

Land Health Evaluation Report
Gneiting Allotment
Bureau of Land Management
Butte Field Office

Introduction and Assessment Process

This report documents whether land health standards were achieved for the Gneiting 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: Gneiting # 20319
Current Management Category: I (Improve)
Location: T2S, R9W, Sections 1, 2, 12; Silver Bow County
Public Acres: 994 acres.
Season of Use: 6/15 to 9/15
Public Animal Unit Months: 120
Assessment Date: June 29, 2009

The Gneiting Allotment is located about 30 miles southwest of Butte, MT, about 9 miles northwest of Divide, MT and approximately 32 miles north of Dillon, MT. The allotment is divided into 3 pasture areas; there are no interior pasture division fences. Livestock are rotated through the allotment by turning on and off different water sources. This allotment and associated private lands are grazed annually with 35 c/c pairs from 06/15 to 09/15 on a deferred basis on the 3 pastures. In 1993 livestock numbers were reduced from 40 c/c pairs to 35 c/c pairs and a portion of Soap Gulch Creek that was being negatively impacted by cattle grazing was fenced off from the allotment. About 100 to 107 AUMs are used each year with 35 c/c pairs.

Major soil map units are:

168E – Sebud-Sieben complex, 8 to 30 percent slopes, stony. Mean annual precipitation: 14 to 16 inches. Frost-free period: 65 to 90 days.

739E – Maurice-Surdal-Mawspring complex, 12 to 35 percent slopes. Mean annual precipitation: 13 to 19 inches. Frost-free period: 50 to 70 days.

803E – Sieben very cobbly loam, 12 to 30 percent slopes, stony. Mean annual precipitation: 11 to 13 inches. Frost-free period: 70 to 90 days.

The Butte Airport weather station reports 12.86 inches of precipitation on average, and an average daily temperature of 39.5 degrees Fahrenheit. The Dillon weather station at Western Montana College reports 11.67 inches of precipitation on average, and an average daily temperature of 44.1 degrees Fahrenheit. The Divide weather station reports 12.19 inches of precipitation on average, and an average daily temperature of 40.9 degrees Fahrenheit.

| 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 |
| Gneiting | 20319 | Yes | Yes | No | 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 allotment contains four dominate vegetation types: a woody riparian /herbaceous type, a sagebrush /blue bunch wheatgrass type, an Idaho fescue/blue bunch wheatgrass type located at the highest elevations of the allotment, and curl leaf mountain mahogany sites.

Two sites were evaluated for rangeland health on the allotment – one site in the sagebrush /blue bunch wheatgrass type and one site on the Idaho fescue/blue bunch wheatgrass vegetation type. Livestock only use these 2 vegetation type areas on the allotment. The curl leaf mountain mahogany area is too steep for livestock grazing and the woody riparian /herbaceous type area has been fenced from the allotment. Overall, the trend studies on the allotment have showed a static to slightly upward trend on the uplands.

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.

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 T2S, R9W, Sec. 2: SE1/4SE1/4. The soil type for this site is Sebud-Sieben complex, 8 to 30 percent slopes, stony (168E). This site was determined to be a silty droughty 10-14” 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 T2S, R9W, Sec. 1: SE1/4NW1/4. The soil type for this site is Maurice-Surdal-Mawspring complex, 12 to 35 percent slopes, stony (739E). This site was determined to be a silty droughty 15-19" precipitation zone ecological site. The assessment showed 15 of 17 indicators rated none to slight from departure. The Litter amount and Annual production indicators were rated as slight to moderate based on information from the Technical Range Site Description for this ecological site. This is a rocky and harsh site and does not appear capable of the annual production amount shown in the Technical Range Site Description. This ecological site has not been updated for the Silver Bow County Soil Survey. The only known information, to address these indicators, is from the Natural Resource Conservation Service's (NRCS) Technical Guide of 1981.

Overall, the uplands are in Proper Functioning Condition.

Western Montana Standard #2

"Riparian and Wetland Areas are in Proper Functioning Condition"

Finding Standard is met.

Rationale

The creek in this allotment has been compromised by historic mining. The creek bottom had been blown up and mined. The creek has been down cut approximately 10 feet in some locations on the allotment. In the late 1980s or early 1990s 2 gully plugs were placed by the BLM in Soap Gulch Creek in the Gneiting Allotment to attempt to trap soil flowing down the drainage and start to build the creek elevation up. These gully plugs have collected sediment that corresponds to their grade. It has been discussed that more gully plugs be installed in this allotment in Soap Gulch Creek. Following mining of the stream, livestock were walking up these down cut areas of the stream and over utilizing the vegetation in this narrow stream bottom. The Allotment Management Plan (AMP) written in 1993 identified this livestock problem, and an enclosure which fenced the riparian bottom away from livestock grazing was built. The riparian reach, SB-24, in the allotment rated as Functioning at Risk (F@R) in 1993. This reach was rated as Proper Functioning Condition (PFC) in 2009. The riparian trend study on this allotment is showing an upward trend from readings in 1991 to readings in 2008.

Western Montana Standard #3:

"Water Quality Meets State Standards."

Finding Standard is not 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 reviewed for Silver Bow County and Soap Gulch Creek is included on this list. Based on the data provided by the State of Montana Soap Gulch Creek supports agriculture, drinking water, industrial and recreation beneficial uses and partially supports aquatic life and cold water fishery uses.

Probable causes of this listing were alteration of riparian vegetation, an increase in phosphorus and sedimentation/siltation. Probable sources noted in the 303d report are grazing in riparian zones, unpaved road and trail work and irrigation of cropland.

Based on the above evaluation and DEQ determinations, the water quality standard is not met on 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.

The allotment provides habitat necessary to maintain a diverse population of native plant and animal species including special status species. Vegetation and observed wildlife and their habitat were all in a healthy condition on the allotment. Noxious weeds are rare or absent. The vegetative composition and reproductive capability are healthy throughout the allotment. A variety of successional stages and age classes of plant communities are represented across the landscape.

The Gneiting Allotment and adjacent area is dominated by grassland and sagebrush that provide important habitat for grassland species and sagebrush obligates including species such as sage grouse and sage thrasher. Other BLM sensitive species found in these habitat types include: long-billed curlew, brewer's sparrow, Swainson's hawk, and golden eagle.

BLM lands in the allotment and surrounding area provide critical elk and mule deer winter range as well as calving habitat. The allotment is within the transition zone between grassland/shrubland and forested habitats and provides essential habitat requirements for big game including year round habitat for bighorn sheep. Bighorn sheep moving between the Highlands and the Pioneer and Fleecer Mountains also use the area in and adjacent to the allotment.

The allotment and adjacent federal lands provide a wildlife movement corridor from the Highland Mountains to the Pintler/Pioneer Mountains. This corridor also provides for local daily movements and seasonal movements between higher elevation summer range along the Continental Divide and lower elevation winter range.

Preliminary Identification of Causal Factors and Recommendations

Based on the field review and documentation search, it appears the following factors may be contributing to land health standards not being achieved:

- The Water Quality Standard is not met on Soap Gulch Creek. There is no authorized livestock grazing of the riparian area on this allotment. No excess sediment is produced from water running off this allotment. Current grazing management of the Gneiting Allotment or nearby road grading does not appear to contribute to Soap Gulch Creek's listing.
- This water source provides irrigation on private property. This would affect Soap Gulch Creek on lands at lower elevations than the Gneiting Allotment.
- Historic mining operations may also have affected the Water Quality Standard on Soap Gulch Creek. Gully plugs were constructed in this drainage to build banks and limit sedimentation in the stream.

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:

- Limiting irrigation use on private property located downstream from this allotment. This action is not within BLM control.
- Constructing additional gully plugs in the down cut, historical mining areas on the allotment.

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 lessee.

The Gneiting Allotment grazing permittee participated in the rangeland health assessment through telephone discussions.

The United States Forest Service (USFS) was contacted to determine if they have any watershed or stream survey information on Soap Gulch Creek. They had no watershed information on Soap Gulch Creek.

BLM Staff Participants

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

| Assessment Team Member | Title | Signature | Date |
|-------------------------------|--|------------------|-------------|
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| | | | |

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