United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Winnemucca District Office
Humboldt River Field Office
5100 East Winnemucca Boulevard
Winnemucca, Nevada 89445
Phone: (775) 623-1500 Fax: (775) 623-1503
Email: wfoweb@blm.gov
www.blm.gov/nv/st/en/fo/wfo.html

In Reply Refer To:
4130
(NV010.16)
#2702136

Determination Document/Indicators for Rangeland Health (IIRH)/
Standards for Rangeland Health (SRH)
Pueblo Mountain Allotment

Introduction

An assessment of the indicators for rangeland health (IIRH) was conducted in 2012 on the Pueblo Mountain Allotment. This data was then used to determine if the allotment has been meeting the Standards for Rangeland Health (SRH). The following determination has been made based on the information analyzed in that assessment.

Determination

A. Indicators of Rangeland Health (IIRH)

A total of 9 plots representing 11,877 acres were established in the Pueblo Mountain Allotment. The plots were located in 6 different pastures and on 8 ecological sites. Methods used for the assessment were line-point intercept, canopy gap, and soil surface aggregate stability. Pueblo Mountain Allotment Indicators of Rangeland Heath (IIRH) included: soil and site stability (Soil), hydrologic function (Hydro), and biotic integrity (Biotic) qualitative indicators. Data collected was compared with the Ecological Site Description reference condition for each site. This comparison showed the deviation of the current allotment conditions from what should be expected within each ecological site.

Ecological Site	Ecological Site Name	DRG	Plots (n)	Acres Assessed	Acres Represented
R023XY039NV	Loamy slope 10-14		2	4.68	1,576
R023XY057NV	Granitic loam 10-12		1	2.34	3,753
R023XY068NV	Granitic loam 8-10		1	2.34	2,104
R023XY212OR	Loamy 10-12 pz		1	2.34	608
R023XY301OR	Droughty S. slope 11-13		1	2.34	250

R024XY001NV	Dunes 6-10	7	1	2.34	1,931
R024XY007NV	Saline bottom	10	1	2.34	670
R024XY022NV	Sodic terrace 8-10		1	2.34	985
Totals			**9**	**21.06**	**11,877**

DRG = Disturbance Response Group; pz = precipitation zone; (n) = number of plots
DRG = a group of Ecological Site Descriptions that respond to disturbance similarly

In the Pueblo Mountain Allotment, 2 out of the 7 plots that received an IIRH assessment met the *None to Slight* (NS) or *Slight to Moderate* (SM) categories for all three soil, hydrologic, and biotic qualitative indicators. Soil and site stability was rated as *None to Slight* or *Slight to Moderate* for 50% of plots and *Moderate* for the other 50%. Hydrologic function had 83% of plots in the *None to Slight* or *Slight to Moderate* and 17% in the *Moderate* category. Biotic Integrity had 17% of plots in the *Slight to Moderate*, 33% in the *Moderate*, and 50% in the *Moderate to Extreme* category.

Ecological Site	Plot	DRG	Soil	Hydro	Biotic
R023XY039NV Loamy Slope 10-14	Alberson Basin 10		**M**	SM	**ME**
	Chokecherry 3	1	**M**	SM	**ME**
R023XY057NV Granitic Loam 10-12	Black Mountain 1		NS	NS	SM
R023XY068NV Granitic Loam 8-10	Black Mountain 2		SM	**M**	**ME**
R023XY212OR Loamy 10-12	Denio Basin 5		-	-	-
R023XY301OR Drought S. Slope 11-13	Alberson Basin 7		-	-	-
R024XY001NV Dunes 6-10	Cowden 8	7	SM	NS	SM
R024XY007NV Saline Bottom	Continental 4	10	**M**	SM	**M**
R024XY022NV Sodic Terrace 8-10	Cowden 11	3A	NS	SM	**M**

*Ratings are *None Slight* (NS), *Slight to Moderate* (SM), *Moderate* (M), *Moderate to Extreme* (ME), and *Extreme to Total* (ET). Red indicates ratings with high deviations from reference conditions.

B. Standards for Rangeland Health

Through examination of the data collected through the IIRH as well as data and field observations collected through upland and riparian monitoring of the allotment it can be determined as to whether or not the allotment is meeting the Standards for Rangeland Health (SRH). These standards are :

Sierra Front-Northwestern Great Basin Area RAC Standards:

STANDARD 1: SOILS --Soil processes will be appropriate to soil types, climate and land form.

As indicated by:

-Surface litter is appropriate to the potential of the site;

-Soil crusting formations in shrub interspaces, and soil compaction are minimal or not in evidence, allowing for appropriate infiltration of water;

-Hydrologic cycle, nutrient cycle and energy flow are adequate for the vegetative communities;

-Plant communities are diverse and vigorous, and there is evidence of recruitment; and

-Basal and canopy cover (vegetative) is appropriate for site potential.

STANDARD 2: RIPARIAN/WETLANDS --Riparian/Wetland systems are in properly functioning condition.

As indicated by:

-Sinuosity, width/depth ratio and gradient are adequate to dissipate stream flow without excessive erosion or deposition;

-Riparian vegetation is adequate to dissipate high flow energy and protect banks from excessive erosion; and

-Plant species diversity is appropriate to riparian-wetland systems.

STANDARD 3: WATER QUALITY-Water quality criteria in Nevada or California State Law shall be achieved or maintained.

As indicated by:

-Chemical constituents do not exceed the water quality Standards;

-Physical constituents do not exceed the water quality Standards;

-Biological constituents do not exceed the water quality Standards; and

-The water quality of all water bodies, including ground water located on or influenced by BLM lands will meet or exceed the applicable Nevada or California water quality Standards. Water quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, and anti-degradation requirements set forth under State law, and as found in Section 303(c) of the Clean Water Act.

STANDARD 4: PLANT AND ANIMAL HABITAT-Populations and communities of native plant species and habitats for native animal species are healthy, productive and diverse.

As indicated by:

-Good representation of life forms and numbers of species;

-Good diversity of height, size and distribution of plants;

-Number of wood stalks, seed stalks, and seed production adequate for stand maintenance; and

-Vegetative mosaic, vegetative corridors for wildlife, and minimal habitat fragmentation.

STANDARD 5: SPECIAL STATUS SPECIES HABITAT-Habitat conditions meet the life cycle requirements of special status species.

As indicated by:

-Habitat areas are large enough to support viable populations of special status species;

-Special status plant and animal numbers and ages appear to ensure stable populations;

-Good diversity of height, size, and distribution of plants;

-Number of wood stalks, seed stalks, and seed production adequate for stand maintenance; and

-Vegetative mosaic, vegetative corridors for wildlife, and minimal habitat fragmentation.

Southeast Oregon Resource Advisory Council:

Standard 1 Watershed Function – Uplands: Upland soils exhibit infiltration and permeability rates, moisture storage and stability that are appropriate to soil, climate and landform.

As indicated by:

- amount and distribution of plant cover (including forest canopy cover); ° amount and distribution of plant litter;

- accumulation/incorporation of organic matter;

- amount and distribution of bare ground;
- amount and distribution of rock, stone, and gravel;
- plant composition and community structure;
- thickness and continuity of A horizon;
- character of micro-relief;
- presence and integrity of biotic crusts;
- root occupancy of the soil profile;
- biological activity (plant, animal, and insect); and
- absence of accelerated erosion and overland flow.

Soil and plant conditions promote moisture storage as evidenced by:

- amount and distribution of plant cover (including forest canopy cover);
- amount and distribution of plant litter;
- plant composition and community structure; and
- accumulation/incorporation of organic matter

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

As indicated by:

Hydrologic, vegetative, and erosional/depositional processes interact in supporting physical function, consistent with the potential or capability of the site, as evidenced by:

- frequency of floodplain/wetland inundation;
- plant composition, age class distribution, and community structure;
- root mass;
- point bars revegetating;
- streambank/shoreline stability;
- riparian area width;
- sediment deposition;
- active/stable beaver dams;
- coarse/large woody debris;
- upland watershed conditions;
- frequency/duration of soil saturation; and
- water table fluctuation.

Stream channel characteristics are appropriate for landscape position as evidenced by:

- channel width/depth ratio;
- channel sinuosity;
- gradient;
- rocks and coarse and/or large woody debris;
- overhanging banks;
- pool/riffle ratio;
- pool size and frequency; and
- stream embeddedness.

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.

As indicated by:

Photosynthesis is effectively occurring throughout the potential growing season, consistent with the potential/capability of the site, as evidenced by plant composition and community structure.

Nutrient cycling is occurring effectively, consistent with the potential/capability of the site, as evidenced by:

- plant composition and community structure;
- accumulation, distribution, incorporation of plant litter and organic matter into the soil;
- animal community structure and composition;
- root occupancy in the soil profile; and
- biological activity including plant growth, herbivory, and rodent, insect and microbial activity.

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

As indicated by:

Water quality meets applicable water quality standards as evidenced by:

- water temperature;
- dissolved oxygen;
- fecal coliform;

- turbidity;
- pH;
- populations of aquatic organisms; and
- effects on beneficial uses (i.e., effects of management activities on beneficial uses as defined under the Clean Water Act and State implementing regulations).

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.

As indicated by:

Essential habitat elements for species, populations and communities are present and available, consistent with the potential/capability of the landscape, as evidenced by:

- plant community composition, age class distribution, productivity;
- animal community composition, productivity;
- habitat elements;
- spatial distribution of habitat;
- habitat connectivity; and
- population stability/resilience

1. Statement of Achievement or Non-Achievement

a. STANDARD 1: SOILS --Soil processes will be appropriate to soil types, climate and land form.

Met or Making Significant Progress

Rationale: Soil processes appropriate to soil type, climate and landform are being attained and improving in the uplands. Six out of the nine ecological site plots were rated as having none to low deviation from the ecological site description in the soils category. From 2001 to 2011 utilization levels have been 50% or less on key forage upland grass species (bottlebrush squirreltail, Indian ricegrass, Thurber's needlegrass, bluegrasses, blue bunch wheatgrass, and Idaho fescue) at the end of the season.

b. STANDARD 2: RIPARIAN/WETLANDS --Riparian/Wetland systems are in properly functioning condition.

Not meeting

Rationale: A Proper Functioning Condition assessment was conducted on Denio Creek in 1997. At that time the creek was divided into three reaches. The upper reach was determined to be properly functioning. The middle reach was determined to be functional at risk with no apparent trend. The lower reach was determined to be properly functioning.

In 2012 these reaches were re-assessed. At this time, the upper and middle reaches were determined to be functioning at risk and the lower reach was determined to be properly functioning.

c. STANDARD 3: WATER QUALITY-Water quality criteria in Nevada or California State Law shall be achieved or maintained.

Met or Making Significant Progress

Rationale:

d. STANDARD 4: PLANT AND ANIMAL HABITAT-Populations and communities of native plant species and habitats for native animal species are healthy, productive and diverse.

Met or Making Significant Progress

Rationale:

e. STANDARD 5: SPECIAL STATUS SPECIES HABITAT-Habitat conditions meet the life cycle requirements of special status species.

Not Met

Rationale:

Streambank alteration has consistently exceeded the perimeters set in the Biological Assessment and Biological Opinion for LCT occupied streams

2. Conformance or Non-Conformance with Guidelines

Current livestock grazing management is resulting in the nonattainment of the standards and is therefore not in conformance with the guidelines.

Based on the information provided in the assessment, I have determined that three of the five standards for rangeland health are being met or that significant progress is being made towards meeting these standards for rangeland health and two standards for rangeland health is not being met. In addition, existing livestock grazing is not in conformance with the guidelines for the standards for rangeland health.

_____

Authorized Officer Date