

Standards for Rangeland Health
and
Guidelines for Livestock Grazing Management
for
Public Lands in Oregon and Washington

for the

Round Mountain Allotment #00211

December 2013

The original Round Mountain Allotment Rangeland Health Assessment was conducted in 1999. This assessment included the East, North and West Pastures. The grazing system is a rest rotation system grazing two pastures during April thru June each year and resting the third pasture. There are 1,102 AUMs of forage allocated to two permittees. Two of the pastures operate under a Biological Opinion as part of the Section 7 consultation process with the U.S. Fish and Wildlife Service related to threatened Warner Suckers.

There are 7 long term trend plots in the allotment with one in East, one in North pasture and 5 in the West pasture. The trend plot in the North pasture (RM-01) is a long term photo plot and the trend plot in East pasture (RM-02) is a long term photo plot with associated step-toe vegetation transect. The five trend plots in the West pasture include four long term photos plots (RM-03, 04, 05, 06) and one long term photo plot (RM-07) with associated step-toe vegetation transect. There is shorter term riparian study plot along fifteen mile creek in the West Pasture. Attached is a Summary of the Round Mountain Allotment data.

In the Rangeland Health Assessment in 1999, both standards 2 and 4 were not being met, but it was determined that existing grazing management practices or levels were promoting achievement of significant progress toward the Standards for Rangeland Health and conformed with the Guidelines for Livestock Grazing Management. A summary of the assessment of the Standards in 1999 and an updated assessment is shown in the Table 1.

Table 1 . Rangeland Health Assessments for Round Allotment

Standard	1999	2013	Comments
1. Watershed Function – Uplands	Met	Met	<p>The 1999 RHA found upland soils in the allotment exhibited infiltration and permeability rates, moisture storage, and stability appropriate for soil, climate, and land form. Root occupancy for the soil was appropriate. 86% of the allotment was in the Slight Erosion Condition Class, 12% was in Stable class, and the remaining acres were unknown. OAT found 26% of the allotment in upward trend, 71% static trend, and 3% unknown. Photo trend plots, step-toe transects, and professional judgment determined trend across the allotment to be static. Recent photos and transects (2000-2011) continue to show stable to increasing vegetation cover across the allotment in all pastures. In the 1999 RHA, 70% of the allotment was in mid seral and 13% was in late seral ecological condition. Based on assessing photos and transect data collected from 2000-2012, ecological condition has been stable or improving across the allotment. There is good plant vigor and cover allowing the upland soils to exhibit infiltration and permeability rates, moisture storage, and stability appropriate to soils, climate and landform.</p>
2. Watershed Function Riparian/ Wetland Areas	Not Met	Met	<p>The 1999 Rangeland Health Assessment stated that 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, Fifteenmile and Twentymile Creeks . The Twelvemile Creek reaches have been excluded from authorized grazing since 1980 and have been effectively excluded from grazing since 1994. The Fifteenmile 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.</p> <p>Site visits in 2013 and all available data generally indicate improving trends in fish habitat, stream channel, and riparian conditions throughout the allotment. Photos points established in the 1970's and 1980's that were retaken more recently show increases in native riparian vegetation, including willows, sedges and rushes, as well as stream channel narrowing and deepening, and increases in streambank stability. A rapid riparian scorecard assessment developed for the Fremont National Forest and Lakeview BLM (Riegel, unpublished) site was established on a grazed reach of Fifteenmile Creek in 2006 and re-read in 2013. The 2013 data showed the site continued to be in moderate to ecological status, with some increases in late seral species and some decreases in early seral species being noted. Juniper has been cut at the site since 2006, and its ecological condition is thought to be improving in general. Fifteenmile Creek is intermittent in the reach in question and a significant change in species composition will take place over a longer time period than seven years.</p> <p>There are approximately 266 acres of palustrine wetlands which occur within the allotment all of which are currently rated in Proper Functioning Condition.</p>
3. Ecological Processes	Met	Met	<p>The 1999 RHA concluded that the vegetation was healthy and productive with the cover and composition appropriate to soil, climate and landform for this allotment. The RHA used OAT data from the ESI (1988) and the long term monitoring plots to determine the trend of the vegetation condition across the allotment. The OAT from the 1988 ESI examined plant vigor, seedlings, litter, rills and gullies to determine that 26% of the allotment was in an upward trend and 71% had a static trend. In 1999 there were 7 long term photo plots in the allotment and one of the photo plots had an associated vegetation transect. The vegetation transect was in the West Pasture of the allotment located in the big sagebrush/Thurber's needlegrass community. This is the largest vegetation community in the northern part of the pasture and represents a key area that is consistently grazed by cattle. The data showed an increase in vegetation cover between 1986 and 1994. There also</p>

			<p>appears to be an increase in Thurber's needlegrass and Idaho fescue, both desirable grasses. The other 6 photo trend plots within the allotment were evaluated and the trend at these sites was determined to be static. Therefore the conclusion in the 1999 RHA was that the vegetation trend across the allotment is static to upward.</p> <p>In 2013, the assessment included the vegetation transect in the West Pasture (RM-07) and another vegetation transect in the East Pasture (RM-02) that began in 1986 and was read in 2000, 2005, 2008 and 2011. Assessing the vegetation transects (RM-02 and RM-07) in 2013 found that vegetation cover and composition has either been stable or slightly improved since the 1999 RHA. Assessing the photos from all 8 trend studies across the allotment in 2013 found the trend to be stable or slightly upward when comparing vegetation cover, composition and plant vigor. The only negative change was the increase in juniper size and density in trend plot RM-06 in the West Pasture.</p>
4. Water Quality	Not Met	Met	<p>In 1999 the RHA found this standard was not being met, but the current management of livestock was resulting in significant progress towards meeting the standard. Twentymile, Twelvemile and Fifteenmile Creeks from the mouth to the headwaters did not meet state standards for temperature. Currently, Twelvemile Creek on the BLM is excluded from grazing so livestock use is no longer a causative factor in not meeting the standard. Twentymile Creek is either excluded from grazing and/or is intermittent, so livestock use is no longer a causal factor in not meeting the standard. Because of past changes to grazing to better manage riparian vegetation, current livestock management continues to make significant progress toward meeting the standard.</p>
5. Native, T/E, and Locally Important Species	Met	Met	<p>In 1999 the deer and pronghorn populations were healthy and increasing in number. Habitat quantity and quality did not appear to be limiting population size or health. Coyote predation was thought to be depressing mule deer recruitment, however, populations continue to fluctuate at or slightly below ODFW's Management Objective for the big game management units. 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 at 12 browse (bitterbrush) transects. The condition of the bitterbrush stands demonstrates what fire suppression, historic livestock grazing practices, and past high deer numbers does to mule deer winter habitat. There are numerous decadent or dead bitterbrush plants within the allotment which provide valuable forage and cover for wintering deer, however, recruitment of young plants varies from virtually none within some transects to fairly decent in others. Overall there has been 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.</p> <p>In 2013, the mule deer and pronghorn antelope populations were relatively stable within this unit. Habitat quantity and quality do not appear to be limiting big game population size or health within the unit. Deer and pronghorn populations continue to fluctuate at or slightly above ODFW's population management objectives for the unit (ODFW 2012). A population of Rocky Mountain elk occurs within the Round Mountain Allotment. Population expansion within this area is limited by disease mortality currently being monitored by the ODFW.</p> <p>Current livestock grazing use (both stocking rates and grazing season) does not appear to be limiting wildlife habitat within the allotments</p> <p>The allotment provides habitat for numerous small and nongame birds and mammals common to the Great Basin, as well as, marginal sage grouse habitat. The allotment also provides habitat for raptors and BLM and state sensitive wildlife species and federally listed species. No critical habitat or limitations have been</p>

		<p>identified for any of these species which include wintering bald eagles, possibly pygmy rabbits and various sensitive bat species.</p> <p>Rangeland Health Standard 5 would continue to be met and the allotment would continue to provide adequate quality wildlife habitat that is capable of supporting an appropriate assemblage of sagebrush-dependent wildlife species.</p> <p>The Warner sucker is listed as a Threatened Species under the ESA. 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 USFWS issued a Biological Opinion to authorize incidental "take" of the species. Warner red-band trout, a Bureau Sensitive Species is found in Twelvemile and Fifteenmile Creek. Their populations appear to be strong in both creeks.</p> <p>Noxious weeds are known to occur and 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. The current rest rotation system maintains or improves the native plant community and this reduces the opportunity for the spread of noxious weeds.</p> <p>Special Status Plants: A three-acre population of <i>Gratiola heterosepala</i> (Boggs Lake hedeghyssop), a BLM sensitive plant species, occurs on the West Pasture of this allotment. The population represents the only known occurrence for this species in Oregon. Initial monitoring indicated that grazing had a detrimental effect on this species and the population was fenced to exclude cattle. The population size appears to fluctuate annually based on site hydrology. Due to the fenced enclosure, this population of <i>Gratiola heterosepala</i> is not disturbed or otherwise affected by current grazing activity.</p>
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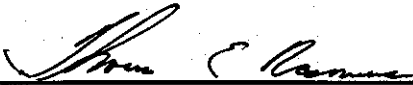
Guidelines for Livestock Management

Existing grazing management practices or levels of grazing use on the Round Mountain Allotment are consistent with the Guidelines for Livestock Grazing Management (August 12, 1997). These pastures have and continue to be grazed in a rest rotation system, and are provided complete rest every 3rd year. The rest enables the grass species to provide adequate cover for infiltration, moisture storage and maintains diverse plants communities.

2013 Determination

Existing grazing management practices of 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.



Thomas E. Rasmussen, Field Manager

12/4/13

Date

Round Mountain Allotment Monitoring Summary 2013 (see Lakeview Resource Area Monitoring Files for Raw Data):

In 2013, Round Mountain Allotment was utilized from 4/12-7/9. The Round Mountain Allotment has 1,102 Active AUMs. The average actual use from 2004-2013 is 640 AUMs and target utilization level is 50%.

Table 2. Actual Use and Utilization Round Mountain

Year	East Pasture		North Pasture		West Pasture	
	AUMs	% Utilization	AUMS	% Utilization	AUMS	% Utilization
2013	REST		267	47%	281	49%
2012	385	43%	350	40%	37	REST
2011	331	53%	REST	REST	406	40%
2010	REST	REST	525	40%	307	32%
2009	778	50%	70	36%	23	REST
2008	565	39%	REST	REST	198	37%
2007	REST	REST	108		339	40%
2006	353		36		REST	REST
2005	491	39%	REST	REST	348	
2004	REST	REST	330		369	
2003	277		94		REST	REST
2002	415	47%	REST		REST	REST
Total	3595		1513		2027	
Average	300	45%	126	41%	169	40%

Utilization in the Round Mountain Allotment have never exceeded the target utilization of 50%. The total active AUMs have never exceeded the permitted AUMS. The utilization levels have been under the target of 50%, except in the East pasture in 2011 when the level reached 53%. This is still well within the moderate utilization range.

There are 7 permanent long term trend plots in the Allotment with 5 being photo trend plots and 2 plots having photo plots and vegetation transects. There is one more recent riparian plot on fifteen mile creek monitoring stubble height and willow use. A summary of all 8 trend plots, their location and the trend is in Table 3. A summary of the vegetation data for the 2 plots with vegetation transects is shown below (Table 3 and 4). All the photos for the eight trend plots in the allotment are on file at the Lakeview Resource Area office.

The two vegetation transects RM-02 in the East Pasture and RM-07 in the West Pasture illustrate similar increases in vegetation cover between 1986 and 2011 (Tables 1 and 2). The rest rotation grazing system and improved management has been responsible for some increase in the vegetation cover as the other

5 photo trend plots also show either stable or improved ecological conditions since the 1970's. However the two vegetation transects are in different pastures and different variables are contributing to these significant increases in vegetation cover at the two trend plots. At the RM-02 transect (East Pasture) about half of the significant increase in vegetation cover was shrub cover (big sagebrush and antelope bitterbrush). This increase is partially the result of bigger and more robust shrubs as seen in the photos and partially an artifact of the sampling method and the way shrubs were measured. The percent cover of the perennial grass species did increase from 4% in 1986 to 12-13 % during 2000, 2005, and 2008. The frequency (Table 4) data thru the years (1986-2011) does reflect little change in the species composition except for a reduction in Sandberg bluegrass and an increase in the frequency of shrubs, especially antelope bitterbrush. The antelope bitterbrush has increased from 3% in 1986 to 25% in 2011. The photo for RM-02 support the conclusion that antelope bitterbrush has increased in size and in numbers. The trend plot RM-07 in the West Pasture had significant increase in vegetation cover and following the prescribed in 2003 there was an increase in grass cover and forb cover (Table 5). The shrub cover (sagebrush and bitterbrush) declined in 2005 following the prescribed fire, but the grass and forb cover increased, raising the total vegetation cover in 2011 to 64%. The photos also illustrate that as there was a reduction in juniper and shrubs, there was a noticeable increase in grass and forb cover.

The other photo trend plots (RM-01, North Pasture and RM-03, 04, 05, 06, West Pasture) all show vegetation cover and species composition is stable or improving between 1970 and 2012. The photo plots RM-01 in the North Pasture and RM-05 and 06 in the West Pasture show little or no change in the vegetation cover or composition between 1970 and 2013. There was an increase in the size and density of juniper trees in the backgrounds of these photos. In RM-03 and 04 in the Long Canyon of the West Pasture, the photos illustrate a noticeable improvement of the vegetation cover and composition between 1970 and 2012. This is an area where juniper control and prescribed fire have reduced the juniper trees and improved the vegetation cover in the bottom and along the banks of Long Canyon.

Table 3. Ecological Trend by Pasture Based on Long-term Monitoring Photos and Plots on the Round Mountain Allotment (00211)

Pasture	Monitoring plot#	Photo Trend Years Taken	Transect Method Years	Trend
North	RM-01	Photo 14 years 1969-2011	Photo	Photo trend Upward 1969-1989 Static 1989-2011
East	RM-02	15 years 1969-2011	Steptoe 5 years 1986-2011	Upward Vegetation cover 28%-52%
West	RM-03	Upward 12 years 1969-2011	Photo	Photo trend upward
West	RM-04	Upward 14 years 1969-2012	Photo	Photo trend upward
West	RM-05	Static 14 years 1970-2011	Photo	Photo trend Static
West	RM-06	Static 14 years 1969 --2011	Photo	Photo trend Static except in increase in juniper size and density
West	RM-07	Upward 8 years 1986-2011	Steptoe 7 years 1986-2011	Trend Upward Vegetation cover 11% to 64% Grass Cover from 6% to 33%
West	RM-08*	Upward 5 Years 1997-2013	Stubble Height	Photo trend Upward

* Riparian transect established on Fifteenmile Creek to determine stubble height and willow use.

**TABLE 4. ROUND MOUNTAIN ALLOTMENT 0211 STEP-TOE TRANSECT SUMMARY
EAST PASTURE STUDY PLOT: RM-2**

YEAR	1986	2000	2005	2008	2011
PERCENT COVER					
BAREGROUND	33%	11%	3%	7%	9%
ROCK/Gravel	6%	10%	12%	16%	4%
LITTER	57%	45%	45%	46%	42%
VEGETATION	4%	34%	40%	31%	45%
STTH	2%	1%	5%	2%	4%
SIHY	0	2%	1%	2%	0
POSE	2%	4%	6%	7%	2%
POCU	0	6%	0	1%	0
ARTR	0	9%	4%	3%	5%
PUTR	0	9	12%	11%	19%
BRTE	0	7	12%	2%	15%
CHRYSO	0	1	0	4	0
PERCENT FREQUENCY					
STTH	25%	16%	21%	25%	22%
POSE	56%	38%	40%	40%	28%
AGSP	1%	0	0	0	0
ARTR	3%	16%	8%	5%	10%
PUTR	3%*	13%	19%	14%	25%
POCU	0	6	0	1	0
Lupine	1%	0	0	0	
ELCI	0	0	2%	0%	1%
SIHY	9%	9%	8%	10%	14%
CHRYSO	1%	1%	2%	5%	0
TECA	2%	1%	0	0	0
BRTE**	60%	16%	39%	33%	15%

***The overstory of PUTR was measured in 1986 and found to be 11% of the cover points**

****The frequency of BRTE (Cheatgrass) was estimated separately when it was the nearest plant, but the nearest perennial plants was also recorded. Therefore the frequency of the perennial plants total to 100% and the annual cheatgrass percentage is extra. However the variability of the percent cheatgrass is a good indication of the moisture and growing conditions of that year.**

**TABLE 5. ROUND MOUNTAIN ALLOTMENT 0211 STEP-TOE TRANSECT SUMMARY
WEST PASTURE STUDY PLOT: RM-7**

PERCENT BASAL GROUND COVER							
YEAR	1986	1989	1994	2000	2005	2008	2011
BAREGROUND	27%	39%	31%	6%	7%	12%	9%
ROCK/Gravel	4%	0%	0%	6%	8%	9%	3%
LITTER	58%	35%	39%	39%	35%	36%	24%
VEGETATION	11%	26%	30%	49%	50%	43%	64%
STTH	1%	2%	6%	3%	5%	3%	3%
SIHY	2%	4%	3%	8%	4%	2%	3%
POSE	3%	6%	9%	3%	16%	14%	23%
AGSP	0	0	0	1%	0	0	0
ARTR	2%	4%	4%	15%	8%	3%	3%
AAFF		1%	0	0	2%	0	0
ACMI	0	0	0	0	1%	0	1%
FEID	0	1%	1%	8%	0	3%	4%
PUTR	3%	4%	3%	8%	3%	3%	5%
BRTE		3%	1%	0	5%	6%	4%
CHRYSO	0	0	2%	2%	1%	4%	9%
WYAM		1%	1%	1%	3%	3%	5%
SYOC	0	0	0	0	2%	0	0
Lupine	0	0	0	0	0	2%	2%
PP Forbs	0	0	0	0	0	0	1%
Thistle	0	0	0	0	0	0	1%
PERCENT FREQUENCY							
SIHY	33%	28%	21%	16%	15%	12%	8%

STTH	10%	13%	17%	9%	12%	23%	7%
POSE	17%	35%	27%	17%	32%	36%	47%
AGSP	0	0	0	1%	0	0	0
ARTR	15%	12%	13%	17%	10%	3%	3%
AAFF	1%	0	0	0	0	0	0
FEID	2%	1%	6%	25%	2%	5%	6%
PPFF	0%	3%	0	0	0	0	1%
ACMI	4%	0	0	0	1%	0	3%
LUPINE	1%	0	0	0	6%	5%	2%
WYAM	1%	0	2%	3%	4%	4%	6%
CHRYSO	4%	0	3%	3%	7%	5%	10%
PUTR	12%	7%	6%	9%	5%	3%	6%
SYAL	0	1%	0	0	3%	0	0
CAREX	0	1%	0	0	0	0	0
BRTE	0	0	5%*	1%**	0	14%	5%

**BRTE in 2000 was estimated separately as nearest plant if annuals were included.

* BRTE in 1994, was not separated out but was estimated as the nearest plant.