Results of Assessment/Establishment of Cause

Achieving Standards For Rangeland Health
Conforming with Guidelines for Livestock Grazing Management

Resource Area: Central Oregon Resource Area
Geographic Areas Assessed: Squaw Creek Watershed
Allotment Areas Assessed: Squaw Creek Allotment, #2558
Period Assessment Conducted: June, 2003 to February, 2004

Assessment Benchmark: Standards for Rangeland Health and Guidelines for Livestock Grazing for Public Lands in Oregon and Washington were approved on August 12, 1997 by the Secretary of Interior.

Assessment Objectives:

Per USDI/USDA Tech Reference 1734-6 of 2000: Provide preliminary assessment of soil/site stability, hydrologic function, biological integrity. Help land managers identify areas that are potentially at risk for degradation. Provide early warnings of potential problems and opportunities. Provide capability to communicate fundamental ecological concepts to a variety of audiences. Improve communications among interest groups. Provide capability to select monitoring sites for future monitoring programs. Help understand and communicate rangeland health issues.

Per BLM, Oregon State IB No. OR-98-315 of 7/24/98: Assess rangeland condition relative to Rangeland Health Standards; determine cause in those cases where standards are not being met; and take action that will result in progress toward standards attainment where these are not being met.

Assessment Findings:

The grazing lessee, Humphreys Ranch Inc. is developing a ranch plan in cooperation with Natural Resources Conservation Service to create additional pastures and develop additional water sources for the livestock.

Assessment Preparers:

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Assessment Approval

Christina M. Welch, Field Manager Christina M. Welch Date: 9/30/04

Squaw Creek Allotment

Public Land Upland Acres: 5,063 acres
Public Land Riparian/Wetland Acres: 20 acres
Public Land Stream Miles: 2.0 miles; perennial

General:

1. This information applies only to BLM-administered lands within the allotment.
2. Where Allotment Monitoring Sites are referenced, information from these sites will include photographs, vegetation data, forage utilization estimates, trend rating forms, cover worksheets, and/or Rangeland Health Evaluation Summary Worksheets (all located in the respective allotment's monitoring files).
3. The information presented here is not intended to be all-encompassing. Rather, the intent is to focus on documenting the rationale and evidence that supports the determinations and, where applicable, the findings of cause.

Squaw Creek Allotment, #2558

Oaesis Range Sites	Dominant Species on Range Site	Acres	% of Allotment
	Poor Condition		
46	Western Juniper/Sandberg Bluegrass	59 acres	
38	Western Juniper/Big Sagebrush/Sandberg Bluegrass	95 acres	
68, 19, 10	Western Juniper/Big Sagebrush/Cheatgrass	80 acres	
11	Big Sagebrush/Cheatgrass	129 acres	
43	Cheatgrass/Bluebunch Wheatgrass	22 acres	
10,20	Big Sagebrush/Cheatgrass	360 acres	
Totals		**745 acres**	**15%**
	Fair Condition		
33,51,50	Cheatgrass/Sedge sp.	206 acres	
71	Nevada Bluegrass/Sedge sp.	17 acres	
45	Cheatgrass/Idaho Fescue	15 acres	
44,8	Big Sagebrush/Idaho Fescue	260 acres	
51,56	Cheatgrass/Sedge sp.	77 acres	
27,21	Western Juniper/Bluebunch Wheatgrass	336 acres	
15,16,18	Big Sagebrush/Bluebunch Wheatgrass	403 acres	
9,18,30	Western Juiper/Big Sagebrush/Bluebunch Wheatgrass	752 acres	
39	Stiff Sagebrush/Sandberg Bluegrass	752 acres	
Totals		**2,134 acres**	**42%**
	Good		
58, 56,48	Stiff Sagebrush/Sandberg Bluegrass	576 acres	
47,42	Stiff Sagebrush/Cheatgrass	129 acres	
36	Western Juniper/Gray Rabbitbrush/Bluebunch Wheatgrass/Squirreltail	177 acres	
35,34,73	Low Sagebrush/Sandberg Bluegrass	258 acres	

Oaesis Range Sites	Dominant Species on Range Site	Acres	% of Allotment
24	Bluebunch Wheatgrass	12 acres	
7	Western Juniper/Bluebunch Wheatgrass	888 acres	
26	Idaho Fescue	31 acres	
12,13	Big Sagebrush/Bluebunch Wheatgrass	63 acres	
Totals		**2,134 acres**	**42%**
	Excellent		
33	**Cheatgrass/Idaho Fescue**	**45 acres**	**1%**

Standard 1 (Watershed Function-Uplands)

A. Determination:

☐ Meeting the Standard
☐ Not Meeting the Standard; Making Significant Progress Toward
☑ Not Meeting the Standard; Not Making Significant Progress Toward
☐ Standard Does Not Apply

B. Establishment of Cause:

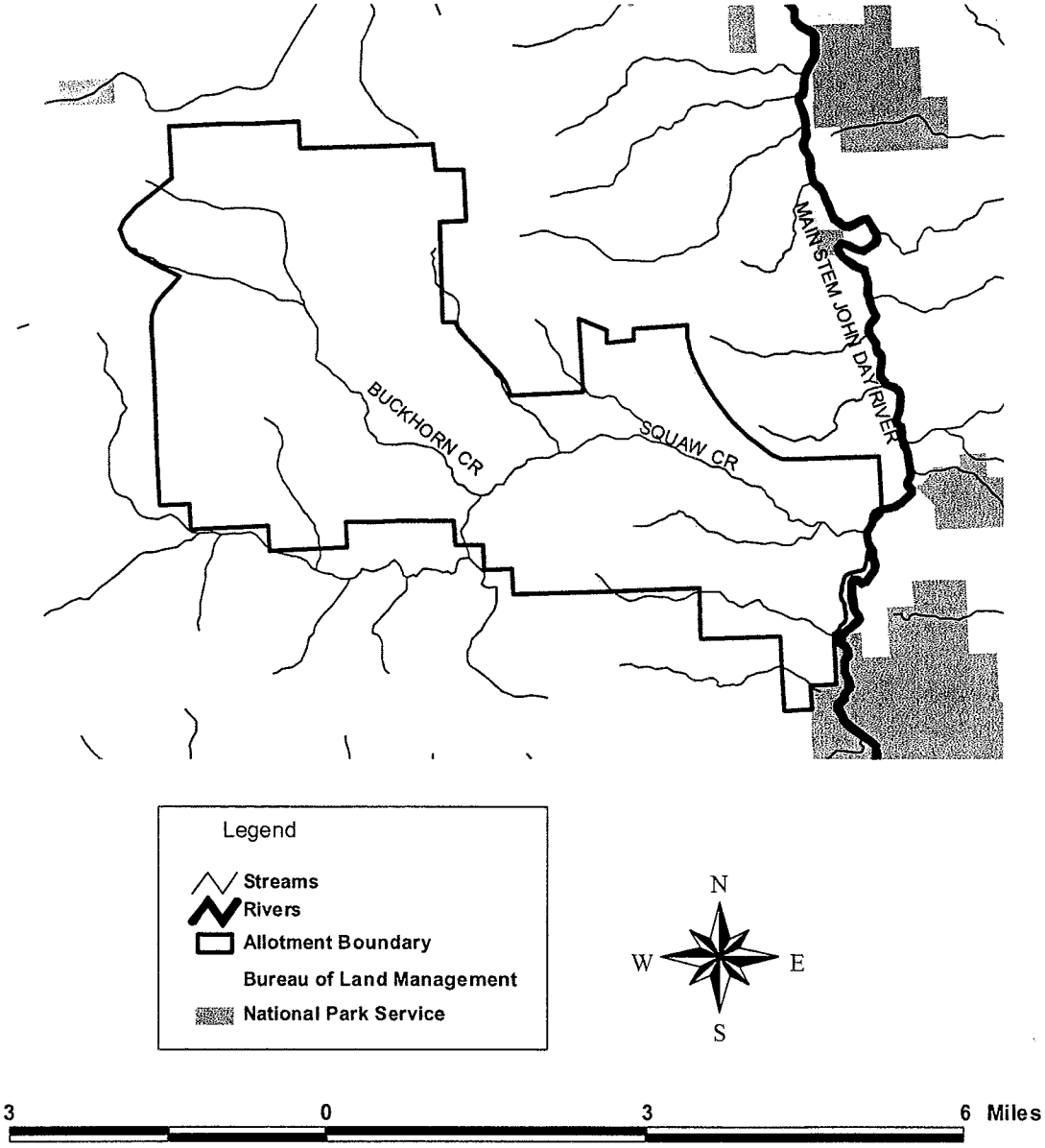
☑ Livestock are significantly contributing to the failure to meet the standard.
☐ Livestock are not significant contributors to the failure to meet the standard.
☐ Failure to meet the standard is related to other uses or conditions: **X** on-site; ___ off-site

Rationale/Information Sources:

In the higher elevations, upland soils support plant communities and maintain plant populations that efficiently capture, store, and beneficially release water. Bunchgrass plant communities dominate the upland areas in the higher elevations. Because of topography and the lack of developed water, the livestock do not graze these areas. Standard one **is** being met in the higher elevation upland sites.

In the lower elevations, upland sites have been heavily impacted by current and historic season – long grazing and juniper encroachment. Cheatgrass plant communities dominate the upland areas adjacent to the riparian areas. In the riparian areas, the livestock have been hedging the young woody species and heavily grazing the herbaceous vegetation. Standard one **is not** being met in the riparian areas and the uplands adjacent to the riparian areas.

Squaw Creek Allotment #2558



Standard 2 (Watershed Function-Riparian/Wetland Areas)

A. Determination:

☐ Meeting the Standard
☐ Not Meeting the Standard; Making Significant Progress Toward
☑ Not Meeting the Standard; Not Making Significant Progress Toward
☐ Standard Does Not Apply

B. Establishment of Cause:

☑ Livestock are significantly contributing to the failure to meet the standard.
☐ Livestock are not significant contributors to the failure to meet the standard.
☑ Failure to meet the standard is related to other uses or conditions: X on-site; ____ off-site.

Rationale/Information Sources:

In September 2003, an interdisciplinary team assessed Proper Functioning Condition on Buckhorn Creek. Buckhorn Creek was rated functional-at risk with an upward trend, but very close to properly functioning condition for several reasons. First, there was not a diverse age-class distribution or composition of riparian-wetland vegetation. Livestock have been hedging young woody species and heavily grazing areas that could support herbaceous sedges and rushes. Several mid channel bars indicate elevated sediment loads. The stream is not in balance with the sediment being supplied by the watershed. Road encroachment and livestock grazing are both contributing to Buckhorn Creek **not** meeting the standard.

The interdisciplinary team also assessed Proper Functioning Condition on Squaw Creek. Squaw Creek was rated as proper functioning at risk, no trend apparent. There is not a diverse age-class distribution or composition of riparian-wetland vegetation. Historic land use and road construction caused Squaw Creek to down cut to bedrock. Along most of the channel, mature alder trees now form a stable monoculture. A few mock orange and dead cottonwood trees are scattered along the abandoned floodplain. The herbaceous vegetation has been shaded out and woody species lack young sprouts. Unless large debris jams develop and revegetate with herbaceous vegetation, this channel will not aggrade towards its abandoned floodplain. Current road encroachment and livestock grazing may limit future herbaceous recovery, and are contributing to Squaw creek **not** meeting standard two.

Standard 3 (Ecological Processes)

A. Determination:

☐ Meeting the Standard
☐ Not Meeting the Standard; Making Significant Progress Toward
☑ Not Meeting the Standard; Not Making Significant Progress Toward
☐ Standard Does Not Apply

B. Establishment of Cause:

☑ Livestock are significantly contributing to the failure to meet the standard.
☐ Livestock are not significant contributors to the failure to meet the standard.
☐ Failure to meet the standard is related to other uses or conditions: X on-site; ___ off-site.

Rationale/Information Sources:

In higher elevations, plant composition and structure are similar by soil type. There appears to be little or no soil disturbance from wind or water. Site appropriate quantities of litter are accumulating in place and biological activity appears to be suitable for the site. Because of topography and the lack of developed water, livestock do not graze these areas.

In lower elevations, there are not healthy, productive, and diverse plant communities appropriate to the soil, climate, and landforms. These plant populations do not support ecological processes of nutrient cycling and energy flow. Because of past and present season-long grazing and encroachment of juniper, the bunchgrass communities in the lower elevations have been changed to cheatgrass, annual grasses, and forbs plant communities. Because of the present season-long grazing in the lower elevations on the allotment, this standard is not met.

Standard 4 (Water Quality)

A. Determination:

☑ Meeting the Standard
☐ Not Meeting the Standard; Making Significant Progress Toward
☐ Not Meeting the Standard; Not Making Significant Progress Toward
☐ Standard Does Not Apply

B. Establishment of Cause:

☐ Livestock are significantly contributing to the failure to meet the standard.
☐ Livestock are not significant contributors to the failure to meet the standard.
☐ Failure to meet the standard is related to other uses or conditions: **X** on-site; ___ off-site.

Rationale/Information Source:

Surface water and groundwater quality complies with State water quality standards.

Standard 5 (Habitat for Native, T & E and Locally Important Species)

A. Determination:

☐ Meeting the Standard
☐ Not Meeting the Standard; Making Significant Progress Toward
☑ Not Meeting the Standard; Not Making Significant Progress Toward
☐ Standard Does Not Apply

B. Establishment of Cause:

☑ Livestock are significantly contributing to the failure to meet the standard.
☐ Livestock are not significant contributors to the failure to meet the standard.
☐ Failure to meet the standard is related to other uses or conditions: ___ on-site; ___ off-site.

Rationale/Information Sources:

Squaw Creek supports spawning and rearing habitat for Middle Columbia River (MCR) steelhead and Buckhorn Creek has suitable rearing habitat for MCR steelhead. Rearing habitat for MCR steelhead in Frank Creek is limited to the lower 100 yards of stream on BLM lands, where a 6-foot headcut blocks upstream access.

In uplands away from riparian areas, especially those with steeper topography, habitats support healthy, productive and diverse communities of native plants and animals appropriate to soil, climate, and landform. An exception to this is areas where increased juniper occupation has altered the habitat function of some upland sites. In these cases juniper is out-competing (or has already out-competed) many significant plant and shrub species making those sites less diverse and productive habitats for wildlife species.

Riparian areas, and upland areas adjacent to riparian areas, **do not** support healthy, productive, and diverse populations and communities of native plants and animals appropriate to soil, climate, and landform. Many of these areas are grazed season long and have no riparian oriented grazing system.

Riparian structure, density and diversity are the most important attributes for riparian associated wildlife species. Where grazing can be controlled in riparian habitats and seasonally light-to-moderate forage removal is practiced, the impact can be small to riparian vegetation and wildlife. When riparian systems are grazed, moderate use during late-fall and winter, or short-term use in spring, will be less damaging than continuous or growing-season grazing, and would thus have less of an impact on wildlife species that use these habitat types.

Livestock grazing systems that provide for the physiological needs of riparian and upland vegetation would increase the suitability of these habitats for wildlife use.

Desirable wildlife cover and structure conditions in rangelands currently influenced by annual grass species (cheatgrass and medusahead rye), and juniper may be difficult to obtain in the short or long term without rehabilitation efforts, regardless of the grazing system.

VI. Guidelines for Livestock Grazing Management:

☐ Conforms with Guidelines for Livestock Grazing Management
☑ Does Not Conform to Guidelines for Livestock Grazing Management, Guideline Numbers: 1b,f,g,h,j and 2,3,4,5,6

Livestock Grazing Management Guidelines

☑ 1: The season, timing, frequency, duration and intensity of livestock grazing use should be based on the physical and biological characteristics of the site and the management in order to:

☐ a. provide adequate cover to promote infiltration, conserve soil moisture and to maintain soil stability in upland areas

☑ b. provide adequate cover and plant community structure to promote streambank stability, debris and sediment capture and floodwater energy dissipation in riparian areas.

☐ c. promote soil surface conditions that support infiltration

☐ d. avoid sub-surface soil compaction that retards the movement of water in the soil profile.

☐ e. help prevent the increase and spread of noxious weeds

☑ f. maintain or rest for diverse plant populations and communities that fully occupy the potential rooting volume of the soil

☑ g. maintain or restore plant communities to promote photosynthesis throughout the potential growing season

☑ h. promote soil and site conditions that provide the opportunity for the establishment of desirable plants

☐ i. protect or restore water quality

☑ j. provide for the life cycle requirements and maintain or restore the habitat elements of native and desired plants and animals

☑ 2: Grazing mgmt plans should be tailored to site specific conditions and plan objectives. Livestock grazing should be coordinated with the timing of precipitation, plant growth and plant form. Soil moisture, plant growth stage and timing of peak stream flows are key factors in determining when to graze. Response to different grazing strategies varies with differing ecological sites.

- ☑ 3: Grazing mgmt systems should consider nutritional and herd health requirements of the livestock

- ☑ 4: Integrate grazing mgmt systems into the year-round mgmt strategy and resources of the permittee(s) or lessee(s). Consider the use of collaborative approaches in this integration.

- ☑ 5: Consider competition for forage and browse among livestock, big game animals and wild horses in designing and implementing a grazing plan.

- ☑ 6: Provide periodic rest from grazing for rangeland vegetation during critical growth periods to promote plant vigor, reproduction and productivity.

- ☐ 7: Range improvement practices should be prioritized to promote rehabilitation and resolve grazing concerns on transitory grazing land.

- ☐ 8: Consider the potential for conflict between grazing use on public land and adjoining land uses in the design and implementation of a grazing mgmt plan.