

## **RANGELAND HEALTH STANDARDS - ASSESSMENT – East Rabbit Hills Allotment #0530**

### **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 East Rabbit Hills 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**

**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. A copy of the form used to document SSF is attached (Appendix A, "Determination of Erosion Condition Class"). On a majority of the allotment (59%) the SSF is unknown, but on the remaining part, almost all of it is in the Slight erosion class. These soils are not very susceptible to wind or water erosion.

Most of the utilization appears to be on the crested wheatgrass seedings and the average utilization was 53% since 1990. This is under the 60% level allowed for seedings in the winter. The authorized use is November thru April, but most of the use is in February and March.

It appears from the amount of acreage in the slight erosion condition class, the utilization levels, and season of use that current grazing practices are not negatively impacting the upland watershed.

	<b>Erosion Condition Classes* (Main Pasture)</b>				
Classes	Stable	Slight	Moderate	Rockland or Playa	Unknown**
Acres	36	2,835	96	171	4,580
Percent of Allotment	T	37%	1%	2%	59%

*\* The erosion condition classes are based on numeric scoring system which considers soil movement, surface litter, surface rock, pedestalling, flow patterns, rills and gullies. Appendix A is an example of the scoring sheet that is used.*

*\*\* The SSF scores are derived from actual transects and these transects were not done in every Site Writeup Area (SWA), but only in enough SWAs to represent the different vegetation types. Therefore the unknown acres result from SWAs where the representative transect was run in a different pasture or allotment. Therefore the SSF score should not be used as it may or may not represent the SSF score in the 530 Allotment.*

Another indicator of Upland Watershed condition is plant composition and community structure. The composition of the vegetation within the allotment can be seen in attached Table 1. There is no single dominant vegetation type in the allotment, with crested wheatgrass being the most common type, making up about 31% of the main pasture and 78% of the small pasture. The Wyoming big sagebrush and Wyoming big sagebrush/grass occupies about 21% and 15% of the main pasture respectively. The crested wheatgrass seedings do provide a stable perennial plant community and a significant forage resource for the cattle. Since most of the cattle use is on the crested wheatgrass seedings and the use occurs in the winter, it doesn't appear livestock grazing has any significant impact on vegetation composition or community structure.

The Ecological Site Inventory (ESI) compares the current plant composition to a defined Potential Natural Plant Community for the identified soil type and precipitation zone. Using the 1995-2000 ESI, the percent of public land in the allotment in each seral stage is summarized in the table below.

**Ecological Condition of Allotment #0530, Rabbit Hills East (Main Pasture) as determined by the Ecological Site Inventory in 1995 and 1996.**

<b>Ecological Condition Classes (Main Pasture)</b>				
	Early	Mid	Late	Climax
Acres	5,028	1,108	526	29
Percent of Vegetation	75%	17%	8%	T

<b>Ecological Condition Classes Small Pasture</b>				
	Early	Mid	Late	Climax
Acres	766	0	0	0
Percent of Vegetation	100%	%	%	T

About 78% (5,794 acres) of the vegetation in the allotment is in the early seral stage and this includes all the crested wheatgrass seedings and the cheatgrass stands (2,692 acres). The Wyoming big sagebrush (1,625 acres) and the Wyoming big sagebrush/cheatgrass (591 acres) makes up most of the remaining acres in the early seral condition. The crested wheatgrass seedings and cheatgrass stands are mono cultures that are automatically in the early seral stage. The Wyoming big sagebrush type contains some scattered bottlebrush squirreltail, cheatgrass, and annual forbs, but the sagebrush plants occupy enough of the available space and resources to make establishment of new perennial grasses very difficult without new disturbance. The current winter and early grazing does not significantly impact this sagebrush type and the utilization of the cheatgrass when is young and green may actually reduce cheatgrass production in this type.

The remaining vegetation types in the mid and late seral stages are a mixture of sagebrush, greasewood and hopsage types, some with a significant perennial grass understory and some without. However all these types appear stable and are not impacted significantly by the current grazing management. The vegetation type in the climax class is hopsage/creeping wildrye types and appears stable and not impacted by cattle grazing.

**Standard 2 - Riparian/Wetland**

**Standard II is being met for Riparian/Wetland function.** There are 5 acres of palustrine wetlands found in the allotment and they are rated at Proper Functioning Condition. Livestock grazing does not appear to be a factor limiting Riparian/Wetland function.

**Standard 3 Ecological Processes**

**This standard is being met.** Following are observations from the interdisciplinary team about the current plant community in the East Rabbit Hills Allotment. There are no obvious signs of livestock overuse or damage in areas surveyed and processes of plant growth and decomposition appear normal. *Agropyron cristatum* (crested wheatgrass) appears to be scattered throughout the allotment. The dominant shrub in the allotment is *Artemesia tridentata* with a low-density understory of *Bromus tectorum* and a low diversity of

native grasses and forbs, as noted in Standard 5. Green rabbitbrush is the dominant shrub in the north with saltgrass in the understory. Plant community diversity is moderate and listed in Standard 5.

The Observed Apparent Trend (OAT) for the vegetation communities on public land was determined during the Ecological Site Inventory (1995-2000) and is seen in the Table below. Over half the acres in the allotment are unknown as a result of the survey procedure, where the actual transect representing a vegetation type was run on a different pasture or allotment and the OAT score can not be accurately transferred.

The SSF and OAT in the 852 acres in the small pasture within the 530 allotment is unknown. Transects for these vegetation types were run in Allotment 516.

**OBSERVED APPARENT TREND FOR ALLOTMENT #0530 – EAST RABBIT HILLS (MAIN PASTURE)**

	Observed Apparent Trend*			Rockland or Playa	Unknown**
	Upward	Static	Downward		
Acres	0	1,629	1,338	171	4,580
Percent of Allotment	0%	21%	17%	2%	59%

\* The Observed Apparent Trend (OAT) is a numerical rating which considers vigor, seedlings, surface litter, pedestals and gullies to estimate the trend of a particular site and SWA. An example of how the rating is determined can be seen in Appendix B.

\*\* The OAT scores are derived from actual transects and these transects were not done in every Site Writeup Area (SWA), but only in enough SWAs to represent the different vegetation types. Therefore the unknown acres result from SWAs where the representative transect was run in a different pasture or allotment. Therefore the OAT score should not be used as it may or may not represent the OAT score in the 530 Allotment.

**This standard is being met for animal populations.** The allotment is supporting the current and proposed number of mule deer and pronghorn antelope identified by Oregon Department of Fish and Wildlife (ODFW) management plans.

**Standard 4 - Water Quality Standards**

There are no Oregon listed water quality limited streams in this pasture.

**Standard 5 Native, T&E, and Locally Important Species**

**This standard is being met for native, T&E and locally important wildlife species.** The deer 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, deer and pronghorn populations continue to fluctuate at or slightly below ODFW’s Management Objective for the unit.

The allotment also provides habitat for numerous small and nongame birds and mammals common to the Great Basin. There are no known sage grouse leks or identified habitat found within the allotment. 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, California bighorn sheep, various sensitive bat species or Peregrine falcons. Livestock grazing does not appear to be limiting wildlife habitat within the allotment.

Special Status Plants: None found, none suspected.

Locally Important Plant Species: None found.

Native Plant Species: *Artemesia cana*, *Artemesia tridentata*, *Camissonia tanacetifolia*, *Carex* sp., *Chrysothamnus viscidiflorus*, *Delphinium* sp., *Descurainia* sp., *Distichlis spicata* var. *stricta*, *Elymus cinereus*, *Elymus elymoides*, *Eriogonum vimineum*, *Gilia leptomeria*, *Lupinus* sp., *Mentzelia albicaulis*, *Monolepsis* sp., *Oryzopsis hymenoides*, *Plagiobothrys* sp., *Rumex* sp., *Sarcobatus vermiculatus*, *Stipa comata*, *Tetradymia canescens*, and *Sidalcea* sp.

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

The allotment has been grazed in the winter and early spring (February to Mid April) for many years and this management will continue. This winter and early spring use with crested wheatgrass allows the native grasses and forbs rest most years and the crested wheatgrass is still able to regrow during the spring and fall months.

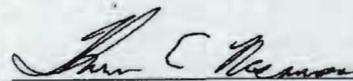
#### **Team Members**

#### **Title**

Les Boothe	Range Management Specialist
Alan Munhall	Fishery Biologist
Vern Stofleth	Wildlife Biologist
Lucile Housley	Botanist
Bill Cannon	Archaeologist
Ken Kestner	Supervisory NRS
Robert Hopper	Supervisory RMS
Erin McConnell	Weed Management Specialist

#### **Determination**

- Existing grazing management practices or levels of grazing use on the East Rabbit Hills 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 East Rabbit Hills 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.



Field Manager, Lakeview Resource Area

Date

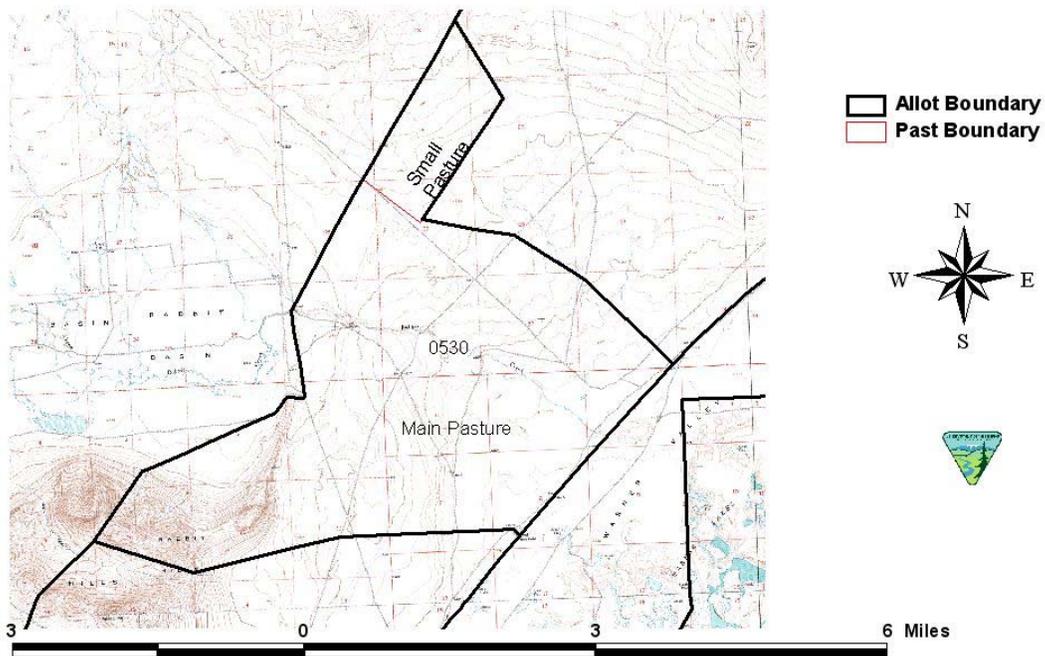
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**Table 1. VEGETATION TYPES IN ALLOTMENT 0530 - EAST RABBIT HILLS (MAIN PASTURE)**

<b>Vegetation Type</b>	<b>Acres</b>	<b>Percent of Allotment</b>
<b>Grasses</b>		
AGCR Crested Wheatgrass	2,376	31%
BRTE Cheatgrass	58	1%
STTH Thurber's Needlegrass	107	1%
<b>Grasses TOTAL</b>	<b>2,541</b>	<b>33%</b>
<b>Forbs</b>		
DESCU-BRTE Tanysmustard/Cheatgrass	231	3%
<b>Shrubs</b>		
ARSP Bud sage	122	3%
ARTRT big sagebrush	368	5%
ARTRW Wyoming big sagebrush	1,625	21%
GRSP Spiney Hopsage	48	1%
<b>Shrubs TOTAL</b>	<b>2,253</b>	<b>30%</b>
<b>Shrubs/Grasses</b>		
ARSP-SIHY bud sagebrush- bottlebrush squirreltail	54	1%
<b>Big Sage/Grass</b>		
ARTR-ELCI big sagebrush/basin wildrye	228	3%
<b>Silver Sage/Grass</b>		
ARCA-ELCI Silver sagebrush-basin wildrye	1	T
<b>Wyoming Sage/Grass</b>		
ARTRW-BRTE Wyoming big sage/cheatgrass	591	8%
ARTRW-ELTR Wyoming big sage/creeping wildrye	418	5%
ARTRW-STTH Wyoming big sage/Thurber's needlegrass	138	2%
<b>Wyoming Sagebrush/Grass TOTAL</b>	<b>1,147</b>	<b>15%</b>
<b>All Sagebrush/Grass TOTAL</b>	<b>1,430</b>	<b>19%</b>
<b>Rabbitbrush/Grass</b>		
CHVI-AGCR green rabbitbrush/crested wheatgrass	27	T
<b>Hopsage/Grass</b>		
GRPS-ELTR hopsage/creeping wildrye	29	T
<b>Greasewood/Grass</b>		
SAVE-DESCU-ELTR Wyoming big sage/ Tanysmustard/creeping wildrye	36	T
SAVE-BRTE	144	2%
<b>TOTAL VEGETATION</b>	<b>6,691</b>	<b>87%</b>
Playa	4	T
Rockland/ Rubble	167	2%
Unknown *	856	11%
<b>ALLOTMENT TOTAL (MAIN PASTURE)</b>	<b>7,718</b>	

<b>Vegetation Types in Allotment 0530 EAST RABBIT HILLS (SMALL PASTURE)</b>		
<b>Vegetation Type</b>	<b>Acres</b>	<b>Percent of Pasture</b>
AGCR Crested Wheatgrass	662	78%
BRTE Cheatgrass	105	12%
Unknown	85	10%
<b>TOTAL</b>	<b>852</b>	

## East Rabbit Hills Allotment 0530



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