT(S)	Permittee(s)/Operator No.	Active AUMs	Range ¹ 1990-2011 AUMs	Average 1990-2011 AUMs
Alkali-Wildcat (514)	Ted Blackstock (1389)	155	44-167	126
	Chipmunk Grazing Assn. (1395)	469	66-763	270
Elephant Butte (513)	Ted Blackstock (1389)	305	128-422	252
	Chipmunk Grazing Assn. (1395)	85	91	91
Poison Creek (603)	Poison Creek Grazing Assn. (3987)	761	H 1-10 S 95-469 C 126-400	4 265 215
Rats Nest (522)	Chipmunk Grazing Assn. (1395)	557	251-605	436
Sands Basin (521)	Chipmunk Grazing Assn. (1395)	999	779-1017	892

¹Years that were over the Active AUMs were for Temporary Non-Renewable authorized use.

The nearest weather station data is from Reynolds, National Oceanic Atmospheric Administration (NOAA) weather station. Precipitation data from this station is available from 1962-2010. Average crop year precipitation was 9.54 inches and varied from 4.8 inches in 1966 to 15.5 inches in 1985 (Figure ALLOT-1). Crop year precipitation is the sum of monthly precipitation between September and June and is used as a predictor of forage production during the growing season during the crop year (Sneva, 1983).

Figure ALLOT-1: Reynolds Crop Year Precipitation 1962-2010



Standard 2 – Riparian Areas and Wetlands

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

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

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

Desired Conditions:

1999 Owyhee Resource Management Plan Objective:

Maintain or improve riparian-wetland areas to attain proper functioning and satisfactory conditions. Riparian-wetland areas include streams, springs, seeps, and wetlands.

Alkali-Wildcat Allotment

Assessment- Alkali-Wildcat

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). The reaches of Jump Creek that traverse BLM lands within the allotment (0.93 miles) were in unsatisfactory condition at the time the Plan was written. The ORMP refers to streams and riparian-wetland areas in unsatisfactory condition as those that were either functional-at-risk or non-functional.

According to the National Hydrologic Dataset (NHD), the Alkali-Wildcat Allotment contains one named stream (Jump Creek) with approximately 0.16 miles of perennial and 0.76 miles of intermittent streams¹ (Table RIPN-1). The allotment contains an additional 25.0 miles of unnamed intermittent streams that do not appear to support significant riparian vegetation (NAIP 2011). The NHD identifies 1 spring/seep (Wildcat Spring) that occurs within the allotment.

Table RIPN-1: Total Miles of Perennial and Intermittent Stream, and Number of Springs within Pasture- NHD Derived

Stream Name and Flow Type	Alkali-Wildcat Pasture 1	Total Miles
Jump Creek		
Intermittent Miles	0.764	0.764
Perennial Miles	0.160	0.160
Unnamed Creek		
Intermittent Miles	25.10	25.10
Total Miles	26.03	26.03
Total # of Springs	1	

¹ Perennial: Contains water throughout the year, except for infrequent periods of severe drought
Intermittent: Contains water for only part of the year, but more than just after rainstorms and at snowmelt
Ephemeral: Flows in normal water years only in direct response to precipitation and channel is above the water table at all times

Previous Assessment Summary

The Northwest Owyhee Front Rangeland Health Assessment that includes the Alkali-Wildcat Allotment primarily discussed the results of Proper Functioning Condition (PFC)² assessments that were conducted on streams and their associated riparian-wetland areas between 1994 and 2000. The results of the assessments indicated that a portion of Jump Creek was functioning properly (PFC)³ and a portion was functioning-at-risk (FAR)³. It also spoke to the assumption that the approximate 3.0 miles of Jump Creek that border the West edge of the allotment and are excluded from grazing is in PFC.

The assessment determined that typically for the reaches of stream that were not in proper functioning condition, there was inadequate riparian-wetland vegetation present to protect streambanks and dissipate energy during high flows, and plant communities were often not comprised of deep-rooted bank stabilizing hydric species.

Current Assessment

The two reaches of Jump Creek that occur on BLM lands within the allotment and outside of the exclosed canyon area have been assessed using the PFC protocol: 0.8 miles are functional-at-risk and 1.0 miles are functioning properly (Table RIPN 2). Consistent with the previous assessment, it is assumed that the approximate three miles of Jump Creek that traverse the western boundary of the allotment/ pasture and are excluded from livestock are in PFC. Wildcat Spring was assessed non-functional (NF)³ in 2011; however, the observers noted the spring water source is intermittent, the area contained no hydric vegetation, and the assessment may not be applicable. The spring is developed with a non-functioning trough present (Figure RIPN-1).

² PFC Assessments are based on Interagency Technical Reference 1737-15, *A User Guide to Assessing Proper Functioning Condition and Supporting Science for Lotic Areas* and 1737-16, *A User Guide to Assessing Proper Functioning Condition and Supporting Science for Lentic Areas*

³ PFC indicates a riparian-wetland area has adequate vegetation, landform, or large woody debris present to dissipate stream energy, filter sediment, aid ground water recharge, aid in floodplain development, stabilize streambanks, and/or maintain channel characteristics. FAR AND NF indicate that the riparian-wetland area does not have sufficient vegetation, landform, or large woody debris to dissipate stream energy, filter sediment, aid ground water recharge, aid in floodplain development, stabilize streambanks, and/or maintain channel characteristics.

Figure RIPN-1: Wildcat Spring; Alkali-Wildcat Allotment; UTM: 4811522N 509814E



The reaches of Jump Creek that were assessed FAR had inadequate hydric vegetation present to protect streambanks and dissipate energy during high stream flows, and the plant community present was not comprised of deep-rooted hydric species.

Table RIPN-2: Total Miles of Perennial and Intermittent Stream that have been assessed

Stream Name and Flow Type	Alkali-Wildcat Pasture 1	PFC Condition	Total Miles Assessed
Jump Creek Assessed			
Intermittent Miles Assessed	1.5	FAR	1.5
	0.8	PFC	0.8
Perennial Miles Assessed	0.75	FAR	0.75
Total Miles Assessed	3.05		3.05

Evaluation Finding – Alkali Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Alkali-Wildcat

Jump Creek, its’ tributaries, and many of the tributaries of Squaw Creek are the primary drainages in the Alkali-Wildcat Grazing Allotment that support riparian-wetland vegetation. About three miles of Jump Creek are excluded from livestock grazing, are in a relatively steep canyon, and are assumed to be in PFC. The portions of Jump Creek that are accessible to

livestock were assessed FAR in 1999. The lower reach was re-assessed in PFC in 2011 indicating progress towards meeting the minimal requirements for the Standard.

Elephant Butte Allotment

Assessment- Elephant Butte

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). Approximately 0.5 miles of Squaw Creek occur in pasture 2 and it was assessed in unsatisfactory condition. The ORMP refers to streams and riparian-wetland areas in unsatisfactory condition as those that were either functional-at-risk or non-functional.

According to the National Hydrologic Dataset (NHD), the Elephant Butte allotment contains one named stream (Squaw Creek) with approximately 0.5 miles of perennial streams (Table RIPN-3). The allotment contains an additional approximate 9.0 miles of unnamed intermittent streams that do not appear to support riparian vegetation (NAIP 2011). The NHD identifies two springs/seeps that occur within the allotment.

Table RIPN-3: Total Miles of Perennial and Intermittent Stream, and Number of Springs within Pasture- NHD Derived

Stream Name and Flow Type	Elephant Butte 1	Elephant Butte 2	Elephant Butte 3	Elephant Butte 4	Elephant Butte 5	Total Miles
Squaw Creek						
Perennial Miles		0.47				0.47
Unnamed Creek						
Intermittent Miles	1.24	0.23	5.08	0.56	1.74	8.85
Total Miles	1.24	0.71	5.08	0.56	1.74	9.32
Total # of Springs		1	1			

Previous Assessment Summary

The Northwest Owyhee Front Rangeland Health Assessment that includes the Elephant Butte Allotment primarily discussed the results of Proper Functioning Condition (PFC) assessments that were conducted on streams and their associated riparian-wetland areas between 1994 and 2000. The results of the assessments indicated that the reach of Squaw Creek that traverses pasture 2 was functioning properly (PFC). The stream is well armored with rock and inaccessible to livestock.

Current Assessment

Pasture 2

The reach of Squaw Creek that occurs on BLM lands within the allotment was assessed in 1999 using the PFC protocol and 0.5 miles were functioning properly (Table RIPN 4). The same reach was visited again in 2011 as part of a longer reach that traverses both the Elephant Butte and the Rats Nest Allotments. The observers noted the vegetation composition and vigor, and channel characteristics; however, a PFC assessment was not conducted based on the reaches good condition and inaccessibility to livestock.

Alkali Spring is the only spring in pasture 2. It was visited with the intent of conducting a PFC assessment in 2011; however, the spring source is protected from livestock and the water is supplying about 10 troughs below the enclosure. The plant community is predominantly upland species and undesirable weed species.

Pasture 3

An unnamed spring was assessed in pasture 3. However, a PFC assessment was not conducted because the water from the source is supplying a non-functioning trough and is not enclosed from livestock. The plant community present contains one hydric species (*Juncus Spp*) along with upland species.

Table RIPN-4: Total Miles of Perennial and Intermittent Stream that have been *assessed*

Stream Name and Flow Type	Elephant Butte 1	Elephant Butte 2	Elephant Butte 3	Elephant Butte 4	Elephant Butte 5	Total Miles Assessed
Squaw Creek						
Perennial Miles Assessed		1.37 (PFC)				1.37
Unnamed Creek/ Rats Nest Gulch						
Intermittent Miles Assessed			1.30 (FAR)			1.30
Total Miles Assessed		1.37	1.30			2.66

Evaluation of Standard 2- Elephant Butte

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding- Elephant Butte

Approximately 0.5 perennial miles of Squaw Creek occur in pasture 2 of the allotment. The stream is inaccessible to livestock and has twice been assessed in PFC. The two springs that occur in pastures 2 and 4 are developed with the water source supplying cattle troughs. The

riparian-wetland areas that would be associated with the springs/seeps do not exist and thus were not assessed using the PFC protocol. The areas are currently occupied by upland species and weeds.

Poison Creek Allotment

Assessment- Poison Creek

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). Jump Creek is the only perennial drainage identified and it had 0.6 miles in unsatisfactory condition at the time the RMP was written. The ORMP refers to streams and riparian-wetland areas in unsatisfactory condition as those that were either functional-at-risk or non-functional.

According to the National Hydrologic Dataset (NHD), the Poison Creek allotment contains three named streams (Poison and Little Poison Creeks, and Poison Creek Tributary) with approximately 0.6 miles of perennial and 5.2 miles of intermittent streams (Table RIPN-5). The portion of Jump Creek that form the eastern boundary of the allotment was discussed under the Alkali-Wildcat Allotment. The allotment contains an additional approximate 18.5 miles of unnamed intermittent streams that do not appear to support riparian vegetation (NAIP 2011). The NHD does not identify any springs/seeps within the allotment.

Table RIPN-5: Total Miles of Perennial and Intermittent Stream within Pasture- NHD Derived

Stream Name and Flow Type	Miles	Total Miles
Little Poison Creek		
Intermittent Miles	1.41	1.41
Poison Creek		
Intermittent Miles	3.79	3.79
Perennial Miles	0.62	0.62
Unnamed Creek		
Intermittent Miles	18.28	18.28
Perennial Miles	0.27	0.27
Total Miles	24.37	24.37

Previous Assessment Summary

The Northwest Owyhee Front Rangeland Health Assessment that includes the Poison Creek Allotment primarily discussed the results of Proper Functioning Condition (PFC) assessments that were conducted on streams and their associated riparian-wetland areas between 1994 and 2000. At the time of the rangeland health assessment, there was no information available for the streams within the allotment.

Current Assessment

The perennial portion of Poison Creek was assessed in 2002 and 1.5 miles were non-functioning (Table RIPN 6). The assessment acknowledged the impacts of a recent fire and noted the reach would likely have been FAR prior to the fire. Other issues identified included a high percent of uncovered banks, a lack of deep root binding vegetation, and the presence of weedy plant species. The same reach was visited in 2013 and photos were taken that document the recovery of the stream. The reach is in a relatively deep canyon and is currently well armored with woody species. The reach of Little Poison Creek that falls within the allotment appears to support very little riparian-wetland vegetation (NAIP 2011)

Table RIPN-6: Total Miles of Perennial and Intermittent Stream that have been assessed

Stream Name and Flow Type	Miles	Total Miles Assessed
Little Poison Creek		
Intermittent Miles Assessed		
Poison Creek		
Intermittent Miles Assessed		
Perennial Miles	1.57 (NF in 2002 & PFC in 2013)	1.57
Unnamed Creek		
Intermittent Miles Assessed		
Perennial Miles Assessed		
Total Miles Assessed	1.57	1.57

Evaluation of Standard 2- Poison Creek

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding- Poison Creek

Poison and Little Poison Creeks are the primary drainages in the Poison Creek Grazing Allotment that support riparian-wetland vegetation. About 1.6 miles of Poison Creek were assessed NF in 2002. The Trimby fire that occurred the same year as the assessment makes it difficult to determine how much of the condition is attributable to the fire. However, specific issues identified include long term indicators that the stream lacks the deep rooted vegetation necessary to stabilize streambanks and that weedy species are increasing. The same reach was well recovered in 2013 with dense woody species protecting the stream banks. Thus, the allotment is making significant progress towards meeting the Standard.

Rats Nest Allotment

Assessment- Rats Nest

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). Squaw Creek is the only perennial drainage identified and it had 0.72 miles in unsatisfactory condition at the time the RMP was written. The ORMP refers to streams and riparian-wetland areas in unsatisfactory condition as those that were either functional-at-risk or non-functional.

According to the National Hydrologic Dataset (NHD), the Rats Nest allotment contains one named stream (Squaw Creek) with approximately 0.7 miles of perennial streams (Table RIPN-7). The allotment contains an additional approximate 17.5 miles of unnamed intermittent streams. About 3.5 miles are commonly referred to as Rats Nest Gulch that does support hydric species, and the remainder do not appear to support riparian vegetation (NAIP 2011). The NHD identifies eight springs/seeps that occur within the allotment.

Table RIPN-7: Total Miles of Perennial and Intermittent Stream, and number of springs within Pasture- NHD Derived

Stream Name and Flow Type	Miles	Total Miles
Squaw Creek		
Perennial Miles	0.70	0.70
Unnamed Creek		
Intermittent Miles	17.55	17.55
Total Miles	18.25	18.25
Total # of Springs	5	

Previous Assessment Summary

The Northwest Owyhee Front Rangeland Health Assessment that includes the Rats Nest Allotment primarily discussed the results of Proper Functioning Condition (PFC) assessments that were conducted on streams and their associated riparian-wetland areas between 1994 and 2000. At the time of the rangeland health assessment, the 0.7 miles of Squaw Creek had been assessed in PFC.

Current Assessment

The 0.7 miles of Squaw Creek were assessed in 1999 in PFC, and the same reach was re-visited in 2011 and deemed inaccessible to livestock and thus in PFC (Table RIPN-8). The 3.5 intermittent miles of Rats Nest Gulch were assessed as FAR. This comprised three distinct

reaches and the specific issues identified included: more than 80 percent of the streambank accessible to livestock, less than 30 percent of the streambank contained deep rooted plant species, and active lateral cutting of the stream. On the third (downstream) reach, livestock pugging was noted and on the first (upstream) reach, a high (more than 30 percent) presence of noxious weed presence was noted.

Three of the springs have been assessed. Coyote Spring (Figure RIPN 2) was in PFC in 2007, but FAR with a downward trend in 2011 because the riparian-wetland area is shrinking from excessive soil erosion, subsurface flow patterns have been altered by hoof action, and there is inadequate hydric vegetation present to protect soil surface. Bathtub spring was evaluated; however, the PFC protocol was not applicable because the spring consists of a livestock trough that fills from a pipeline at the spring source. The spring source is not excluded from livestock. Upper Rats Nest Spring was assessed NF because the riparian-wetland area has been reduced to a dry pond development without any hydric species or soil types to support them present.

Figure RIPN 2: Coyote Spring; Rats Nest Allotment; UTM: 4806759N 516180E



Table RIPN-8: Total Miles of Perennial and Intermittent Stream that have been assessed

Stream Name and Flow Type	Miles	Total Miles Assessed
Squaw Creek		
Perennial Miles Assessed	0.7 (PFC)	0.7
Unnamed Creek/ Rats Nest Gulch		
Intermittent Miles Assessed	3.5 (FAR)	3.5
Total Miles Assessed	4.2	4.2

Evaluation of Standard 2- Rats Nest

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Rats Nest

Squaw Creek and Rats Nest Gulch are the primary drainages in the Rats Nest Grazing Allotment that support riparian-wetland vegetation. About 3.5 miles of Rats Nest Gulch were determined to be FAR because there was a high (>30%) percent of noxious weeds present, lateral cutting of the stream channel was occurring, and there was a lack of deep rooted plant species. The three springs that have been evaluated range from NF to FAR. Bathtub spring was recently re-assessed FAR with a downward trend.

Sands Basin Allotment

Assessment- Sands Basin

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). Jump Creek is the only perennial drainage identified and it had 0.29 miles in unsatisfactory condition at the time the RMP was written. The ORMP refers to streams and riparian-wetland areas in unsatisfactory condition as those that were either functional-at-risk or non-functional.

According to the National Hydrologic Dataset (NHD), the Sands Basin Allotment contains three named streams (Bridge, Jump, and Pole Creek) with approximately 1.2 miles of perennial and 3.0 miles of intermittent streams (Table RIPN-9). The allotment contains an additional approximate 35.0 miles of unnamed intermittent streams, most of which do not appear to support riparian vegetation (NAIP 2011). The NHD identifies four springs/seeps that occur within the allotment.

Table RIPN-9: Total Miles of Perennial and Intermittent Stream, and number of springs within Pasture- NHD Derived

Stream Name and Flow Type	Sands Basin 1	Sands Basin 2	Sands Basin 3	Sands Basin 4	Total Miles
Bridge Creek					
Intermittent Miles		0.76	0.73		1.49
Jump Creek					
Intermittent Miles		0.80		0.28	1.07
Perennial		0.20		0.98	1.19
Pole Creek					

Stream Name and Flow Type	Sands Basin 1	Sands Basin 2	Sands Basin 3	Sands Basin 4	Total Miles
Intermittent Miles				0.27	0.27
Unnamed Creek					
Intermittent Miles	5.65	10.33	6.27	12.98	35.23
Perennial				0.25	0.25
Total Miles	5.65	12.09	7.00	14.76	39.50
Total # of Springs			1	3	

Previous Assessment Summary

The Northwest Owyhee Front Rangeland Health Assessment that includes the Sands Basin Allotment primarily discussed the results of Proper Functioning Condition (PFC) assessments that were conducted on streams and their associated riparian-wetland areas between 1994 and 2000. At the time of the rangeland health assessment, the 2.0 miles of Jump Creek that fall on BLM lands had been assessed FAR. Tributaries to both Jump and Squaw Creeks had not been evaluated at the time, but the BLM riparian length was noted.

Current Assessment

Pasture 2

Two reaches of Jump Creek totaling about 1.0 miles that traverse BLM land in pasture 2 were assessed FAR in 1999 (Table RIPN-10). The two distinct reaches had specific issues identified that included a lack of diverse hydric vegetation that aids in stabilizing streambanks during high flows, and a lack of vigor and regeneration of riparian-wetland species. The northern segment (1.3 mile reach) was re-assessed in 2007; the reach was assessed in PFC and the evaluation stated that the rock and woody debris armored the stream.

A MMIM site was established on Jump Creek in 2008 within pasture 2. The MMIM determined that the reach had a median stubble height of 10.0 inches and covered, stable banks.

Stubble height was also measured in 1997 on the upper reach with an average height of 5.0 on August 25th, and again in 2008 on the lower reach of Jump Creek where a 7.0-inch average was recorded on November 19.

Pasture 4

One perennial mile of Jump Creek that crosses BLM lands was assessed FAR in pasture 4. All of the riparian-wetland indicators associated with vegetation were not meeting the standard set by the BLM PFC protocol. Essentially, the segment of stream did not comprise deep rooted, bank stabilizing plant species that help maintain the resiliency of the system and dissipate energy during high flows. Additionally, the riparian-wetland vegetation was not sufficient to control erosion, filter sediment, and aid in floodplain development.

A MMIM sites were established on Jump Creek (Figure RIPN 3) in 2008 within pasture 4. The MMIM determined that the reach had a median stubble height of 2.0 inches and bank alteration of 59%.

On November 19, 2008, a tributary to Jump Creek had an average 3.0 inch stubble height measured, and on Jump Creek an average 2.5 inch stubble height was measured.

The Sands Basin Spring Complex was assessed in 2007 as FAR primarily based on the presence of two headcuts creating vertical instability in the system. Additionally, there was a lack of a woody component when the site likely has the potential to support woody species and the spring source nor the riparian-wetland area were exclosed from livestock.

Figure RIPN 3: Jump Creek; Sands Basin Allotment; UTM: 501849E 4804542N



Table RIPN-10: Total Miles of Perennial and Intermittent Stream that have been assessed

Stream Name and Flow Type	Sands Basin 1	Sands Basin 2	Sands Basin 3	Sands Basin 4	Total Miles Assessed
Bridge Creek					
Intermittent Miles <i>Assessed</i>					
Jump Creek					
Intermittent Miles <i>Assessed</i>		1.0 (FAR); 0.75 (PFC)			1.75
Perennial Miles <i>Assessed</i>				1.09 (FAR)	1.09
Pole Creek					
Intermittent Miles <i>Assessed</i>					
Unnamed Creek					
Intermittent Miles <i>Assessed</i>					
Perennial Miles <i>Assessed</i>					
Total Miles Assessed		1.75		1.09	2.84

Evaluation of Standard 2- Sands Basin

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Sands Basin

Jump Creek is the primary perennial drainage in the Sands Basin Grazing Allotment that supports riparian-wetland vegetation. The stream traverses both BLM and private in pastures 2 and 4. About 1.0 mile of Jump Creek that traverses BLM lands was determined to be FAR because there was insufficient deep rooted, bank stabilizing plant species present to protect the system during high flows. Additionally, Sands Basin Spring Complex was rated FAR based on the presence of headcuts that compromise the vertical stability of the wet meadow area.

Information Sources

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http://www.deq.idaho.gov/media/453824-snake_river_succor_creek_entire.pdf

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USDI Bureau of Land Management. 1993. Technical Reference 1737-8 - Greenline riparian-wetland monitoring: Riparian area management.
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<http://www.blm.gov/nstc/library/pdf/MIM.pdf>

Idaho Department of Fish and Game Fisheries Management Plan 2007-2012.

<http://fishandgame.idaho.gov/public/fish/planFisheries.pdf>

USDI U.S. Geological Survey. National Hydrologic Dataset (NHD), Earth Science Information Center. <http://nhd.usgs.gov/data.html>

USDA Farm Services Agency. 2009. NAIP Aerial Imagery.

<http://www.fsa.usda.gov/FSA/apfoapp?area=home&subject=prog&topic=nai>

Standard 3 – Stream Channel/Floodplain

Stream channels and flood plains 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.

Desired Conditions:

1999 Owyhee Resource Management Plan:

Maintain or improve riparian-wetland areas to attain proper functioning and satisfactory conditions. Riparian-wetland areas include streams, springs, seeps, and wetlands.

Alkali-Wildcat Allotment

Assessment- Alkali-Wildcat

Overview and Previous Assessment

See information and assessment under Standard 2.

Current Assessment

In addition to the assessment information described under Standard 2 , the PFC metrics associated with stream channels and floodplains indicated that the reaches of Jump Creek that

were FAR did not have the characteristics necessary to dissipate high flows. For example, overwidening of the channel was noted.

Evaluation of Standard 3- Alkali-Wildcat

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Alkali-Wildcat

See information and evaluation under Standard 2.

Elephant Butte Allotment

Assessment- Elephant Butte

See information and assessment under Standard 2.

Evaluation of Standard 3- Elephant Butte

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Elephant Butte

See information and evaluation under Standard 2.

Poison Creek Allotment

Assessment- Poison Creek

Overview and Previous Assessment

See information and assessment under Standard 2.

Current Assessment

In addition to the assessment information described under Standard 2, the information associated with stream channels and floodplains indicated that Poison Creek did not have the geomorphic characteristics necessary to dissipate high flows. For example, overwidening of the channel and an inability of the flows to inundate the floodplains were noted.

Evaluation of Standard 3- Poison Creek

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Poison Creek

Overview and Previous Assessment

See information and evaluation under Standard 2.

Current Assessment

See information and evaluation under Standard 2.

Rats Nest Allotment

Assessment- Rats Nest

See information and assessment under Standard 2.

Evaluation of Standard 3- Rats Nest

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Rats Nest

See evaluation under Standard 2.

Sands Basin Allotment

Assessment- Sands Basin

Overview and Previous Assessment

See information and assessment under Standard 2.

Current Assessment

Pasture 2

In addition to the assessment information described under Standard 2 , the information associated with stream channels and floodplains indicated that the segments of Jump Creek that traverse BLM lands on pasture 2 did not have the geomorphic characteristics necessary to dissipate high

flows. For example, overwidening of the channel and a lack of sinuosity appropriate for the valley type and stream gradient were noted.

Pasture 4

See the assessment information described under Standard 2. The information associated with stream channels and floodplains did not indicate specific issues with the segments of Jump Creek that traverse BLM lands on pasture 4.

Evaluation of Standard 3- Sands Basin

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Sands Basin

See evaluation under Standard 2.

Information Sources:

See the references under Standard 2.

Standard 7 – Water Quality

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

Indicators may include but are not limited to:

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

Desired Conditions:

1999 Owyhee Resource Management Plan:

Meet or exceed State of Idaho water quality standards on all Federally administered waters within the Owyhee Field Office. Follow current State water rights processes and procedures to acquire water rights for beneficial uses and support establishment of in-stream flows which are in the public interest.

Jump Creek Group- Alkali-Wildcat, Elephant Butte, Poison Creek, Rats Nest, and Sands Basin Allotments

Overview

The Idaho Department of Environmental Quality (IDEQ) is the state agency tasked with complying with and implementing the federal Clean Water Act. IDEQ sets the states standards through their integrated report and beneficial use process. On stream segments listed as water quality limited in the current IDEQ 303(d) list, Idaho BLM is expected to implement grazing

practices that make progress towards achieving proper functioning condition and satisfactory riparian condition.

All five of the allotments in the Jump Creek group fall within the Middle Snake-Succor watershed, an arid watershed characterized by hot summer temperatures. The streams within the watershed are tributaries to the Snake River and are generally low volume streams that have a combination of high ambient temperatures, poor shading, low flow volume, flow alteration, and naturally warm springs, which often lead to exceedances of the temperature standard. Other issues identified that affect the streams in the watershed are nutrient loading and in-stream channel erosion causing sediment loading (IDEQ 2010).

Idaho water quality standards require that surface waters of the state be protected for beneficial uses, wherever attainable (IDAPA 58.01.02.050.02). These beneficial uses are interpreted as existing uses, designated uses, and presumed uses. The beneficial uses assigned to the Middle Snake- Succor watershed include cold water aquatic life, salmonid spawning, and primary and secondary contact recreation. Cold-water aquatic life water bodies are defined as “water quality appropriate for the protection and maintenance of a viable aquatic life community for cold water species.” Streams within the allotment that are identified by IDEQ as not supporting the beneficial use include Jump, Bridge, Poison, and Little Poison Creeks, and their tributaries. Two tributaries to McBride Creek that traverse pasture 4 in the Sands Basin Allotment have been through the reconnaissance process and placed on the 303(d) list due to excessive temperature, sedimentation and siltation.

Previous Assessment Summary

The Northwest Owyhee Front Rangeland Health Assessment from 2001 that includes all five of the Jump Creek Group of allotments discussed the beneficial uses set for the area by IDEQ as well as those streams that are not supporting them. The report disclosed information regarding temperature and bacteria monitoring data collected by both BLM and other agencies. It found that Squaw Creek in the Rats Nest and Elephant Butte allotments was not supporting the cold water aquatic life beneficial use. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C.

Alkali-Wildcat Allotment

Assessment- Alkali-Wildcat

None of the streams in the Alkali-Wildcat Allotment are on the IDEQ 303(d) list of impaired waters, nor does the BLM have any water quality monitoring sites within this allotment.

Evaluation of Standard 2- Alkali-Wildcat

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Elephant Butte Allotment

Assessment- Elephant Butte

None of the streams in the Elephant Butte Allotment are on the IDEQ 303(d) list of impaired waters, nor does the BLM have any water quality monitoring sites within this allotment.

Evaluation of Standard 2- Elephant Butte

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Poison Creek Allotment

Assessment- Poison Creek

None of the streams in the Poison Creek Allotment are on the IDEQ 303(d) list of impaired waters, nor does the BLM have any water quality monitoring sites within this allotment.

Evaluation of Standard 2- Poison Creek

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rats Nest Allotment

Assessment- Rats Nest

None of the streams in the Rats Nest Allotment are on the IDEQ 303(d) list of impaired waters, nor does the BLM have any water quality monitoring sites within this allotment.

Evaluation of Standard 2- Rats Nest

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Sands Basin Allotment

Assessment- Sands Basin

Pasture 4

The two tributaries of McBride Creek that occur within pasture 4 are on the IDEQ 303(d) list of impaired waters that are not supporting the beneficial use. BLM has not monitored water temperature or bacterial levels in pasture 4.

Evaluation of Standard 2- Sands Basin

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Sands Basin

There are two tributaries that are not meeting the State's water quality standards in pasture 4 of the allotment.

Information Sources

IDAPA 58.01.02. Idaho water quality standards and wastewater treatment requirements.

Idaho Department of Environmental Quality. 2011. Idaho Department of Environmental Quality Final 2010 Integrated Report. Boise, ID: Idaho Department of Environmental Quality. <http://www.deq.idaho.gov/media/725927-2010-integrated-report.pdf>

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Appendix A: Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management

Standards for Rangeland Health (associated with water and riparian resources)

The Standards for Rangeland Health, as applied in the State of Idaho, are to be used as the Bureau of Land Management's management goals for the betterment of the environment, protection of cultural resources, and sustained productivity of the range. They are developed with the specific intent of providing for the multiple use of the public lands. Application of the

standards should involve collaboration between the authorized officer, interested publics, and resource users.

Rangelands should be meeting the Standards for Rangeland Health or making significant progress toward meeting the standards. Meeting the standards provides for proper nutrient cycling, hydrologic cycling, and energy flow.

Monitoring of all uses is necessary to determine if the standards are being met. It is the primary tool for determining rangeland health, condition, and trend. It will be performed on representative sites.

Appropriate to soil type, climate, and landform, indicators are a list of typical physical and biological factors and processes that can be measured and/or observed (e.g., photographic monitoring). They are used in combination to provide information necessary to determine the health and condition of the rangelands. Usually, no single indicator provides sufficient information to determine rangeland health. Only those indicators appropriate to a particular site are to be used. The indicators listed below each standard are not intended to be all inclusive.

The issue of scale must be kept in mind in evaluating the indicators listed after each standard. It is recognized that individual isolated sites within a landscape may not be meeting the standards; however, broader areas must be in proper functioning condition. Furthermore, fragmentation of habitat that reduces the effective size of large areas must also be evaluated for its consequences.

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.
- Indicators may include, but are not limited to, the following:
- 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 flood water, and increasing recharge of groundwater appropriate to site potential.
- 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.
- Age class and structural diversity of riparian/wetland vegetation is appropriate for the site.
- Noxious weeds are not increasing.

Standard 3 (Stream Channel/Floodplain)

- Stream channels and floodplains are properly functioning relative to the geomorphology (e.g., gradient, size, shape, roughness, confinement, and sinuosity) and climate to provide for proper nutrient cycling, hydrologic cycling, and energy flow.
- Indicators may include, but are not limited to, the following:

- 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.
- Stream width/depth ratio, gradient, sinuosity, and pool, riffle and run frequency are appropriate for the valley bottom type, geology, hydrology, and soils.
- Streams have access to their floodplains and sediment deposition is evident.
- There is little evidence of excessive soil compaction on the floodplain due to human activities.
- Streambanks are within an appropriate range of stability according to site potential.
- Noxious weeds are not increasing.

Standard7 (Water Quality)

- Surface and ground water on public lands comply with the Idaho Water Quality Standards.
- Indicators may include, but are not limited to, the following:
- Physical, chemical, and biologic parameters described in the Idaho Water Quality Standards.

Guidelines for Livestock Grazing Management

Guidelines direct the selection of grazing management practices, and where appropriate, livestock management facilities to promote significant progress toward, or the attainment and maintenance of, the standards. Grazing management practices are livestock management techniques. They include the manipulation of season, duration (time), and intensity of use, as well as numbers, distribution, and kind of livestock. Livestock management facilities are structures such as fences, corrals, and water developments (ponds, springs, pipelines, troughs, etc.) used to facilitate the application of grazing management practices. Livestock grazing management practices and guidelines will be consistent with the Idaho Agricultural Pollution Abatement plan.

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

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

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

Guidelines Associated with the Water and Riparian Resources

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.
10. Implement grazing management practices and/or facilities that provide for complying with the Idaho Water Quality Standards.

Appendix B: Methods

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

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-BLM 1994). Lentic areas are defined as wetland-riparian areas adjacent to standing water habitats such as lakes, ponds, seeps, and meadows.

BUREAU OF LAND MANAGEMENT

Specialist Report - Riparian/ Water Resources

Owyhee Field Office Group 2 Allotments

May 2012

Idaho BLM NEPA Permit Renewal Team

Specialist Report – Water and Riparian Resources

Field Office: Owyhee Field Office

Allotment Name/Number: Group 2 – Succor Creek: Blackstock Springs (515), Jackson Creek (506), Texas Basin FFR (472)

Names of Permittees:

Standards for Rangeland Health

In 1997, the BLM in Idaho adopted rangeland health standards (*Appendix A - Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management*), which were developed in coordination with the Resource Advisory Councils during the previous two years. 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. Proper nutrient and hydrologic cycling, and energy flow lead toward meeting the standards. Current livestock grazing management is evaluated as a part of the Evaluation Report to identify if it appears to maintain standards or promote significant progress toward meeting the standards.

The Standards for Rangeland Health, as applied in the State of Idaho, are to be used as the Bureau of Land Management's management goals for the betterment of the environment, protection of cultural resources, and sustained productivity of the range. They are developed with the specific intent of providing for the multiple uses of the public lands. Application of the standards should involve collaboration between the authorized officer, interested publics, and resource users.

Rangelands should be meeting the Standards for Rangeland Health or making significant progress toward meeting the standards. Meeting the standards provides for proper nutrient cycling, hydrologic cycling, and energy flow.

Monitoring of all uses is necessary to determine if the standards are being met. It is the primary tool for determining rangeland health, condition, and trend. It will be performed on representative sites.

Appropriate to soil type, climate, and landform, indicators are a list of typical physical and biological factors and processes that can be measured and/or observed (e.g., photographic monitoring). They are used in combination to provide information necessary to determine the health and condition of the rangelands. Usually, no single indicator provides sufficient information to determine rangeland health. Only those indicators appropriate to a particular site are to be used. The indicators listed below each standard are not intended to be all inclusive. The issue of scale must be kept in mind in evaluating the indicators listed after each standard. It is recognized that individual isolated sites within a landscape may not be meeting the standards; however, broader areas must be in proper functioning condition. Furthermore, fragmentation of habitat that reduces the effective size of large areas must also be evaluated for its consequences.

Rangeland Health and Evaluation

The rangeland health assessment (RHA) describes the current rangeland health conditions. It identifies the current conditions including changes in rangeland health over time (trend). Permittees, interested publics, tribes, and state agencies must be given an opportunity to provide information and data to be considered in the RHA. The rangeland health assessment (RHA) is a compilation and analysis of all data and information available for an allotment or group of allotments.

The Evaluation report answers two major questions.

1. Is the allotment meeting the Idaho Standards for Rangeland Health (ISRH)?
2. If the allotment is not meeting the ISRH, is it making significant progress toward meeting the ISRH?

The analysis in the RHA is the basis for completing the evaluation. The evaluation rationale should contain descriptions of each attribute or indicator that contributes to allotment(s) meeting or not meeting ISRH. Conclusions reached in the evaluation should describe all the factors and indicators and the scientific basis for the conclusions reached. The rationale should include a description of each of the indicators and/or attributes that led to the determination that the ISRH are not being met.

Factors potentially contributing to the current conditions are described in the evaluation. Some of the factors that may influence the current conditions include livestock grazing management, off-high-way vehicles, wildlife concentration, roads, and trails. Current livestock grazing management and other uses are evaluated to conclude causes of any unsatisfactory conditions.

This report pertains to the water and riparian resources only and will facilitate the analysis in the EIS for the permit renewals.

Allotment and Livestock Grazing Management

Table ALLOT-1: Total acres, active use and class of livestock within Group 2 Succor Creek allotments in 2011 (Taken from Owyhee Resource Management Plan ORMP)

Allotment Name/#	Class of Livestock	Active Permitted Use	Public Acres	State Acres	Private Acres	Total Acres
Blackstock Springs (515)	C	2,057	12,799	1,277	3,260	17,336
Jackson Creek (506)	C	1,139	5,548	3,711	862	10,122
Texas Basin FFR (472)	C	5	91	0	1,908	1,999
Total Acres		3,201	18,438	4,988	6,030	29,457

Standards:

Standard 2 – Riparian Areas and Wetlands

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

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

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

Desired Conditions:

1999 Owyhee Resource Management Plan Objective:

Maintain or improve riparian-wetland areas to attain proper functioning and satisfactory conditions. Riparian-wetland areas include streams, springs, seeps, and wetlands.

Assessment and Monitoring Methods

The BLM primarily utilizes the lotic and lentic¹ proper functioning condition (PFC)² protocol to measure whether or not the resource objectives are being met. The PFC assessment is a qualitative determination that refers to a consistent approach for considering hydrology, vegetation, and erosion/deposition (soils) attributes and processes to assess the condition of riparian-wetland areas. Essentially, a PFC determination rates the state of resiliency that will allow a riparian area to hold together during a high-flow event which then allows the area to provide desired values (ie. wildlife habitat). The standard checklist for lotic areas which has seventeen indicators, is used to evaluate both Standards 2 and 3. The standard checklist for lentic areas has twenty indicators and is used to evaluate Standard 2.

The BLM employs several additional assessment methods that aid in interpreting the condition of the water and riparian resources. Most recently, the multiple indicator method (MIM)³ has been finalized. MIM is a quantitative monitoring and analysis method used to assess the long-term trend of a designated stream reach. MIM can be used to help evaluate livestock grazing

¹ Lotic = flowing water. Lentic = standing water, e.g. a seep or pond.

² PFC Assessments are based on Interagency Technical Reference 1737-15, *A User Guide to Assessing Proper Functioning Condition and Supporting Science for Lotic Areas* and 1737-16, *A User Guide to Assessing Proper Functioning Condition and Supporting Science for Lentic Areas*

³ MIM: Interagency Technical Reference 1737-23, *Multiple Indicator Monitoring of Stream Channels and Streamside Vegetation*

management (i.e. timing, duration, and frequency of grazing) and to determine how the vegetation and stream channels are responding to herbivore use. Monitoring data is gathered for ten indicators to assess the current condition and trend of the streambanks, channel, and vegetation. From the gathered data, an evaluation is made for the stream reach in relation to the following three capability groups: 1) ecological status, 2) vegetation-erosion resistance (i.e., streambank stability), and 3) site wetland status. Depending on the objectives for an area or stream, the MIM method can also be modified (MMIM) allowing the observers to collect only the three short-term indicators (ie. stubble height, woody browse, and bank alteration).

BLACKSTOCK SPRINGS ALLOTMENT

Assessment- Blackstock Springs

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). The reaches of Little McBride, Little Squaw, and McBride Creek that traverse BLM lands within the allotment (1.40 miles) were in unsatisfactory condition at the time the Plan was written. The ORMP refers to streams and riparian-wetland areas in unsatisfactory condition as those that were either functional-at-risk or non-functional.

According to the National Hydrography Dataset (NHD), the Blackstock Springs Allotment contains five named streams (Dead Horse, Little McBride, Little Squaw, McBride, and Willow Fork Creeks) with approximately 2.3 miles of perennial and 7.0 miles of intermittent streams⁴ (Table RIPN-1). The NHD identifies an additional 39.0 miles of unnamed intermittent streams that do not appear to support significant amounts of riparian vegetation (NAIP 2011). The NHD identifies 15 springs/seeps that occur within the allotment.

Table RIPN-1: Total Miles of Perennial and Intermittent Stream, and Number of Springs within Pasture- NHD Derived

Stream Name and Flow Type	Blackstock Springs- Seeding 01	Blackstock Springs- Native 02	Blackstock Springs- South Native 03	Total Miles
Dead Horse Creek				
Intermittent Miles	1.75			1.75
Little McBride Creek				
Intermittent Miles		0.79		0.79
Perennial Miles		1.07		1.07

⁴ Perennial: Contains water throughout the year, except for infrequent periods of severe drought
 Intermittent: Contains water for only part of the year, but more than just after rainstorms and at snowmelt
 Ephemeral: Flows in normal water years only in direct response to precipitation and channel is above the water table at all times

Stream Name and Flow Type	Blackstock Springs- Seeding 01	Blackstock Springs- Native 02	Blackstock Springs- South Native 03	Total Miles
Little Squaw Creek				
Intermittent Miles	3.55			3.55
Perennial Miles	0.44			0.44
McBride Creek				
Intermittent Miles			0.33	0.33
Perennial Miles		0.05	0.57	0.62
Willow Fork				
Intermittent Miles		0.55		0.55
Perennial Miles		0.22		0.22
Total Miles	5.74	2.68	0.91	9.33
Total # of Springs	8	4	3	

Table RIPN-2: Total Miles of Perennial and Intermittent Streams and Springs that have been Assessed

Stream Name and Flow Type	Blackstock Springs- Seeding 01	Blackstock Springs- Native 02	Blackstock Springs- South Native 03	Total Miles Assessed
Little McBride Creek				
Intermittent Miles Assessed		0.8 (FAR)		0.8
Perennial Miles Assessed		1.0 (PFC)		1.0
Little McBride Creek Tributary				
Intermittent Miles Assessed		1.3 (FAR –PFC)		1.3
Little Squaw Creek				
Intermittent Miles Assessed	0.4 (FAR)			0.4
Perennial Miles Assessed	0.6 (FAR)			0.6
McBride Creek				
Intermittent Miles Assessed				
Perennial Miles Assessed		1.2 (FAR)	0.6 (FAR)	1.8
Total Miles	1.0	4.3	0.6	5.9

Blackstock Springs- Seeding 01		Blackstock Springs- Native 02		Blackstock Springs- South Native 03	
Unnamed Spring	PFC- FAR	Unnamed Spring	PFC	Unnamed Spring	not assessed NA
Unnamed Spring	PFC	Unnamed Spring	PFC	Unnamed Spring	PFC
Unnamed Spring	NF	Unnamed Spring	FAR		

Blackstock Springs- Seeding 01		Blackstock Springs- Native 02		Blackstock Springs- South Native 03	
Unnamed Spring	NF	Unnamed Spring	not assessed NA		
Unnamed Spring	FAR	Bush Ranch Complex	FAR		
Unnamed Spring	NF				
Blackstock Spring	PFC				
Unnamed Spring	FAR				
Unnamed Spring	FAR				
Unnamed Spring	NF				
Unnamed Spring	PFC				
Unnamed Spring	NF				

Assessment

Native Pasture 1

One mile of the perennial portion and 0.8 mile of the intermittent portion of Little McBride Creek that traverses the native pasture has been assessed using the BLM's PFC protocol (Table RIPN 2). The *perennial* reach is functioning properly because it is primarily in an enclosure larger than one acre and the stream is geologically confined in an approximate ten foot deep channel with a coble stream bed. However, there is approximately 100 meter reach southeast of the enclosure and bordered by a road which has two culverts to channel the stream. This portion of the stream is heavily rock armored and anchored with large woody species that maintain stream bank stability. The *intermittent* reach was functional-at-risk (FAR)⁵ because there was a high (>25%) percent of bare ground, heavy use of vegetation by herbivores (>35%), an approximate 2.0 inch stubble height, and moderately high (~20%) animal pugging present within the riparian-wetland area.

About 1.3 miles of a *tributary* to Little McBride Creek (Figure RIPN 1) were assessed as FAR in 2002 and rated in PFC when revisited in 2011. It was determined to be in PFC because the reach is a shallow and heavily rock armored stream that is densely covered with woody species that protect it from livestock.

⁵ PFC indicates a riparian-wetland area has adequate vegetation, landform, or large woody debris present to dissipate stream energy, filter sediment, aid ground water recharge, aid in floodplain development, stabilize streambanks, and/or maintain channel characteristics. FAR AND NF indicate that the riparian-wetland area does not have sufficient vegetation, landform, or large woody debris to dissipate stream energy, filter sediment, aid ground water recharge, aid in floodplain development, stabilize streambanks, and/or maintain channel characteristics.

Figure RIPN 1: Tributary of Little McBride Creek; Blackstock Springs Allotment; UTM: 4789673N 506155E



Approximately 1.2 miles of McBride Creek were assessed FAR in 2002 (Figure RIPN 2) primarily because the exclosure fence was down and livestock had accessed the area that was recovering relatively well. Also, the inventory report noted the presence of lateral and vertical (2 headcuts

) instability, noxious weed presence, and the NF condition of the water gaps that were included in the reach. The same reach was re-visited in 2011, but was not assessed with the PFC protocol because the area is exclosed from livestock and appears to be recovering well (Figure RIPN 3).

Figure RIPN 2: McBride Creek- livestock in exclosure and water gap condition; Blackstock Springs Allotment; UTM: 4789448N 504354E

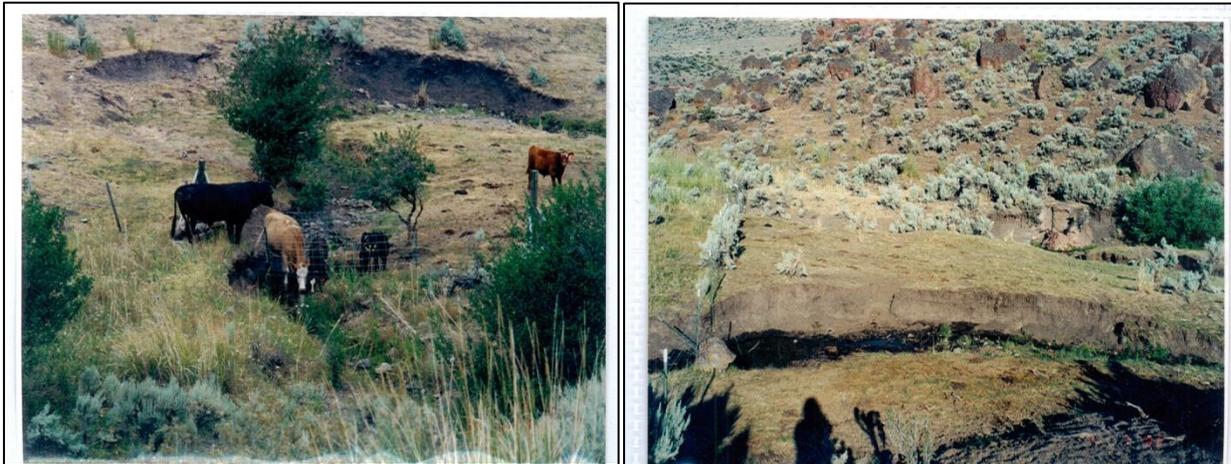


Figure RIPN 3: McBride Creek enclosure; Blackstock Springs Allotment; UTM: 4789448N 504354E



A MIM site was established on Willow Fork Creek within the Native pasture. The report noted “Willow Fork is a downcut stream that flows through a big sagebrush community with a slope of 3-5%. The greenline is protected and covered with dense JUBA and Carex species. Mature willows (*salix spp*) are present to trap sediment and dissipate energy within the channel. Livestock grazing appears to be slight to moderate on key riparian species”. The metrics collected determined a relatively sustainable stubble height, but a high streambank alteration and somewhat low bank stability (Table RIPN 3).

Tables RIPN-3: Willow Fork Creek- Blackstock Springs Allotment/ Native Pasture Multiple Indicator Monitoring (MIM) Metrics

	Median SH (inches)	Mean SH (inches)	Bank Alteration (%)	Woody Use (%)	Bank Stability (%)	Bank Cover (%)
Willow Fork Creek	8.0	9.5	21%	6.7%	66%	93%

Stubble height was also measured on Willow Fork Creek three consecutive years; 3.0 inches was recorded in October of 2001 and 2002, and 2.5 inches was recorded in November of 2003

Bush Ranch Complex along with four unnamed springs were assessed in the Native pasture. Bush Ranch spring was rated FAR because surface flow patterns have been altered by hoof action and are creating hummocks. The soils that comprise the hummocks are drying and are no longer able to support hydric species. Additionally, there is one large and one smaller headcut at the lower end of the wet meadow area. Headcuts threaten the vertical stability of the riparian-wetland area and could lead to the lowering of the water table, thus removing the moisture from the soils that are needed to support hydric vegetation.

A large (about 4 acres) unnamed spring (Figure RIPN 4) at the headwaters of the tributary to Little McBride Creek in the southern portion of the Native pasture was also rated FAR. The wet meadow complex is comprised of six seeps and has light to moderate grazing and pugging that appears to be altering the flow pattern and is also limiting wetland obligates in some places.

Figure RIPN 4: Unnamed Spring; Blackstock Springs Allotment- Native Pasture; UTM: 4789304N 507587E



Two additional unnamed springs that occur within the Native pasture were visited but not assessed because the spring sources are enclosed from livestock. However, it was noted that both enclosures are very small and that the water is being piped to troughs outside the enclosures. The removal of the majority of the water has dried the soils and upland species are outcompeting the obligate wetland vegetation.

Seeding Pasture 2

Approximately one mile of Little Squaw Creek that occurs in the northern portion of the Seeding pasture was rated FAR in 2002. The reach was in poor condition with poorly vegetated banks (~20% unstable and bare), both lateral and vertical instability (5 headcuts were recorded), heavy pugging, and high use of vegetation (20-40%). As a supplement and a follow-up of the FAR rating, a MIM site was established about a third of the way down the same reach in 2011. The site was placed in a relatively rock-armored segment of the stream and the metrics indicate an improvement (Table RIPN 4).

Tables RIPN-4: Little Squaw Creek- Blackstock Springs Allotment/ Seeding Pasture Multiple Indicator Monitoring (MIM) Metrics

	Median SH (inches)	Mean SH (inches)	Bank Alteration (%)	Woody Use (%)	Bank Stability (%)	Bank Cover (%)
Little Squaw Creek	8.0	9.4	15%	20%	99%	100%

Twelve springs have been assessed within the Seeding pasture (Table RIPN 2). The only named spring, Blackstock Spring, was visited in 2011 and found to be exclosed from livestock and thus was not assessed (assumed in PFC). The riparian-wetland area encompasses about four acres with a stock pond at the lower end.

During the most recent monitoring in 2011, four additional unnamed springs that occur within the pasture were assessed; one was in PFC and three were rated FAR. The spring that was in PFC is a small seep with a non-functioning trough and pipeline; however, the hydric vegetation is healthy and the area does not appear to have been impacted by livestock. One of the springs that was rated FAR showed heavy livestock impacts in the form of vegetation use, pugging, and wetland soil loss. The surface flows patterns have been altered by hoof action creating high and dry pedestals and eroding soils, and the plant community had low vigor. The second FAR spring (Figure RIPN 5) is mostly exclosed from livestock; however, the riparian-wetland area outside the fence is being impacted from livestock grazing and trampling. The third FAR spring was originally assessed NF in 2003 and re-assessed in 2011. The condition appears to have improved; however, moderate to severe hoof action and trails are present that alter the surface flow system, and numerous livestock trails leading from the uplands to the lentic area are creating sloughing, erosion and deposition contributing to riparian wetland degradation.

Figure RIPN 5: Unnamed Spring fence contrast; **Figure RIPN 6:** Unnamed Spring;

Blackstock Springs Allotment/ Seeding Pasture; Blackstock Springs Allotment/ Seeding

UTM: 4794094N 505625E

Pasture; UTM: 4794880N 507479E



Six additional and different unnamed springs in the Seeding pasture were assessed in 2003; one was in PFC, two were FAR, and three were NF. The Unnamed spring that was in PFC is a large two acre riparian-wetland area to the east of Little Squaw Creek, and was re-assessed in 2011 and rated FAR. The downward trend was based on the livestock trampling and pugging along the outer edges of the wet meadow. The hoof action is altering the surface flows and leading to high and dry hummocks that do not support hydric species. The first of the two FAR springs is primarily exclosed from livestock; however, the riparian-wetland area outside of the enclosure was affected by hoof action that altered the surface flow pattern and vigor of the hydric

vegetation. The second FAR spring is developed with a trough, but is not enclosed. The riparian-wetland area has been impacted by hoof action in the form of pugging, soil shearing, reduced vigor of hydric plants, and drying of hydric soils.

The three springs that were rated NF are all located along the eastern edge of the pasture. The first was developed with both a trough and a soil berm. At the time of the assessment, the berm had eroded, the disturbed area had caused an increase in invasive species, and there were inadequate hydric plants present to dissipate energy during a high flow event. The second spring that was rated NF is a small seep that was heavily grazed (>50%) and had over 45% of the area covered by disturbance-caused undesirable herbaceous species (Kentucky bluegrass, bur buttercup, dandelion). The third NF spring is comprised of a series of seeps along a small draw. The draw was incised and the areas surface flow and vegetation had been altered by hoof action.

South Native Pasture 3

About 0.5 mile of McBride Creek that traverses pasture 3 was rated FAR in 2002. The assessment indicated that the channel was incised, there was not continuous deep rooted hydric vegetation present along banks, about 20% of the riparian-wetland area is bare of vegetation and unstable, and that historic livestock use appears to have stunted willow recruitment.

Subsequent to the assessment described above, a MIM site was established on the same reach (Figure RIPN 7 and Table RIPN 5). The reach of McBride Creek is a shallow heavily rock armored stream that is densely covered with willows that prohibit access. There is a road running parallel to the reach that crosses the stream with the aid of culverts several times. Livestock trails are present but the dense coverage of woody species greatly reduces and may eliminate any access to the stream by livestock. All hydric plant species show high vigor and reproduction.

Ten metrics were collected at the MIM site (Table RIPN 5). Median stubble height is the middle of the measured values of use on herbaceous vegetation along the greenline. Stubble height indicates whether the current grazing system is allowing adequate vegetation growth to maintain or enhance vigor and reproduction of the plants. Bank alteration is the percentage of streambank that has been altered by large herbivores walking along or crossing the stream resulting in bank shearing from hooves. Bank stability is the percentage of streambank in stable, intact condition (i.e. streambank that is not fractured, slumping, sloughing, or uncovered, eroding, and steep). Bank cover is the percentage of streambank that is at least 50% covered by perennial vegetation; cobbles six inches or larger; anchored large woody debris with a diameter of four inches or greater, or at least 50% of the bank area is covered by a combination thereof.

Based on the sites metrics, an evaluation was made for the stream reach in relation to the following three capability groups: 1) ecological status, 2) vegetation-erosion resistance (i.e., streambank stability), and 3) site wetland status (Tables RIPN 5 and 6). The summary rating for the McBride Creek reach showed that the greenline ecological status was at a late seral stage, the vegetation-erosion resistance was moderate, and the site wetland status was good. The outcome of the MIM data in regard to the three capability groups provides a good indication of a streambank's ability to buffer the hydrologic forces of moving water.

Figure RIPN- 7: McBride Creek MIM site- Blackstock Springs Allotment/ South Native Pasture



Table RIPN-5: McBride Creek- Blackstock Springs Allotment/ South Native Pasture Multiple Indicator Monitoring (MIM) Metrics

Stream Metrics							Woody Species Regeneration			Greenline Ecological Rating	Vegetation Erosion Status	Site Wetland Rating
	Median SH (inches)	Mean SH (inches)	Bank Alteration (%)	Woody Use (%)	Bank Stability (%)	Bank Cover (%)	Seedlings (%)	Young (%)	Mature (%)	65- Late	5.82- Moderate	74- Good
McBride Creek	10.0	11.7	0	4.2	78	100	0	2	98			

Tables RIPN-6: Multiple Indicator Monitoring (MIM) Capability Groups

Greenline Ecological Status Rating		Vegetation-Erosion Resistance Status Rating		Site Wetland Status Rating	
Summary Value	Condition Rating	Summary Value	Condition Rating	Summary Value	Condition Rating
0-15	Very Early	0-2	Very Low	0-15	Very Poor
16-40	Early	3-4	Low	16-40	Poor
41-60	Mid	5-6	Moderate	41-60	Fair
61-85	Late	7-8	High	61-85	Good
85+	PNC	9-10	Very High	85+	Very Good

There are three springs on BLM lands within pasture 2. Two of the springs were assessed in 2011 using the BLM PFC protocol. One of the unnamed springs was rated in PFC; the spring source and associated wet meadow area contained multiple hydric plant species in good vigor with various age classes. The second unnamed spring was not assessed with the PFC protocol because the spring has been developed and piped to a trough at the lower end. The trough and pipeline are not functioning and there is no surface water present to support hydric vegetation.

Evaluation of Standard 2- Blackstock Springs

Evaluation Finding – Allotment/watershed is:

 Meeting the Standard

- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding- Blackstock Springs

The three pastures of the Blackstock Springs allotment contain about 9.0 miles of named streams (Deadhorse, Little McBride, McBride, Little Squaw Creeks, and Willow Fork) and 15 NHD identified springs. Six miles of the streams have been assessed and 3.6 miles (~60%) were rated FAR. Specific issues identified include poorly vegetated banks, both lateral and vertical instability, altered surface flows caused by excessive hoof action, and high use of vegetation (for quantification where available, see the information under each pasture above). MMIM sites were established on both Little Squaw Creek and Willow Fork. Both sites exceeded the bank alteration objective set in the ORMP; 15 and 21% respectively.

Seventeen springs have been assessed within the three pastures; six (35%) were FAR and five were NF (30%). Specific issues identified in the recent assessments include heavy livestock impacts in the form of vegetation use, pugging, and wetland soil loss. The surface flows patterns have been altered by hoof action creating high and dry pedestals and eroding soils, and the plant community had low vigor (for quantification where available, see the information under each pasture above).

JACKSON CREEK ALLOTMENT

Assessment- Jackson Creek

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). The reaches of Succor Creek that traverse BLM lands within the allotment (0.95 mile) were in unsatisfactory condition at the time the Plan was written. The ORMP refers to streams and riparian-wetland areas in unsatisfactory condition as those that were either functional-at-risk or non-functional.

According to the National Hydrography Dataset (NHD), the Jackson Creek Allotment contains five named streams (Coyote, Jackson, Little Jackson, Little Cow, and Succor Creeks) with approximately 3.5 miles of perennial streams (Table RIPN-7). The NHD identifies an additional 6.75 miles of unnamed intermittent streams that do not appear to support significant amounts of riparian vegetation (NAIP 2011). The NHD identifies 11 springs/seeps that occur within the allotment.

Table RIPN-7: Total Miles of Perennial and Intermittent Stream, and Number of Springs within Pasture- NHD Derived

Stream Name and Flow Type	Jackson Creek 1	Jackson Creek 2	Jackson Creek 3	Jackson Creek 4	Jackson Creek 5	Total Miles
Coyote Creek						
Perennial Miles				0.39		0.39

Stream Name and Flow Type	Jackson Creek 1	Jackson Creek 2	Jackson Creek 3	Jackson Creek 4	Jackson Creek 5	Total Miles
Jackson Creek						
Perennial Miles				1.51		1.51
Little Cow Creek						
Perennial Miles					0.55	0.55
Little Jackson Creek						
Perennial Miles				0.08		0.08
Succor Creek						
Perennial Miles			0.96			0.96
Unnamed Creek (Wildcat Canyon)						
Intermittent Miles	2.49	0.69	2.05	1.55		6.78
Perennial Miles				0.99		0.99
Total Miles	2.49	0.69	3.01	4.53	0.55	11.27
Total # of Springs	2	1	1	7	0	

Table RIPN-8: Total Miles of Perennial and Intermittent Stream, and Number of Springs within Pasture that have been *Assessed*

Stream Name and Flow Type	Jackson Creek 1	Jackson Creek 2	Jackson Creek 3	Jackson Creek 4	Jackson Creek 5	Total Miles Assessed
Unnamed Creek (Wildcat Canyon)						
Perennial Miles Assessed				1.0 (FAR-PFC)		1.0
Jackson Creek						
Perennial				1.2 (PFC)		1.2
Succor Creek						
Perennial			1.0 (FAR)			1.0
Total Miles Assessed			1.0	2.2		3.2

Jackson Creek 3		Jackson Creek 4	
Texas Basin Spring	FAR	Unnamed Spring	FAR
Unnamed Spring	FAR	Unnamed Spring	FAR

Assessment

Pasture 1

According to the NHD, there are about 3.5 intermittent miles of an unnamed creek in pasture 1. The stream is commonly called Westgate Gulch, is a tributary to Cow Creek, and has not been assessed. The portion of the stream that traverses the western half of the pasture flows downstream from a reservoir and appears to support riparian vegetation (NAIP 2011). The NHD

identifies two springs that occur within the pasture that do not appear to support riparian-wetland vegetation (NAIP 2011). Neither of the springs have been assessed.

Pasture 2

The NHD identifies approximately 0.7 miles of an unnamed intermittent creek and one spring within pasture 2 that do not appear to support riparian vegetation (NAIP 2011). However, to the west of the NHD spring and at the headwaters of the unnamed stream, there is a complex (~4.5 acres) of seeps/ springs that do appear to support riparian vegetation (NAIP 2011).

Pasture 3

According to the NHD, about 1.0 perennial mile of Succor Creek and 2.0 miles of an Unnamed intermittent Creek occur within the pasture. The mile of Succor Creek that traverses BLM lands in pasture 3 was rated FAR in 2008. The lower portion of the reach had high erosion and deposition, a lack of bank binding vegetation, as well as overwidening and incisement of the stream channel. It was noted, however, that willow recruitment was occurring on the point bars. If allowed to establish, the willows will protect the banks from further erosion and incisement.

Subsequent to the assessment described above, a MIM site was established on the lower portion of the reach of Succor Creek where the issues were identified.

Ten metrics were collected at the MIM site (Table RIPN 9). Median stubble height is the middle of the measured values of use on herbaceous vegetation along the greenline. Stubble height indicates whether the current grazing system is allowing adequate vegetation growth to maintain or enhance vigor and reproduction of the plants. Bank alteration is the percentage of streambank that has been altered by large herbivores walking along or crossing the stream resulting in bank shearing from hooves. Bank stability is the percentage of streambank in stable, intact condition (i.e. streambank that is not fractured, slumping, sloughing, or uncovered, eroding, and steep). Bank cover is the percentage of streambank that is at least 50% covered by perennial vegetation; cobbles six inches or larger; anchored large woody debris with a diameter of four inches or greater, or at least 50% of the bank area is covered by a combination thereof.

Based on the sites metrics, an evaluation was made for the stream reach in relation to the following three capability groups: 1) ecological status, 2) vegetation-erosion resistance (i.e., streambank stability), and 3) site wetland status (Tables RIPN 10). The summary rating for the McBride Creek reach showed that the greenline ecological status was at a late seral stage, the vegetation-erosion resistance was moderate, and the site wetland status was good. The outcome of the MIM data in regard to the three capability groups provides a good indication of a streambank's ability to buffer the hydrologic forces of moving water.

Table RIPN-9: Succor Creek- Jackson Creek Allotment/ Pasture 3 Multiple Indicator Monitoring (MIM) Metrics

Stream Metrics								Woody Species Regeneration		Greenline Ecological Rating	Vegetation Erosion Status	Site Wetland Rating	
	Median SH (inches)	Mean SH (inches)	Bank Alteration (%)	Woody Use (%)	Bank Stability (%)	Bank Cover (%)	% Hydric	Greenline-greenline width (m)	Seedlings & Young (%)	Mature (%)			
Succor Creek	4.0	5.9	32.0	23.2	53	96	36	5.92	76	19	65-Late	7.26-High	42-Fair

Tables RIPN-10: Multiple Indicator Monitoring (MIM) Capability Groups

Greenline Ecological Status Rating		Vegetation-Erosion Resistance Status Rating		Site Wetland Status Rating	
Summary Value	Condition Rating	Summary Value	Condition Rating	Summary Value	Condition Rating
0-15	Very Early	0-2	Very Low	0-15	Very Poor
16-40	Early	3-4	Low	16-40	Poor
41-60	Mid	5-6	Moderate	41-60	Fair
61-85	Late	7-8	High	61-85	Good
85+	PNC	9-10	Very High	85+	Very Good

The NHD identifies one spring (Texas Basin Spring) that was rated FAR because >40% of the available forage had been grazed and 35-45% of the site was covered in undesirable herbaceous (ie. Kentucky Blue Grass) species. The spring is developed; however, at the time of the assessment, the trough was non-functional. The spring appears to flow for about 0.10 mile and supports approximately 0.5 acres of wet meadow area (NAIP 2011; Figure RIPN 8). A second spring was discovered just north of Succor Creek and assessed FAR. The spring is a small wet meadow area on a relatively steep slope; it appears to be shrinking in size as upland plant species encroach on the edges. In addition, the surface flow patterns are disrupted by hoof action and livestock trailing.

Figure RIPN 8: Texas Basin Spring- example of wet meadow are observed using the 2011 NAIP



Pasture 4

According to the NHD, portions of Coyote Creek (0.4 mile), Jackson Creek (1.5 mile), and Wildcat Canyon (1.5 miles) occur within pasture 4. Approximately 1.0 mile of Wildcat Canyon that traverses pasture 4 was rated FAR (Figure RIPN 9) in 2002. Issues identified at the time included a lack of binding herbaceous and woody species because >35% of the vegetation had been foraged, the stubble height was 3.0 inches, and >25% of the area was bare ground. About 20% of the area was affected by hoof action in the form of pugging and livestock browse was inhibiting regeneration of the woody species. The same reach was revisited in 2008 (Figure RIPN 9) and rated in PFC. The reach appeared to have improved and is armored with rock and large, mature willows.

Figure RIPN 9: Wildcat Canyon in 2002 (left) and again in 2008 (right); Jackson Creek Allotment/ Pasture 4



Approximately 1.2 miles of Jackson creek that traverse BLM lands in pasture 4 have been assessed in PFC. The reach is perennial and flows in a relatively steep canyon; the stream is rock armored, has a mature willow community, and is mostly inaccessible to livestock.

The NHD identifies seven springs that occur on BLM lands in pasture 4. Two of the springs have been assessed and were rated FAR. Both springs are small ponds with small associated riparian-wetland areas. They were at risk primarily because there was a low composition of hydric species and the soils were compacted by hoof action.

Pasture 5

According to the NHD, about 0.5 mile of Little Cow Creek traverses BLM lands in pasture 5. The reach is perennial; however, it appears to consist primarily of Juniper (NAIP 2011).

Evaluation of Standard 2- Jackson Creek

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding- Jackson Creek

Coyote, Jackson, Little Cow, and Succor Creeks, and Westgate Gulch are the primary drainages in the Jackson Creek Grazing Allotment that support riparian-wetland vegetation.

Approximately 1.0 mile of Succor Creek, 1.0 mile of Wildcat Canyon, and 1.2 miles of Jackson Creek have been assessed. Both Jackson Creek and Wildcat Canyon are in relatively deep canyons, are well armored with rock and a mature willow community, and were in PFC. However, the reach of Succor Creek was at risk because there was a lack of bank binding vegetation, as well as overwidening and incisement of the stream channel.

The NHD identifies 11 springs that occur on BLM lands within the allotment. Three of the springs have been assessed at risk because there was a low composition of hydric species and the soils were compacted by hoof action. A fourth spring was at risk because >40% of the available forage had been grazed and 35-45% of the site was covered in undesirable herbaceous species.

TEXAS BASIN FFR ALLOTMENT

Assessment- Texas Basin FFR

Overview

There are no riparian or water resources on BLM lands within the Texas Basin FFR; thus, Standard 2 will not be discussed further.

Evaluation of Standard 2- Texas Basin FFR

Evaluation Finding – Allotment/watershed is:

NOT APPLICABLE

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Texas Basin FFR

There are no riparian or water resources on BLM lands within the Texas Basin FFR

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<http://www.fsa.usda.gov/FSA/apfoapp?area=home&subject=prog&topic=nai>

Standard 3 – Stream Channel/Floodplain

Stream channels and flood plains 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.

Desired Conditions:

1999 Owyhee Resource Management Plan Objective:

Maintain or improve riparian-wetland areas to attain proper functioning and satisfactory conditions. Riparian-wetland areas include streams, springs, seeps, and wetlands.

BLACKSTOCK SPRINGS ALLOTMENT

Assessment - Blackstock Springs

Overview

See information and assessment under Standard 2.

Current Assessment

See information and assessment under Standard 2.

Evaluation of Standard 3- Blackstock Springs

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Blackstock Springs

See information and assessment under Standard 2.

JACKSON CREEK ALLOTMENT

Assessment- Jackson Creek

Overview

See information and assessment under Standard 2.

Assessment

Pasture 1

See information and assessment under Standard 2.

Evaluation of Standard 3- Jackson Creek

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding- Jackson Creek

See information and assessment under Standard 2.

TEXAS BASIN FFR

Assessment- Texas Basin FFR

There are no riparian or water resources on BLM lands within the Texas Basin FFR; thus, Standard 2 will not be discussed further.

Evaluation of Standard 3- Texas Basin FFR

Evaluation Finding – Allotment/watershed is:

NOT APPLICABLE

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding- Texas Basin FFR

There are no riparian or water resources on BLM lands within the Texas Basin FFR

INFORMATION SOURCES:

See the references under Standard 2.

Standard 7 – Water Quality

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

Indicators may include but are not limited to:

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

Desired Conditions:

1999 Owyhee Resource Management Plan:

Meet or exceed State of Idaho water quality standards on all Federally administered waters within the Owyhee Field Office. Follow current State water rights processes and procedures to acquire water rights for beneficial uses and support establishment of in-stream flows which are in the public interest.

Succor Creek Group- Blackstock Springs, Jackson Creek, and Texas Basin FFR Allotments

Overview

The three allotments in the Succor Creek group fall within both the Middle Snake-Succor and the Jordan watersheds. The Middle Snake-Succor watershed is an arid area characterized by hot

summer temperatures. The streams within the watershed are tributaries to the Snake River and are generally low volume streams that have a combination of high ambient temperatures, poor shading, low flow volume, flow alteration, and naturally warm springs, which often lead to exceedances of the temperature standard. Other issues identified that affect the streams in the watershed are nutrient loading and in-stream channel erosion causing sediment loading (IDEQ 2010).

The Jordan Creek watershed encompasses a large area in southwest Idaho and southeast Oregon. The headwaters of Jordan Creek originate in the western section of the Owyhee Mountains, in southwest Idaho, flowing mostly west into Oregon, entering near the community of Jordan Valley. The general flow characteristics of the Jordan Creek watershed are from east to west, with most of the headwaters within Idaho. The major topographic features include the Silver City Mountain Range to the north, South Mountain to the south and Combination/Antelope Ridges to the east. Within Idaho, the entire watershed could be broken into four distinctive areas associated with land use influences and/or geographical location; Cow Creek, Upper Jordan Creek, Big Boulder Creek (Triangle) and Lower Jordan Creek subbasins (5th level HUCs) (IDEQ 2009).

Idaho water quality standards require that surface waters of the state be protected for beneficial uses, wherever attainable (IDAPA 58.01.02.050.02). These beneficial uses are interpreted as existing uses, designated uses, and presumed uses. The beneficial uses assigned to the Middle Snake- Succor watershed include cold water aquatic life, salmonid spawning, and primary and secondary contact recreation. The beneficial uses assigned to the Jordan watershed are cold water aquatic life, primary contact recreation, salmonid spawning, and special resource water. Cold-water aquatic life water bodies are defined as “water quality appropriate for the protection and maintenance of a viable aquatic life community for cold water species.” Streams within the allotments that are identified by IDEQ as not supporting the beneficial use include Cow, Coyote, Dead Horse, Jacks, Jackson, Little Cow, Little Jackson, Little McBride, Little Squaw, McBride, Succor, WF Squaw, and Willow Fork Creeks. All of the creeks that are not supporting the beneficial use have been through the reconnaissance process and placed on the 303(d) list with the exception of Little Squaw, Succor, and WF Squaw Creeks. The primary causes identified in the TMDLs are flow alteration, temperature, sediment, and siltation (IDEQ 2010).

BLACKSTOCK SPRINGS ALLOTMENT

Assessment- Blackstock Springs

Native Pasture 1

McBride, Little McBride, and a tributary of McBride Creek that occur within pasture 1 are on the IDEQ 303(d) list of impaired waters that are not supporting the watershed’s beneficial uses. The BLM has monitored water temperatures in both Little McBride and McBride Creeks (Figures RIPN-10 and 11); both streams exceeded the State’s criteria for support of the cold water aquatic life beneficial use. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C.

Figure RIPN-10: McBride Creek Temperature Information, 2003 (MDMT = 33.5°C and MDAT = 25.4°C)

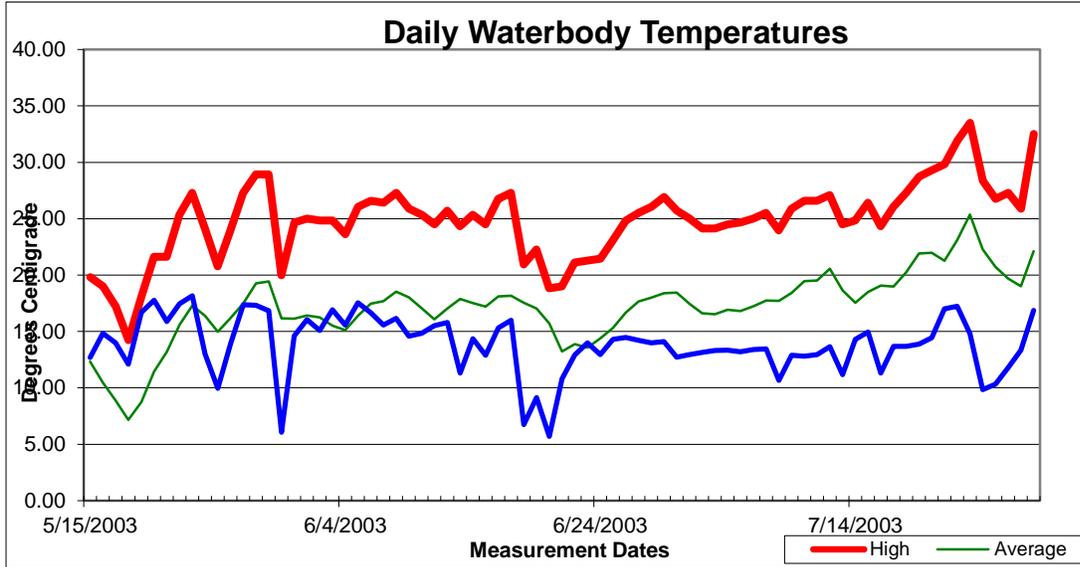
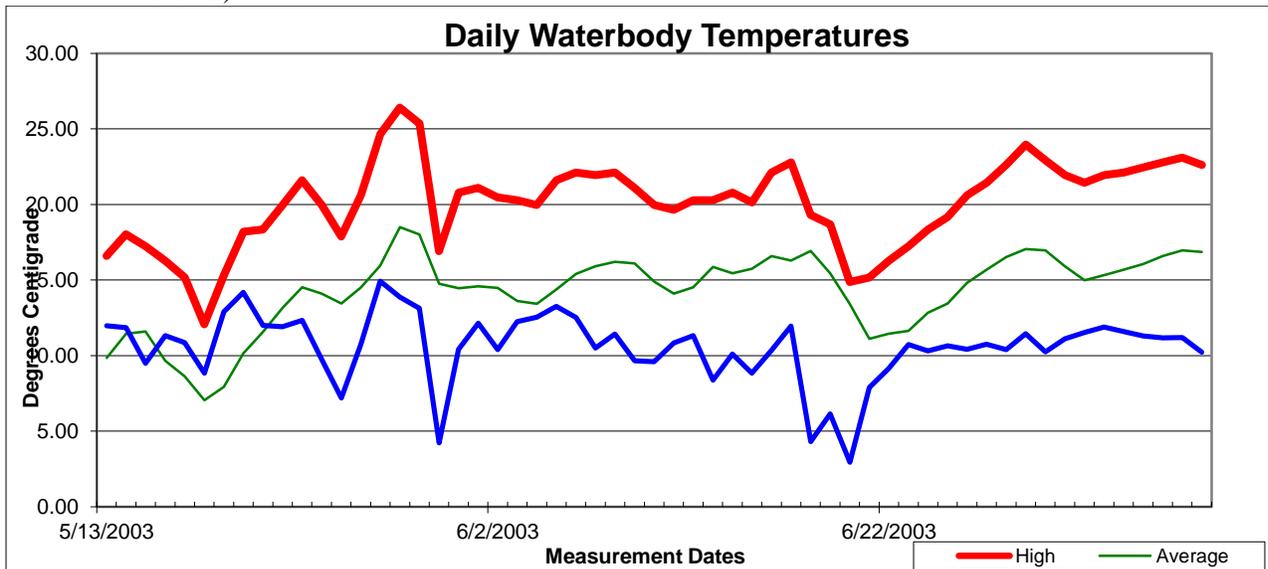


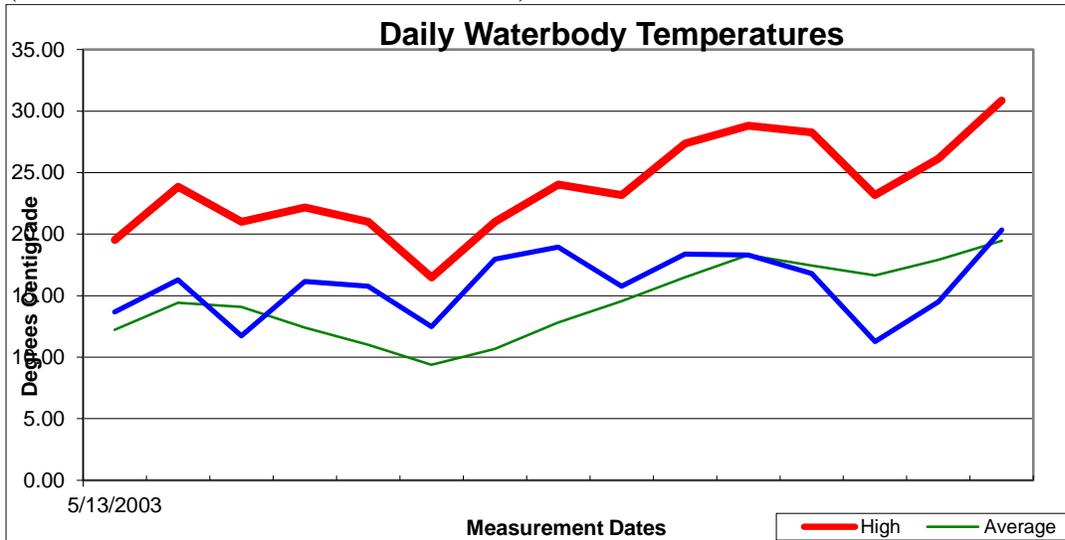
Figure RIPN-11: Little McBride Creek Temperature Information, 2003 (MDMT = 26.4°C and MDAT = 18.5°C)



Seeding Pasture 2

Deadhorse Creek, and two tributaries of McBride Creek that occur within pasture 2 are not supporting the watershed’s beneficial uses. All of the streams are on the IDEQ 303(d) list of impaired waters. Little Squaw and a tributary of Squaw Creek are fully supporting the watershed’s beneficial uses. The BLM has monitored water temperature on Little Squaw Creek (Figure RIPN-12) and the stream exceeded the State’s criteria for support of the cold water aquatic life beneficial use. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C.

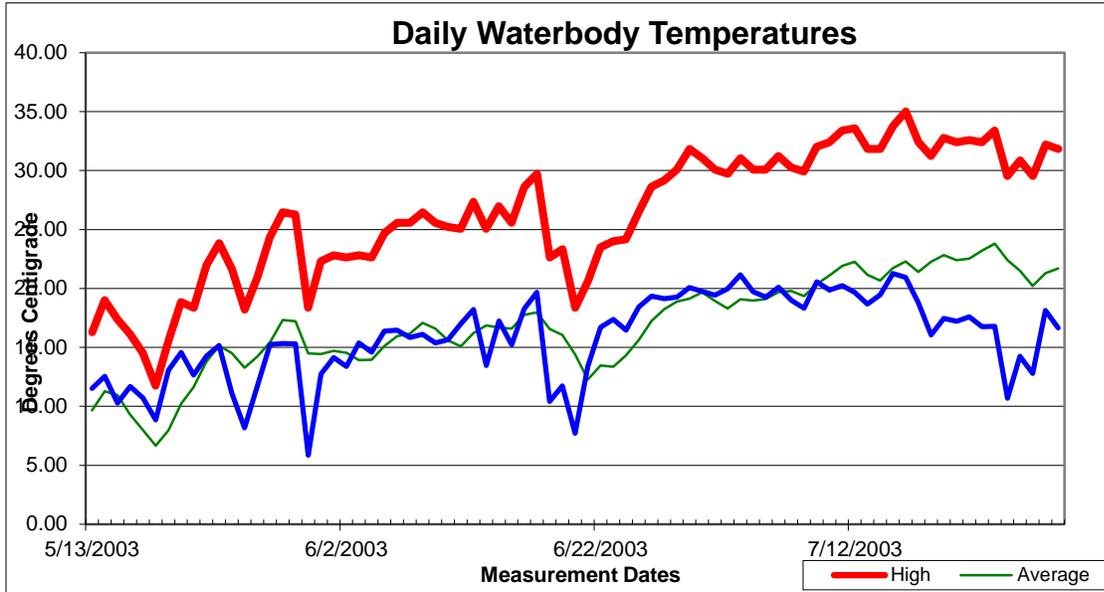
Figure RIPN-12: Little Squaw Creek Temperature Information, 2003
(MDMT = 30.9°C and MDAT = 19.5°C)



South Native Pasture 3

McBride, and two tributaries of Succor Creek that occur within pasture 3 are not supporting the watershed's beneficial uses. The reaches of McBride Creek that traverse the pasture are also on the IDEQ 303(d) list of impaired waters. The BLM has monitored water temperature on McBride Creek (Figures WATR 4) and the stream exceeded the State's criteria for support of the cold water aquatic life beneficial use. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C.

**Figure RIPN-13: McBride Creek Temperature Information, 2003
(MDMT = 35.0°C and MDAT = 23.8°C)**



Evaluation of Standard 7- Blackstock Springs

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding- Blackstock Springs

With the exception of Little Squaw Creek and a tributary of Squaw Creek that traverse pasture 2, all of the streams that occur within the allotments’ three pastures are not meeting the State’s water quality standards. Additionally, BLM’s internal water temperature monitoring on Little Squaw, McBride, and Little McBride Creeks provided information that the streams exceeded the State’s cold water aquatic life temperature criteria.

JACKSON CREEK ALLOTMENT

Assessment- Jackson Creek

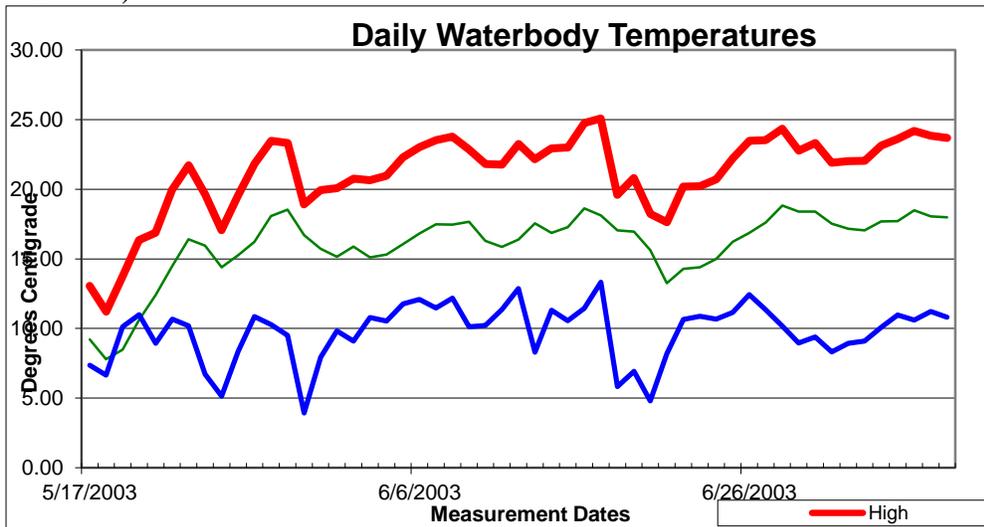
Pastures 1&2

The unnamed tributaries of Cow Creek that traverse BLM lands in pastures 1 and 2 are on IDEQ’s 303(d) list of impaired waters. The streams are not supporting the beneficial uses that were assigned to the Middle Snake-succor watershed. Issues identified include flow alteration, stream temperature, and sedimentation (IDEQ 2010).

Pasture 3

The unnamed tributary of McBride Creek that traverses BLM lands in pasture 3 is on IDEQ 303(d) list of impaired waters. The stream is not supporting the beneficial uses that were assigned to the Middle Snake-succor watershed. The BLM has monitored water temperature on Succor Creek (Figure RIPN-14) and the stream exceeded the State's criteria for the maximum daily temperature for support of the cold water aquatic life beneficial use. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C.

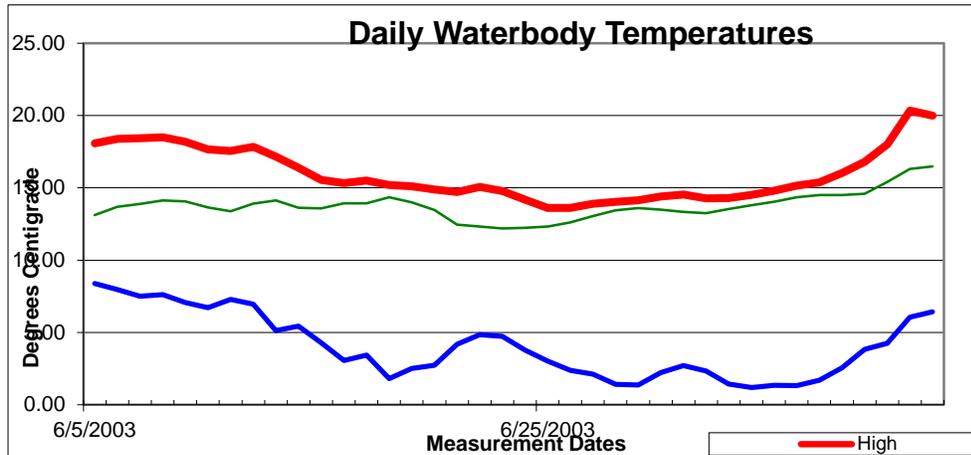
Figure RIPN-14: Succor Creek Temperature Information, 2003 (MDMT = 25.1°C and MDAT = 18.8°C)



Pasture 4

The reaches of Jackson Creek, Wildcat Canyon, and the unnamed tributaries of Cow Creek that traverse BLM lands in pasture 4 are on IDEQ's 303(d) list of impaired waters. The streams are not supporting the beneficial uses that were assigned to the Middle Snake-succor watershed. The BLM has monitored water temperature on Wildcat Canyon (Figure RIPN-15) and the stream was within the State's criteria for support of the cold water aquatic life beneficial use. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C. However, the stream went dry after 38 days, and thus, temperature was measured from June 5 to July 12.

Figure RIPN-15: Unnamed Tributary to Cow Creek Temperature Information, 2003
(MDMT = 20.3°C and MDAT = 16.5°C)



Pasture 5

A short reach of Little Cow Creek that traverses BLM lands in pasture 5 is on IDEQ’s 303(d) list of impaired waters. The stream is not supporting the beneficial uses assigned to the Middle Snake-Succor watershed. Issues identified include flow alteration, water temperature, and sedimentation (IDEQ 2010).

Evaluation of Standard 7- Jackson Creek

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding- Jackson Creek

All five of the pastures that make up the Jackson Creek grazing allotment have portions of streams on BLM lands that are on IDEQ’s 303(d) list of impaired waters. The streams occur in the Middle Snake-Succor watershed and are not meeting the beneficial uses assigned to them including cold water aquatic life, salmonid spawning, and primary and secondary contact recreation.

TEXAS BASIN FFR ALLOTMENT

Assessment- Texas Basin FFR

There are no water resources in the Texas Basin FFR.

Evaluation of Standard 7- Texas Basin FFR

Evaluation Finding – Allotment/watershed is:

NOT APPLICABLE

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding- Texas Basin FFR

There are no water resources in the Texas Basin FFR.

Information Sources:

IDAPA 58.01.02. Idaho water quality standards and wastewater treatment requirements.

Idaho Department of Environmental Quality. 2011. Idaho Department of Environmental Quality Final 2010 Integrated Report. Boise, ID: Idaho Department of Environmental Quality. <http://www.deq.idaho.gov/media/725927-2010-integrated-report.pdf>

Idaho Department of Environmental Quality. 2003. Middle Snake- Succor TMDL: http://www.deq.idaho.gov/media/453824-snake_river_succor_creek_entire.pdf

Idaho Department of Environmental Quality. 2011. Middle Snake- Succor Watershed Five Year Review. <http://www.deq.idaho.gov/media/699532-snake-river-succor-creek-sba-tmdl-five-year-review-0911.pdf>

Idaho Department of Environmental Quality. 2009. Jordan Watershed TMDL: http://www.deq.idaho.gov/media/454554-water_data_reports_surface_water_tmdls_jordan_creek_jordan_creek_final_entire_including_errata.pdf

USDI Bureau of Land Management. 1999. Owyhee Resource Management Plan. Available at the Owyhee Field Office, Marsing, Idaho.

Appendix A: Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management

Standards for Rangeland Health (associated with water and riparian resources)

The Standards for Rangeland Health, as applied in the State of Idaho, are to be used as the Bureau of Land Management's management goals for the betterment of the environment, protection of cultural resources, and sustained productivity of the range. They are developed with the specific intent of providing for the multiple use of the public lands. Application of the standards should involve collaboration between the authorized officer, interested publics, and resource users.

Rangelands should be meeting the Standards for Rangeland Health or making significant progress toward meeting the standards. Meeting the standards provides for proper nutrient cycling, hydrologic cycling, and energy flow.

Monitoring of all uses is necessary to determine if the standards are being met. It is the primary tool for determining rangeland health, condition, and trend. It will be performed on representative sites.

Appropriate to soil type, climate, and landform, indicators are a list of typical physical and biological factors and processes that can be measured and/or observed (e.g., photographic monitoring). They are used in combination to provide information necessary to determine the health and condition of the rangelands. Usually, no single indicator provides sufficient information to determine rangeland health. Only those indicators appropriate to a particular site are to be used. The indicators listed below each standard are not intended to be all inclusive.

The issue of scale must be kept in mind in evaluating the indicators listed after each standard. It is recognized that individual isolated sites within a landscape may not be meeting the standards; however, broader areas must be in proper functioning condition. Furthermore, fragmentation of habitat that reduces the effective size of large areas must also be evaluated for its consequences.

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.
- Indicators may include, but are not limited to, the following:
- 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 flood water, and increasing recharge of groundwater appropriate to site potential.
- 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.
- Age class and structural diversity of riparian/wetland vegetation is appropriate for the site.
- Noxious weeds are not increasing.

Standard 3 (Stream Channel/Floodplain)

- Stream channels and floodplains are properly functioning relative to the geomorphology (e.g., gradient, size, shape, roughness, confinement, and sinuosity) and climate to provide for proper nutrient cycling, hydrologic cycling, and energy flow.
- Indicators may include, but are not limited to, the following:
- 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.

- Stream width/depth ratio, gradient, sinuosity, and pool, riffle and run frequency are appropriate for the valley bottom type, geology, hydrology, and soils.
- Streams have access to their floodplains and sediment deposition is evident.
- There is little evidence of excessive soil compaction on the floodplain due to human activities.
- Streambanks are within an appropriate range of stability according to site potential.
- Noxious weeds are not increasing.

Standard7 (Water Quality)

- Surface and ground water on public lands comply with the Idaho Water Quality Standards.
- Indicators may include, but are not limited to, the following:
- Physical, chemical, and biologic parameters described in the Idaho Water Quality Standards.

Guidelines for Livestock Grazing Management

Guidelines direct the selection of grazing management practices, and where appropriate, livestock management facilities to promote significant progress toward, or the attainment and maintenance of, the standards. Grazing management practices are livestock management techniques. They include the manipulation of season, duration (time), and intensity of use, as well as numbers, distribution, and kind of livestock. Livestock management facilities are structures such as fences, corrals, and water developments (ponds, springs, pipelines, troughs, etc.) used to facilitate the application of grazing management practices. Livestock grazing management practices and guidelines will be consistent with the Idaho Agricultural Pollution Abatement plan.

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

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

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

Guidelines Associated with the Water and Riparian Resources

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.
10. Implement grazing management practices and/or facilities that provide for complying with the Idaho Water Quality Standards.

Appendix B: Methods

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

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-BLM 1994). Lentic areas are defined as wetland-riparian areas adjacent to standing water habitats such as lakes, ponds, seeps, and meadows.

BUREAU OF LAND MANAGEMENT

Specialist Report - Water and Riparian Resources

Group 2 – Jump, Succor, and Cow Creek Watersheds Allotments

Owyhee Field Office Group 2 Allotments

May 2012

Idaho BLM NEPA Permit Renewal Team

Specialist Report – Water and Riparian Resources

Field Office: Owyhee Field Office

Allotment Name/Number: Group 2 – Cow Creek: Burgess (572), Burgess FFR (638), Chimney Pot FFR (646), Cow Creek (562), Ferris FFR (545), Joint (531), Lowry FFR (477), Madriaga (557), Soda Creek (652), Trout Creek/Lequerica (560)

Standards for Rangeland Health

In 1997, the BLM in Idaho adopted rangeland health standards (*Appendix A - Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management*), which were developed in coordination with the Resource Advisory Councils during the previous two years. 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. Proper nutrient and hydrologic cycling, and energy flow lead toward meeting the standards. Current livestock grazing management is evaluated as a part of the Evaluation Report to identify if it appears to maintain standards or promote significant progress toward meeting the standards.

The Standards for Rangeland Health, as applied in the State of Idaho, are to be used as the Bureau of Land Management's management goals for the betterment of the environment, protection of cultural resources, and sustained productivity of the range. They are developed with the specific intent of providing for the multiple uses of the public lands. Application of the standards should involve collaboration between the authorized officer, interested publics, and resource users.

Rangelands should be meeting the Standards for Rangeland Health or making significant progress toward meeting the standards. Meeting the standards provides for proper nutrient cycling, hydrologic cycling, and energy flow.

Monitoring of all uses is necessary to determine if the standards are being met. It is the primary tool for determining rangeland health, condition, and trend. It will be performed on representative sites.

Appropriate to soil type, climate, and landform, indicators are a list of typical physical and biological factors and processes that can be measured and/or observed (e.g., photographic monitoring). They are used in combination to provide information necessary to determine the health and condition of the rangelands. Usually, no single indicator provides sufficient information to determine rangeland health. Only those indicators appropriate to a particular site are to be used. The indicators listed below each standard are not intended to be all inclusive. The issue of scale must be kept in mind in evaluating the indicators listed after each standard. It is recognized that individual isolated sites within a landscape may not be meeting the standards; however, broader areas must be in proper functioning condition. Furthermore, fragmentation of habitat that reduces the effective size of large areas must also be evaluated for its consequences.

Rangeland Health and Evaluation

The rangeland health assessment (RHA) describes the current rangeland health conditions. It identifies the current conditions including changes in rangeland health over time (trend). Permittees, interested publics, tribes, and state agencies must be given an opportunity to provide information and data to be considered in the RHA. The rangeland health assessment (RHA) is a compilation and analysis of all data and information available for an allotment or group of allotments.

The Evaluation report answers two major questions.

1. Is the allotment meeting the Idaho Standards for Rangeland Health (ISRH)?
2. If the allotment is not meeting the ISRH, is it making significant progress toward meeting the ISRH?

The analysis in the RHA is the basis for completing the evaluation. The evaluation rationale should contain descriptions of each attribute or indicator that contributes to allotment(s) meeting or not meeting ISRH. Conclusions reached in the evaluation should describe all the factors and indicators and the scientific basis for the conclusions reached. The rationale should include a description of each of the indicators and/or attributes that led to the determination that the ISRH are not being met.

Factors potentially contributing to the current conditions are described in the evaluation. Some of the factors that may influence the current conditions include livestock grazing management, off-high-way vehicles, wildlife concentration, roads, and trails. Current livestock grazing management and other uses are evaluated to conclude causes of any unsatisfactory conditions.

This report pertains to the water and riparian resources only and will facilitate the analysis in the EIS for the permit renewals.

Allotment and Livestock Grazing Management

Table ALLOT-1: Total acres, active use and class of livestock within Group 2 Cow Creek allotments in 2011 (Taken from Owyhee Resource Management Plan ORMP)

Allotment Name/#	Class of Livestock	Active Permitted Use	Public Acres	State Acres	Private Acres	Total Acres
Burgess (572)	C	240	1,244	0	101	1,345
Burgess FFR (638)	C	11	263	0	485	748
Chimney Pot FFR (646)	C	4	25	0	1,255	1,280
Cow Creek (562)	C	1,214	7,946	0	102	8,048
Ferris FFR (545)	C	150	886	0	1,879	2,765
Joint (531)	C	1,089	3,187	954	177	4,317

Allotment Name/#	Class of Livestock	Active Permitted Use	Public Acres	State Acres	Private Acres	Total Acres
Lowry FFR (477)	C	6	70	0	242	312
Madriaga (557)	C	865	3,998	0	146	4,145
Soda Creek (652)	C	501	3,165	656	5,522	9,343
Trout Creek/Lequerica (560)	C	115	735	0	408	1,143
Total Acres		4,195	21,519	1,610	10,317	33,446

Standard 2 – Riparian Areas and Wetlands

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

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

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

Desired Conditions:

1999 Owyhee Resource Management Plan:

Maintain or improve riparian-wetland areas to attain proper functioning and satisfactory conditions. Riparian-wetland areas include streams, springs, seeps, and wetlands.

BURGESS ALLOTMENT

Assessment- Burgess

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). None of the streams nor their condition were identified in the ORMP.

According to the National Hydrography Dataset (NHD), the Burgess Allotment contains one unnamed streams with approximately 1.6 miles of intermittent streams¹ (Table RIPN-1). The NHD also identifies 1 spring/seep that occur within the allotment.

Table RIPN-1: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Burgess allotment- NHD Derived

Stream Name and Flow Type	Burgess – Big Field	Burgess- Old Home	Total Miles
Unnamed Creek			
Intermittent Miles	1.51	0.11	1.62
Total Miles	1.51	0.11	1.62
Total # of Springs	1	0	1

Big Field & Old Home Pastures

The 1.6 miles of intermittent stream that traverse BLM lands within the Big Field and Old Home pastures have not been assessed. However, the streams support very small, intermittent reaches of riparian-wetland areas (NAIP 2011).

Evaluation of Standard 2

Evaluation Finding – Riparian-wetland Areas Are:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

The Burgess allotment contains 1.6 miles of intermittent stream and one spring within two pastures; however, neither the streams nor the spring support significant areas of riparian-wetland resources and have not been assessed.

¹ Perennial: Contains water throughout the year, except for infrequent periods of severe drought
 Intermittent: Contains water for only part of the year, but more than just after rainstorms and at snowmelt
 Ephemeral: Flows in normal water years only in direct response to precipitation and channel is above the water table at all times

BURGESS FFR

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). The reaches of Succor Creek that traverse BLM lands within the allotment (0.34 mile) were in unsatisfactory condition at the time the Plan was written. The ORMP refers to streams and riparian-wetland areas in unsatisfactory condition as those that were either functional-at-risk or non-functional.

According to the National Hydrography Dataset (NHD), the Burgess FFR Allotment contains one named stream (Succor Creek) with approximately 0.35 miles of perennial streams (Table RIPN-2). There is an additional 0.5 mile of intermittent stream that supports riparian vegetation (NAIP 2011). The NHD does not identify any springs/seeps within the allotment.

Table RIPN-2: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Burgess FFR allotment- NHD Derived

Stream Name and Flow Type	Burgess FFR Pasture 1	Burgess FFR Pasture 1	Total Miles
Succor Creek			
Perennial Miles	0.35		0.35
Unnamed Creek			
Intermittent Miles		0.55	0.55
Total Miles	0.35	0.55	0.90

Assessment

Table RIPN-3: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Burgess FFR allotment that have been *Assessed*

Stream Name and Flow Type	Burgess FFR Pasture 1	Burgess FFR Pasture 1	Total Miles
Succor Creek			
Perennial Miles	0.35 (FAR-FAR)		0.35
Total Miles	0.35		0.35

Pasture 1

The 0.35 miles of Succor Creek that traverse pasture 1 were assessed FAR in 2006. The assessment noted bank instability and a lack of bank binding, deep rooted riparian vegetation along the stretch. The same reach was re-assessed in 2011 FAR. It was noted that the channel was incised and erosion was increasing in areas where vegetation was not sufficient to protect the stream banks.

Evaluation of Standard 2

Evaluation Finding – Riparian-wetland Areas Are:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

There are about 0.35 perennial miles of stream that occur within pasture 1 of the Burgess FFR that were rated FAR due to issues with bank instability, a lack of riparian vegetation, and erosion/ deposition caused by overland flows.

CHIMNEY POT FFR

There are no water or riparian-wetland resources on BLM lands within the Chimney Pot FFR.

Evaluation of Standard 2

Evaluation Finding – Riparian-wetland Areas Are:

- Not Applicable
- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

COW CREEK ALLOTMENT

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). The reaches of the EF of Trout Creek that traverse BLM lands within the allotment (0.71 mile) were in unsatisfactory condition at the time the Plan was written. The ORMP refers to streams and riparian-wetland areas in unsatisfactory condition as those that were either functional-at-risk or non-functional.

According to the National Hydrography Dataset (NHD), the Cow Creek Allotment contains three named streams (Chimney, EF Trout, and WF Trout Creeks) and one unnamed stream with approximately 19 miles of intermittent streams (Table RIPN-3). An estimated 3.8 miles support riparian vegetation (NAIP 2011). The NHD also identifies four springs/seeps within the allotment.

Table RIPN-3: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Cow Creek allotment- NHD Derived

Stream Name and Flow Type	Cow Creek Individual- 1	Cow Creek Individual- 2	Cow Creek Individual- 3	Cow Creek Individual- 4	Cow Creek Individual- 5	Total Miles
Chimney Creek						
Intermittent Miles				1.15		1.15
Perennial Miles				0.06		0.06
East Fork Trout Creek						
Intermittent Miles					1.28	1.28
West Fork Trout Creek						
Intermittent Miles				0.18		0.18
Unnamed Creek						
Intermittent Miles	3.62	10.24	0.56		1.99	16.43
Perennial Miles			0.02			0.02
Total Miles	3.62	10.24	0.58	1.4	3.27	19.12
Total # of Springs	0	2	1	1	0	

Assessment

Table RIPN-4: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Cow Creek allotment that have been Assessed

Stream Name and Flow Type	Cow Creek Individual- 1	Cow Creek Individual- 2	Cow Creek Individual- 3	Cow Creek Individual- 4	Cow Creek Individual- 5
Unnamed Creek (Split Rock Canyon)					
Intermittent Miles <i>Assessed</i>		1.2 (FAR)			
EF Trout Creek (Trout Creek)					
Intermittent Miles <i>Assessed</i>					1.1 (PFC)
Total Miles		1.2			
Total # of Springs Assessed	1 (PFC) 1 (FAR)	1 (NF- FAR)	Trail Spring (FAR- PFC)		1 (NF) 1 (NF- PFC)

Cow Creek Individual Pasture 1

None of the unnamed streams within pasture 1 have been assessed. However, a large (30+ acre) spring was assessed in PFC in 2003. The riparian-wetland area consisted of a healthy herbaceous community of sedges and rushes. It was noted that there is potential for a woody component and that there were a few, scattered invasive species present. Additionally, a second unnamed spring was assessed FAR in 2011. The flow patterns have been altered by a road

traversing the riparian area, and hoof alteration were present throughout the wetland area creating a loss of soil moisture and thus the ability to support hydric species.

Cow Creek Individual Pasture 2

There are about 10 miles of intermittent stream that traverse BLM lands within pasture 2. Approximately 1.2 miles of Split Rock Canyon were assessed FAR in 2003 (Table RIPN 4). The inventory reported bank instability because of the lack of deep rooted, bank stabilizing riparian vegetation, a skewed age distribution of the species present, and the presence of multiple headcuts along the reach creating vertical instability and channel incision. The remainders of the intermittent streams have not been assessed; however, they appear to support intermittent areas of riparian vegetation (NAIP 2011) and it can be assumed they are in similar condition as Split Rock Canyon and the springs that have been assessed.

Subsequent to the assessment described above, a MIM site was established on Split Rock Canyon in 2011.

Ten metrics were collected at the MIM site (Table RIPN 5). Median stubble height is the middle of the measured values of use on herbaceous vegetation along the greenline. Stubble height indicates whether the current grazing system is allowing adequate vegetation growth to maintain or enhance vigor and reproduction of the plants. Bank alteration is the percentage of streambank that has been altered by large herbivores walking along or crossing the stream resulting in bank shearing from hooves. Bank stability is the percentage of streambank in stable, intact condition (i.e. streambank that is not fractured, slumping, sloughing, or uncovered, eroding, and steep). Bank cover is the percentage of streambank that is at least 50% covered by perennial vegetation; cobbles six inches or larger; anchored large woody debris with a diameter of four inches or greater, or at least 50% of the bank area is covered by a combination thereof.

Based on the sites metrics, an evaluation was made for the stream reach in relation to the following three capability groups: 1) ecological status, 2) vegetation-erosion resistance (i.e., streambank stability), and 3) site wetland status (Table RIPN 6). The summary rating for Split Rock Canyon showed that the greenline ecological status was at a late seral stage, the vegetation-erosion resistance was high, and the site wetland status was Good (Winward 2000, BLM MIM TR 2011). The outcome of the MIM data in regards to the three capability groups provides a good indication of a streambank’s ability to buffer the hydrologic forces of moving water.

**Table RIPN-5: Split Rock Canyon Multiple Indicator Monitoring (MIM) Metrics
Cow Creek Allotment/ Pasture 2**

Stream Metrics							Woody Species Regeneration			Greenline Ecological Rating	Vegetation Erosion Index	Site Wetland Rating
	Median SH (inches)	Mean SH (inches)	Bank Alteration (%)	Woody Use (%)	Bank Stability (%)	Bank Cover (%)	Seedlings (%)	Young (%)	Mature (%)			
Split Rock Canyon	4.0	5.0	31	16	87	95	21	59	21	69- Late	7.45- High	84- Good

Tables RIPN-6: Multiple Indicator Monitoring (MIM) Capability Groups

Greenline Ecological Status Rating		Vegetation-Erosion Resistance Status Rating		Site Wetland Status Rating	
Summary Value	Condition Rating	Summary Value	Condition Rating	Summary Value	Condition Rating
0-15	Very Early	0-2	Very Low	0-15	Very Poor
16-40	Early	3-4	Low	16-40	Poor
41-60	Mid	5-6	Moderate	41-60	Fair
61-85	Late	7-8	High	61-85	Good
85+	PNC	9-10	Very High	85+	Very Good

One of the two springs was assessed NF in 2002, and re-assessed FAR in 2011. The 2002 assessment identified issues with riparian species composition; there were only mature *Salix Spp* present and the browse was up to 50% of the present years growth, not allowing any regeneration to occur. Additionally, 5-15% of the riparian area was impacted by livestock trailing and hoof shearing creating bare ground and disturbance where invasive species had populated. A trough was and still is present and a portion of the spring source water is piped to it. In 2011, flow pattern alterations caused by hoof shearing and trailing were reported.

Cow Creek Individual Pasture 3

None of the streams that occur on BLM lands within pastures 4 have been assessed. One of the two springs (Trail Spring) was assessed FAR in 2002, and re-assessed PFC in 2011. In 2002, the spring area consisted of a mature willow population with little or no regeneration because young plants were heavily browsed. There was no herbaceous component and the understory was mostly bare rock and soil where livestock trailing and trampling occurred. In 2011, the understory appeared to have recovered and wetland obligate species were regenerating.

Cow Creek Individual 4 Pasture

None of the streams or springs that occur on BLM lands within pastures 4 have been assessed. Both the spring and the northern reaches of Chimney Creek that traverse pasture 4 appear to support riparian-wetland vegetation (NAIP 2011, BING Maps 2011) and it can be assumed the condition is similar to the riparian areas that have been assessed in the allotment because the livestock operator manages the pasture similarly with about the same number of AUMs (see the allotment introduction- this document).

However, a MMIM site was established on Chimney Creek in 2011. Ten metrics were collected at the MIM site (Table RIPN 7). Median stubble height is the middle of the measured values of use on herbaceous vegetation along the greenline. Stubble height indicates whether the current grazing system is allowing adequate vegetation growth to maintain or enhance vigor and reproduction of the plants. Bank alteration is the percentage of streambank that has been altered by large herbivores walking along or crossing the stream resulting in bank shearing from hooves. Bank stability is the percentage of streambank in stable, intact condition (i.e. streambank that is not fractured, slumping, sloughing, or uncovered, eroding, and steep).

Figure RIPN-1: Chimney Creek MMIM site; Cow Creek Allotment/ Pasture 4;
UTM 503547N 4763929E



Table RIPN-7: Chimney Creek Multiple Indicator Monitoring (MIM) Metrics
Cow Creek Allotment/ Pasture 4

	Median SH (inches)	Mean SH (inches)	Bank Alteration (%)	Woody Use (%)	Bank Stability (%)
Chimney Creek	4.5	5.6	0	NA	40

Cow Creek Individual Pasture 5

Approximately 1.1 mile of the East Fork of Trout Creek were assessed PFC in 2011. The stream flows through a low gradient meadow and is armored with boulders. Vigorous riparian obligate species occur intermittently coincident with the flow. None of the springs that occur on BLM lands within pastures 5 have been assessed. However, two reservoirs were assessed NF in 2002. The reservoirs did not have the form or function of a riparian-wetland area (ie. there is no groundwater infiltration or recharge, and the lack of any riparian vegetation prohibits wildlife use of the area). The BLM PFC protocol is not applicable to assess the condition of reservoirs; however, the two areas have a water source and likely were functioning springs/ seeps prior to development. Kiyi Spring/ reservoir was re-assessed in 2011 and was in PFC (Figure RIPN-2). The lentic area is armored with boulders downstream of the reservoir where it changes to a lotic system, and above the reservoir, a large meadow comprised diverse, vigorous, and regenerating riparian vegetation. The flow pattern has been altered by the dike that creates the reservoir; however, the overflow channel is functioning.

Figure RIPN-2: Kiyi Spring/ Reservoir/ Cow Creek allotment/ Pasture 5 (left in 2002 and right in 2011)



Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

Approximately 1.2 miles of Split Rock Canyon were assessed FAR because of issues with bank instability and erosion, and one MMIM site was established on Chimney Creek that showed relatively poor conditions. A 1.1 mile reach of the East Fork of Trout Creek was assessed in

PFC in 2011 because the stream is armored against erosion by large boulders and riparian vegetation appeared healthy and occurred as expected intermittently with the flow. There are an additional 17 miles of intermittent streams that were not assessed; however, portions of the streams do appear to support riparian-wetland vegetation and it was determined that conditions would be similar to those that have been visited. Six springs have been assessed throughout the allotment: one was in PFC, two were FAR, and three were NF. Two of the NF springs are developed reservoirs that the PFC protocol is not applicable; however, the spring sources have been altered and no longer provide the form and function associated with riparian-wetland areas.

FERRIS FFR

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). The ORMP does not identify any of the streams within the Ferris FFR.

According to the National Hydrography Dataset (NHD), the Ferris FFR Allotment contains two named streams (Deadhorse and McBride Creeks) and one unnamed stream with approximately 0.25 miles of perennial stream and 12.75 miles of intermittent streams (Table RIPN-8). The NHD also identifies two springs/seeps within the allotment.

Table RIPN-8: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Ferris FFR allotment- NHD Derived

Stream Name and Flow Type	Ferris FFR 1	Ferris FFR 2	Ferris FFR 3	Total Miles
Dead Horse Creek				
Intermittent Miles			1.91	1.91
McBride Creek				
Perennial Miles			0.23	0.23
Intermittent Miles			1.28	1.28
Unnamed Creek				
Intermittent Miles	2.05	1.81	5.67	9.53
Total Miles	2.05	1.81	9.09	12.95
Total # of Springs	0	0	2	

Assessment

Pastures 1-3

None of the streams that occur on BLM lands within the three pastures have been assessed. However, the three pastures contain very small parcels of BLM lands nor do they appear to support substantial riparian-wetland areas (NAIP 2011, BING Maps 2011). Two springs were

assessed FAR in 2012 because there was a loss of the spring area caused by erosion and livestock trailing, and the flow patterns had been altered.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

According to the NHD, there are almost 13 miles of stream and two springs on BLM land within the Ferris FFR. However, none of the streams been assessed; thus, there is not information available regarding their condition. Also, recent aerial imagery indicates there is very little riparian-wetland areas associated with the streams. Two springs in pasture 3 were rated FAR in 2012. The assessment cited concerns with erosion and livestock trampling.

JOINT ALLOTMENT

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). The ORMP does not identify any of the streams within the Joint allotment.

According to the National Hydrography Dataset (NHD), the Ferris FFR Allotment contains three named streams (Cow, Posey, and Soda Creeks) and one unnamed stream with approximately 0.18 miles of perennial stream and 8.36 miles of intermittent streams (Table RIPN-9). About 4.5 miles of the streams support riparian vegetation (NAIP 2011). The NHD also identifies two springs/seeps within the allotment.

Table RIPN-9: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Joint allotment- NHD Derived

Stream Name and Flow Type	Joint- Chubby	Joint- Little Pasture	Joint- Mountain	Joint- Seeding	Total Miles
Cow Creek					
Perennial Miles				0.18	0.18
Posey Creek					
Intermittent Miles			0.92		0.92
Soda Creek					
Intermittent Miles	0.14			0.47	0.60
Unnamed Creek					
Intermittent Miles	0.97	0.01	3.83	2.03	6.84
Total Miles	1.11	0.01	4.74	2.68	8.54
Total # of Springs	1	0	6	1	

Assessment

Table RIPN-10: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Joint allotment that have been *Assessed*

Stream Name and Flow Type	Joint- Chubby/4	Joint- Little Pasture/5	Joint- Mountain/2	Joint- Seeding/3
Total # of Springs Assessed	0	0	2 (FAR)	1 (NF)

Mountain Pasture 2

There were two springs assessed FAR in pasture 2, but the assessment information is unavailable.

Seeding Pasture 3

The spring in pasture 3 was assessed NF in 2003; however, the assessment information is not available.

Chubby Pasture 4

Neither the 1.11 miles of stream nor the one spring that occur on BLM lands within pasture 4 have been assessed. The short reach of Soda Creek and the one spring do support a substantial area of riparian-wetland vegetation and the spring is developed (BING Maps 2011).

Little Pasture 5

There are no springs and a negligible (<0.01 mile) segment of stream within pasture 5 of the allotment; thus, the standard is not applicable.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

The reach of Posey Creek that traverses pasture 2 and the reach of Soda Creek that occurs in pasture 3 within the Joint allotment were both rated FAR, based on issues with channel instability, incision, and over-widening. The springs that occur within the allotment were assessed either FAR or NF because there were concerns with the presence of undesirable species, non-maintained developments, altered flow patterns, and vertical instability.

LOWRY FFR

Overview

Assessment

None of the streams that occur on BLM lands within the FFR have been assessed. However, there are very small parcels of BLM lands and about 0.2 miles of intermittent stream that do appear to support riparian-wetland areas (NAIP 2011, BING Maps 2011).

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

Not Applicable

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

MADRIAGA ALLOTMENT

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). The ORMP does not identify any of the streams within the Madriaga allotment.

According to the National Hydrography Dataset (NHD), the Madriaga Allotment contains two named streams (Posey and Spring Branch Creeks) and one unnamed stream with approximately 0.17 miles of perennial stream and 9.5 miles of intermittent streams (Table RIPN-11). An estimated 3.5 miles of the streams support riparian vegetation (NAIP 2011). The NHD also identifies two springs/seeps within the allotment.

Table RIPN-11: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each pasture of the Madriaga allotment- NHD Derived

Stream Name and Flow Type	Madriaga 1	Madriaga 2	Total Miles
Posey Creek			
Intermittent Miles		1.76	1.76
Spring Branch Creek			
Intermittent Miles		1.06	1.06
Unnamed Creek			
Intermittent Miles	4.16	2.54	6.71
Perennial Miles	0.17		0.17
Total Miles	4.33	5.37	9.70
Total # of Springs	5	4	

Assessment

Table RIPN-12: Total Springs within each pasture of the Madriaga allotment that have been Assessed

Spring Name	Pasture	Condition
Blue Clay Pit Spring	1	NF
Standford Spring	1	NF
1X	1	FAR
1A	1	PFC
2A	2	NF
2C	2	NF
2B	2	FAR

Pasture 1

Five springs that occur in pasture 1 was assessed in 2003: three were NF, one was FAR, and one was in PFC. Blue Clay Pit spring is limited by lack of water, and appeared to have been burned prior to the PFC assessment (though BLM does not have records of this fire). Approximately 50% bare ground was noted, and pugging and bank shear were common in saturated portions of the spring. The spring supports riparian vegetation including sedges and rushes where soil saturation is adequate. Thistle was also noted at the site. This spring was rated as non-functional. Spring 5571A supports good cover of both woody and herbaceous riparian species, which were noted as exhibiting high vigor. Some signs of historic pugging were noted. The spring was rated as properly functioning. Spring 5571X supports adequate cover of sedges and rushes, but bull thistle was also noted. Other species present at this site include hawthorn, rose, Kentucky bluegrass, monkey flower and wiregrass. Pugging was noted on saturated soils, and riparian-wetland plant vigor appeared to be poor. This spring was rated as functional at risk. Stanford Spring is dewatered by a trough development and does not support hydric soils or riparian vegetation.

Pasture 2

Approximately 1.6 miles of Posey Creek and 0.2 miles of Long Draw Creek are located in pasture 2 of the Madriaga Allotment. Posey Creek is an intermittent stream that supports limited riparian communities. The stream is ephemeral upstream of the confluence with Long Draw Creek. Downstream of the confluence with Long Draw Creek, flow is intermittent, and tends to run for a longer period each year than the upper reach. Along both reaches, vigor, cover, and recruitment of riparian vegetation are poor. The channel is incised and supports small amounts of riparian vegetation; upland species are common to dominant. Posey Creek has downcut through most of the reach and has active headcuts adjacent to the pasture fence. A small reservoir (< 5 acre feet) captures flow from Posey Creek, just downstream from the Long Draw confluence. The reservoir berm and outlet are stable. The reach of Posey Creek in Pasture 2 was rated as functional-at-risk.

Three springs in pasture 2 were assessed in 2003: two were NF and one was FAR. Spring 5572A and spring 5572C in Pasture 2 were rated NF and are dewatered by a trough development, and did not maintain hydric soils or riparian vegetation. Spring 5572B was rated FAR because the area lacked surface water to support hydric vegetation.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

Approximately 1.6 miles of Posey Creek were assessed FAR because of issues with low plant vigor, lack of hydric plant cover, and recruitment of riparian vegetation was poor. Additionally, the channel was incised and there are active headcuts adjacent to the pasture fence. Eight springs have been assessed within the two pastures on the Madriaga allotment. Five were non-functional, two were FAR, and one was in PFC.

SODA CREEK ALLOTMENT

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). The reaches of the Cow Creek (0.99 mile) and Little Cow Creek (0.78 mile) that traverse BLM lands within the allotment were in unsatisfactory condition at the time the Plan was written. The ORMP refers to streams and riparian-wetland areas in unsatisfactory condition as those that were either functional-at-risk or non-functional.

According to the National Hydrography Dataset (NHD), the Soda Creek Allotment contains six named streams (Cow, EF Trout, Jacks, Little Cow, and Soda Creeks) and one unnamed stream with approximately 2.7 miles of perennial stream and 5.8 miles of intermittent streams (Table RIPN-13). About 4.5 miles of the streams support riparian vegetation (NAIP 2011). The NHD also identifies two springs/seeps within the allotment.

Table RIPN-13 Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Soda Creek allotment- NHD Derived

Stream Name and Flow Type	Soda Creek 1	Soda Creek 1A	Soda Creek 2	Soda Creek 3	Total Miles
Cow Creek					
Perennial			1.06	0.38	1.44
East Fork Trout Creek					
Intermittent Miles	0.09				0.09
Jacks Creek					
Perennial			0.28		0.28
Little Cow Creek					

Stream Name and Flow Type	Soda Creek 1	Soda Creek 1A	Soda Creek 2	Soda Creek 3	Total Miles
Perennial			0.71		0.71
Soda Creek					
Intermittent	0.17				0.17
Perennial	0.29				0.29
Unnamed Creek					
Intermittent Miles	0.23	0.39		4.91	5.53
Total Miles	0.78	0.39	2.07	5.29	8.54
Total # of Springs	0	0	0	11	

Assessment

Table RIPN-14: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Soda Creek allotment that have been *Assessed*

Stream Name and Flow Type	Soda Creek 1	Soda Creek 1A	Soda Creek 2	Soda Creek 3	Soda Creek 4	Total Miles
Cow Creek						
Perennial			1.06 (FAR- 2002) 0.72 (PFC- 2009)			1.78
Little Cow Creek						
Perennial			0.71 (FAR- 2002) 0.23 (PFC- 2009)			0.94
Total Miles			2.72			2.72

Spring Name	Pasture	PFC Condition	Date
6523A	3	PFC	6/5/2003
6523B	3	PFC	6/5/2003
6523C	3	PFC	6/5/2003
6523D	3	PFC	6/5/2003
6523E	3	PFC	6/5/2003
6523F	3	PFC	6/9/2003
6523G	3	NF	7/14/2003
6523X	3	NF	7/2/2003
6523Y	3	PFC	7/2/2003
BUCKET SPRING	3	NF/ PFC	7/2/2003--7/2/2009
LOWER FLAT SPRING	3	FAR/ PFC	7/2/2003—7/2/2009
Unname001_sodackallot	3	PFC	7/1/2009
Unname002_sodackallot	3	PFC	7/1/2009
Unname003_sodackallot	3	PFC	7/1/2009
Unname004_sodackallot	3	PFC	7/1/2009
Unname005_sodackallot	3	PFC	7/1/2009
Unname006_sodackallot	3	PFC	7/2/2009
Unname007_sodackallot	3	PFC	7/2/2009
Willingger Spring 01	3	PFC/ PFC	6/9/2003—7/2/2009
Willingger Spring 02	3	PFC	7/2/2009

Pasture 1, 1A, & 4

None of the streams that occur on BLM lands within pastures 1, 1A, and 4 have been assessed. However, there are very small parcels of BLM lands the reaches of stream intermittently cross from private to BLM and back to private. The short reaches of stream do appear to support riparian-wetland vegetation (NAIP 2011, BING Maps 2011).

Pasture 2

The reach of Cow Creek (1.1 miles) that traverses pasture 2 was assessed FAR in 2002. A full inventory was completed and issues identified included: a lack of hydric vegetation to protect banks, inappropriate sinuosity and width-to-depth ratios for the valley/ stream type, and hoof shearing of riparian soils both in the stream channel and along the banks. The reach farthest west in the pasture (0.23 mile) and the reach downstream of the confluence with Little Cow Creek (0.46 mile) were re-assessed in 2009 and were in PFC indicating an improvement. Both reaches had perennial flow, a healthy community of willows including all age groups, were relatively well armored with both rock and woody debris, and seemingly less accessible by livestock because of the steep slopes and large rocks. A lack of an herbaceous component was noted.

Two MIM sites were established in the pasture in 2009; one on Cow Creek downstream of the confluence with Jacks Creek and one on Jacks Creek upstream of the same confluence.

Ten metrics were collected at the MIM site (Table RIPN 15). Median stubble height is the middle of the measured values of use on herbaceous vegetation along the greenline. Stubble height indicates whether the current grazing system is allowing adequate vegetation growth to maintain or enhance vigor and reproduction of the plants. Bank alteration is the percentage of streambank that has been altered by large herbivores walking along or crossing the stream resulting in bank shearing from hooves. Bank stability is the percentage of streambank in stable, intact condition (i.e. streambank that is not fractured, slumping, sloughing, or uncovered, eroding, and steep). Bank cover is the percentage of streambank that is at least 50% covered by perennial vegetation; cobbles six inches or larger; anchored large woody debris with a diameter of four inches or greater, or at least 50% of the bank area is covered by a combination thereof.

Based on the sites metrics, an evaluation was made for the stream reach in relation to the following three capability groups: 1) ecological status, 2) vegetation-erosion resistance (i.e., streambank stability), and 3) site wetland status. The summary rating for both Cow and Jacks Creeks showed that the greenline ecological status was at a late seral stage, the vegetation-erosion resistance was high, and the site wetland status was Fair. The outcome of the MIM data in regard to the three capability groups provides a good indication of a streambank's ability to buffer the hydrologic forces of moving water.

Tables RIPN-15: Cow and Jacks Creeks Multiple Indicator Monitoring (MIM) Metrics Soda Creek Allotment/ Pasture 2

Stream Metrics							Woody Species Regeneration			Greenline Ecological Rating	Vegetation Erosion Status	Site Wetland Rating
	Median SH (inches)	Mean SH (inches)	Bank Alteration (%)	Woody Use (%)	Bank Stability (%)	Bank Cover (%)	Seedlings & Young (%)	Mature (%)	Hydric (%)			
Cow Creek	6.5	6.8	20	9.6	76	85	17	83	25	79- Late	8.31- High	53- Fair
Jacks Creek	4.0	4.7	16	18.9	78	93	18	8	58	69- Late	7.98- High	60- Fair

Pasture 3

Twenty springs have been assessed in pasture 3; eight of them in 2009 and the remaining twelve in 2003 (Table RIPN-14). Of the twelve springs that were evaluated in 2003, two were NF, one was FAR, and ten were in PFC. All eight of the springs that were assessed in 2009 were in PFC. Three of the springs that were visited in 2003 were re-assessed in during the 2009 monitoring: Willinger Spring remained in PFC, Lower Flat Spring improved to PFC from a FAR rating, and Bucket Spring improved to PFC from a NF rating.

The issues identified in 2003 for Bucket Spring included: a lack of hydric and stabilizing vegetation, altered overland flow patterns caused by hoof shearing, a high percent of undesirable herbaceous species present, and a moderate level of use on both the woody and herbaceous plants. The issues identified for Lower Flat Spring included: the presence of undesirable herbaceous species, and a moderate level of use on both the woody and herbaceous riparian plant species. However, Bucket Spring was rated in PFC when it was re-assessed in 2009. The riparian-wetland areas associated with the spring appeared to have much less use of both the woody and herbaceous plants, and the herbaceous vegetation was out-competing the undesirable species.

The two springs that were rated NF in 2003 were developed with earth burms and had lost their form and function. The burming had made the area unstable and there was little or no hydric vegetation present. The shrubs were degrading and upland species were encroaching on the riparian-wetland areas.

Figure RIPN-3: Spring 6523X; Soda Creek Allotment/ Pasture 3; UTM: 4768897 508936



Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

The portions of both Cow and Little Cow Creeks that occur within pasture 2 were assessed as functioning at risk (FAR) in 2002 because the streams lacked hydric vegetation, there were imbalanced sinuosity and width/depth ratios, and hoof shearing of wetland soils was present. However, smaller segments of both Cow and Little Cow Creeks that traverse pasture 2 were rated as proper functioning condition (PFC) in 2009, and the metrics associated with the two MIM sites indicate the streams are resilient to erosion, have a late-seral plant community, and are generally stable. Eighteen of the 20 springs that occur on BLM lands within pasture 3 were most recently in PFC; they appear to have generally stable riparian-wetland areas, moderately low impacts from livestock, and are composed of healthy hydric vegetation communities, all allowing the systems to function properly.

TROUT CREEK/ LEQUERICA ALLOTMENT

Overview

The ORMP identified perennial and fish-bearing streams that occur on public lands and included an assessment of the mileage present and the condition at the time (1999). The ORMP does not identify any of the streams within the Trout Creek/Lequerica allotment.

According to the National Hydrography Dataset (NHD), the Trout Creek/Lequerica allotment contains one named stream (WF Trout Creeks) and one unnamed stream with approximately 0.36 miles of perennial stream and 2.3 miles of intermittent streams (Table RIPN-16). About 2.0 miles of the streams support riparian vegetation (NAIP 2011). The NHD does not identify any springs/seeps within the allotment.

Table RIPN-16: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Trout Creek/ Lequerica allotment- NHD Derived

Stream Name and Flow Type	Trout Creek/Lequerica 1	Trout Creek/Lequerica 2	Total
West Fork Trout Creek			
Intermittent Miles	1.06		1.06
Unnamed Creek (Nichols Creek Trib)			
Intermittent Miles	0.97		0.97
Unnamed Creek (Split Rock Canyon)			
Intermittent Miles		0.26	0.26
Total Miles	2.03	0.54	2.53

Assessment

Table RIPN-17: Total Miles of Perennial and Intermittent Stream, and Number of Springs within each Pasture of the Trout Creek/ Lequerica allotment that have been assessed

Stream Name and Flow Type	Trout Creek/Lequerica 1	Trout Creek/Lequerica 2	Total
West Fork Trout Creek			
Intermittent Miles	0.36 (NF)		0.36
Unnamed Creek (Nichols Creek Trib)			
Intermittent Miles	0.97 (FAR)		0.97
Unnamed Creek (Split Rock Canyon)			
Intermittent Miles		0.26 (FAR)	0.26
Total Miles			

Spring Name	Pasture	PFC Condition	Date
Nichols Spring	1	PFC	8/10/2011

Pasture 1

The reach of the WF of Trout Creek (0.36 mile) that traverses pasture 1 within the allotment was assessed NF as part of a 1.0 mile reach of stream that extends south into the Gusman allotment. The portion within the Trout Creek/Lequerica allotment was in better condition than the lower reach; however, the inventory was applied to the entire reach. It noted that heavy use by livestock has resulted in a non-native, undesirable vegetation dominance, over-widening of the channel creating lateral instability, and a lack of hydric plant species to protect stream banks and dissipate energy during higher flows. An unnamed tributary of Nichols Creek (0.87) was assessed FAR in 2000. The inventory noted issues with bank instability caused by a lack of deep rooted hydric vegetation, sheared and slumping banks causing vertical instability and erosion, and over-widening of the stream channel.

During the most recent monitoring in 2001, Nichols Spring, the headwater spring of the unnamed tributary discussed above was assessed in PFC. The spring source supports a large 2-3 acre riparian-wetland area, and the assessment noted concerns regarding the altered overland flow patterns caused by moderate hoof shearing caused by livestock trampling.

Pasture 2

The reach of the Split Rock Canyon (0.26 mile) that traverses pasture 2 within the allotment was assessed FAR in 2000 as part of a larger reach of stream that extends south into the Trout Creek allotment. The inventory report noted that the stream reach is entirely incised with the channel running well below the terraced floodplain which causes the wetland soils to dry and no longer support hydric species, and the water table to lower. There was evidence of past beaver activity, but the area did not appear to contain sufficient woody species present to support a population. Finally, the assessment noted issues with imbalanced erosion and deposition of soils creating sedimentation and aggradation. The same reach was re-assessed in 2011 and was in PFC, indicating an upward trend and progress towards meeting the Standard. The riparian area surrounding the stretch of stream has been exclosed and beaver dams rebuilt. The riparian vegetation appeared to be diverse and vigorous, and the water table has raised allowing for surface saturation late into the summer.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

The reach of the WF of Trout Creek that traverses pasture 1 was assessed NF, and the reaches of both Nichols Creek tributary and Split Rock Canyon were assessed FAR. The issues identified in the assessments suggest both short- and long-term riparian-wetland area indicators are not being met. For example, the incised channel on Split Rock Canyon and the change in plant community along the WF Trout Creek are an indication that prolonged impacts have occurred.

However, the reach of Split Rock Canyon in pasture 2 was re-assessed in 2011 and was in PFC, indicating the Standard is now being met in that pasture.

Standard 3 – Stream Channel/Floodplains

Stream channels and flood plains 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.

Desired Conditions:

1999 Owyhee Resource Management Plan:

Maintain or improve riparian-wetland areas to attain proper functioning and satisfactory conditions. Riparian-wetland areas include streams, springs, seeps, and wetlands.

BURGESS ALLOTMENT

Overview

See information under Standard 2

Assessment

See information under Standard 2

Big Field & Old Home Pastures

See information under Standard 2

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

See information under Standard 2

BURGESS FFR

Overview

See information under Standard 2

Assessment

See information under Standard 2

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

See information under Standard 2

CHIMNEY POT FFR

There are no stream channel/floodplain resources within the Chimney Pot FFR.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is: **NOT APPLICABLE**

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

COW CREEK ALLOTMENT

Overview

See information under Standard 2

Assessment

Cow Creek Individual Pastures 1-5

See information under Standard 2

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

See information under Standard 2

FERRIS FFR

Overview

See information under Standard 2

Assessment

See information under Standard 2

Evaluation of Standard 3

Evaluation Finding – Allotment/watershed is:

Not Applicable

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

Although there are ephemeral/ intermittent streams on BLM lands within the allotment, they have not been assessed, nor do they appear to support riparian vegetation.

JOINT ALLOTMENT

Overview

See information under Standard 2.

Assessment

See information under Standard 2.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

See information under Standard 2.

LOWRY FFR

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Not Applicable
- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

There are no riparian-wetland resources on BLM lands within the Lowry FFR; thus, the standard is not applicable.

MADRIAGA ALLOTMENT

Overview

See information under Standard 2.

Assessment

See information under Standard 2.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

See information under Standard 2.

SODA CREEK ALLOTMENT

Overview

See information under Standard 2.

Assessment

Pasture 1, 1A, 2, 3, & 4

See information under Standard 2.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

See information under Standard 2.

TROUT CREEK/ LEQUERICA ALLOTMENT

Overview

See information under Standard 2.

Assessment

See information under Standard 2.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

See information under Standard 2.

Standard 7 – Water Quality

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

Indicators may include but are not limited to:

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

Desired Conditions:

1999 Owyhee Resource Management Plan:

Meet or exceed State of Idaho water quality standards on all Federally administered waters within the Owyhee Field Office. Follow current State water rights processes and procedures to acquire water rights for beneficial uses and support establishment of in-stream flows which are in the public interest.

ALL ALLOTMENTS

Overview

The Idaho Department of Environmental Quality (IDEQ) is the state agency tasked with complying with and implementing the federal Clean Water Act. IDEQ sets the states standards through their integrated report and beneficial use process. On stream segments listed as water quality limited in the current IDEQ 303(d) list, Idaho BLM is expected to implement grazing practices that make progress towards achieving proper functioning condition and satisfactory riparian condition.

Idaho water quality standards require that surface waters of the state be protected for beneficial uses, wherever attainable (IDAPA 58.01.02.050.02). These beneficial uses are interpreted as existing uses, designated uses, and presumed uses. The beneficial uses assigned to the Jordan watershed are cold water aquatic life, primary contact recreation, salmonid spawning, and special resource water. Cold-water aquatic life water bodies are defined as water quality appropriate for the protection and maintenance of a viable aquatic life community for cold water species. Streams within the allotments that are identified by IDEQ as not supporting the beneficial use include Cow, Little Cow, Jacks, Succor, Chimney, and Soda Creeks, Maws Gulch, and Sommercamp Basin (Map 5). The primary causes identified in the TMDLs are flow alteration, temperature, sediment, and siltation (IDEQ 2010).

BURGESS ALLOTMENT

Assessment

Big Field Pasture

Approximately 0.25 miles of an unnamed tributary of Cow Creek that occurs in the big field pasture is on IDEQ's 303(d) list of impaired waters. The stream is not supporting the watershed's beneficial uses that include cold water aquatic life, primary contact recreation,

salmonid spawning, and special resource water (IDEQ 2010). BLM does not have any water quality monitoring sites within this pasture.

Old Home Pasture

Approximately 1.0 miles of an unnamed tributary of Cow Creek that traverses BLM lands within the old home pasture is on IDEQ's 303(d) list of impaired waters. The stream is not supporting the watershed's beneficial uses that include cold water aquatic life, primary contact recreation, salmonid spawning, and special resource water (IDEQ 2010). BLM does not have any water quality monitoring sites within this pasture.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

Both pastures that make up the Burgess allotment have portions of streams on BLM lands that are on IDEQ's 303(d) list of impaired waters. The streams occur in the Jordan watershed and are not meeting the beneficial uses assigned to them including cold water aquatic life, salmonid spawning, and primary and secondary contact recreation.

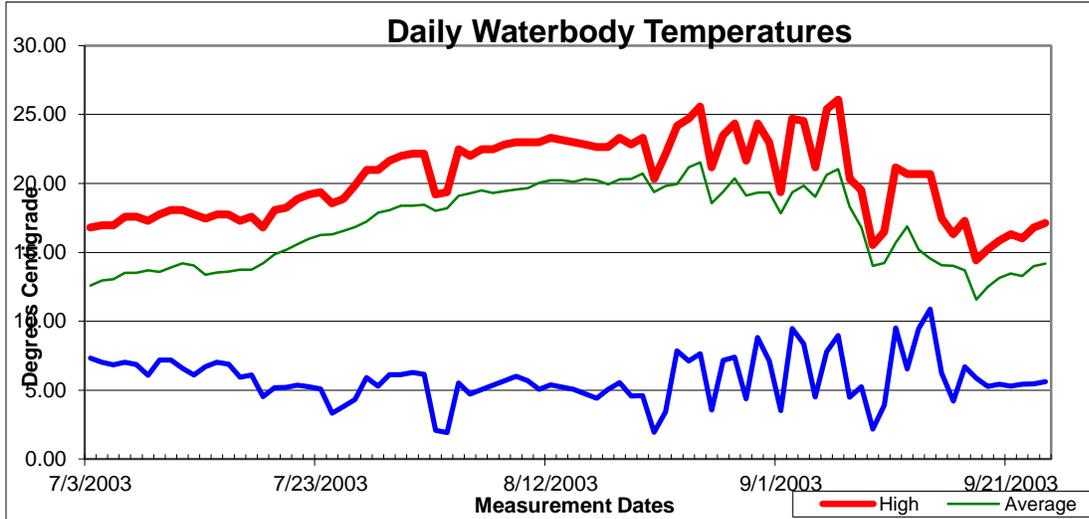
BURGESS FFR

Assessment

Pasture 1

About 0.3 miles of Succor Creek that are not supporting the watershed's beneficial uses traverse BLM lands in pasture 1. BLM has monitored the temperature (Figure RIPN-4) in this reach of Succor Creek and the temperatures exceeded the State's criteria for support of the cold water aquatic life beneficial use. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C.

Figure RIPN-4: Succor Creek Temperature Information, 2003 (MDMT = 26.1°C and MDAT =21.5°C)



Pasture 2

A short reach (0.3 mile) of Westgate Gulch that traverses BLM lands within pasture 2 is on IDEQ’s 303(d) list of impaired waters. BLM has not monitored water quality in this pasture.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

Both pasture of the allotment contain reaches of stream that are on the State’s 303(d) list of impaired waters that are not supporting the watershed’s beneficial uses. Additionally, BLM has monitored water temperature on Succor Creek and found that it exceed the criteria set by the State.

CHIMNEY POT FFR

Assessment

There are no water/riparian resources on BLM lands within the Chimney Pot FFR.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Not Applicable
- Meeting the Standard

- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

There are no water/riparian resources on BLM lands within the Chimney Pot FFR.

COW CREEK ALLOTMENT

Assessment

Cow Creek Individual 4 Pasture

Approximately 1.0 mile of Chimney Creek that traverses BLM lands within pasture 4 is on IDEQ's 303(d) list of impaired waters.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

IDEQ has only assessed the streams in pasture 4 and has determined Chimney Creek is not meeting the watershed's beneficial uses. Additionally, the stream has been through the reconnaissance process and placed on the 303(d) list. The streams that occur in the remaining four pastures have not yet been assessed.

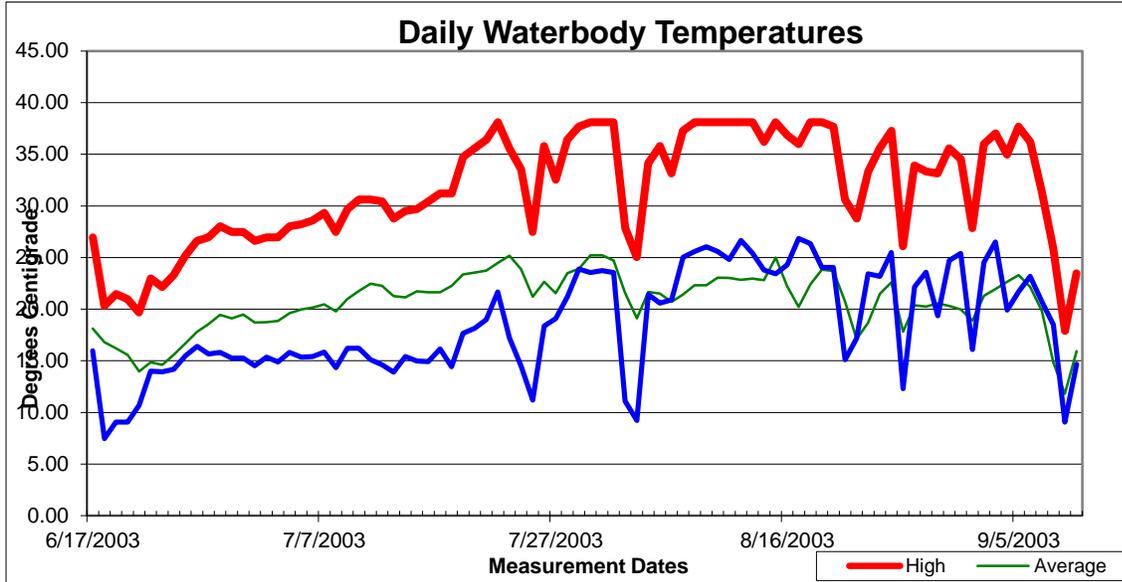
FERRIS FFR

Assessment

Pasture 1

Approximately 0.2 miles of Cow Creek traverse the BLM lands within pasture 1. The stream is not supporting the watershed's beneficial uses and has been through IDEQ's reconnaissance process and placed on the 303(d) list of impaired waters. BLM has monitored water temperature on the stream (Figure RIPN-5) and found that it exceeded the temperature criteria set by the State. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C.

Figure RIPN-5: Cow Creek Temperature Information, 2003 (MDMT = 38.1°C and MDAT =25.2°C)



Pasture 3

Approximately 0.4 miles of an Unnamed Creek traverse the BLM lands within pasture 3. The stream is not supporting the watershed’s beneficial uses and has been through IDEQ’s reconnaissance process and placed on the 303(d) list of impaired waters.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

Two reaches of stream that traverse BLM lands within pastures 1 and 3 are on IDEQ’s 303(d) list of impaired waters and are not meeting the standard set by the State. Additionally, BLM has internal information that Cow Creek exceeded the water temperature criteria.

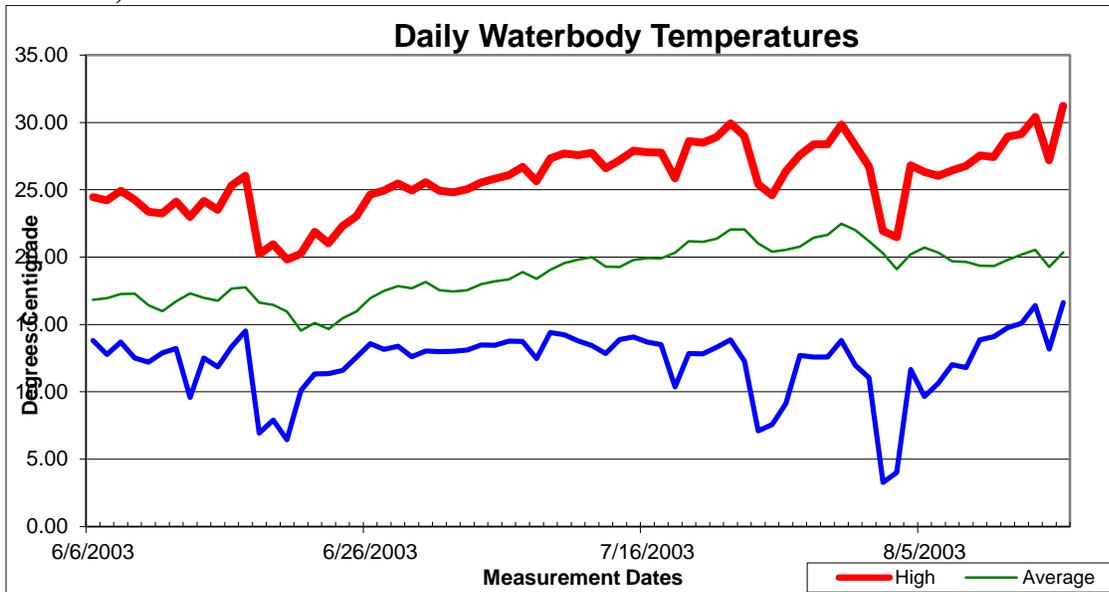
JOINT ALLOTMENT

Assessment

Chubby Pasture 1

Approximately 0.15 mile of Soda Creek and about 0.9 mile of an Unnamed Creek that traverse the BLM portion of the pasture are on IDEQ’s 303(d) list of impaired waters. Additionally, BLM has monitored water temperature on the Soda Creek (Figure RIPN-6) and found that it exceeded the temperature criteria set by the State. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C. .

Figure RIPN-6: Soda Creek Temperature Information, 2003 (MDMT = 31.2°C and MDAT =22.5°C)



Mountain Pasture 3

There are approximately 0.9 miles of Soda Creek and 1.9 miles of Unnamed stream on BLM lands within pasture 3 that are on IDEQ’s 303(d) list of impaired waters.

Seeding Pasture 4

Approximately 0.4 miles of Soda Creek and 1.0 mile of an Unnamed Creek that traverse BLM lands within pasture 4 are on IDEQ’s 303(d) list of impaired waters.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

Several reaches of Soda Creek and an Unnamed Creek that occur within pastures 1, 3, and 4 are not supporting the watershed's beneficial uses. All of the streams have been through IDEQ's reconnaissance process and were placed on the 303(d) list of impaired waters. Additionally, BLM has internally collected information that the reach of Soda Creek that traverses pasture 1 exceeded the water temperature criteria set by the State.

LOWRY FFR

Assessment

There are no water/riparian resources on BLM lands within the Lowry FFR.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Not Applicable
- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

There are no water/riparian resources on BLM lands within the Lowry FFR.

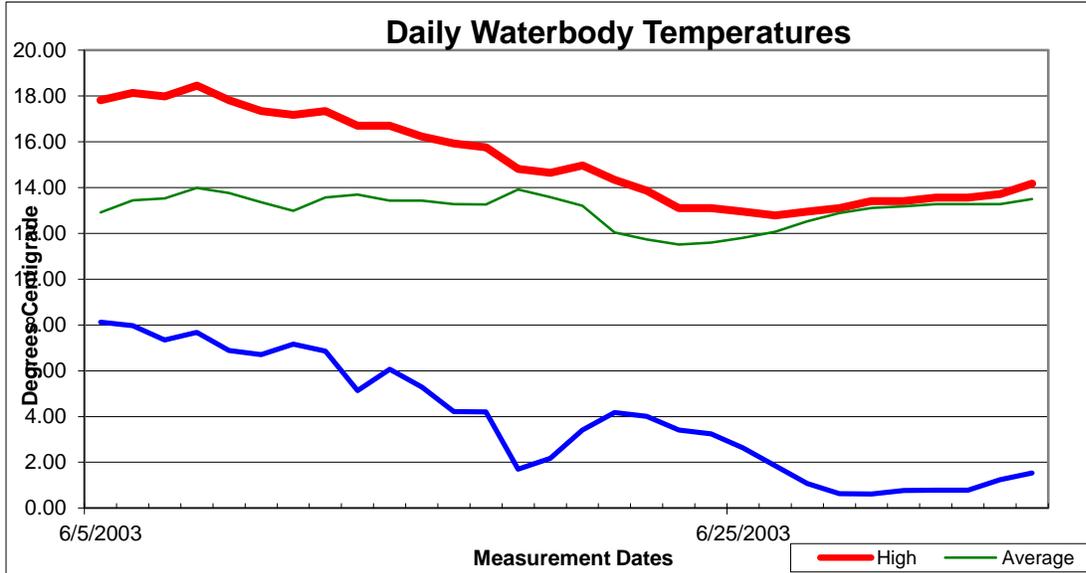
MADRIAGA ALLOTMENT

Assessment

Pasture 1

Approximately 1.0 mile of Maws Gulch and 0.8 mile of Sommercamp Basin that traverse BLM lands within pasture 1 are on IDEQ's 303(d) list of impaired waters. BLM monitored Sommercamp Basin for 22 days in 2003 and the water temperatures met the criteria for cold water aquatic life set by the State. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C.

Figure RIPN-7: Sommercamp Basin Temperature Information, 2003 (MDMT = 18.5°C and MDAT =14.0°C)



Pasture 2

Approximately 1.5 miles of Posey Creek, 0.75 mile of an unnamed tributary to Posey Creek, and 0.75 mile of Spring Branch Creek that occur in pasture 2 are on IDEQ’s 303(d) list of impaired waters.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
- Not meeting the Standard, but making significant progress towards meeting
- Not meeting the Standard

Rationale for Evaluation Finding

Almost 5.0 miles of stream that occur within the allotment are not meeting the watershed’s beneficial uses. The beneficial uses assigned to the watershed include cold water aquatic life, primary contact recreation, salmonid spawning, and special resource water. Cold-water aquatic life water bodies are defined as water quality appropriate for the protection and maintenance of a viable aquatic life community for cold water species. All of the reaches have been through IDEQ’s reconnaissance process and placed on the 303(d) list of impaired waters.

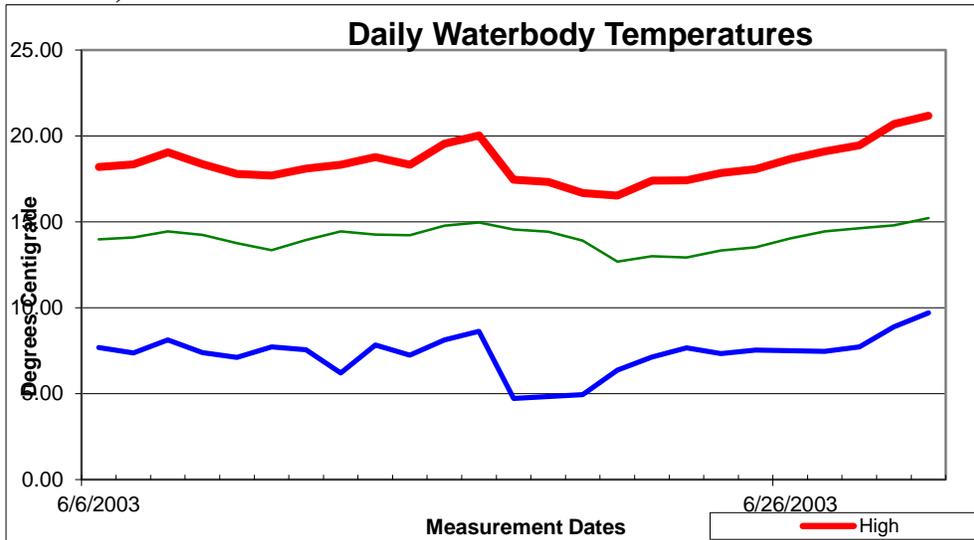
SODA CREEK ALLOTMENT

Assessment

Pasture 1

Approximately 0.4 miles of Soda Creek that traverses BLM lands within pasture 1 are on IDEQ's 303(d) list of impaired waters. BLM monitored the temperature of Soda Creek for 20 days in 2003 (Figure RIPN-8) and found that the stream was within the criteria set by the State. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C.

Figure RIPN-8: Soda Creek Temperature Information, 2003 (MDMT = 19.3°C and MDAT =15.2°C)



Pasture 2

Approximately 2.0 miles of Cow, Little Cow and Jacks Creeks that traverse BLM lands within pasture 2 are on IDEQ's 303(d) list of impaired waters. Additionally, BLM has monitored temperature on both Cow and Little Cow Creeks within pasture 2. Both reaches of stream exceeded the temperature criteria set by the State. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C.

Figure RIPN-9: Cow Creek Temperature Information, 2003 (MDMT = 25.0°C and MDAT =20.3°C)

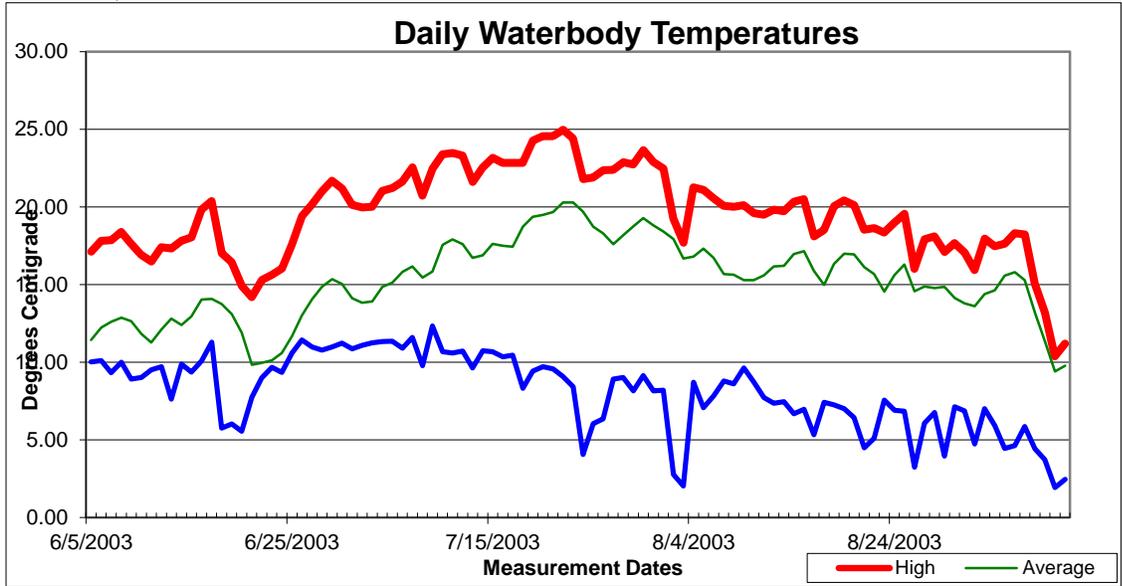
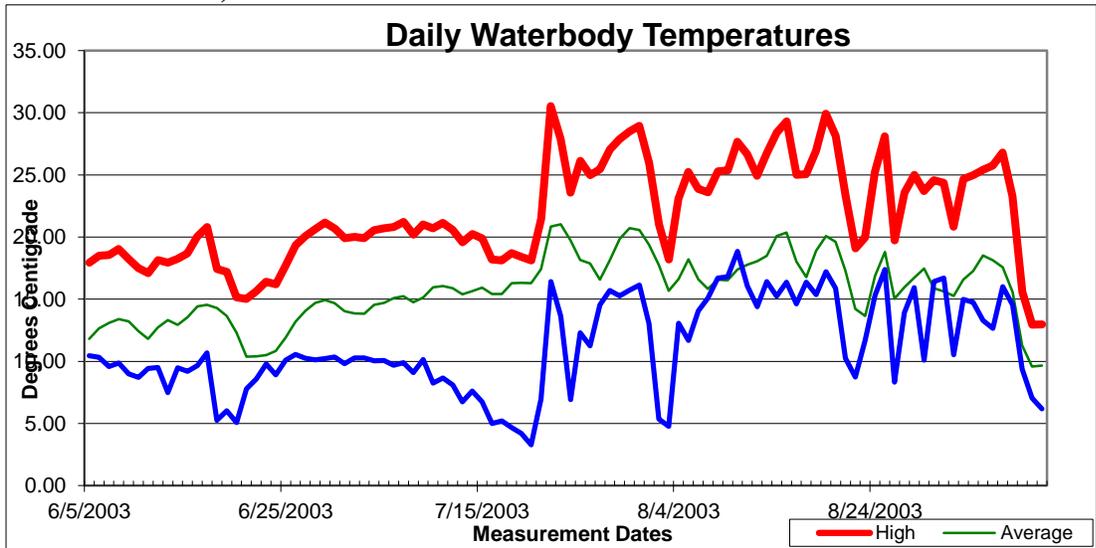


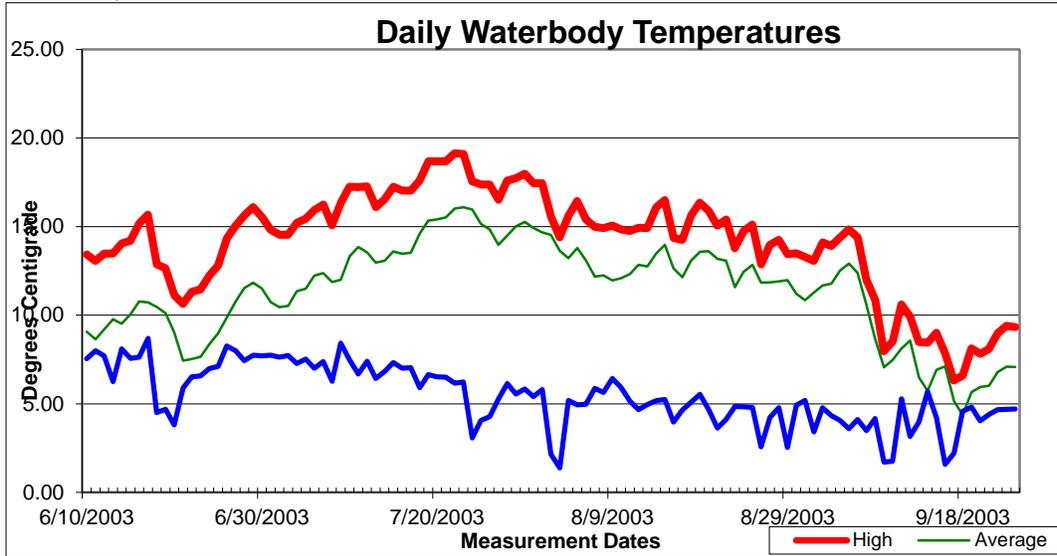
Figure RIPN-10: Little Cow Creek Temperature Information, 2003 (MDMT = 30.5°C and MDAT =21.0°C)



Pasture 3

Approximately 0.4 miles of Cow Creek and 4.8 miles of Unnamed Creeks that traverse BLM lands within pasture 3 are on IDEQ’s 303(d) list of impaired waters. Additionally, BLM has monitored temperature in Cow Creek within pasture 3. The stream was within the temperature criteria set by the State. The criteria, as defined by the State, sets a Maximum Daily Maximum Temperature (MDMT) of 22° C and a Maximum Daily Average Temperature (MDAT) of 19° C.

Figure RIPN-11: Cow Creek Temperature Information, 2003 (MDMT = 19.1°C and MDAT =16.1°C)



Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

- Meeting the Standard
 Not meeting the Standard, but making significant progress towards meeting
 Not meeting the Standard

Rationale for Evaluation Finding

All of the reaches of stream that occur on BLM lands within the allotment (Cow, Little Cow, Jacks, Cold Spring, and several Unnamed Creeks) are not meeting the watershed’s beneficial uses. The beneficial uses assigned to the watershed include cold water aquatic life, primary contact recreation, salmonid spawning, and special resource water. Cold-water aquatic life water bodies are defined as “water quality appropriate for the protection and maintenance of a viable aquatic life community for cold water species.” All of the reaches have been through IDEQ’s reconnaissance process and placed on the 303(d) list of impaired waters. Additionally, BLM has monitored water temperatures on Cow and Little Cow Creeks in pastures 2 and 3; the reaches within pasture 2 were not meeting the temperature criteria, and the reach on Cow Creek in pasture 3 was within the temperature limits set by the State.

TROUT CREEK/ LEQUERICA ALLOTMENT

Assessment

None of the streams within the allotment have been assessed by IDEQ for water quality impairment, and the BLM has not monitored water temperatures or bacterial levels.

Evaluation of Standard 2

Evaluation Finding – Allotment/watershed is:

Meeting the Standard

Not meeting the Standard, but making significant progress towards meeting

Not meeting the Standard

Rationale for Evaluation Finding

None of the streams within the allotment have been assessed by IDEQ for water quality impairment, and the BLM has not monitored water temperatures or bacterial levels.

Information Sources

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Idaho Department of Environmental Quality. 2009. Jordan Watershed TMDL: http://www.deq.idaho.gov/media/454554-water_data_reports_surface_water_tmdls_jordan_creek_jordan_creek_final_entire_including_errata.pdf

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Appendix A: Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management

Standards for Rangeland Health (associated with water and riparian resources)

The Standards for Rangeland Health, as applied in the State of Idaho, are to be used as the Bureau of Land Management's management goals for the betterment of the environment, protection of cultural resources, and sustained productivity of the range. They are developed with the specific intent of providing for the multiple use of the public lands. Application of the standards should involve collaboration between the authorized officer, interested publics, and resource users.

Rangelands should be meeting the Standards for Rangeland Health or making significant progress toward meeting the standards. Meeting the standards provides for proper nutrient cycling, hydrologic cycling, and energy flow.

Monitoring of all uses is necessary to determine if the standards are being met. It is the primary tool for determining rangeland health, condition, and trend. It will be performed on representative sites.

Appropriate to soil type, climate, and landform, indicators are a list of typical physical and biological factors and processes that can be measured and/or observed (e.g., photographic monitoring). They are used in combination to provide information necessary to determine the health and condition of the rangelands. Usually, no single indicator provides sufficient information to determine rangeland health. Only those indicators appropriate to a particular site are to be used. The indicators listed below each standard are not intended to be all inclusive.

The issue of scale must be kept in mind in evaluating the indicators listed after each standard. It is recognized that individual isolated sites within a landscape may not be meeting the standards; however, broader areas must be in proper functioning condition. Furthermore, fragmentation of habitat that reduces the effective size of large areas must also be evaluated for its consequences.

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.
- Indicators may include, but are not limited to, the following:
- 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 flood water, and increasing recharge of groundwater appropriate to site potential.
- 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.

- Age class and structural diversity of riparian/wetland vegetation is appropriate for the site.
- Noxious weeds are not increasing.

Standard 3 (Stream Channel/Floodplain)

- Stream channels and floodplains are properly functioning relative to the geomorphology (e.g., gradient, size, shape, roughness, confinement, and sinuosity) and climate to provide for proper nutrient cycling, hydrologic cycling, and energy flow.
- Indicators may include, but are not limited to, the following:
- 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.
- Stream width/depth ratio, gradient, sinuosity, and pool, riffle and run frequency are appropriate for the valley bottom type, geology, hydrology, and soils.
- Streams have access to their floodplains and sediment deposition is evident.
- There is little evidence of excessive soil compaction on the floodplain due to human activities.
- Streambanks are within an appropriate range of stability according to site potential.
- Noxious weeds are not increasing.

Standard 7 (Water Quality)

- Surface and ground water on public lands comply with the Idaho Water Quality Standards.
- Indicators may include, but are not limited to, the following:
- Physical, chemical, and biologic parameters described in the Idaho Water Quality Standards.

Guidelines for Livestock Grazing Management

Guidelines direct the selection of grazing management practices, and where appropriate, livestock management facilities to promote significant progress toward, or the attainment and maintenance of, the standards. Grazing management practices are livestock management techniques. They include the manipulation of season, duration (time), and intensity of use, as well as numbers, distribution, and kind of livestock. Livestock management facilities are structures such as fences, corrals, and water developments (ponds, springs, pipelines, troughs, etc.) used to facilitate the application of grazing management practices. Livestock grazing management practices and guidelines will be consistent with the Idaho Agricultural Pollution Abatement plan.

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

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

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

Guidelines Associated with the Water and Riparian Resources

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.
10. Implement grazing management practices and/or facilities that provide for complying with the Idaho Water Quality Standards.
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

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

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-BLM 1994). Lentic areas are defined as wetland-riparian areas adjacent to standing water habitats such as lakes, ponds, seeps, and meadows.

Idaho State Office NPR Team

August 1, 2013

Chipmunk (Group 2) Allotments- Riparian/ Water Specialist Report Addendum

BLM has met with IDEQ on two occasions (6/21 & 7/17- 2013) to discuss the water quality comments specific to the Group 2 allotments. Inconsistencies between DEQs 2010 spatial dataset and the information available on the integrated map browser were discussed and a solution formulated. All DEQ data has been re-evaluated and updates made throughout the EIS. Additionally, the following is the re-evaluation of Standard 7 Determinations for all Group 2 allotments. Where determinations for Standard 7 were changed from the DEIS, the allotment is followed by the * symbol.

Group 2 Allotment Name/ #

Alkali-Wildcat (514)*
Baxter Basin (530)^
Blackstock Springs (515)
Burgess (572)
Burgess FFR (638)
Chimney Pot FFR (464)
Chipmunk Field FFR (523)^
Corral FFR (602)^
Cow Creek (562)*
Elephant Butte (513)
Ferris FFR (545)
Franconi (558)^
Jackson Creek (506)
Joint (531)
Lowry FFR (477)
Madriaga (557)
Poison Creek (603)*
R Collins FFR (612)^
Rats Nest (522)
Sands Basin (521)
Soda Creek (652)
Stanford FFR (608)^
Texas Basin FFR (472)^
Trout Creek (529)^
Trout Cr/Lequerica (560)

^ Previously signed assessments have been carried forward

* The Determination changed from the DEIS

IDEQ sub-basins, assessment units, and 303(d) streams within the Chipmunk Group 2 allotments

Subbasin (4th Field HUC)	IDEQ Assessment Unit	Allotment	303(d) Streams on BLM lands¹
Middle Snake- Succor	ID17050103SW005_02 ID17050103SW005_03	Alkali-Wildcat	None
	ID17050103SW003_02 ID17050103SW004_02 ID17050103SW007_02	Blackstock Springs	McBride Creek Little McBride Creek Deadhorse Creek

¹ 303(d) streams are water quality limited and are in Category 5

Subbasin (4 th Field HUC)	IDEQ Assessment Unit	Allotment	303(d) Streams on BLM lands ¹
			Willow Fork
	ID17050103SW003_03	Burgess FFR	None
	ID17050103SW003_02 ID17050103SW003_03 ID17050103SW009_02	Chipmunk Field FFR	None
	ID17050103SW007_02	Corral Creek FFR	None
	ID17050103SW006_02 ID17050103SW007_02 ID17050103SW007_03	Elephant Butte	None
	ID17050103SW003_02 ID17050103SW003_03 ID17050103SW004_02	Jackson Creek	Unnamed Creek
	ID17050103SW005_02 ID17050103SW005_03	Poison Creek	None
	ID17050103SW007_02 ID17050103SW007_03	Rats Nest	None
	ID17050103SW004_02 ID17050103SW005_02 ID17050103SW005_03	Sands Basin	Tribs to McBride Creek
	ID17050103SW004_02	Texas Basin FFR	Unnamed Creek
Jordan	ID17050108SW020_02 ID17050108SW023_02	Baxter Basin	None
	ID17050108SW021_02	Burgess	Tribs to Cow Creek
	ID17050108SW021_02	Burgess FFR	Unnamed Creek
	ID17050108SW019_02 ID17050108SW022_02 ID17050108SW023_02	Cow Creek Individual	none
	ID17050108SW021_02 ID17050108SW021_03 ID17050108SW021_04 ID17050108SW022_02 ID17050108SW022_03	Ferris FFR	Cow Creek
	ID17050108SW021_02 ID17050108SW022_02	Franconi	Cow Creek
	ID17050108SW021_02	Jackson Creek	Coyote Creek Jackson Creek Little Cow Creek Little Jackson Creek
	ID17050108SW020_02 ID17050108SW021_02 ID17050108SW021_04 ID17050108SW022_02 ID17050108SW022_03	Joint	Posey Creek
	ID17050108SW019_02	Lowry FFR	none
	ID17050108SW021_02	Madriaga	Posey Creek Spring Branch Creek

Subbasin (4 th Field HUC)	IDEQ Assessment Unit	Allotment	303(d) Streams on BLM lands ¹
			Trib to Posey Creek
	ID17050108SW019_03	R Collins FFR	none
	ID17050108SW004_02 ID17050108SW021_02 ID17050108SW022_02	Soda Creek	Cold Spring Creek Cow Creek Little Cow Creek Jacks Creek Unnamed Creek
	ID17050108SW021_02	Stanford FFR	Jackson Creek
	ID17050108SW019_02 ID17050108SW019_03	Trout Creek	none
	ID17050108SW019_02	Trout Creek/ Lequerica	none

Jordan Sub-basin IDEQ information:

Hydrologic Unit Code	17050108
Size	Approximately 385,000 acres in Idaho (approximately 740,000 acres total)
§303(d) Listed Stream Segments	Jordan Creek (2 Segments), Cow Creek, Soda Creek, Rock Creek, Spring Creek, Louisa Creek, Louse Creek
Beneficial Uses Affected	Cold-water aquatic life, primary contact recreation, salmonid spawning, special resource water
Pollutants of Concern	Sediment, bacteria, flow alteration, oil and grease, pesticides, metals, pH, mercury, temperature
Major Land Uses	Irrigated agriculture, rangeland, forest, mining, riparian

Middle Snake-Succor Sub-basin IDEQ information:

Hydrologic Unit Code	17050103
Size	2,002 square miles
§303(d) Listed Stream Segments	Snake River (3 segments), Birch Creek, Brown Creek, Castle Creek, Corder Creek, Cottonwood Creek, Hardtrigger Creek, Jump Creek, McBride Creek, North Fork Castle Creek, Pickett Creek (2 segments), Poison Creek, Rabbit Creek, Reynolds Creek, Sinker Creek, South Fork Castle Creek, Squaw Creek, Squaw Creek Unnamed Tributary, Succor Creek (2 segments)
Beneficial Uses Affected	Cold-water aquatic life, salmonid spawning, primary contact recreation, drinking water supply, special resource water
Pollutants of Concern	Bacteria, dissolved oxygen, flow alteration, nutrients, pH, sediment, temperature
Major Land Uses	Rangeland, irrigated agriculture

2013 Supplement to the Alkali-Wildcat Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

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

Rationale for Evaluation Finding and Determination

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list.

Current IDEQ information identifies that the BLM portions within the Alkali-Wildcat allotment contain approximately 17.1 miles of stream that are not supporting the watershed's beneficial uses. The allotment contains portions of 2 AUs with associated beneficial uses and pollutants (Table RIPN-1). Both of the AUs are currently not supporting the beneficial uses; however, the streams that occur within those AUs are not on the 303(d) list of impaired waters because a TMDL has been developed for sediment for both AUs, and the streams were not 303(d) listed for the flow and habitat alterations.

Standard 7 is currently being met in the Alkali-Wildcat allotment, and the allotment is in conformance with the Guidelines for Livestock Grazing Management because none of the streams that occur within the allotment are 303(d) listed.

Table RIPN-1:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050103SW005_02	Jump Creek - 1st and 2nd order	1	CWAL ¹	physical substrate habitat alterations sedimentation/ siltation	NA Yes- all streams
ID17050103SW005_03	Jump Creek - 3rd order	1	CWAL	low flow alterations sedimentation/ siltation	NA Yes- all streams

¹CWAL = cold water aquatic life

2013 Supplement to the Blackstock Springs Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

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

Rationale for Evaluation Finding and Determination

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

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list. Current IDEQ information identifies that the BLM portions within the Blackstock Springs allotment contain approximately 12.3 miles of stream that are not supporting the watershed's beneficial uses, and 4.9 miles that are fully supporting the beneficial uses. The allotment contains portions of three AUs with associated beneficial uses and pollutants (Table RIPN 2). AU# ID17050103SW004_02 and ID17050103SW003_02 are currently not supporting the beneficial uses, and the streams that occur within AU# ID17050103SW004_02 are also on the 303(d) list of impaired waters. A TMDL have been developed for sediment and temperature within AU# ID17050103SW003_02, removing the streams from the 303(d) list.

Potential Natural Vegetation (PNV) TMDLs were developed for temperature for AU# ID17050103SW003_02. Idaho water quality standards include a provision (IDAPA 58.01.02.200.09), which establishes that if natural conditions exceed numeric water quality criteria, exceedance of the criteria is not considered to be a violation of water quality standards. In these situations, natural conditions essentially become the water quality standard, and the natural level of shade and channel width become the target of the TMDL. The in-stream temperature that results from attainment of these conditions is consistent with the water quality standards, even though it may exceed numeric temperature criteria.

Standard 7 is currently not being met in the Blackstock Springs allotment. The allotment is not in conformance with the Guidelines for Livestock Grazing Management because the streams that occur within AU# ID17050103SW004_02 are 303(d) listed for sediment and temperature, and livestock are a contributing factor for both pollutants.

Table RIPN-2:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050103SW003_02	Upper Succor Creek - 1st and 2nd order tributaries	3	CWAL ¹	flow alterations sediment/siltation temperature	No Yes- all streams Yes- all streams
ID17050103SW004_02	McBride Creek - 1st and 2nd order	1, 2, 3	CWAL	sediment/siltation temperature	No No
ID17050103SW007_02	Squaw Creek - 1st & 2nd order	1	fully supporting	NA	NA

¹CWAL = cold water aquatic life

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

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

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

Rationale for Evaluation Finding and Determination

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list. Current IDEQ information identifies that the BLM portions within the Burgess allotment contain approximately 0.8 miles of stream that are not supporting the watershed's beneficial uses. The allotment contains portions of AU# ID17050108SW021_02 with associated beneficial uses and pollutants (Table RIPN-3). The AU is currently not supporting the beneficial uses, and the streams that occur within it are also on the 303(d) list of impaired waters. A TMDL have been developed and approved for temperature, removing the streams from the 303(d) list for that pollutant. However, the streams with the AU remain on the 303(d) list for flow alteration since a TMDL has not yet been developed

Potential Natural Vegetation (PNV) TMDLs were developed for temperature for AU# ID17050108SW021_02. Idaho water quality standards include a provision (IDAPA 58.01.02.200.09), which establishes that if natural conditions exceed numeric water quality criteria, exceedance of the criteria is not considered to be a violation of water quality standards. In these situations, natural conditions essentially become the water quality standard, and the natural level of shade and channel width become the target of the TMDL. The in-stream temperature that results from attainment of these conditions is consistent with the water quality standards, even though it may exceed numeric temperature criteria.

Standard 7 is currently not being met in the Burgess allotment. However, the allotment is in conformance with the Guidelines for Livestock Grazing Management because the streams that occur within AU# ID17050108SW021_02 are 303(d) listed for flow alteration which cannot be attributed to livestock.

Table RIPN-3:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050108SW021_02	Cow Creek - 1st and 2nd order	1, 3	CWAL ¹	temperature flow alteration	Yes- all streams No

¹CWAL = cold water aquatic life

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

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

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

Rationale for Evaluation Finding and Determination

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the

loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list. Current IDEQ information identifies that the BLM portions within the Burgess FFR allotment contain approximately 0.8 miles of stream that are not supporting the watershed's beneficial uses. The allotment contains portions of two AUs with associated beneficial uses and pollutants (Table RIPN 4). The AUs are currently not supporting the beneficial uses, and the streams that occur within AU# ID17050108SW021_02 are also on the 303(d) list of impaired waters. TMDLs have been developed and approved for temperature and sediment, removing the streams from the 303(d) list for those pollutants. However, the streams with the AU# ID17050108SW021_02 remain on the 303(d) list for flow alteration since a TMDL has not yet been developed.

Potential Natural Vegetation (PNV) TMDLs were developed for temperature in both AUs that occur within the allotment. Idaho water quality standards include a provision (IDAPA 58.01.02.200.09), which establishes that if natural conditions exceed numeric water quality criteria, exceedance of the criteria is not considered to be a violation of water quality standards. In these situations, natural conditions essentially become the water quality standard, and the natural level of shade and channel width become the target of the TMDL. The instream temperature that results from attainment of these conditions is consistent with the water quality standards, even though it may exceed numeric temperature criteria.

Standard 7 is currently not being met in pasture 2 of the Burgess FFR allotment. However, the allotment is in conformance with the Guidelines for Livestock Grazing Management because the streams that occur within AU# ID17050108SW021_02 are 303(d) listed for flow alteration which cannot be attributed to livestock. Pasture 1 is meeting the standard because none of the streams are 303(d) listed.

Table RIPN 4:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050103SW003_03	Upper Succor Creek - 3rd order (Granite Creek to State Line)	1	CWAL ¹	flow alterations (not 303d) sediment/ siltation temperature	No Yes- all streams Yes- all streams
ID17050108SW021_02	Cow Creek - 1st and 2nd	2	CWAL	temperature	Yes- all streams

	order			flow alteration	No
¹ CWAL = cold water aquatic life					

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

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

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

Rationale for Evaluation Finding and Determination

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list. Current IDEQ information identifies that the BLM portions within the Cow Creek allotment contains approximately 1.1 miles of stream that are not supporting the watershed’s beneficial

uses, and 11.6 miles that have not been assessed. The allotment contains portions of three AUs with associated beneficial uses and pollutants (Table RIPN 5). The AUs are currently not supporting the beneficial uses; however, the streams that occur within the AUs are currently not 303(d) listed. TMDLs have been developed and approved for both temperature and sediment, removing the streams from the 303(d) list for those pollutants.

A Potential Natural Vegetation (PNV) TMDL was developed for temperature for AU# ID17050108SW022_02. Idaho water quality standards include a provision (IDAPA 58.01.02.200.09), which establishes that if natural conditions exceed numeric water quality criteria, exceedance of the criteria is not considered to be a violation of water quality standards. In these situations, natural conditions essentially become the water quality standard, and the natural level of shade and channel width become the target of the TMDL. The in-stream temperature that results from attainment of these conditions is consistent with the water quality standards, even though it may exceed numeric temperature criteria.

Standard 7 is currently being met in pasture 4 of the Cow Creek allotment, and is in conformance with the Guidelines for Livestock Grazing Management because the streams that occur within the allotment have been removed from the 303(d) list. The Standard is not applicable to pastures 1, 2, and 5 because none of the streams have been assessed by IDEQ.

Table RIPN 5:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050108SW019_02	Trout Creek - 1st and 2nd order	1, 2, 4, 5	not assessed	NA	NA
ID17050108SW022_02	Soda, Swisher and Chimney Creeks - 1st and 2nd order	4	CWAL ¹	sediment/ siltation temperature	Yes- all streams Yes- all streams
ID17050108SW023_02	Baxter Creek - 1st and 2nd order	2	not assessed	NA	NA

¹CWAL = cold water aquatic life

2013 Supplement to the Elephant Butte Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

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

Rationale for Evaluation Finding and Determination

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

Current IDEQ information identifies that the BLM portions within the Elephant Butte allotment contain approximately 9.0 miles of stream that are fully supporting the watershed's beneficial uses. The allotment contains portions of three AUs.

Standard 7 is currently being met in the Elephant Butte allotment because the streams are fully supporting the watershed's beneficial uses.

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

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

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

Rationale for Evaluation Finding and Determination

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list.

Current IDEQ information identifies that the BLM portions within the Ferris FFR allotment contain approximately 1.0 miles of stream that are not supporting the watershed's beneficial uses. The allotment contains portions of five AUs with associated beneficial uses and pollutants (Table RIPN 6). All of the AUs except AU# ID17050108SW021_04 are currently not supporting the beneficial uses; however, the streams that occur within AU# ID17050108SW022_02 and ID17050108SW022_03 are currently not 303(d) listed. TMDLs have been developed and approved for both temperature and sediment, removing the streams from the 303(d) list for those pollutants. AU# ID17050108SW021_03 and ID17050108SW021_02 are both 303(d) listed for flow alteration in addition to temperature. A TMDL has not been developed for flow alteration; therefore, the streams remain listed.

A Potential Natural Vegetation (PNV) TMDL was developed for temperature for all of the AUs

that occur within the allotment except AU# ID17050108SW021_04 which is fully supporting the beneficial uses. Idaho water quality standards include a provision (IDAPA 58.01.02.200.09), which establishes that if natural conditions exceed numeric water quality criteria, exceedance of the criteria is not considered to be a violation of water quality standards. In these situations, natural conditions essentially become the water quality standard, and the natural level of shade and channel width become the target of the TMDL. The in-stream temperature that results from attainment of these conditions is consistent with the water quality standards, even though it may exceed numeric temperature criteria.

Standard 7 is currently not being met in pasture 1 of the Ferris FFR allotment, but it is in conformance with the Guidelines for Livestock Grazing Management because the streams are 303(d) listed for flow alteration which cannot be attributed to livestock. The Standard is not applicable in pasture 2 because there are no streams, and is being met in pasture 3 because the streams have been removed from the 303(d) list.

Table RIPN 6:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050108SW021_02	Cow Creek - 1st and 2nd order	1	CWAL ¹	flow alteration temperature	No Yes- all streams
ID17050108SW021_03	Cow Creek - 3rd order (Wildcat Canyon to Soda Creek)	1	CWAL	flow alteration temperature	No Yes- all streams
ID17050108SW021_04	Cow Creek - 4th order	1	fully supporting	NA	NA
ID17050108SW022_02	Soda, Swisher and Chimney Creeks - 1st and 2nd order	3	CWAL	sediment temperature	Yes- all streams Yes- all streams
ID17050108SW022_03	Soda Creek - 3rd order section	1	CWAL	sediment temperature	Yes- all streams Yes- all streams

¹CWAL = cold water aquatic life

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

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). (only in pasture 3 due to sediment and temperature 303(d) listed streams)

Rationale for Evaluation Finding and Determination

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list.

Current IDEQ information identifies that the BLM portions within the Jackson Creek allotment contain approximately 9.5 miles of stream that are not supporting the watershed's beneficial uses. The allotment contains portions of four AUs with associated beneficial uses and pollutants (Table RIPN 7). All of the AUs are currently not supporting the beneficial uses; however, the

streams that occur within AU# ID17050103SW003_02 and ID17050103SW003_03 are currently not 303(d) listed. AU# ID17050103SW004_02 is 303(d) listed for sediment and temperature, and AU# ID17050108SW021_02 is 303(d) listed for flow alteration and temperature. A TMDL has been developed and approved for temperature in AU# ID17050108SW021_02, removing the streams from the 303(d) list for temperature only. A TMDL has not been developed for flow alteration in either AU, and has not been developed for temperature in AU# ID17050103SW004_02; therefore, the streams remain listed.

A Potential Natural Vegetation (PNV) TMDL was developed for temperature in AU# ID17050108SW021_02. Idaho water quality standards include a provision (IDAPA 58.01.02.200.09), which establishes that if natural conditions exceed numeric water quality criteria, exceedance of the criteria is not considered to be a violation of water quality standards. In these situations, natural conditions essentially become the water quality standard, and the natural level of shade and channel width become the target of the TMDL. The in-stream temperature that results from attainment of these conditions is consistent with the water quality standards, even though it may exceed numeric temperature criteria. However, reaches of Succor Creek that occur on BLM land in pasture 3 are not meeting the shade target as established by IDEQ.

Standard 7 is currently not being met in the Jackson Creek allotment. The streams that occur on BLM land in pasture 3 are not in conformance with the Guidelines for Livestock Grazing Management because the streams are 303(d) listed for both sediment and temperature and livestock are a contributing factor. The streams that occur in pastures 1, 2, 4, and 5 are in conformance with the Guidelines because they are 303(d) listed for flow alteration which cannot be attributed to livestock.

Table RIPN 7:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050103SW003_02	Upper Succor Creek - 1st and 2nd order tributaries	3	CWAL ¹	flow alteration sediment/ siltation temperature	No Yes, all streams Yes, all streams
ID17050103SW003_03	Upper Succor Creek - 3rd order (Granite Creek to State Line)	3	CWAL	flow alteration sediment/ siltation temperature	No Yes, all streams Yes, all streams

ID17050103SW004_02	McBride Creek - 1st and 2nd order	3	CWAL	sediment/ siltation temperature	No No
ID17050108SW021_02	Cow Creek - 1st and 2nd order	1, 2, 4, 5	CWAL	flow alteration temperature	No Yes, all streams

¹CWAL = cold water aquatic life

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

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

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

Rationale for Evaluation Finding and Determination

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the

loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list.

Current IDEQ information identifies that the BLM portions within the Joint allotment contain approximately 6.5 miles of stream that are not supporting the watershed’s beneficial uses, 1.1 miles that have not been assessed, and 0.2 miles that are fully supporting the beneficial uses. The allotment contains portions of five AUs with associated beneficial uses and pollutants (Table RIPN 8). AU# ID17050108SW021_02, ID17050108SW022_02, and ID17050108SW022_03 are currently not supporting the beneficial uses; however, the streams that occur within AU# ID17050108SW022_02 and ID17050108SW022_03 are currently not 303(d) listed because a TMDL has been developed and approved for both sediment and temperature. AU# ID17050108SW021_02 remains 303(d) listed for flow alteration because a TMDL has not been developed for flow alteration.

A Potential Natural Vegetation (PNV) TMDL was developed for temperature in AU# ID17050108SW021_02, ID17050108SW022_02, and ID17050108SW022_03. Idaho water quality standards include a provision (IDAPA 58.01.02.200.09), which establishes that if natural conditions exceed numeric water quality criteria, exceedance of the criteria is not considered to be a violation of water quality standards. In these situations, natural conditions essentially become the water quality standard, and the natural level of shade and channel width become the target of the TMDL. The in-stream temperature that results from attainment of these conditions is consistent with the water quality standards, even though it may exceed numeric temperature criteria. However, reaches of Soda Creek that occur on BLM land in pasture 3 are not meeting the shade target as established by IDEQ.

Standard 7 is currently not being met in pastures 2 and 3 of the Joint allotment. However, the streams that occur on BLM land in pasture 3 are in conformance with the Guidelines for Livestock Grazing Management because the streams are 303(d) listed for flow alteration which cannot be attributed to livestock. Since TMDLs have been developed and approved for temperature and sediment, and the streams have been de-listed, the Standard is being met in pasture 4, and is not applicable in pasture 5.

Table RIPN 8:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050108SW020_02	Hooker Creek - entire drainage	2	not assessed	NA	NA
ID17050108SW021_02	Cow Creek - 1st and 2nd	2, 3	CWAL ¹	flow alteration	No

	order			temperature	Yes, all streams
ID17050108SW021_04	Cow Creek - 4th order	3	fully supporting	NA	NA
ID17050108SW022_02	Soda, Swisher and Chimney Creeks - 1st and 2nd order	3, 4	CWAL	sediment temperature	Yes, all streams Yes, all streams
ID17050108SW022_03	Soda Creek - 3rd order section	3, 4	CWAL	sediment temperature	Yes, all streams Yes, all streams

¹CWAL = cold water aquatic life

<i>2013 Supplement to the Lowry FFR Allotment Rangeland Health Standards and Guidelines Assessment</i>
<p>Evaluation Findings and Determination</p> <p>Standard 7 (Water Quality) Surface and ground water on public lands comply with the Idaho Water Quality Standards.</p> <p>Standard</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Standard does not apply <input type="checkbox"/> Meeting the Standard <input type="checkbox"/> Not meeting the Standard; Current Livestock grazing management practices are significant factors <input type="checkbox"/> Not Meeting the Standard; Making significant progress toward <input type="checkbox"/> Not Meeting the Standard; Current livestock grazing management practices are not significant factors <p>Guidelines</p> <ul style="list-style-type: none"> <input type="checkbox"/> Conforms with Guidelines for Livestock Grazing Management <input type="checkbox"/> Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). <p>Rationale for Evaluation Finding and Determination Idaho Department of Environmental Quality (IDEQ) designates basins, sub-basins, and assessment units in order to manage the State's waterways. The 2010 Integrated Report</p>

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

Current IDEQ information identifies that the BLM portions within the Lowry FFR allotment contain approximately 0.2 mile of stream that has not been assessed. The allotment contains portions of AU# ID17050108SW019_02; however, beneficial uses have not been assigned and pollutants have not been identified.

Standard 7 is currently not applicable to Lowry FFR allotment because none of the streams have been assessed by IDEQ.

*2013 Supplement to the Madriaga Allotment Rangeland Health Standards and Guidelines
Assessment*

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

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

Rationale for Evaluation Finding and Determination

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

on the IDEQ web site <http://www.deq.idaho.gov>).

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list.

Current IDEQ information identifies that the BLM portions within the Madriaga allotment contain approximately 6.1 miles of stream that are not supporting the watershed's beneficial uses. The allotment contains portions of AU# ID17050108SW021_02 with associated beneficial uses and pollutants (Table RIPN 9). The AU is currently not supporting the beneficial uses; however, the streams that occur within it have been de-listed for temperature because a TMDL has been developed and approved. It remains 303(d) listed for flow alteration because a TMDL has not yet been developed for flow alteration.

A Potential Natural Vegetation (PNV) TMDL was developed for temperature for the AU. Idaho water quality standards include a provision (IDAPA 58.01.02.200.09), which establishes that if natural conditions exceed numeric water quality criteria, exceedance of the criteria is not considered to be a violation of water quality standards. In these situations, natural conditions essentially become the water quality standard, and the natural level of shade and channel width become the target of the TMDL. The instream temperature that results from attainment of these conditions is consistent with the water quality standards, even though it may exceed numeric temperature criteria. However, reaches of Soda Creek that occur on BLM land in pasture 3 are not meeting the shade target as established by IDEQ.

Standard 7 is currently not being met in the Madriaga allotment. However, the streams that occur on BLM land are in conformance with the Guidelines for Livestock Grazing Management because the streams are 303(d) listed for flow alteration which cannot be attributed to livestock.

Table RIPN 9:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050108SW021_02	Cow Creek - 1st and 2nd order	1, 2	CWAL ¹	flow alteration temperature	No Yes, all streams

¹CWAL = cold water aquatic life

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

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

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

Rationale for Evaluation Finding and Determination

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list.

Current IDEQ information identifies that the BLM portions within the Poison Creek allotment contain approximately 12.2 miles of stream that are not supporting the watershed's beneficial uses. The allotment contains portions of two AUs with associated beneficial uses and pollutants (Table RIPN 10). The AU is currently not supporting the beneficial uses; however, the streams that occur within it have been de-listed for sediment because a TMDL has been developed and approved. Although there is not an approved TMDL for flow alteration, the streams within the two AUs are not 303(d) listed for the pollutant.

Standard 7 is currently being met in the Poison Creek allotment, and the streams that occur on BLM land are in conformance with the Guidelines for Livestock Grazing Management because the streams have been removed from the 303(d) listed for sediment and are not listed for flow alteration.

Table RIPN 10:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050103SW005_02	Jump Creek - 1st and 2nd order	1	CWAL ¹	physical substrate habitat alteration sediment	No Yes, all streams
ID17050103SW005_03	Jump Creek - 3rd order	1	CWAL	low flow alteration sediment	No Yes, all streams

¹CWAL = cold water aquatic life

2013 Supplement to the Rats Nest Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

- Conforms with Guidelines for Livestock Grazing Management

- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). (only in pasture 3 due to sediment and temperature 303(d) listed streams)

Rationale for Evaluation Finding and Determination

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

Current IDEQ information identifies that the BLM portions within the Rats Nest allotment contain approximately 16.4 miles of stream that are fully supporting the watershed’s beneficial uses. The allotment contains portions of two AUs.

Standard 7 is currently being met in the Rats Nest allotment because the streams are fully supporting the watershed’s beneficial uses.

2013 Supplement to the Sands Basin Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

- Standard does not apply
- Meeting the Standard
- Not meeting the Standard; Current Livestock grazing management practices are significant factors (pasture 4 only)
- 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). (only in pasture 4 due to sediment and temperature 303(d) listed streams)

Rationale for Evaluation Finding and Determination

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

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list.

Current IDEQ information identifies that the BLM portions within the Sands Basin allotment contain approximately 15.9 miles of stream that are not supporting the watershed's beneficial uses. The allotment contains portions of three AUs with associated beneficial uses and pollutants (Table RIPN 11). The AUs are currently not supporting the beneficial uses; however, the streams that occur within AU# ID17050103SW005_02 and ID17050103SW005_03 have been de-listed for sediment because a TMDL has been developed and approved. Although there is not an approved TMDL for flow alteration, the streams within the two AUs are not 303(d) listed for the pollutant. AU# ID17050103SW004_02 remains 303(d) listed for both sediment and temperature.

Standard 7 is currently being met in pasture 4 of the Sands Basin allotment, and the streams that occur on BLM land are not in conformance with the Guidelines for Livestock Grazing Management because the streams are 303(d) listed for sediment and temperature. The Standard is being met in pastures 1, 2, and 3 because the streams have been de-listed for sediment and are not 303(d) listed for flow alteration.

Table RIPN 11:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050103SW004_02	McBride Creek - 1st and 2nd order	4	CWAL ¹	sediment temperature	No No
ID17050103SW005_02	Jump Creek - 1st and 2nd order	1, 2, 3, 4	CWAL	sediment physical substrate	Yes, all streams NA

				habitat alterations	
ID17050103SW005_03	Jump Creek - 3rd order	2, 4	CWAL	sediment	Yes, all streams
				low flow alterations	NA

¹CWAL = cold water aquatic life

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

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s) (only in pasture 3 due to sediment and temperature 303(d) listed streams)

Rationale for Evaluation Finding and Determination

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads (TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the loading capacity of the water body and to allocate that load among different pollutant sources so

that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list.

Current IDEQ information identifies that the BLM portions within the Soda Creek allotment contain approximately 7.8 miles of stream that are not supporting the watershed's beneficial uses. The allotment contains portions of three AUs with associated beneficial uses and pollutants (Table RIPN 12). The AUs are currently not supporting the beneficial uses; however, the streams that occur within all three AUs have been de-listed for temperature, and AU# ID17050108SW022_02 has also been de-listed for sediment because TMDLs have been developed and approved. AU# ID17050108SW004_02 remains 303(d) listed for mercury, and AU# ID17050108SW021_02 remains listed for flow alteration.

A Potential Natural Vegetation (PNV) TMDL was developed for temperature for all three of the AUs that occur within the allotment. Idaho water quality standards include a provision (IDAPA 58.01.02.200.09), which establishes that if natural conditions exceed numeric water quality criteria, exceedance of the criteria is not considered to be a violation of water quality standards. In these situations, natural conditions essentially become the water quality standard, and the natural level of shade and channel width become the target of the TMDL. The instream temperature that results from attainment of these conditions is consistent with the water quality standards, even though it may exceed numeric temperature criteria. However, reaches of Cow Creek that occur in pasture 2 and of Soda Creek that occur on BLM land in pasture 1 are not meeting the shade target as established by IDEQ.

Standard 7 is currently not being met in pastures 2 and 3 of the Soda Creek allotment; however, the streams that occur on BLM land are in conformance with the Guidelines for Livestock Grazing Management because the streams are 303(d) listed for flow alteration and mercury which cannot be attributed to livestock. The Standard is being met in pastures 1 and 5 because the streams have been de-listed for temperature and sediment.

Table RIPN 12:

AU #	AU Name	Pasture (s) AU occurs in	Beneficial Use Not Meeting	Pollutant/ Pollution	TMDL
ID17050108SW004_02	Upper Jordan Creek - 1st and 2nd order tributaries	3	CWAL ¹	temperature	Yes, all streams
			SCR ²	mercury	No
ID17050108SW021_02	Cow Creek - 1st and 2nd order	2, 3	CWAL	temperature	Yes, all streams

				flow alteration	No
ID17050108SW022_02	Soda, Swisher and Chimney Creeks - 1st and 2nd order	1, 3, 5	CWAL	temperature	Yes, all streams
				sediment	Yes, all streams

¹CWAL = cold water aquatic life

²SCR = secondary contact recreation

2013 Supplement to the Trout Creek/ Lequerica Allotment Rangeland Health Standards and Guidelines Assessment

Evaluation Findings and Determination

Standard 7 (Water Quality)

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

Standard

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

Guidelines

- Conforms with Guidelines for Livestock Grazing Management
- Does not conform with Guidelines for Livestock Grazing Management; Guideline No(s). (only in pasture 3 due to sediment and temperature 303(d) listed streams)

Rationale for Evaluation Finding and Determination

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

According to the Clean Water Act, each state must develop Total Maximum Daily Loads

(TMDLs) for all the waters on the 303(d) list. The objective of a TMDL is to determine the loading capacity of the water body and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. The TMDL process is important for improving water quality because it links the development and implementation of control actions to the attainment of water quality standards. Once a TMDL is developed for a particular pollutant or pollution, it is effectively removed from the 303(d) list.

Current IDEQ information identifies that the BLM portions within the Trout Creek/ Lequerica allotment contain approximately 2.9 miles of stream that have not been assessed. The allotment contains portions of AU# ID17050108SW019_02; however, beneficial uses have not been assigned and pollutants have not been identified.

Standard 7 is currently not applicable in the Trout Creek/ Lequerica allotment because none of the streams have been assessed by IDEQ.