

2006 Evaluation of Rattlesnake Gulch Allotment (#1023) Relative to Rangeland Health Standards

Assessment Participants (Name & Discipline or Interest):

_____ Jackie Dougan	Fisheries Biologist
_____ Melissa Yzquierdo	Wildlife Biologist/Botanist
_____ Craig Martell	Range Management Specialist
_____ Susan Badgley	Range Technician
_____ Todd Kuck	Supervisory NRS/Hydrologist

I. Area Evaluated

The Rattlesnake Gulch Allotment (#1023) is located west of Rye Valley, Oregon (see Appendix 1: Map), and it is within the Pedro Mountain Geographic Unit as described in the Baker Resource Management Plan/Record of Decision dated July 1989. It is an allotment consisting of one pasture of 703 acres, of which 405 acres are public land. There is no longer a fence between this allotment and Dixie Creek Allotment #1020, so for the last decade or so, these allotments have been grazed together. The allowable amount of use under the ten-year permit is 92 AUMs on public land plus 61 AUMs on private land, for a total of 153 AUMs (60% public land), to be used within the dates of May 1 to October 22. The actual management has been alternating spring and fall use, typically June one year and October the next year.

II. Data and Information Used in the Evaluation

A. Trend Plot

Data from the trend plot is summarized in Appendix 2: Trend Data.

Indicators used are ground cover (compared to bare ground), and plant species frequency as measured in frequency transects.

B. Rangeland Health Assessments

Appendix 3 summarizes the results of the rangeland health assessments completed in 2006. Multidisciplinary teams viewed a representative site on the allotment, assessing 17 rangeland health indicators at each site in accordance with Technical Reference 1734-6, Interpreting Indicators of Rangeland Health, 2000 (Version 4).

C. Proper Functioning Condition Assessments

Appendix 4 summarizes the results of the PFC assessments completed in 2006, in which seventeen indicators were assessed in accordance with Technical Reference 1737-9, Process for Assessing Proper Functioning Condition, 1993.

D. Native, T & E, and Locally Important Species Habitat Ratings

These are habitat ratings for Standard 5 that were done with each

rangeland health assessment. Indicators used were:

1. Presence or absence of T & E species or species of concern
2. Native Plant Communities
 - a. Age classes
 - b. Diversity
 - c. Habitat connectivity
 - d. Population recovery

III. Standards Evaluated

The standards evaluated are those presented in detail on pages 15-18 of the final version of "The Standards for Rangeland Health and Guidelines for Livestock Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington" (August 12, 1997).

A. Standard 1 - Upland Watershed Function

Upland soils exhibit infiltration and permeability rates, moisture storage, and stability that are appropriate to soil, climate, and landform.

What Was Used to Evaluate the Status of this Standard: Rangeland health assessments, using the attributes of Soil & Site Stability and Hydrologic Function, plus the ground cover data from the trend plot.

Determination for Standard 1:

Standard Met X Standard Not Met _____ Standard Not Present _____
Livestock not a significant factor _____
Livestock a significant factor _____

Rangeland health assessment showed none-to-slight departure from expected levels in Soil & Site Stability, and slight-to-moderate departure in Hydrologic Function. The trend plot however showed more bare ground and less litter, in comparing 1987 to 2005.

B. Standard 2 - Riparian/Wetland Watershed Function

Riparian-wetland areas are in properly functioning physical condition appropriate to soil, climate, and landform.

What Was Used to Evaluate the Status of this Standard: proper functioning condition assessments for streams in each pasture.

Determination for Standard 2:

:
Standard Met _____ Standard Not Met X Standard Not Present _____
Livestock not a significant factor _____
Livestock a significant factor X

Although 71% (1.17 mi.) of stream in the allotment was rated at PFC, 29% (.47 mi.) was rated as Functioning at Risk, downward trend. There is obvious heavy use by cattle on the lower stream segments.

C. 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.

What Was Used to Evaluate the Status of this Standard: Rangeland health assessments, using the attribute of Biotic Integrity, plus plant species changes determined from trend plots.

Determination for Standard 3:

Standard Met X Standard Not Met Standard Not Present
Livestock not a significant factor
Livestock a significant factor

Rangeland health assessment showed slight-to-moderate departure in Biotic Integrity. The trend plot showed static trend between 1987 and 2005.

D. Standard 4 - Water Quality

Surface water and groundwater quality, influenced by agency actions, complies with State water quality standards.

What Was Used to Evaluate the Status of this Standard: Water quality data, plus professional judgment based mainly on the observations from the proper functioning condition assessments.

Determination for Standard 4:

Standard Met Standard Not Met X Standard Not Present
Livestock not a significant factor
Livestock a significant factor X

Stream temperatures recorded at North Fork Dixie Creek frequently exceed state water quality standards, and the streams in this allotment contribute to the problem. Heavy to severe livestock utilization observed on riparian zones indicates livestock is a significant factor.

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.

What Was Used to Evaluate the Status of this Standard: Native, T &E and locally important species habitat ratings done with each rangeland health assessment, plus sagebrush canopy cover estimates.

Determination for Standard 5:

Standard Met X Standard Not Met Standard Not Present
Livestock not a significant factor
Livestock a significant factor

No species of T & E importance were noted, and native species habitat was adequate. Scotch thistle, juniper, and annuals were present, however.

Conformance with Guidelines for Livestock Grazing Management

Management does not conform to the guideline to provide adequate cover and plant community structure to promote streambank stability, debris and sediment capture, and floodwater energy dissipation in riparian areas.

Recommendations

1. Construct or reconstruct fences to separate this allotment from adjacent allotments, in order to better control times of grazing.
2. Reduce amounts of grazing use or decrease time livestock are in the allotment. The initial reduction should be based on the percentage of the allotment where steep slopes limit cattle use (steepness of slope of over 50% will be considered not allocable for grazing in this allotment due to the grazing pressure on riparian zones). This will result in a 40% reduction in public land use and a 22% reduction in private land AUMs allowed for exchange of use.
3. The upper reach of Rattlesnake Gulch (with uplands in the vicinity of the trend plot) should be monitored annually. The AUMs of use may be further adjusted based on utilization and actual use data. Utilization guidelines should be set at 50% for key herbaceous forage species and 30% for key woody species in the riparian zone. Failure to achieve utilization guidelines should trigger reductions in use, with the amount of reductions dependent on the utilization/actual use analysis.
4. Change period of use on the permit: instead of May 1 to October 22, change to dates that allow either spring or fall use (but not both in the same year). Actual dates would be determined through coordination with the permittee in discussions in 2007.
5. Wildlife escape ramps must be installed in all troughs.

IV. Appendices

Appendix 1: Map

Appendix 2: Trend Data

Appendix 3: Summary of Rangeland Health Evaluations

Appendix 4: Summary of Proper Functioning Condition Assessments

Appendix 5: Actual Use and Utilization Table