

Land Health Evaluation Report
Copp-Jackson Allotment
Bureau of Land Management
Butte Field Office

Introduction and Assessment Process

This report documents whether land health standards were achieved for the Copp-Jackson 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: Copp-Jackson # 20301
Current Management Category: I (Improve)
Location: BLM Portion: T. 1 S., R. 10 W., Secs 3, 10-15 (See attached map)
Public Acres: 2,900 BLM acres, and 1,683 USFS
Season of Use: 6/16 through 9/30
Public Animal Unit Months: 138 AUMs
Assessment Date/Period: 8/10-8/11/2010

Allotment Overview:

The Copp-Jackson Allotment is located 1.5 miles west of Divide, MT, and ~23 miles southwest of Butte, MT. The allotment is comprised of both BLM and Forest Service lands and managed under an allotment management plan (AMP) and the BLM is the lead agency for management purposes. Through the AMP, a rest-rotation grazing management system as well as several range improvement projects was developed. The Copp-Jackson Allotment has been rested for the past four grazing seasons. Since the 1990's the allotment has had several different permittees.

Topography on the BLM portion is fairly steep with heavy forest cover and Douglas fir colonization common into most of the upland meadows and riparian areas. Elevations range from 5,200 to 7,600 feet. Vegetation ranges from sagebrush grassland communities to densely forested areas limited herbaceous vegetation in the understory. Forested areas that are not as densely populated with conifers have pinegrass, forbs, snowberry, and in some areas Scouler's willows in the understory. Riparian areas support aspen, willows, several species of sedges, and riparian grasses and forbs.

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
Copp-Jackson	20301	NO	NO	YES	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

Range health was evaluated at two sites that contained representative soils, topography, were at a reasonable distance from water sources and contained representative vegetation.

The first evaluation was completed within a loamy, steep ecological site, and the second was completed on a shallow, droughty ecological site both within sagebrush-grassland habitats. All indicators on the shallow-droughty ecological site were as expected and there were no departures in soil and site stability, hydrologic function, and biotic integrity observed. All indicators on the loamy, steep ecological site were as expected with the exception of functional/structural groups, which was rated slight to moderate due to the Douglas fir that was colonizing the sagebrush-grassland meadow. Douglas-fir was listed as comprising an additional functional structural group not expected compared with the site guide. Overall the soil and site stability, hydrologic function, and biotic integrity were as expected.

In 2006, utilization transects completed in Dry Gulch Pasture indicated that rough fescue was utilized to 80% at only one transect, bluebunch wheatgrass averaged 22% utilization, and Idaho fescue averaged 44%. One Daubenmire permanent trend monitoring transect was implemented on the allotment and showed little to no change in canopy cover, composition or plant frequency from 1990 to the present.

Although at the two sites where the range evaluations were completed rated the condition as very good, overall the sagebrush-grassland openings throughout the allotment have extensive conifer expansion outside of the range of natural variability largely due to fire suppression. Conifers have become so dense in forested areas that little to no herbaceous vegetation persists in the understory. Douglas-fir has expanded and become very dense in areas that were historically dominated by herbaceous vegetation with scattered patches of older, larger diameter conifers. Many of the trees on the allotment have also been impacted by spruce budworm. Aspen stands outside of riparian areas have been heavily colonized with Douglas-fir, which is reducing the aspens ability to compete for resources and the aspen stands are becoming decadent and much reduced in size, vigor, and frequency.

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

Finding Standard is met.

Rationale

Approximately 2.5 miles of stream reaches and 3 acres of perennial springs are located on the Copp-Jackson Allotment. Sawmill Gulch was previously rated as functioning at risk (FAR), however the ID team rated the reach as proper functioning condition (PFC) during the allotment evaluation this year. A variety of riparian woody species were present throughout the length of the reach and multiple age classes of all woody species were represented. Stream channel characteristics were adequate for the amount of water in the system to dissipate energy and maintain stream stability. No excessive erosion or deposition was observed. Weeds were present particularly Canada thistle in a few large patches and the culvert near the road crossing has collapsed. The road itself was in poor condition due to mud and rutting. Even though the culvert had collapsed very little if any negative impacts to the stream were observed.

Happy Camp Springs is a series of three springs that are inside of an enclosure. One of the springs has been developed and supplies water to a trough adjacent to the enclosure. The springs were not previously rated and the ID team determined that the vegetation, hydric soils, and overall characteristics of the spring complex were PFC. Adjacent, but not hydrologically connected on the surface, is the Happy Camp Tributary reach. Other than during high flows in early spring, the reach most likely does not connect with the Big Hole River. The upper portion was rated at FAR and the bottom portion was rated PFC. The upper portion was a steep conifer stream type with banks comprised of peat that are very fragile. The streambanks have been trampled, which caused erosion in the past, to occur in higher than expected amounts. Deposition was apparent further downstream. Because the peat soils are so fragile maintaining the herbaceous riparian forbs, grasses and mosses are critical to keeping the streambank intact.

The bottom half of Happy Camp Tributary is PFC, and was able balance the amount of sediment that was being contributed from the upper reach. The vegetation, both herbaceous and woody was in good condition although browsing at fairly heavy levels still occurs. The floodplain in many areas supported seeps and bogs that had adequate water tables to support riparian vegetation. Woody recruitment of willows and aspen was apparent, although competition from conifer expansion was apparent in a few areas. Overall, the riparian areas in the allotment were predominantly PFC and the standard was met overall.

Table 1. Stream reaches and springs ratings on the Copp-Jackson Allotment.

Reach Name	Stream Type	Length (miles/size)	Previous Rating	2010 Rating
Sawmill Gulch	Perennial	1.05	FAR	PFC
Happy Camp Springs	Perennial	3 acres	NR	PFC

Happy Camp Tributary	Intermittent	1.52	PFC	PFC/FAR
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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 establishing Total Maximum Daily Loads (TMDL) of sediment and contaminants affecting water quality for beneficial uses. The Middle Big Hole River, which is located below the Copp-Jackson Allotment is listed on the State of Montana and EPA 303(d) list of impaired water bodies. TMDLs have been developed for the Big Hole River and are published in the Middle and Lower Big Hole Planning Area Total Maximum Daily Loads (TMDL) and Water Quality Improvement Plan of 2009.

The Middle Big Hole River was determined by the DEQ to be fully supporting agriculture, and industry, partially contact recreation. It does not support aquatic life, cold water fisheries and drinking water.

Sediment was noted as a primary factor negatively affecting water quality of the middle-Big Hole River, originating from historic mining, unstable banks, grazing and roads. The TMDL plan targets an overall 28% reduction in sediment loading for the watershed, which corresponds to target reductions in uplands of 23% reduction from grazing and 56% reduction from croplands. Streamside source target reductions are 36% from streamside erosion and a 30% from roads. Mining is noted as contributing excessive levels of lead and copper. No known abandoned or active mines on BLM land are contributing. No riparian reaches from the Copp-Jackson connect on an annual basis to the Big Hole River and are therefore not supplying additional sediment to the river.

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.

Fisheries

There are no fish bearing streams within the Copp-Jackson Allotment, but the Big Hole River runs along the northern boundary. The Big Hole River is a world renowned trout fishery and is one of only a few free flowing rivers left in the west. The lower Big Hole is classified as a Blue Ribbon Fishery and hosts rainbow, brown, westslope cutthroat and brook trout. Rocky Mountain whitefish, burbot, longnose dace, longnose suckers, mottled sculpin and white sucker are also present. The river is refuge for the last wild population of fluvial arctic grayling, a trout species now limited to the Big Hole River in the lower 48 states. Arctic grayling (BLM sensitive species) are found in the Big Hole River immediately adjacent to the allotment, although they are rarely found in this section of the Big Hole River.

Wildlife

The Copp-Jackson Allotment is within the Dewey linkage area identified by American Wildlands. The Dewey linkage allows north-south wildlife movement between the Mount Haggin-Fleecer Mountain area into the Pioneer Mountains and east- west movement between the Divide area and Highland Mountains and the Upper Big Hole River Valley.

Existing stands of dense Douglas-fir mixed with lodgepole pine currently provide habitat for those wildlife and avian species that prefer closed canopy, dense forest or forest generalists. The allotment also provides habitat for those species that use sagebrush habitats or the edge of forest and sagebrush/grassland openings. Numerous wildlife species and/or their habitats can be found in the allotment including but not limited to elk, mule deer, moose, bighorn sheep, red fox, black bear, coyote, bobcat, mountain lion, pine marten and other weasel species, porcupine, badger, red squirrel, flying squirrel, mountain cottontail, snowshoe hare, white-tailed jackrabbit, 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 some elk reside in the allotment year-round, most of the use occurs from winter through spring and the allotment provides critical elk winter range. The allotment also provides mule deer winter range as well as calving habitat for both elk and deer. Although not commonly seen in the allotment, bighorn sheep are known to occur in the area. Moose can be found anywhere in the allotment, but use is concentrated within riparian habitats, especially Sawmill Gulch.

Habitat dominated by sagebrush provides important habitat for sagebrush obligates including BLM sensitive species such as sage grouse and sage thrasher. Other sensitive species known or suspected to occur in the allotment include boreal toad, wolverine, northern goshawk, great gray owl, Brewer's sparrow, fisher, golden eagle, and grey wolf.

The allotment provides 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. Lynx were observed in the allotment during the 1980s but no recent sightings have been identified. 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 in the allotment has been impacted by both anthropogenic and natural events. Fire suppression and change in fire frequency has changed open forest "savannah" habitat with upland aspen and Scouler's willow to dense thickets of Douglas-fir. Both upland and riparian aspen have significantly declined throughout the allotment and upland willow has nearly been lost due to shading by conifers. Forest insects are causing damage to all size classes of trees. Spruce budworm is reducing the health of Douglas-fir while epidemic levels of mountain pine beetle have killed nearly all

lodgepole pine in the allotment.

Conifer colonization is reducing the amount and quality of sagebrush, grass and forbs in the allotment. Although weed infestations are low compared to other areas in the field office, weeds are still having a negative, although negligible, impact on wildlife habitat in the allotment.

Although the allotment does provide habitat for a variety of wildlife species, poor forest conditions, conifer colonization of sagebrush and loss of aspen and upland willow has resulted in a loss of productive and diverse habitats. Therefore, the allotment is not providing habitat to maintain a viable and diverse population of native wildlife species, including special status species.

To restore and improve habitat conditions in the area, including the Copp-Jackson Allotment, the Wise River Forest Health and Habitat Restoration Project is currently removing conifer colonization in sagebrush habitats and will thin and/or burn forest stands to increase overstory and understory vegetation diversity. Although the allotment is currently not providing a diversity of productive habitats, the Wise River Project should move the allotment towards meeting Standard #5.

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:

- Fire suppression
- Spruce budworm

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:

- The Copp-Jackson Allotment lies within the Wise River Habitat Restoration Project, and has already begun to be implemented. The focus is on conifer thinning and projects to improve aspen recruitment and upland health. Continuing to implement the treatments in the Wise River project area on the Copp-Jackson Allotment will allow the allotment to make progress towards meeting the Upland Standard 1 and improve wildlife habitat for Standard 5.

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 groups/individuals were notified of the Copp-Jackson Allotment Assessment:

Permittee authorized to graze the allotment

Western Watersheds Project

Beaverhead-Deerlodge National Forest
Wise River Ranger District

Montana Fish, Wildlife, and Parks
Butte Resource Office

BLM Staff Participants

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

Assessment Team Member	Title	Signature	Date
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