

Land Health Evaluation Report

Big Foot Allotment

Bureau of Land Management

Butte Field Office

Introduction and Assessment Process

This report documents whether land health standards were achieved for the Big Foot Grazing Allotment administered by the Bureau of Land Management's Butte Field Office. Standards for Rangeland Health were evaluated utilizing an interdisciplinary team (ID team) of resource specialists.

Rangeland Health Standards for Western Montana are described in detail in the Record of Decision (ROD) issued for Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Montana, North Dakota and South Dakota (August 1997). The preamble of the Western Montana Standards states: "The purpose of the S&Gs (Standards and Guidelines) are to facilitate the achievement and maintenance of healthy, properly functioning ecosystems within the historic and natural range of variability for long-term sustainable use." Standards are statements of physical and biological condition or degree of function required for healthy sustainable lands. Achieving or making significant progress towards these functions and conditions is required of all uses of public land as stated in 43 CFR 4180.1.

This report contains an evaluation of each of the five standards:

- Standard #1 Upland Health
- Standard #2 Riparian/Wetland Health
- Standard #3 Water Quality
- Standard #4 Air Quality
- Standard #5 Biodiversity

Available monitoring data from both upland and riparian sites, existing inventories, historical photographs and standardized methodology are used by an ID team to assess condition and function. Condition/function declarations regarding this allotment are expressed as:

- Proper Functioning Condition (PFC)
- Functioning at Risk (FAR), which is assigned a trend of up, down, static or not apparent
- Nonfunctioning (NF)

Standards are met when conditions are at PFC or FAR with an upward trend. This is dependent on scope and scale. The BLM will consider the information contained in this report, along with public scoping and other sources of information, to make a determination regarding causal factors and courses of action to be analyzed in a National Environmental Policy Act (NEPA) document.

General Allotment Summary

Allotment Name/Number: Big Foot 20239

Current Management Category: M (Maintain)

Location: T4N, R4W, Sections 4, 5, 8, 17, 20; Jefferson County

Public Acres: 1520 acres.

Season of Use: 06/16 to 10/15

Public Animal Unit Months: 280

Assessment Date: May 6, 13, & 20, 2009

The Big Foot Allotment lies about 7 miles south of Boulder, MT and about 14 miles north of Whitehall, MT. The allotment is grazed in conjunction with adjacent private property (approx. 4000 acres) and United States Forest Service (USFS) lands (approx. 20,000 acres). This allotment is included as lower elevation portions of 3 pastures within the USFS's Big Foot Allotment. The 3 pastures are Little Whitetail, Big Foot and Beacon. The BLM's Rocky Canyon Allotment is also grazed as a pasture within the USFS's Big Foot Allotment grazing system. The USFS Big Foot Allotment including these BLM managed lands, is managed as a 9 pasture deferred grazing system with approximately 550 c/c pairs. This allotment was changed from a rest rotation grazing system to a deferred system, in order to shorten the grazing period on the allotment's riparian areas. The USFS has the lead for grazing management on this allotment.

The Boulder weather station reports 11.48 inches of precipitation on average, and an average daily temperature of 42.6 degrees Fahrenheit. The Big Foot Allotment sits at higher elevations than the Boulder weather station, and receives more precipitation and cooler weather than is recorded at the weather station.

Some major soil map units on the allotment are:

Soils

1591E – Catgulch, boulderly-Crackerville-Rock outcrop complex, 15 to 45 percent slopes.

1373E – Burtoner-Elmark-Connieo complex, 8 to 25 percent slopes, very boulderly.

1540F – Shaboom, extremely boulderly-Rock outcrop Elmark, very boulderly, association, 35 to 60 percent slopes.

1910F – Elmark, very boulder- Rock outcrop-Shaboom, extremely boulderly, complex, 25 to 60 percent slopes.

Summary of Standards Achieved --Yes, No, N/A (Not Applicable)--						
Allotment Name	Allot #	1. Upland	2. Riparian	3. Water Quality	4. Air Quality	5. Biodiversity
Big foot	20239	Yes	No	Yes	Yes	Yes

Rangeland Health Standards Evaluation and Rationale

The issue of scope and scale must be kept in mind when evaluating each standard. It is recognized that isolated sites within a landscape may be Functioning at Risk (FAR) and not meeting the standards; however, considering broader scope and scale, the area may be deemed in Proper Functioning Condition (PFC). Likewise, isolated sites may be in PFC, but, overall, the resource within the allotment or area could be FAR and not meeting standards. Therefore, no single indicator provides sufficient information to determine rangeland health. Indicators are used in combination to provide information necessary to make rangeland health determinations.

Western Montana Standard #1

“Uplands are in Proper Functioning Condition”

Finding Standard is met.

Rationale

The rangeland health evaluation conducted on this allotment was compared to the Natural Resource Conservation Service’s ecological site guides. The sites evaluated on this allotment showed little departure from the soil stability, hydrologic and biotic function indicators. There is some scattered Douglas fir expansion. Utilization is within acceptable levels on this allotment and on adjacent private property managed with the public land.

Site 1: a Rangeland Health Evaluation Worksheet was completed at T4N, R4W, Sec. 8: NE1/4NW1/4. The soil type for this site is Burtoner-Connieo, bouldery-Rock outcrop complex, 4 to 15 percent slopes (1372D). This site was determined to be a shallow 15-19” precipitation zone ecological site. The assessment showed 17 of 17 indicators rated none to slight from departure. The site had a good representation of native vegetation.

Site 2: a Rangeland Health Evaluation Worksheet was completed at T4N, R4W, Sec. 5: NE1/4NE1/4. The soil type for this site is Burtoner-Connieo, bouldery-Rock outcrop complex, 4 to 15 percent slopes (1372D). This site was determined to be a shallow 15-19” precipitation zone ecological site. The assessment showed 14 of 17 indicators rated none to slight from departure. The Plant community composition and distribution relative to infiltration and runoff indicator was rated as slight to moderate. Club moss

and conifer encroachment have a slight to moderate effect on infiltration. The Functional/structural groups indicator was rated as slight to moderate. The presence of club moss has slightly to moderately altered the relative dominance of vegetation on the site. The Annual production indicator was rated as slight to moderate. The amount of club moss has slightly to moderately reduced the annual production of blue bunch wheatgrass on the site. Blue bunch wheatgrass is the dominant species on this site.

Site 3: a Rangeland Health Evaluation Worksheet was completed at T4N, R4W, Sec. 8: SE1/4SW1/4. The soil type for this site is Martinsdale-Martinsdale, shawmut complex, 2 to 8 percent slopes (1222c). This site was determined to be a silty 15-19" precipitation zone ecological site. The assessment showed 15 of 17 indicators rated none to slight from departure. The Plant community composition and distribution relative to infiltration and runoff indicator was rated as slight to moderate. Club moss and sagebrush have a slight to moderate effect on infiltration. The Functional/structural groups indicator was rated as slight to moderate. The presence of club moss has slightly to moderately altered the relative dominance of vegetation on the site.

Site 4: a Rangeland Health Evaluation Worksheet was completed at T4N, R4W, Sec. 20: NE1/4NW1/4. The soil type for this site is Burtoner-Connieo, bouldery-Rock outcrop complex, 4 to 15 percent slopes (1372D). This site was determined to be a silty 15-19" precipitation zone ecological site. The assessment showed 11 of 17 indicators rated none to slight from departure. The Plant community composition and distribution relative to infiltration and runoff indicator was rated as moderate. Club moss has a moderate effect on infiltration. The Functional/structural groups indicator was rated as slight to moderate. The presence of club moss has slightly to moderately altered the relative dominance of vegetation on the site. The Plant mortality/decadence indicator was rated as slight to moderate. There is older sagebrush on site. The Litter amount, Annual production and Reproductive capability of perennial plants indicators were rated as slight to moderate. The presence of club moss affected all these indicators.

Overall, the uplands are in Proper Functioning Condition.

Western Montana Standard #2

"Riparian and Wetland Areas are in Proper Functioning Condition"

Finding Standard is not met.

Rationale

All riparian reaches were rated in Proper Functioning Condition (PFC) with the exception of J-93, a tributary to Little Whitetail Creek, which was rated as nonriparian and J-15-2, Little Whitetail Creek, which was rated as Functioning at Risk (F@R) with no apparent trend.

Reach J-93 was reclassified as an intermittent draw which contained little riparian

vegetation. The majority of this draw is dry and is covered with conifer species. Reach J-15-2 was rated as F@R with Trend Not Apparent. This is a fairly level area on the reach. The reach has an adequate diversity and composition of riparian vegetation, however it is receiving some animal trampling. The interdisciplinary team could not give J-15-2 an upward or downward trend. It was felt that the grazing treatment on this reach was short enough to not negatively affect the composition of the riparian vegetation of this reach, but the topography of the area funneled animals to this site. This animal concentration is creating some annual bank impact.

The following reaches are rated as PFC:

Rocky Canyon Tributary	J-11
Tributary to Little Whitetail	J-12
Little Whitetail Cr.	J-15-1
Little Whitetail Cr. Trib	J-136
Big Foot Creek	J-13-1
State Creek	J-17
Big Foot Creek	J-95
Not Named Intermittent	J-14
Little Whitetail Cr	J-18

Little Whitetail Creek has been separated into 3 different riparian reaches, because of slope and land status differences of these reaches. There is approximately 26,000 feet of total riparian reach in the Big Foot Allotment. Twenty five thousand feet of these reaches rated PFC and approximately 1000 (J-15-2) feet rated F@R with trend Not Apparent. Since, 1000 feet of riparian reach does not have an apparent upward trend, the riparian standard is not met on this allotment.

Western Montana Standard #3:
“Water Quality Meets State Standards.”

Finding Standard is met.

Rationale

The State of Montana, Department of Environmental Quality (DEQ) has responsibility for implementing the Clean Water Act. This responsibility includes making beneficial use determinations. The State of Montana 303(d) list of impaired water bodies was checked for Jefferson County and these riparian reaches were not included on this list. No excess sediment is produced from water running off this allotment.

Western Montana Standard #4
“Air Quality Meets State Air Quality Standards.”

Finding Standard is met.

Rationale

Although the actual air quality in the allotment is unknown, there is no evidence to suggest that the current allotment conditions would be contributing to any air quality problems in terms of a source of smoke or dust particulates. No visual impairment was observed.

Western Montana Standard #5

“Provide habitat as necessary, to maintain a viable and diverse population of native plant and animal species, including special status species.”

Finding Standard is met.

Rationale

The following indicators were used to assess whether existing habitat conditions are at a condition to support viable and diverse populations of native plant and animal species, including special status species.

- Plants and animals are diverse, vigorous, and reproducing satisfactorily.
- Noxious weeds are absent or insignificant in the overall plant community.
- Spatial distribution of species is suitable to ensure reproductive capability and recovery.
- A variety of age classes is present.
- Connectivity of habitat or presence of corridors prevents habitat fragmentation.
- Diversity of species (including plants, animals, insects, and microbes) are represented.
- Plant communities in a variety of successional stages are represented across the landscape.

A variety of native wildlife species are represented on the allotment. Big game including moose, elk, and deer are present; small mammal burrows were noted; red-tailed hawks, ruffed grouse and numerous passerine species were seen during the allotment evaluation; numerous insect and arachnid species were seen. Wildlife appears to be healthy, diverse, and reproducing satisfactorily. Although the allotment is too small to sustain healthy and diverse wildlife communities on its' own, it is connected on all sides to USFS, state, and undeveloped private land. There are no significant barriers to wildlife movement in and out of the allotment.

Noxious weeds and invasive plant species are rare. Conifer species are expanding into sage, grass, and riparian areas due to alteration of historic disturbance but have not become completely dominant in these areas.

Preliminary Identification of Causal Factors and Recommendations

Based on the field review and observations, it appears the following factors may be

contributing to land health standards not being achieved:

- Stream bank trampling on a portion of reach J-15-2.

Final determinations will be made upon assessment of further information. It should be noted that if changing a current management or use will not result in progress toward meeting the standards, then the current management or use should not be considered a significant causal factor.

The following actions may be necessary in order to make significant progress in achieving the Western Montana Standards for Rangeland Health:

- Monitoring to determine trend of riparian reach J-15-2.
- Some type of barrier to grazing use of a portion of reach J-15-2.

How This Information Will Be Used

If the information in this Evaluation Report indicates that the allotment meets the Western Montana Standards for Rangeland Health, BLM will issue grazing decision(s) (subject to protest and appeal) to renew or issue associated grazing authorizations as necessary, with the appropriate level of NEPA documentation and public involvement in accordance with CEQ guidance and BLM direction. No additional final determinations are necessary.

For allotments not meeting the Western Montana Standards for Rangeland Health, BLM will use the information in this Evaluation Report along with any other relevant data or information, including input from interested parties, to make a final determination whether or not current grazing management or levels of use are a significant causal factor in not meeting rangeland health standards on the allotment. If current grazing management and/or levels of use appear to be a significant causal factor, BLM will use the NEPA process to document the affected environment and develop alternatives to propose changes to grazing management to facilitate achieving rangeland health standards. These changes or actions will be addressed with an appropriate level of NEPA documentation and public involvement in accordance with CEQ guidance and BLM direction. A Final Determination Document will be prepared in concert with the NEPA analysis and associated decision(s). Pursuant to 43 CFR 4180.2(c), the Authorized Officer shall take appropriate action as soon as practicable, but not later than the start of the next grazing year upon determining that existing grazing management practices or levels of grazing use on public lands are significant factors in failing to achieve the standards. Any grazing decisions, however, are subject to protest and appeal.

If current grazing management or levels of use do not appear to be a significant causal factor, changes or activities in other program areas or activities that appear to be significant causal factors may or may not be undertaken through a NEPA process, dependent on program and office priorities. However, a Final Determination Document will be prepared to document and outline the significant causal factors.

Involvement of Permittees, State Agencies and Interested Publics

The following parties were solicited by mail to see if they had interest in the 2009 Rangeland Health Assessments for the BLM – Butte Field Office: MT Fish, Wildlife, and Parks, Western Watersheds Project, Beaverhead-Deerlodge National Forest, Helena National Forest, Gallatin National Forest, MT Department of Natural Resources and Conservation and the allotment grazing permittee.

The grazing permittee accompanied the interdisciplinary team to 1 pasture of this allotment, and contributed in the discussion and the upland determination on this site.

The Forest Service employee responsible for range management on adjacent national forest lands accompanied the interdisciplinary team on allotment evaluations on 5-13-09. He contributed to the upland and riparian evaluations on this date.

The United States Forest Service (USFS) has supplied streamreach measurement information for the following streams:

1. Bigfoot Creek (on USFS managed lands).
2. Beaver Creek (on USFS managed lands). This stream is a tributary of State Creek.
3. State Creek (on USFS and BLM managed lands). This includes less than 1/4 mile of the stream on BLM managed lands.

BLM Staff Participants

The following BLM staff participated in the preparation of this report:

Assessment Team Member	Title	Signature	Date
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