

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

UPDATE for the
Murdock Allotment (#00710)
May 2014

Background

The Murdock allotment is located approximately 2 miles southeast of Silver Lake, Oregon. The allotment has a total of 4,274 acres of BLM-administered lands and 1,020 acres of private land. A 10-year permit (#3601441) permits 403 AUMs to be used between 4/16-6/30. This allotment contains 4 pastures grazed in a rest-rotation grazing system during the spring and summer months. In 1960, this area burned and about 1,306 acres were reseeded with crested wheatgrass.

Summary

The following table contains a summary of the 2004 rangeland health assessment and the update completed in 2014.

Summary of Rangeland Health Assessments for Murdock Allotment (00705)

Standard	2004 Assessment	2014 Assessment Update	Comments
1. Watershed Function – Uplands	Met	Met	Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and landform. Trend data show that there has been a shift from early seral grass and shrub species to later seral shrub dominated vegetation. Some decline in forage for livestock has occurred over time. However, current livestock management has continued to be appropriate to maintain healthy upland vegetation and stable soils. The most dominant vegetation on the allotment is mountain big sagebrush with an understory of crested wheatgrass. Medusahead rye is invading the allotment and, if not treated in the near future, will start negatively effecting upland function.
2. Watershed Function Riparian/ Wetland Areas	Met	NA	There are no perennial streams in the allotment. There are a number of intermittent drainages that seasonally flow during precipitation events or during spring snowmelt. The National Wetland Inventory (NWI) classifies these drainages as “riverine” systems, but due to their intermittent nature, they do not support wetland or riparian vegetation. Therefore, there are no lotic wetlands or riparian areas within the allotment. The NWI also identifies four small freshwater ponds on BLM-administered portions of one drainage. All four represent livestock water developments and are not wetlands. For these reasons, this standard is not applicable to the area.
3. Ecological Processes	Met	Met	Plant reproduction is appropriate for the area and organic matter is being incorporated into the soil. Trend photos indicate appropriate vigor of vegetation species with trends stable to upward across the allotment. The most dominant vegetation on the allotment is mountain big sagebrush with an understory of crested wheatgrass. Plant composition and community structure are appropriate for this allotment. The 2004 RHA update noted are a few small historic patches of musk thistle and diffuse knapweed. These weed species are being managed under the current integrated weed management program. Current noxious weeds occurring in the allotment are Mediterranean sage, medusahead rye, and spotted knapweed. Over 100 acres of medusahead are currently found the allotment. Other likely invasive plants to invade the allotment are bull and Canada thistle.
4. Water Quality	NA	NA	This standard is not applicable to the assessment area. There are no perennial streams or other water sources in this allotment which must comply with State water quality standards.
5. Native, T/E, and Locally Important Species	Met	Met	The allotment supports an appropriate assemblage of sagebrush-steppe wildlife habitats and populations. There are 60 AUMs of forage allocated for deer and pronghorn, another 60 AUMs of forage allocated for elk, and 12 AUMs allocated for other wildlife in the allotment. These forage allocations are adequate to support currently wildlife populations.

			<p>There are no known special status plants located within the allotment. Special status wildlife species or their habitats that may be present within the allotment include bald eagle, ferruginous hawk, peregrine falcon, burrowing owl, kit fox, sage-grouse, and pygmy rabbit. Species of high public interest in the allotment include mule deer, elk, and pronghorn antelope. About 78% of the allotment contains sage-grouse preliminary general habitat (PGH).</p>
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Guidelines for Livestock Management

Existing grazing management practices or levels of grazing use on the Murdock Allotment are consistent with the Guidelines for Livestock Grazing Management (August 12, 1997). The allotment is grazed at an appropriate season coordinated with precipitation, plant growth, and plant form to promote appropriate vegetative cover and optimal rangeland health. BLM lands are grazed in coordination with private lands to minimize conflicts and promote adequate livestock distribution.


2014 Determination

Existing grazing management practices on the Murdock Allotment promote achievement of, or significant progress towards, the Oregon Standards for Rangeland Health and conform with the applicable Guidelines for Livestock Grazing Management.

Existing grazing management practices on Murdock Allotment will require modification or change prior to the next grazing season to promote achievement of, or make significant progress towards, the Oregon Standards for Rangeland Health and conform with the applicable Guidelines for Livestock Grazing Management.



 Thomas E. Rasmussen, Field Manager



 Date

Murdock Allotment Monitoring Summary (2013):

The Murdock Allotment is categorized as an "I" (improve) allotment. The Key Rating form in 1986 rated the allotment as improve with moderate production potential and forage conditions that could be improved with treatment. No serious resource conflicts exists with good opportunity for positive economic returns, and improvement on forage conditions. In the past this included seeding and treatments to sagebrush. Management in 1986 was unsatisfactory due to inferior fencing and no rotation of grazing established. Since that time four pastures have been created and a rest-rotation grazing system has been implemented.

Average actual use: 174 AUMs

Permitted: 403 AUMs; period of use is 4/16-6/30.

Actual Use and Utilization for Murdock Allotment

Year	South(Mahogany)		West		East		Bunchgrass		Total Yearly AUM
	AUM	% use	AUM	% use	AUM	% use	AUM	% use	
2013	102		rest		rest		102		204
2012	rest		92	45	43	32	42		178
2011	50		Rest		rest		50		100
2010	rest	0	64		45	9	44		153
2009	67	51	59		rest		rest		126
2008	87	18	rest		103	5	rest		190
2007	rest		rest		rest		rest		0
2006	rest		90		144		rest		234
2005	142	60	rest		rest		rest		142
2004	79		rest		42	40	41	51	162
2003	135	62	57	52	rest		rest		213
2002	123	39	Rest	46	43	57	42	46	208
Average	98	46	72	48	70	43	54	49	174

Utilization has averaged 46% over the last 10 years for this allotment. Some years utilization exceeded 50% on individual pastures and the following year were rested to allow vegetation to fully complete their reproduction.

Trend Plot Monitoring Data Summary

M-1 - South Pasture

Years Data was Recorded: 1969, 1971, 1975, 1978, 1981, 1993, 1999,
2008 plot discontinued as it is located on private land within the allotment.
Photo Trend: *Stable*.

This area was burned in 1960 and planted with crested wheatgrass plants. Trend looks to be stable with natural successional processes evident. Photos captured in 1969 show crested wheatgrass and rabbitbrush are the dominant vegetative cover. Natural successional process have occurred over time

showing overall decrease in density of crested wheatgrass plants and an increase of sagebrush over time. Cheatgrass was not observed on this site.

Observed Apparent Trend

OF-1	1999
Vigor	5
Seedlings	4
Surface Litter	3
Pedestals	3
Gullies	5
Total	20
Rating	<i>stable</i>

M-2 - East Pasture

Years Data Recorded – 1966, 1969, 1975, 1978, 1980, 1991, 1996, 1997, 1999, 2008, 2012

This area was burned in 1960 and subsequently planted to crested wheatgrass. Forage production has decreased over time through natural successional processes moving from early seral to late seral. In 2012, this site was dominated by sagebrush and rabbitbrush. Crested wheatgrass remains the dominant understory grass species along with other native vegetation. Some cheatgrass was observed.

Observed Apparent Trend

M-2	2012
Vigor	8
Seedlings	7
Surface Litter	5
Pedestals	5
Gullies	5
Total	30
Rating	<i>Upward</i>

Percent Cover

M-2	2012	1987
Bare Ground	66	51
Litter	15	32
Rock	3	1
Vegetation	16	16
Crust	0	0

M-3 - South Pasture

Years Data Recorded: 1993, 1999,

Photo Trend: *Stable*.

2008- Plot discontinued due to location on private land

Percent Cover

M-3	2012
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Bare Ground	49
Litter	41
Rock	2
Vegetation	8
Crust	0

M-4 – South

Data Recorded: 1993, 1999,
2008- Plot discontinued due to location on private land
Photo Trend: Stable

Observed Apparent Trend

OF-3	1999
Vigor	3
Seedlings	3
Surface Litter	4
Pedestals	3
Gullies	5
Total	18
Rating	<i>stable</i>

M-05 - West

Photo Trend: Stable

Data Recorded: 1993, 1997, 1999, 2008, 2012

Photos show a large change in vegetation form 1993 to 2012 with natural successional process occurring. Photos taken in the 1990's show a crested wheatgrass seeding in early seral status. Later photos taken in 2012 show a late seral vegetation with sagebrush the dominant vegetation and perennial grasses being out competed. These photos show a decrease in forage for livestock over time with no crested wheatgrass seeding maintenance.

Observed Apparent Trend

OF-05	2012
Vigor	7
Seedlings	7
Surface Litter	5
Pedestals	4
Gullies	5
Total	28
Rating	<i>upward</i>

Line and Intercept

M-05	% cover		
	LI-1	LI-2	LI-3
ARTR	10	9	11
CHVI	7	6	5
Total % cover	17	15	16

Average Total % cover	16
Average height (ft.)	3-5 ft.

Percent Cover

M-5	2012
Bare Ground	57
Litter	15
Rock	1
Vegetation	27
Crust	0