

Land Health Evaluation Report

Dickie Allotment
Bureau of Land Management
Butte Field Office

Introduction and Assessment Process

This report documents whether land health standards were achieved for the Dickie 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 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:	Dickie Allotment # 20352
Current Management Category:	Unavailable for Grazing
Location:	T. 1 N., R. 12 W., Sec. 24
Public Acres:	168
Season of Use:	Unleased
Public Animal Unit Months:	Unavailable
Assessment Date/Period:	August 8, 2011

The Dickie Allotment is unavailable for grazing (BFO RMP, 2009), because the majority of the allotment has been determined to be unsuitable for livestock grazing. The allotment has 125 acres that is unsuitable for livestock grazing due to steep slopes and dense timber, and 43 acres as suitable. Historically, the allotment has received very little grazing by domestic livestock. An adjacent landowner's horses grazed a small portion of this allotment in the 1980s in trespass. This unauthorized use was eliminated when the livestock owner constructed a fence to keep the horses on his property. The allotment is divided into two, one portion located north of Alder Creek and the other located south of Alder Creek.

In August of 2007, a defensible fuels break line was constructed in response to the Pattengail Wildfire. Trees were harvested on the portion of the allotment located south of Alder Creek in an effort to create a buffer for homes located between Highway 43 and this contingency line. The buffer was meant to provide increased firefighter and public safety in the event that the Pattengail Wildfire reached that area. Some of the timbered areas in this allotment have been infested with Mountain Pine Beetle. This has caused timber mortality in these areas.

Ten different soil map units compose the Dickie Allotment. The ID Team chose to perform the assessment within the Rubick gravelly sandy loam, 8 to 30 percent slopes (913E) map unit. A verification pit was dug at a toeslope position of a mountainside to determine the ecological site. The soil matched the Rubick component, correlating to a Douglas Fir/pinegrass forest habitat type. Rubick is a common soil type found across the allotment. The allotment is dominantly located on mountain sides. Soils are dominantly deep colluvium derived from argillite. The setting and parent material combine to produce soils that are dominantly deep, except on ridges adjacent to rock outcrop, with substantial rock fragment content. Soils found under Douglas Fir, dominantly on north aspects, tend to classify as Loamy-skeletal Ustic Eutrocypts. Soils on south aspects tend to be more grass dominated, and more developed, expressed with a surface layer higher in organic matter, and classifying as Loamy-skeletal Ustic Haplocryolls. Hydric soils are predominantly found on adjacent private land in the valley bottom, however approximately 4.5 acres were mapped onto BLM, split relatively evenly into thirds and occupy toe slope positions.

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
Dickie	20352	No	N/A	N/A	Yes	No

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 not met.

Rationale

The Interdisciplinary Team (IDT) found that the Dickie allotment was not meeting the upland standard due to the increased number of trees. This made the forest stand susceptible to fire and insect outbreak. The lower portion was historically comprised of open groups of large diameter trees. The soil and site stability rating along with the hydrologic function attributes were rated as a none to slight departure from expected. The biotic integrity was rated as a slight to moderate departure from the increased number of trees and the IDT agreed that the departure was significant enough to no longer meet the upland standard.

One forested stand was examined just off of the access road in section 24. This examination site was at the base of a stabilized, forested, scree slope and was within a few hundred feet of the road. Recent disturbance activities included selective cutting and evidence of pile burning activities. The habitat type is Douglas fir-pinegrass, with Douglas fir as the dominant species and lodgepole pine represented as a seral component. Fire has been excluded from this site long enough to allow numerous small diameter trees to establish and persist in between groups of much larger diameter old residual trees. Many former gaps between groups of older trees are now in-filled and the trees persisting in these locations appear stagnant (characterized by flattened crowns, low live crown ratio, defoliation, etc.). Historic stand structure consisted of small groups of trees interspersed with openings in a patch dynamic. No vigorous young regeneration was present on the site examined by the Team. Defoliation attributed to western spruce bud worm was observed at a significant level as well as mountain pine beetle induced

mortality on a few lodgepole pines.

Pinegrass is present and forming areas of continuous cover in the understory; however these areas are patchy in nature and broken up by areas characterized d by thick duff and litter cover but no vegetation. Very few shrubs were observed, those seen were small, spindly and barely alive.

The current stand conditions are outside of those expected to typically develop under a mid-severity fire regime. Crowded stand conditions have increased competition for resources (soil nutrients, water, and light), decreased vigor, and therefore increased the likelihood of insect activity and severe fire events.

Western Montana Standard #2
“Riparian and Wetland Areas are in Proper Functioning Condition”

Finding Not Applicable.

Rationale

No surface water is present on the allotment.

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

Finding Not Applicable.

Rationale

No surface water is present on the 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 not 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.

Wildlife

The Dickie Allotment is within the Pioneer Mountains linkage area identified by American Wildlands. This linkage area provides year-long core habitat for wolverine, fisher, mountain lion, wolves, and black bear. Elk, mule deer, and moose are also present on seasonal ranges throughout the year, with movements dependent on location, forage availability, and winter snow.

Increasing human presence in the Pioneer Mountains linkage area during the summer may be displacing or diverting some wildlife use. Snowmobile use along the Pioneer Scenic Byway and in the West Pioneers may conflict with wolverines and fisher security. Increasing tree mortality in Douglas-fir and lodgepole forest is reducing wildlife cover and security habitat, as well as representing a significant wild fire hazard.

Existing stands of lodgepole pine mixed with Douglas-fir provide limited habitat for those wildlife and avian species that prefer closed canopy, dense forest or forest generalists on roughly 140 acres in the Dickie Allotment. This small allotment also provides limited habitat for those species that use sagebrush habitats or the edge of forest and sagebrush/grassland openings (roughly 20 acres).

Wildlife species and/or their habitats found in the allotment include, but are not limited to

elk, mule deer, moose, red fox, black bear, coyote, bobcat, mountain lion, pine marten and other weasel species, porcupine, badger, red squirrel, flying squirrel, mountain cottontail, snowshoe hare, ground squirrels and other small mammals.

Avian species known or suspected to use the allotment include hairy, downy, pileated and three-toed woodpeckers, brown creeper, grouse, northern flicker, mountain chickadee, red-breasted nuthatch, chipping sparrow, gray jay, Clark's nutcracker, common raven, dark-eyed junco, pine siskin, mountain bluebird, Townsend's solitaire, western tanager, yellow-rumped warbler, Cooper's and sharp-shinned hawks, great-horned, northern saw-whet, and northern pygmy owls, Cassin's finch, red crossbill, red-naped sapsucker, ruby-crowned and golden-crowned kinglets, hermit thrush, and vesper and savannah sparrows.

Although the allotment is identified as year-round habitat for elk and mule deer, and some use does occur from winter through spring, the size of the allotment may limit the amount of use occurring. As with elk and deer, moose can be found anywhere in the allotment but due to the size of the allotment, use is expected to be limited.

Limited habitat for BLM sensitive species (boreal toad, northern goshawk, Brewer's sparrow, and grey wolf) may also be found in the allotment.

The allotment provides roughly 140 acres of habitat for two species listed under the Endangered Species Act, Canada lynx and grizzly bear. Although suitable denning and travel habitat for lynx is found in the area, very limited foraging habitat is provided. Although the allotment is not within a designated recovery or distribution zone for grizzly bear, it does provide habitat and movement corridors for this species.

Wildlife habitat is dominated by lodgepole mixed with Douglas-fir. Recent mortality for the mountain pine beetle has resulted in high mortality of lodgepole pine in the allotment. Along the access road, firewood cutters and past management activities have thinned the forest along the road corridor. Development adjacent to the allotment creates disturbance that may prevent some species from using the area. In addition, conifer colonization is reducing the amount and quality of sagebrush, grass and forbs on roughly 20 acres in the allotment.

Although the allotment does provide habitat for a variety of wildlife species, poor forest conditions, conifer colonization of sagebrush, adjacent development and disturbance, and the small size of the allotment result in an allotment that is not providing habitat to maintain a viable and diverse population of native wildlife species, including special status species.

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:

- Tree mortality and forest density

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:

- Vegetation treatments including, but not limited to prescribed fire, thinning, mastication

How This Information Will Be Used

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 management or levels of use are a significant causal factor in not meeting rangeland health standards on the allotment. If current 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 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).

If current 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 groups/individuals were notified of the Dickie Allotment Assessment through public scoping notices:

Western Watersheds Project

Beaverhead-Deerlodge National Forest
Butte and Whitehall Ranger Districts

Montana Fish, Wildlife, and Parks

BLM Staff Participants

The following BLM staff participated in the preparation of this report

Assessment Team Member	Title	Signature	Date
Roger Olsen	Rangeland Management Specialist		
Sarah LaMarr	Wildlife Biologist		
MaryLou Zimmerman	Forester		
Corey Meier	Soil, Water, Air Lead (Soils Scientist)		
Charles Tuss	Fuels Specialist		

Review	Title	Signature	Date
Tanya Thrift	Assistant Field Manager, Renewable Resources		
Scott Haight	Butte Field Manager		