

## 2006 Evaluation of North Dixie Creek Allotment (#1026) Relative to Rangeland Health Standards

Assessment Participants (Name & Discipline or Interest):

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### I. Area Evaluated

The North Dixie Creek Allotment (#1026) is located at 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. The allotment consists of 3246 acres split into two pastures. Each pasture was evaluated separately. The active grazing use allowable under the ten-year permit is 193 AUMs on public land plus 300 AUMs on private land, for a total of 493 AUMs (39% public land) within the dates of 6/1 to 11/30. Management has been alternating spring use and fall use, every other year, typically June use one year and October use the next year.

	<u>Total</u>	<u>Public Land</u>	
	<u>Acres</u>	<u>Acres</u>	<u>Predominant Elevations (feet)</u>
Upper Pasture	1206	318	3900- 5400
Lower Pasture	2040	754	3300- 4500

### II. Data and Information Used in the Evaluation

#### A. Trend Plots

Data from the trend plots 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 4 sites 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 17 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

E. Actual Use and Utilization Data

Appendix 5 summarizes the actual use records (reported by the permittee) and range forage utilization data (estimated by BLM range personnel in accordance with Technical Reference 4400-3, Utilization Studies and Residual Measurements).

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 trend plots.

**Determinations for Standard 1:**

Upper Pasture:

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

Rangeland Health Assessments in 2006 showed none-to-slight departure from expected levels in Soil & Site Stability and Hydrologic Function. Trend data however indicated less litter on the ground in 2004 than in 1987 or 1993.

Lower Pasture:

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

Rangeland Health Assessments showed none-to-slight departure from expected levels in Soil & Site Stability and Hydrologic Function. Trend data indicated an overall static situation in terms of bare ground and ground cover, with less litter cover but more live vegetation cover.

**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.

**Determinations for Standard 2:**

Upper Pasture:

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

0.76 mile of stream (66% of the public land stream mileage) was functioning at risk with trend not apparent, and the remaining 0.39 mile (34%) was at Proper Functioning Condition. Heavy riparian utilization by livestock has been recorded in recent years.

Lower Pasture:

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

All of the stream mileage in this pasture was rated at Proper Functioning Condition (68% or 2.29 miles) or Functioning at Risk with upward trend (32% or 1.06 mile).

**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.

**Determinations for Standard 3:**

Upper Pasture:

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

Rangeland Health Assessment in 2006 showed slight-to-moderate departure from expected levels in Biotic Integrity. There was a clear upward trend in the frequency of bluebunch wheatgrass at the trend plot between 1987 and 2004.

Lower Pasture:

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

Rangeland Health Assessments in 2006 showed none-to-slight departure from expected levels in Biotic Integrity. The trend plot showed an upward trend between 1988 and 1993, then a static trend between 1993 and 2004.

**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 from North Dixie Creek, plus professional judgment based mainly on the observations from the proper functioning condition assessments.

**Determinations for Standard 4:**

Upper Pasture:

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

See below.

Lower Pasture:

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, with both pastures believed to contribute to the problem. Heavy to severe livestock utilization recorded 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.

**Determinations for Standard 5:**

Upper Pasture:

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

See below.

Lower Pasture:

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

For both pastures, no species of T & E importance were noted, and native species habitat was adequate. Juniper encroachment was identified as a concern.

**Conformance with Guidelines for Livestock Grazing Management**

Grazing utilization levels along riparian zones indicate that 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. Ensure that the allotment boundary fence on the south side of Upper Pasture is completed so that this allotment is fully separated from Pedro Mountain Allotment. Ensure that the fence on the north side (border with Lost Basin Allotment) is kept maintained to prevent trespass from Lost Basin cattle. These would be the actions identified to improve the section of stream rated as Functional at Risk, trend not apparent.
2. Require the building of a new fence splitting the Lower Pasture at the private/public property boundary line. This would allow the lower section of North Dixie Creek on public land to be grazed for shorter periods in order to better control riparian utilization. This new pasture should be managed to achieve riparian objectives, and the cattle should be removed when utilization triggers are reached, using stubble heights determined by what is selected as the key species.
3. Until the above fence is completed, the end-of-season utilization standard at key areas should be set at 45% for herbaceous riparian vegetation and 30% for willows (stubble height measurements could be used instead of percent utilization if this is found to be easier for the permittee to monitor). Failure to leave an adequate stubble height should result in shortening the grazing period in the following year.
4. After completion of the above fence, determine the periods of use in the public land portion of Lower Pasture in coordination with the permittee, with riparian utilization monitoring being used to help set the correct amount of use.

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