

## Standards for Rangeland Health and Guidelines for Livestock Grazing Management (RHM, 1997)

### Introduction

The Range Reform Technical Report of Decision (RHM, 1996) recently updated current grazing administration and management practices. The RHM required the region-specific standards and guidelines to be developed and approved by the Secretary of the Interior. In the State of Oregon, several Rangeland Advisory Committees (RACs) were established as part of the rule-making process for the RHM. Oregon RACs were established in 1997 and 1998. These standards and guidelines for Oregon and Washington were finalized on August 14, 1997 and October 1, 1998.

## **STANDARDS FOR RANGELAND HEALTH ASSESSMENT** **RAHILLY-GRAVELLY #0212**

### Standard 1 - Upland Watershed Function

Upland soils control infiltration and permeability rates, nutrient storage, and stability that are appropriate to soil, substrate, and conditions.

### Standard 2 - Riparian/Wetland Watershed Function

Riparian-wetland areas are in properly functioning physical condition appropriate to soil, climate, and conditions.

### Standard 3 - Ecological Function

Healthy, productive, and diverse plant and animal populations and communities appropriate to climate, and landscapes are supported by ecological processes of nutrient cycling, energy flow, and water cycle.

### Standard 4 - Water Quality

Surface and groundwater quality, influenced by upland, riparian, and wetland conditions, is maintained.

### Standard 5 - Native, Rare, and Locally Important Species

Native, rare, and locally important species and populations are maintained and enhanced. Special status species and species of local importance are maintained.

## RAHILLY-GRAVELLY #0212

### Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM, 1997)

#### Introduction

The Range Reform '94 Record of Decision (BLM, 1995a) recently amended current grazing administration and management practices. The ROD required that region-specific standards and guidelines be developed and approved by the Secretary of the Interior. In the State of Oregon, several Resource Advisory Councils (RACs) were established to develop these regional standards and guidelines. The RAC established for the part of the state covering the Rahilly-Gravelly Allotment is the Southeastern Oregon RAC. These standards and guidelines for Oregon and Washington were finalized on August 12, 1997 and include:

#### Standard 1 - Upland Watershed Function

Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and landform.

#### Standard 2 - Riparian/Wetland Watershed Function

Riparian-wetland areas are in properly functioning physical condition appropriate to soil, climate, and landform.

#### Standard 3 - Ecological Processes

Healthy, productive, and diverse plant and animal populations and communities appropriate to soil, climate, and landform are supported by ecological processes of nutrient cycling, energy flow, and the hydrologic cycle.

#### Standard 4 - Water Quality

Surface water and groundwater quality, influenced by agency actions, complies with State water quality standards.

#### Standard 5 - Native, T&E, and Locally Important Species

Habitats support healthy, productive, and diverse populations and communities of native plants and animals (including special status species and species of local importance) appropriate to soil, climate, and landform.

## STANDARD 1 - UPLAND WATERSHED CONDITION:

Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and landform.

This standard is being met on the allotment. The indicators used to evaluate this standard are Soil Surface Factor (SSF), which documents accelerated erosion; plant community composition, which indicates root occupancy of the soil profile, and trend.

### Soil Surface Factor & Erosion

Soil Surface Factor (SSF) is a method of documenting observations regarding erosion. Of the 22,979 acres in the Rahilly-Gravelly Allotment, 215 acres (1%) have stable erosion conditions, 19,973 acres (87%) are rated as slight, 1,037 acres are moderate, and the condition of the remaining 1,754 (8%) acres is unknown\*. The total acreage that is depicted above does not include the Pederson pasture (2,876 acres) or portions of the Coleman Lake pasture. Because these areas drain into Coleman Lake and do not effect Warner suckers or Warner sucker habitat, they were not analyzed in the Biological Evaluation of Livestock Grazing (1/20/95).

### Plant Community

Another indicator of upland watershed condition is plant composition and community structure. The major vegetation types in this allotment and their approximate percentages occupying the allotment are shown below:

Small sagebrush, with an understory of Sandbergs bluegrass or Idaho fescue	45%
Small sagebrush with a cheatgrass understory	10%
Big sagebrush, with a bunchgrass understory and a western juniper overstory	2%
Big sagebrush-dominated sites with a bunchgrass understory	15%
Big sagebrush with no significant understory	10%
and lakebeds and other low areas	2%

Common plants found within the allotment include bottlebrush squirreltail, Thurber's needlegrass, bluebunch wheatgrass and a variety of annual and perennial forbs. By comparing the percentages of the different communities, it is apparent that over half of the allotment is at a mid- to late seral stage.

### Trend

The Observed Apparent Trend determined during the ESI and summarized in the Biological Evaluation (1995), indicated an upward trend on 528 acres (2%), static trend on 19,840 acres (86%), and 1,754 acres (8%) of the allotment are unknown\*. The Rahilly-Gravelly Allotment Study File includes photo trend stations that were monitored in 1989, 1995, and 1998 on a consistent basis, with results showing a static trend on half of the sites and an upward trend on the other half. The step-toe transects depict an upward trend in the amount of vegetation present versus bare ground.

\*The unknown acres are the inclusions within a vegetation community that include transition areas and plant communities too small to be mapped separately.

## STANDARD 2 - RIPARIAN/WETLAND

Riparian-wetland areas are in properly functioning physical condition appropriate to soil, climate, and landform.

### Wetland (Lentic)

Allot #/ Area	PALUSTRINE (acres)	LACUSTRINE (acres)	TOTAL WETLAND (acres)	PFC* (acres)	Functional At Risk (acres)	Non-Functional (acres)
0212	208	1,575	1,783	1,656	0	127

\*Proper Functioning Condition

In the Rahilly-Gravelly Allotment (#0212) there are 127 acres of nonfunctional wetlands, which are located at May Lake (shown as Squaw Lake on attached map). This condition appears to be the result of the lakebed pits piercing the clay seal of the playa. At the time of the inventory, the lake had already dropped more than two feet, while other playas in the vicinity with smaller watersheds had not lost any lake level. It appears that the clay seal in the playa is very thin (a lot of rock fragments and cobbles all over the playa) and that the lakebed pit is draining most, if not all of the water from the lake. Livestock grazing is not the cause of the nonfunctional wetland area, and it is not apparent that it is a contributing factor presently. This standard is being met for the wetland communities in the allotment.

### Riparian (Lotic)

This standard is not being met because two reaches on Horse Creek were rated as non-PFC. Lotic PFC site inventories were completed in 1996 on Horse Creek and the Horse Creek Tributary. The following table summarizes the non-PFC reach locations and their management status.

STREAM	REACH	PFC RATING**	MANAGEMENT
Horse	Middle	FAR* Trend up	Riparian Pasture with use limits and rest
Horse	Upper	FAR* Trend up	Riparian Pasture with use limits and rest

\*\*PFC = Proper Functioning Condition

\* FAR = Functional At Risk

The Horse Creek reaches have not been grazed since 1993 although it has been licensed for use. The FAR ratings were reached based on the unstable banks on the middle reach and lack of vegetation on the upper reach. The Horse Creek reaches are being managed under consultation with the U.S. Fish and Wildlife Service (USFWS) for the effects of grazing on the Threatened Warner Sucker. While the existing conditions are largely a result of past grazing practices, current management of livestock is resulting in significant progress towards meeting the standard, and is not a significant factor in not meeting the standard.

### **STANDARD 3 - ECOLOGICAL PROCESSES**

**Healthy, productive, and diverse plant and animal populations and communities appropriate to soil, climate, and landform are supported by ecological processes of nutrient cycling, energy flow, and the hydrologic cycle.**

This standard is being met, according to the trend, soil stability, the plant and animal communities, as well as the monitoring shown in the Rahilly-Gravelly Allotment Study File.

The Rahilly-Gravelly Allotment (0212) supports most of the terrestrial animals common to the sagebrush steppe in the Great Basin. The allotment provides habitat for huntable populations of mule deer, pronghorn antelope, Rocky Mountain elk, and sage grouse. The 111 AUM's allocated to wildlife are adequate to support the current wildlife populations. There is currently no major competition between wildlife and domestic livestock for forage, either early green-up grasses and forbs, or winter browse such as antelope bitterbrush and curl-leaf mountain mahogany.

The allotment lies within ODFW's Warner Big Game Management Unit for deer, pronghorn antelope, and elk. Current populations are slightly below management objectives for mule deer and substantially below that proposed for elk. The entire allotment contains yearlong habitat for mule deer, and portions of the allotment are used by elk throughout the entire year. The allotment also contains year-round habitat for pronghorn antelope and sage grouse; however, no crucial habitat has been identified for either species.

### **STANDARD 4 - WATER QUALITY**

**Surface water and groundwater quality, influenced by agency actions, complies with State water quality standards.**

This standard is not being met. Horse Creek does not meet state standards for temperature. The stream is not listed as water quality limited because the state has yet to receive data collected from the Lakeview Resource Area in the 1997 and 1998 seasons, but at the next update cycle, the data will result in the listing of the stream. The Cedarville Resource Area has monitored temperature at the upper end of this allotment and found it to be above the standard in 1996 and 1997. Due to better grazing management, less use in the riparian areas, and possibly a reduction in actual use from 1994 (11% of the active preference) through 1997 (61% of the active preference), there is improvement in the riparian conditions. Under this current management, livestock grazing is not a significant factor in not meeting the standard. With continued improvement in the riparian areas, water quality should also improve, but it will be a slow process.

### **STANDARD 5 - NATIVE, T&E, and LOCALLY IMPORTANT SPECIES**

**Habitats support healthy, productive, and diverse populations and communities of native plants and animals (including special status species and species of local importance) appropriate to soil, climate, and landform.**

This standard is being met. The diversity of the wildlife and plant species is an indication of health and

productivity found in the different habitats within the allotment. However, the status of this standard will depend on future management, in order to correct the adverse effects of past livestock grazing.

#### **Wildlife/Biological Diversity**

Big game habitat within the Rahilly-Gravelly Allotment is monitored via 2 browse (bitterbrush) transects. The condition of the bitterbrush stands within the allotment demonstrates what years of fire suppression, previous livestock grazing practices, and high deer numbers in the past does to mule deer winter range. There are numerous decadent or dead bitterbrush plants within the allotment which are still providing valuable forage and cover for deer. However, recruitment of young plants is relatively low. Overall the studies show some improvement in bitterbrush vigor and stand replacement over the past 10-15 years.

The habitat provided within the allotment is crucial to wintering deer, in that it adjoins with winter range on the forest to the west and to BLM-administered winter range to the north and south. It provides habitat connectivity, as well as a spatial distribution of lower elevation range that is critical during high snowfall years.

The deer, elk, and pronghorn populations are healthy and increasing in number within the allotment - habitat quantity and quality do not appear to be limiting population size or health. Coyote predation is thought to be depressing mule deer recruitment; however, populations continue to fluctuate at, or slightly below, ODFW's Management Objective for the unit. A general hunt season is slowing the population expansion of elk within the unit. However, if ODFW is unable to limit future expansion to the proposed Management Objective for the area, competition with domestic livestock may occur, and depredation on private lands may become an issue.

The allotment also provides habitat for numerous small, nongame birds and mammals common to the Great Basin, as well as sage grouse habitat. There are seven known sage grouse leks found within the allotment. Sage grouse populations, like the rest of southeastern Oregon, are stable to declining. The allotment also provides habitat for raptors and some BLM and state sensitive wildlife species and federally listed species. No critical habitat or limitations have been identified for any of these species, which include wintering bald eagles, and possibly pygmy rabbits and various sensitive bat species.

The Warner sucker is listed as a Threatened Species under the Endangered Species Act. There is no occupied habitat in the allotment. Because Horse Creek flows into occupied habitat less than a mile below the grazed pasture, it was determined in Section 7 consultation that grazing was having an adverse effect on suckers. This effect has been minimized by restrictions placed on riparian grazing, and the Service issuing a Biological Opinion to authorize take of the species. Warner red-band trout, a Bureau Sensitive Species, is found in the lower reach of Horse Creek below the allotment.

The Foscett speckled dace is listed as a Threatened Species under the Endangered Species Act. There is occupied habitat within the allotment in two springs in the Coleman Pasture. Grazing has been excluded from both springs so it is no longer a factor in the listing of the species.

## Botanical/Biological Diversity

### Special Status Plants:

Copper's Goldflower (*Hymenoxys cooperi* var. *canescens*)

Status: BLM Bureau Sensitive Species, List 2: taxa which are threatened or endangered in Oregon, but are more common or stable elsewhere.

### Current Situation:

Only four populations of Cooper's Goldflower are presently known to occur on the Lakeview District; all are within the Rahilly-Gravelly Allotment. This variety occurs at the northwestern edge of its range in Oregon. The total range for Cooper's Goldflower is southern Idaho, southward through Nevada to northwestern Arizona, and west to eastern California. The plant flowers during June in our area.

Habitat for this variety in our area includes low sagebrush and juniper-sagebrush communities. The effect of livestock grazing on this plant is unknown. No work has been done on this plant; however, in 1998, the populations were visited and were healthy.

### **Weeds**

Noxious weeds are known to occur in the allotment. Weeds are concentrated along major travel routes, riparian areas, springs, and waterholes. Yellow starthistle, a new invader, is present at one site in the Coleman Lake pasture. It is under an intensive eradication program and no other starthistle sites have been discovered. The current four-pasture deferred rest-rotation system will allow for control of the current weeds and will minimize the potential of weed populations increasing due to pressure on the native plant community during periods of cattle use.

### **Current Management and Recent Management Changes**

An Allotment Management Plan was implemented in 1978 although there is no signed copy in the Rahilly-Gravelly Allotment (0212) file. As for changes since the writing of this AMP, a fence was built in 1993, separating the Horse Creek riparian area from the remaining Rahilly pasture. The current management is under a four-pasture deferred rest-rotation grazing system, with the FRF Pederson pasture being used outside of this system.

Please see attached map for pasture locations and orientation.

Team Members

Title

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Determination:

- Existing grazing management practices or levels of grazing use on the Rahilly-Gravelly Allotment promote achievement of significant progress towards the Oregon Standards for Rangeland Health and conform with the Guidelines for Livestock Grazing Management.
- Existing grazing management practices or levels of grazing use on the Rahilly-Gravelly Allotment will require modification or change prior to the next grazing season to promote achievement of the Oregon Standards and Guidelines for Rangeland Health and conform with the Guidelines for Livestock Grazing Management.

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Date