

**STANDARDS FOR RANGELAND HEALTH ASSESSMENT FOR ROUND
MOUNTAIN ALLOTMENT #0211**

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 Beaty Butte 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.

**RANGELAND HEALTH STANDARDS - ASSESSMENT -ROUND MOUNTAIN
ALLOTMENT #0211**

STANDARD 1 - UPLAND WATERSHED

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

Soil Surface Factor (SSF) is an indicator of accelerated erosion and is a method of documenting observations regarding erosion. Of the 17,970 acres in Round Mountain Allotment, 2,119 (12%) have an SSF rating of stable and 15,403 acres (86%) are rated as Slight. These ratings indicate the two lowest levels of erosion in this methodology. The remaining 448 acres are unknown. A copy of the form used to document SSF is attached (Appendix A, "Determination of Erosion Condition Class").

Another indicator of Upland Watershed condition is plant composition and community structure. Current plant composition is compared to a defined Potential Natural Plant Community for the identified soil type and precipitation zone. Using the 1988 Ecological Site Inventory, the percent of the allotment in each seral stage is summarized in the table below. As can be seen most of the allotment is in the Mid seral (70%) or Late Seral stage (13%). Therefore the plant composition and community structure is healthy.

| Seral Stage | Percent comparability to Potential Natural Community | Percent of allotment in seral stage |
|-------------|--|-------------------------------------|
| Early | 0-25% | 1% |
| Mid | 26-50% | 70% |
| Late | 51-75% | 13% |
| Unknown* | | 16% |

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

The Observed Apparent Trend (Appendix B) determined during the ESI and summarized in the Biological Evaluation (1994) showed an upward trend on 26% of the allotment and static trend on 71% of the allotment. The Allotment Evaluation (1992) determined the trend to be static when considering the photo trend stations, the step-toe transect and the professional judgement of the resource specialists.

STANDARD 2 - RIPARIAN/WETLAND

This standard is not being met because some stream reaches are not in Proper Functioning Condition (PFC). However the current management of livestock is resulting in significant progress towards meeting the goal. Lotic Proper Functioning Condition (PFC) site inventories were completed in 1996 on Twelvemile, Fifteemile and Twentymile Creeks. The following table summarizes the non-PFC reach locations and their management status.

| STREAM | REACH | PFC RATING | MANAGEMENT |
|------------|----------------------|-------------------------------|--|
| Twelvemile | Lower | NF* | Exclusion |
| Twelvemile | Nevada | NF | Exclusion |
| Twelvemile | Nevada | FAR **Trend up | Exclusion |
| Fifteemile | Huff and watergap | FAR Trend up 1.45 miles | 3 Pasture Rest Rotation with riparian use limits |

* NF - Non-Functional **FAR - Functional at Risk

The Twelvemile Creek reaches have been excluded from authorized grazing since 1980 and have been effectively excluded from grazing since 1994. The Fifteemile reaches are being managed under consultation with the U.S. Fish and Wildlife Service on 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 goal.

STANDARD 3 - ECOLOGICAL PROCESSES

This standard is being met. The Observed Apparent Trend as described in Standard 1 is static or upward on 98% of the allotment. There is one trend study transect in the West pasture of the allotment and the data is summarized below. This trend study is in the big sagebrush/Thurber's needlegrass community in the northern part of the pasture. This is not only the largest vegetation community in the northern part of the pasture but also represents a key area that is consistly grazed by cattle. Therefore the trend data should indicate what impacts grazing is having on this important vegetation community. The data shows an increase in vegetation cover during the eight years. There also appears to be an increase in Thurber's needlegrass (STTH) and Idaho fescue (FEID), both desirable grasses. It would appear the

trend for this site is at least static (1992. Allotment Evaluation) and may be upward (1988 ESI). The photo trend stations within the allotment (7 stations) were evaluated in the 1992 Allotment Evaluation and the trend was determined to be static

The Round Mountain Allotment (0211) 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. 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.

Two-thirds of the Round Mountain Allotment lies within ODFW's Warner Big Game Management Unit and one-third lies within the Beaty Butte 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 lies within crucial mule deer winter range and portions of the allotment are used by elk throughout the entire year. The allotment also contains marginal habitat for pronghorn antelope and sage grouse and supports small numbers of each species year-round, however, no crucial habitat has been identified for either species.

STANDARD 4 - WATER QUALITY STANDARDS

This standard is not being met, but the current management of livestock is resulting in significant progress towards meeting the goal. Twentymile, Twelvemile and Fifteenmile Creeks from the mouth to the headwaters do not meet state standards for temperature. Twelvemile Creek on the BLM is excluded from grazing so livestock use is no longer a causative factor in not meeting the standard on this stream. Twentymile Creek in this allotment is either excluded from grazing and/or is intermittent so livestock use is no longer a causative factor in not meeting the standard on this stream. Because of changes to grazing to better manage riparian vegetation, it is felt that current management of livestock is resulting in significant progress towards meeting the goal.

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

This standard is being met. 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 two units.

Big game habitat within the Round Mountain Allotment is monitored via 12 browse (bitterbrush) transects. The condition of the extensive 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 wintering deer, however, recruitment of young plants varies from virtually none within some transects to fairly descent in others. 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 critical during high snowfall years.

The allotment also provides habitat for numerous small and nongame birds and mammals common to the Great Basin, as well as, sage grouse habitat though marginal. 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 currently being grazed in the allotment. Because Fifteenmile 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 issued a Biological Opinion to authorize "take" of the species. Warner red-band trout, a Bureau Sensitive Species is found in Twelvemile and Fifteenmile Creek in the allotment. Their populations appear to be strong in both creeks.

Noxious weeds are known to occur in the allotment. Weeds are concentrated along travel routes, riparian areas, and waterholes. The 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.

Special Status Plants:

Boggs Lake hedge-hyssop: (Gratiola heterosepala)

Status: BLM Bureau Sensitive Species, Oregon Natural Heritage Program List 1 (Taxa which are endangered or threatened throughout their range), Global 1 and State 1.

Current Situation:

Boggs Lake hedge-hyssop is found on a waterhole and is known to grow in only this one site in Oregon. Outside of Oregon, the species occurs in California. The habitat for the species is vernal wet ponds (natural or human made).

Additional inventories have not found Gratiola heterosepala elsewhere in Oregon. In order to evaluate livestock use at the site and its effects on the Boggs Lake hedge-hyssop, a fence was built to allow monitoring both within the fence and outside. The study site was altered by silt build-up in the pond. This problem was corrected and the study will now begin again in 1999.

Current Management and Recent Management Changes

The current management is a three pasture rest rotation system and the Allotment Management Plan has been in place since 1970 with revisions in 1973 and 1982. There was

an allotment evaluation in 1990 and no changes in the grazing allocation or the season of use were made. There was a Biological Evaluation completed in 1994 and a Biological Opinion issued by the USFWS that the proposed grazing authorizations in the North and West pastures are not likely to jeopardize the continued existence of the threatened Warner sucker or result in the destruction or adverse modification of its designated critical habitat.

Team Members

Title

| | |
|----------------|-----------------------------|
| Les Boothe | Range Management Specialist |
| Alan Munhall | Fishery Biologist |
| Vern Stofleth | Wildlife Biologist |
| Lucile Housley | Botanist |
| Walt Devaurs | Wildlife Biologist |
| Bill Cannon | Archaeologist |
| Dick Mayberry | Supervisory NRS |
| Robert Hopper | Supervisory RMS |
| Erin McConnell | Weed Management Specialist |

Determination

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

Scott R. Florence

Scott Florence
Area Manager, Lakeview Resource Area

1/14/99

Date

Appendix A.

DETERMINATION OF EROSION CONDITION CLASS
Soil Surface Factors

| | | | | | |
|----------------|--|--|--|---|--|
| SOIL MOVEMENT | No visible evidence of movement 0 1 2 3 | Some Movement of soils particles 4 5 | Moderate Movement of soil is visible and recent Slight terracing generally less than 1" in height 6 7 8 | Occurs with each event. Soil and Debris deposited against minor obstructions 9 10 11 | Subsoil exposed over much of area, may have embryonic dunes and wind scoured dunes 12 13 14 |
| SURFACE LITTER | Accumulating in place 0 1 2 3 | May show slight movement 4 5 6 | Moderate movement is apparent, deposited against obstacles 7 8 | Extreme movement apparent, large and numerous deposits against obstacles 9 10 11 | Very little remaining (use care on low productive sites) 12 13 14 |
| SURFACE ROCK | If present, the distribution of fragments show no movement caused by wind or water. 0 1 2 | If present, coarse fragments show a truncated appearance or spotty distribution caused by wind or water 3 4 5 | If present, fragments have a poorly developed distribution pattern caused by wind or water 6 7 8 | If present, surface rock or fragments exhibit some movement and accumulation of smaller fragments behind obstacles 9 10 11 | If present, surface rock or fragments or dissected by rills and gullies or are already washed away 12 13 14 |
| PEDESTALLING | No visible evidence of pedestalling 0 1 2 3 | Slight pedestalling, in flow patterns 4 5 6 | Small rock and plant pedestals occurring in flow patterns 7 8 9 | Rocks and plants on pedestals generally evident, plant roots exposed 10 11 | Most rocks and plants pedestalled and roots exposed 12 13 14 |
| FLOW PATTERNS | No visible evidence of flow patterns 0 1 2 3 | Deposition of particles may be in evidence 4 5 6 | Well defined, small, and few with intermittent deposits 7 8 9 | Flow patterns contain silt and sand deposits and alluvial fans 10 11 12 | Flow patterns are numerous and readily noticeable. May have large barren fan deposits. 13 14 15 |
| RILLS | No visible evidence of rills. 0 1 2 3 | Some rills in evidence at infrequent intervals over 10'. 4 5 6 | Rills 1/2" to 6" deep occur in exposed places at approximately 10' intervals. 7 8 9 | Rills 1/2" to 6" deep occur in exposed area at intervals of 5 to 10". 10 11 12 | May be present at 3" to 6" deep at intervals less than 5'. 13 14 15 |
| GULLIES | May be present in stable condition. Vegetation on channel bed and side slopes 0 1 2 3 | A few gullies in evidence which show little bed or slope erosion. Some vegetation present on slopes. 4 5 6 | Gullies are well developed with active erosion along less than 10% of their length. Some vegetation may be present. 7 8 9 | Gullies are numerous and well developed with active erosion along 10-50% of their lengths or a few well developed gullies with active erosion along more than 50% of their length 10 11 12 | Sharply incised gullies cover most of the area and over 50% are actively eroding. 13 14 15 |
| SITUATION | TOTAL | | | | |
| | | | | | |
| | | | | | |

Erosion Condition Classes: stable 0-20: Slight 21-40: Moderate 41-60: Critical 61-80: Severe 81-100

Appendix B.

OBSERVED APPARENT TREND

(Check appropriate box in each category which best fits area being observed)

| | | |
|---------------------------------|--|---|
| VIGOR (10 Points) | | Desirable grasses, forbs and shrubs are vigorous, showing good health. These plants should have good size, color and produce abundant herbage. |
| (6 Points) | | Desirable grasses, forbs and shrubs have moderate vigor. They are medium size with fair color and producing moderate amounts of herbage, some seed stalks and seedheads are present. |
| (2 Points) | | Desirable grasses, forbs and shrubs have low vigor. They appear unhealthy with small size and poor color. Portions of clumps or entire plants are dead or dying. Seed stalks and seedheads almost non-existent except in protected areas. |
| SEEDLINGS (10 Points) | | There is seedling establishment of desirable grasses, forbs and shrubs. Seedlings are present in open spaces between plants and along edges of soil pedestals. Few seedlings of invader or undesirable plants are present. |
| (6 Points) | | Some seedlings of desirable grasses, forbs and shrubs may or may not be present in open spaces between plants. Some seedlings of invader or undesirable plant species may or may not be present. |
| (2 Points) | | Few if any seedlings of desirable grasses, forbs and shrubs are being established. Seedlings of invaders or undesirable should be present in open space between plants. |
| SURFACE LITTER (5 Points) | | Surface litter is accumulating in place. |
| (3 Points) | | Moderate movement of surface litter is apparent and deposited against obstacles. |
| (1 Point) | | Very little surface litter is remaining. |
| PEDESTALS (5 Points) | | There is little visual evidence of pedestalling. Those pedestals are sloping or rounding and accumulating litter. Desirable forage grasses may be found along edges of pedestals. |
| (3 Points) | | Moderate plant pedestalling. No visual evidence of healing or deterioration. Small rock and plant pedestals may be occurring in flow patterns. |
| (1 Point) | | Most rocks and plants are pedestalled. Pedestals are sharpened and eroding often exposing grass roots. |
| GULLIES (5 Points) | | Gullies may be present in stable condition with moderate sloping or rounded sides. Perennials should be establishing themselves on bottom and sides of channel. |
| (3 Points) | | Gullies are well developed with small amounts of active erosion. Some vegetation may be present. |
| (1 Point) | | Sharply incised V-shaped gullies cover most of the area with most of the gullies actively eroding. Gullies are mostly devoid of perennial plants with fresh cutting of the bottom. |

TOTAL POINTS _____ Rating 26-35-Upward; 17-25-Static; 7-16-Downward

Frequency/Pace Toe Point Summary
PERCENT COVER

| YEAR | 1986 | 1989 | 1994 |
|-------------------------------|------|------|------|
| BAREGROUND | 27% | 39% | 31% |
| ROCK | 4% | 0 | 0 |
| LITTER | 58% | 35% | 39% |
| VEGETATION | 11% | 26% | 30% |
| SPECIES | | | |
| SIHY | 2% | 4% | 3% |
| STTH | 1% | 2% | 6% |
| FEID | 0 | 1% | 1% |
| POSE | 3% | 6% | 9% |
| ARTR | 2% | 4% | 4% |
| PUTR | 3% | 4% | 3% |
| RELATIVE FREQUENCY BY SPECIES | | | |
| SIHY | 33% | 28% | 21% |
| STTH | 10% | 13% | 17% |
| FEID | 2% | 1% | 6% |
| POSE | 17% | 35% | 27% |
| ARTR | 15% | 12% | 13% |
| PUTR | 12% | 7% | 6% |
| | | | |