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

Rangeland Health Assessment Update for the

Wastina Allotment #00901

3/12/2014

The Rangeland Health update presented below is based on field visits and monitoring data collected within the Wastina Allotment (see Appendix A). There are five long-term monitoring study plots within this allotment.

Grazing System: Deferred Rest Rotation. Each pasture is grazed for approximately one month, and at least one pasture is rested each year. The Wastina Allotment is located approximately 15 miles north of Silver Lake, Oregon. 6,366 Acres of public land are within the allotment boundary. The allotment is categorized as an M, Maintain based on the 1986 rating form which is summarized as follows:

- Range condition is satisfactory.
- Forage production potential is moderate to high and present production is near potential.
- No serious conflicts or controversy exist. The area is within deer winter range.
- Opportunity may exist for positive economic returns.
- Present management is satisfactory.

Standards for Rangeland Health for the Wastina Allotment

Standard	2002 Assessment	2013 Assessment Update	Comments
1. Watershed Function – Uplands	Met	Met	This standard is being met on the allotment. Indicators used to evaluate this standard are Soil Surface Factor (SSF), which documents erosion class and soil susceptibility to accelerated erosion; plant community composition, which indicates the root capacity of the soil profile; grazing management, and existing vegetation monitoring (forage utilization studies). Overall, this allotment is functioning properly as indicated by the amount and distribution of ground cover, observations from the ecological site inventory, including SSF, and existing upland forage utilization surveys. The majority of the public land within the allotment has an SSF rating of stable to slight (ranging from 8-30%). About 15% is rated as unknown and represents vegetative communities too small to be mapped (inclusions), transition zones, and rock outcrops. Grazing on the allotment is a six pasture deferred rest rotation system. One pasture is rested each year. The other pastures are grazed from 4-6 weeks each. The grazing system is designed to maintain healthy perennial vegetative communities. The root systems of perennial vegetation assist in holding soil in place. Perennial vegetation provides protective cover to reduce soil movement, decrease compaction and thus increase infiltration. Species composition on the allotment includes a variety of native, deep-rooted species well-distributed throughout the allotment including ponderosa pine, mountain big sagebrush, bitterbrush, Idaho fescue and western needlegrass. These species provide adequate cover to assist in properly functioning soils. Current grazing strategies are adequate to maintain existing vegetation conditions. Monitoring data collected and evaluated in 2013 indicate stable to upward trend throughout the allotment.

Standard	2002 Assessment	2013 Assessment Update	Comments
2. Watershed Function Riparian/ Wetland Areas	NA	NA	The standard does not apply to this allotment because there are no perennial streams, riparian areas, or wetland areas on the allotment. Livestock water sources are from wells or hauling of water.
3. Ecological Processes	Met	Met	This standard is being met on the allotment. 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 hydrologic cycle. Indicators used to evaluate this standard include vegetative composition, presence of weed species ecological status, observed apparent trend (OAT), current plant composition as compared to a defined Potential Natural Community (PNC) for the identified soil type and precipitation zone. Weed concerns in the Wastina Allotment include spotted knapweed and diffuse knapweed invasions that may enter the Lakeview Resource Area especially along adjacent main roads. A few areas of spotted knapweed have been reported in the allotment. These sites have been treated and are monitored to prevent spread. A review of the range monitoring data (photos, trend transects, climate, field observations, OAT and professional judgment indicates that the majority of the allotment is in good condition with a static or upward trend. This trend continues in 2013 based on monitoring data collection and evaluation. There are five long-term study plots within the allotment. These include OAT and photo trends. All five plots indicate a stable to upward trend throughout the allotment.
4. Water Quality	NA	NA	The standard does not apply to this allotment because there are no perennial streams, water bodies, or wetland areas on the allotment. Livestock water sources are from wells or hauling of water.
5. Native, T/E, and Locally Important Species	Met	Met	There have been surveys for several Bureau special status plants in the allotment, but no plants were found. There are no known special status plants in the allotment. With respect to special status plants, this standard is being met. The allotment contains an appropriate assemblage of wildlife species and wildlife habitat expected for the shrub-steppe ecosystem. Species diversity may be somewhat higher due to its juxtaposition with the Ponderosa pine forest transitional zone along the western edge of the allotment providing additional habitat diversity. Special status wildlife species or their habitats that are present within the allotment may include the, bald eagle, ferruginous hawk, peregrine falcon, burrowing owl, Lewis' woodpecker, white-headed woodpecker, black-backed woodpecker, sage-grouse, Townsends big-eared bat, fringed bat, palid bat, spotted bat, kit fox, and pygmy rabbit. There are also several species with high public interest or concern which include golden eagle, mule deer, and elk. Overall, this standard is being met for wildlife species (including special status species) and their habitat within this allotment. See Standard 5 narrative below for more details.

STANDARD 1 - Upland Watershed Function -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**.** Overall, this allotment is functioning properly as indicated by the amount and distribution of ground cover, observations from the ecological site inventory (ESI), including Soil Surface Factor (SSF), and existing upland forage utilization surveys. Indicators used to evaluate this standard are SSF, which documents erosion class and soil susceptibility to accelerated erosion; plant community composition, which indicates the root capacity of the soil profile; grazing management, and existing vegetation monitoring (forage utilization studies). Refer to the maps and site writeup forms from the North Lake ESI.

The majority of the public lands within the allotment have an SSF rating of stable to slight (ranging from 8-30%). About 15% is rated as unknown and represents vegetative communities too small to be mapped (inclusions), transition zones, and rock outcrops.

Grazing on the allotment occurs under a six-pasture deferred rest rotation system where one pasture is rested each year. The other pastures are grazed from 4-6 weeks each. The allotment is grazed season long from April 1st to November 2nd. Livestock use has been low, and utilization levels on public lands have been slight to light. Water sources are on private land, therefore, the majority of use occurs on the private land closer to water.

The grazing system is designed to maintain healthy perennial vegetative communities. The root systems of perennial vegetation assist in holding soil in place. Perennial vegetation provides protective cover to reduce soil movement, decrease compaction and thus increase infiltration. Species composition includes a variety of native, deep-rooted species well-distributed throughout the allotment including ponderosa pine, mountain big sagebrush, bitterbrush, Idaho fescue and western needlegrass. These species provide adequate cover to assist in properly functioning soils.

Current grazing strategies are adequate to maintain the existing vegetation conditions. Monitoring data collected and evaluated in 2013 indicate a stable to upward trend throughout the allotment.

STANDARD 2 - Riparian/Wetland Function - Riparian-wetland areas are in properly functioning physical condition appropriate to soil, climate, and landform.

The standard does not apply to this allotment because there are no perennial streams, water bodies, or wetland areas on the allotment. Livestock water sources are from wells or hauling of water.

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 hydrologic cycle.

This standard is being met on the allotment. 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 hydrologic cycle.

Indicators used to evaluate this standard include vegetative composition, presence of weed species ecological status, observed apparent trend (OAT), current plant composition as compared to a defined Potential Natural Community (PNC) for the identified soil type and precipitation zone. The information comes from the North Lake ESI (see Appendix A). About 82% of the allotment is in a Late Seral stage and 13% is in a Mid Seral stage. The remainder is unknown and represents small, unmapped inclusions and transition zones.

Weed concerns in the allotment include spotted knapweed and diffuse knapweed invasions that may enter the Lakeview Resource Area especially along adjacent main roads. A few areas of spotted knapweed have been reported in the allotment. These sites have been treated in the past and are monitored to prevent spread.

A review of the range monitoring data (photos, trend transects, climate, field observations, OAT and professional judgment indicates that the majority of the allotment is in good condition with a static or upward trend. This trend continues in 2013 based on recent monitoring data collection and evaluation. There are five long-term study plots within the allotment which include OAT and photo trends. All five plots indicate a stable to upward trend throughout the allotment.

STANDARD 4 - Water Quality - Surface water and groundwater quality, influenced by agency actions, complies with State water quality standards.

The standard does not apply to this allotment because there are no perennial streams, water bodies, or wetland areas on the allotment. Livestock water sources are from wells or hauling of water.

STANDARD 5 - Biological Diversity- 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.

There have been surveys for several Bureau special status plants in the allotment, but no plants were found. There are currently no known special status plants in the allotment. With respect to special status plants, this standard is being met.

The allotment contains an appropriate assemblage of wildlife species and wildlife habitat expected for the shrub-steppe ecosystem. Species diversity may be somewhat higher due to its juxtaposition with the Ponderosa pine forest transitional zone along the western edge of the allotment providing additional habitat diversity.

Special status wildlife species or their habitats that may be present within the allotment include the bald eagle (*Haliaeetus leucocephalus*), ferruginous hawk (*Buteo regalis*), peregrine falcon (*Falco peregrinus*), burrowing owl (*Speotyto cunicularia*), Lewis' woodpecker (*Melanerpes lewis*), white-headed woodpecker (*Picoides albolarvatus*), black-backed woodpecker *(Picoides*

arcticus), sage-grouse (*Centrocercus urophasianus*), Townsends big-eared bat (*Corynorhinus townsendii*), fringed bat (*Myotis thysanodes),* pallid bat (*Antrozous pallidus*), spotted bat (*Euderma maculatum),* kit fox (*Vulpes macrotis),* and pygmy rabbit (*Brachylagus idahoensis*). There are also three species with high public interest. These include golden eagles (*Aquila chrysaetos*), mule deer (*Odocoileus hemionus*) and elk (*Cervus elaphus*).

Some potential bald eagle nesting habitat occurs within the western part of the allotment. However, there are no known bald eagle nests within the allotment, lthough they are occasional visitors to the area. Bald eagles may occasionally feed on road killed deer adjacent to the major roadways and scattered carrion within the allotment.

Peregrine falcons have been observed in the general area, possibly due to releases from the Summer Lake hack site to the south and they may be an occasional visitor to the area. However, no nesting habitat or actual nesting activity has been documented within the allotment.

While potential habitat for ferruginous hawk and burrowing owl was identified in the initial rangeland health assessment, these species have not actually been confirmed within the allotment to date. There have been no inventories or incidental sightings indicating ferruginous hawks or burrowing owls are present within the allotment.

Golden eagles (BOC species) have been seen within the general area foraging on small mammals. There are no known golden eagle nests or nesting habitat within the allotment. However, nest sites have been identified within the areas surrounding the allotments where suitable cliff type habitat exists. The closest golden eagle nest is located approximately 12 miles northeast of Wastina Allotment boundaries.

Habitat for the three species of woodpeckers occurs in the western half of the allotment along the pine forest transitional zone. This habitat is suitable, but marginal for black-backed and Lewis' woodpeckers. White-headed woodpeckers are known to occur within this area, however densities are probably low due to limited number of pine seeds as a food source.

The initial assessment noted that sage-grouse habitat existed within this allotment. Bird densities within the area were described as low when compared to other similar areas to the east. The allotment was noted as falling on the western edge of the species range and contained some marginal habitats due to pine forests, juniper expansion, and historic cultivation practices during the homesteading era. Approximately 70% of the allotment was considered to be non-suitable habitat for sage-grouse due to pine forest and expansion of western juniper. Of the remaining 30%, about half was found to be non-suitable due to lack of sufficient sagebrush cover, mainly due to historic cultivation during the homesteading era when sagebrush habitats were converted to cultivated field. After abandonment, rabbit brush tended to dominate these sites and sage brush was slow to reestablish. The remaining 15% was mostly suitable for brood rearing habitats with some nesting and wintering habitats available. Juniper encroachment was noted as a small problem that would become an increasing problem in the future if current trends continued.

Based on ODFW's most recent sage-grouse lek data, the closest occupied lek to the allotment is Fort Rock #1 lek which reported 21 males at the last survey in 2013 with a 17-year average of

approximately 18 males and an increase in a 10 year average of 20 males. Based on habitat data, 0% of the Wastina allotment falls within PPH and approximately 49% (2,837 acres) falls within PGH. HAF survey data does not exist for allotment; however, ESI data and NAIP imagery were examined. The Northwest and Southwest pastures contain a mix of ponderosa pine and shrub-steppe habitats that may impart an "edge effect" from the adjacent plant communities and for this reason, approximately 30% (1,580 acres) are likely unsuitable habitats for sage-grouse. Bitterbrush, mountain sagebrush, and rabbitbrush are the dominant shrubs in the remaining70% (4,186 acres) of the allotment and likely provides some marginal breeding and summer habitats.

Four Bureau Sensitive bat species are known to occur within the Lakeview Resource Area. These include the fringed myotis, pallid bat, spotted bat, and the Townsend's big-eared bat. However, spotted bats and fringed myotis rarely occur in the general area and are not known to occur on the allotment. There are no known caves, adits, shafts, or outbuildings on the BLM portions of the allotment capable of providing winter hibernacula for bats. There are no known roost sites within this allotment for Townsends big-eared bats. There are no resource conflicts for these species. Use of the area by bats is likely limited primarily to foraging activities.

Kit fox and pygmy rabbits, both BLM sensitive species, are also known to occur within the Lakeview Resource Area. The only documented kit fox observation was on the far southeastern edge of the Resource Area near Beaty Butte. Kit foxes are typically associated with sparse greasewood vegetation communities (Verts and Carraway 1998) that are not found in the allotment. According to the information available from ODFW at http://www.dfw.state.or.us/species/mammals/coyotes_wolves_foxes.asp, kit foxes occur in Deschutes, Klamath, and the southern half of Harney and Malheur counties. The potential for the presence of kit foxes is very low as the allotment lies outside of the northern range of the kit fox.

Habitat is present for pygmy rabbits, but locations for these species are not known within the allotment. No specific inventories have been conducted to date for these species within the allotment, however there are sightings within the surrounding area and they are suspected to occur within the allotment.

This allotment falls within mule deer winter range. Bitterbrush is a key forage species for wintering mule deer. A potential conflict exists within this allotment due to the timing of fall grazing and the presence of bitterbrush. However, the exact impacts to bitterbrush from livestock grazing are not known at this time. Although timing of grazing is a potential conflict, bitterbrush abundance and browse use appears to be stable at this time. This is probably due to the low number of AUMs authorized for use and the short duration of use within bitterbrush areas. Generally, fall use is discouraged within portions of the allotment that have significant amounts of bitterbrush. The mule deer management objective for this allotment calls for monitoring browse species (ie. bitterbrush) utilization in winter range areas to avoid livestock utilization levels that reduce the long-term viability of browse species.

Although elk are relatively uncommon within the allotment, a few use the allotment on a regular basis.

There are no known resource conflicts between current livestock grazing management activities and habitat for peregrine falcons, bald eagles, ferruginous hawks, burrowing owls, golden eagles, black-backed woodpeckers, Lewis' woodpeckers, white-headed woodpeckers, bat species, kit foxes, pygmy rabbits, or elk. Meeting the mule deer browse utilization objective would be sufficient to maintain adequate bitterbrush densities within the allotment and avoid a conflict with livestock management.

For these reasons, this standard is being met for wildlife species (including special status species) and their habitat within this allotment. Past use from cultivation, control of wildland fire and invasion of exotic plants has made some portions of this allotment unusable for some species of wildlife. Some areas could benefit from restoration efforts. However, effectiveness of these efforts would be doubtful on historically cultivated areas.

Current Management and Recommended Management Changes

Current livestock management is satisfactory and changes are not recommended at this time. With respect to mule deer habitat, a potential conflict exists between livestock grazing schedules and mule deer winter range. It is recommended that bitterbrush trends be monitored within this allotment and appropriate action taken in the future if use by cattle is found to be negatively impacting existing bitterbrush densities.

2014 Determination

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

( ) Existing grazing management practices on the Wastina 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 — 3/20/14 Date

APPENDIX A

Wastina Allotment Utilization and Actual Use Data 2003 through 2013

Year	N. Peyerl Actual Use	N. Peyerl % Utiliz.*	N. Dehne Actual Use	N. Dehne % Utiliz.	S. Dehne Actual Use	S. Dehne % Utiliz.	SW Hwy Actual Use	SW Hwy % Utiliz.
2003	91	No data	Rested	Rested	39	No data	46	No data
2004	53	No data	40	No data	Rested	Rested	40	55-57=56*
2005	Rested	Rested	Rested	Rested	Rested	Rested	Rested	Rested
2006	41	No data	50	No data	Rested	Rested	45	No data
2007	74	No data	Rested	Rested	62	No data	77	12-14=13*
2008	Rested	Rested	78	45-47=46*	90	No data	103	No data
2009	42	55-65=60*	113	57-63=60*	83	No data	Rested	Rested
2010	78	28	86	No data	Rested	Rested	82	No data
2011	86	No data	86	No data	86	No data	86	37-43=40*
2012	Rested	Rested	113	17-34=26*	113	No data	104	29
2013	79	58	64	44	104	65	37	50
Average	45	24	63	29	54	13	57	27
Year	**NW Hwy Actual Use**	**NW Hwy % Utiliz.**	**Spray Field Actual Use**	**Spray Field % Utiliz.**				
2003	43	No data	41	No data				
2004	36	32	49	No data				
2005	Rested	Rested	Rested	Rested				
2006	42	No data	41	No data				
2007	71	No data	74	No data				
2008	95	50	Rested	Rested				
2009	Rested	Rested	21	60-70=65*				
2010	90	8	82	No data				
2011	78	No data	62	21-45=33*				
2012	74	39	Rested	Rested				
2013	Rested	Rested	113	47				
Average	49	18	44	24				

*range and avg. utilization for multiple perennial grasses at site. Use categories: Slight 6-20%; Light 21-40%; Moderate 41-60%; Heavy 61-80%; Severe 81-100%. # exceeds moderate use category.

Wastina Allotment Current Vegetation Types, Condition, Soil Crusts, and Trend.

Range Site Number	Current Dominant Vegetation Code*	Acres	% of Allotment **	Condition Rating	Seral Stage	BSC	Soil Surface Factor	Observed Apparent Trend
006XB211OR	PIPO/ARTRV/FEID/	1603	28	Good	L	6	Stable	Upward
023XY210OR	/PUTR2/FEID/	1260	22	Good	L	6	Stable	Upward
023XY606OR	/PUTR2/STOC2/	858	15	Good	L	4	Slight	Static
023XY514OR	/ARTRV/STOC2/	640	11	Good	L	4	Stable	Static
023XY210OR	/CHVI8/ELEL5/	581	10	Fair	M	2	Slight	Static
023XY514OR	/ARTRV/STOC2/	331	6	Good	L	4	Stable	Static
023XY606OR	/ARTRV/STOC2/	308	5	Good	L	4	Stable	Static
006XB211OR	/CHNA2/STTH2/	120	2	Fair	M	2	Moderate	Static

**The plant codes represent genus-species abbreviations adopted by USDA-NRCS; see also Plants Database available at http://www.plants.usda.gov).*
*** Every Site Writeup Area (SWA) has a 10-15% portion of that area that is considered inclusions of different (often unknown or unmapped) vegetation communities. The secondary vegetation type for a site DOMVEG2 is essentially the same unless noted. Values less than 1% of area are not displayed in table.*

Wastina Allotment Monitoring (reflects past 10 years data 2003-2013)

Transect	Date	Pasture	Composition % (trend reflects both quantitative data and photo comparisons)	Cover % (trend reflects both quantitative data and photo comparisons)
W-1 Photo Trend/Observed Apparent Trend	7/11/2013	NW	Upward trend	Upward trend
W-1 Photo Trend/Observed Apparent Trend	9/4/2008	NW	Stable trend	Stable trend
W-2 Photo Trend/Observed Apparent Trend	7/11/2013	SW (Garden Club)	Upward trend	Upward trend
W-2 Photo Trend/Observed Apparent Trend	7/11/2013	SW (Garden Club)	Stable-upward trend	Stable-upward trend
W-3 Photo Trend/Observed Apparent Trend	9/16/2013	Spray Field	Stable-upward trend	Stable-upward trend
W-3 Photo Trend/Observed Apparent Trend	9/4/2008	Spray Field	Stable trend	Stable trend
W-4 Photo Trend/Observed Apparent Trend	7/11/2013	North Dehne	Upward trend	Upward trend
W-4 Photo Trend/Observed Apparent Trend	7/30/1999	North Dehne	Stable trend	Stable trend
W-5 Photo Trend/Observed Apparent Trend	7/11/2013	North Dehne	Stable trend	Stable trend

**Stable and Static are used interchangeably on the Observed Apparent Trend forms.*