

## APPENDIX C

### NORTHEASTERN GREAT BASIN AREA

#### PREAMBLE

The Nevada Northeastern Great Basin Resource Advisory Council (RAC), as chartered by the Department of the Interior to promote healthy rangelands, has developed Standards and Guidelines for grazing administration on about 16.2 million acres of public lands administered by the Bureau of Land Management within the designated geographic area of the Northeastern Great Basin. The RAC in developing these Standards and Guidelines, understands and agrees that grazing is only one of the multiple uses recognized under the Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1739, 1740). These recommended Standards and Guidelines reflect the stated goals of improving rangeland health while providing for the viability of the livestock industry in the Northeastern Great Basin.

#### NE RAC'S INTENDED USE OF STANDARDS AND GUIDELINES

Standards and Guidelines will be implemented through terms and conditions of grazing permits, leases, and other authorizations, grazing-related portions of activity plans (including Allotment Management Plans), and through range improvement-related activities.

The RAC anticipates that in most cases the Standards and Guidelines themselves will not be terms and conditions of various authorizations but that the terms and conditions will reflect the Standards and Guidelines.

The RAC intends that the Standards and Guidelines will result in a balance of sustainable development and multiple use along with progress towards attaining healthy, properly functioning rangelands. For that reason, wording has been adopted in this final rule that will require the authorized officer to take appropriate action upon determining the existing grazing management practices are failing to ensure significant progress toward the fulfillment of the Standards and toward conformance with the Guidelines.

The RAC intends that assessments and corrective actions will be undertaken in priority order as determined by BLM.

The BLM will use a variety of data including monitoring records, assessments, and knowledge of the locale to assist in making the "significant progress" determination. It is anticipated that in many cases it will take numerous grazing seasons to determine direction and magnitude of trend. However, actions will be taken to establish significant progress toward conformance as soon as sufficient data are available to make informed changes in grazing practices.

## STANDARDS AND GUIDELINES

### STANDARD 1. UPLAND SITES:

Upland soils exhibit infiltration and permeability rates that are appropriate to soil type, climate and land form.

As indicated by:

- Indicators are canopy and ground cover, including litter, live vegetation and rock, appropriate to the potential of the site.

### GUIDELINES:

- 1.1 Management practices will maintain or promote upland vegetation and other organisms and provide for infiltration and permeability rates, soil moisture storage, and soil stability appropriate to the ecological site within management units.
- 1.2 When grazing practices alone are not likely to restore areas of low infiltration or permeability, land management treatments should be designed and implemented where appropriate.
- 1.3 Management practices are adequate when significant progress is being made toward this Standard.

### STANDARD 2. RIPARIAN AND WETLAND SITES:

Riparian and wetland areas exhibit a properly functioning condition and achieve State water quality criteria.

As indicated by:

- Stream side riparian areas are functioning properly when adequate vegetation, large woody debris, or rock is present to dissipate stream energy associated with high water flows. Elements indicating proper functioning condition such as avoiding accelerating erosion, capturing sediment, and providing for groundwater recharge and release are determined by the following measurements as appropriate to the site characteristics:
  - Width/Depth ratio;
  - Channel roughness;
  - Sinuosity of stream channel;
  - Bank stability;
  - Vegetative cover (amount, spacing, life form); and
  - Other cover (large woody debris, rock).

- Natural springs, seeps, and marsh areas are functioning properly when adequate vegetation is present to facilitate water retention, filtering, and release as indicated by plant species and cover appropriate to the site characteristics.
- Chemical, physical and biological water constituents are not exceeding the State water quality Standards.

#### GUIDELINES:

- 2.1 Management practices will maintain or promote sufficient vegetation cover, large woody debris, or rock to achieve proper functioning condition in riparian and wetland areas. Supporting the processes of energy dissipation, sediment capture, groundwater recharge, and stream bank stability will thus promote stream channel morphology (e.g., width/depth ratio, channel roughness, and sinuosity) appropriate to climate, landform, gradient, and erosional history.
- 2.2 Where grazing management practices are not likely to restore riparian and wetland sites, land management treatments should be designed and implemented where appropriate to the site.
- 2.3 Management practices are adequate when significant progress is being made toward this Standard.
- 2.4 Grazing management practices will maintain, restore or enhance water quality and ensure the attainment of water quality that meets or exceeds State Standards.

#### STANDARD 3. HABITAT:

Habitats exhibit a healthy, productive, and diverse population of native and/or desirable plant species, appropriate to the site characteristics, to provide suitable feed, water, cover and living space for animal species and maintain ecological processes. Habitat conditions meet the life cycle requirements of threatened and endangered species.

As indicated by:

- Vegetation composition (relative abundance of species);
- Vegetation structure (life forms, cover, height, or age classes);
- Vegetation distribution (patchiness, corridors);
- Vegetation productivity; and
- Vegetation nutritional value.

#### GUIDELINES:

- 3.1 Management practices will promote the conservation, restoration and maintenance of habitat for threatened and endangered species, and other special status species as may be appropriate.
- 3.2 Intensity, frequency, season of use and distribution of grazing should provide for growth and reproduction of those plant species needed to reach long-term land use plan objectives. Measurements of ecological condition and trend/utilization will be in accordance with techniques identified in the Nevada Rangeland Monitoring Handbook.
- 3.3 Grazing management practices should be planned and implemented to allow for integrated use by domestic livestock, wildlife, and wild horses consistent with land use plan objectives.
- 3.4 Where grazing practices alone are not likely to achieve habitat objectives, land treatments may be designed and implemented as appropriate.
- 3.5 When native plant species adapted to the site are available in sufficient quantities, and it is economically and biologically feasible to establish or increase them to meet management objectives, they will be emphasized over non-native species.
- 3.6 Management practices are adequate when significant progress is being made toward this Standard.

#### STANDARD 4. CULTURAL RESOURCES:

Land use plans will recognize cultural resources within the context of multiple use.

#### GUIDELINES:

- 4.1 Rangeland management plans will consider listings of known sites that are National Historic Register eligible or considered to be of cultural significance and new eligible sites as they become known.

## GLOSSARY

Most Definitions are taken from "A Glossary of Terms Used in Range Management" developed through the Society for Range Management. If a definition has been slightly modified it is marked with an \*. Other definitions are from Grazing Administration Regulations Code of Federal Regulations, Chapter 43, Sec. 4100.0-5 or Bureau of Land Management Technical Reference. Definitions also include meanings that were developed by the Northeastern Great Basin Resource Advisory Council to understand their intent in the Standards and Guidelines.

### -B-

**Biotic** - Refers to living components of an ecosystem, e.g., plants and animals.

### -C-

**Canopy** - (1) The vertical projection downward of the aerial portion of vegetation, usually expressed as a percent of the ground so occupied. (2) The aerial portion of the overstory vegetation.

**Canopy Cover** - The percentage of ground covered by a vertical projection of the outermost perimeter of the natural spread of foliage of plants. Small openings within the canopy are included.

**Climate** - The average or prevailing weather conditions of a place over a period of years.

**Conservation** - The use and management of natural resources according to principles that assure their sustained economic and/or social benefits without impairment of environmental quality.

### -D-

**Distribution (Grazing)** - Dispersion of grazing animals within a management unit or area.

### -E-

**Ecological Site** - The kind of land with a specific potential natural community and specific physical site characteristics, differing from other kinds of land in its ability to produce vegetation and to respond to management.

**Edaphic** - Refers to the soil.

**Erosion** - (v.) Detachment and movement of soil or rock fragments by water, wind, ice or gravity. (n.) The land surface worn away by running water, wind, ice, or other geologic agents, including such processes as gravitational creep.

**Exotic** - An organism or species which is not native to the region in which it is found.  
*Synonym non-native.*

**-G-**

**Ground Cover** - The percentage of material, other than bare ground, covering the land surface. It may include live and standing dead vegetation, litter, cobble, gravel, stones and bedrock. Ground cover plus bare ground would total 100 percent.

**Ground Water** - Subsurface water that is in the zone of saturation. The top surface of the ground water is the "water table". Source of water for wells, seepage, springs.

**Guidelines:** Guidelines are livestock management practices (e.g. tools, methods, strategies and techniques) designed to achieve healthy public lands as defined by Standards and portrayed by Indicators. Guidelines are designed to provide direction, yet offer flexibility for local implementation through activity plans and grazing permits. Activity plans may add specificity to the Guidelines based on local goals and objectives as provided for in adopted manuals, handbooks and policy. Not all Guidelines fit all circumstances. Monitoring or site specific evaluation will determine if significant progress is being made towards achieving the Standards, and if the appropriate Guidelines are being applied.

**-H-**

**Habitat** - The natural abode of a plant or animal, including all biotic, climatic, and edaphic factors affecting life.

**-I-**

**Indicators:** Indicators are observations or measurements of physical, chemical or biological factors used to evaluate site conditions or trends, appropriate to the potential of the site. Indicators will be used to determine whether or not Standards are being met.

**Infiltration** - The flow of a fluid into a substance through pores or small openings. It connotes flow into a substance in contradistinction to the word percolation.

**Infiltration Rate** - Maximum rate at which soil under specified conditions can absorb rain or shallow impounded water, expressed in quantity of water absorbed by the soil per unit of time, e.g., inches/hour.

**Intensity (Grazing)** - A reference to grazing density per unit of time.

**-L-**

**Land Use Plan** - Land use plan means a resource management plan, developed under the provisions of 43 CFR part 1600, or management framework plan. These plans are developed through public participation in accordance with the provisions of the Federal Land Policy and Management Act of 1976 and establish management direction for resource uses of public lands. (43 CFR 4100.0.5)

**Litter** - The uppermost layer of organic debris on the soil surface; essentially the freshly fallen or slightly decomposed vegetal material.



**-M-**

**Management Objective** - The objectives for which rangeland and rangeland resources are managed which includes specified uses accompanied by a description of the desired vegetation and the expected products and/or values.

**Management Plan** - A program of action designed to reach a given set of objectives.

**Marsh** - Flat, wet, treeless areas usually covered by standing water and supporting a native growth of grasses and grasslike plants.

**Monitoring** - The orderly collection, analysis, and interpretation of resource data to evaluate progress toward meeting management objectives.

**Morphology** - The form and structure of an organism, with special emphasis on external features.

**-N-**

**\*Native Species** - A species which is a part of the indigenous fauna or flora of the area in question.

**-O-**

**Overstory** - The upper canopy or canopies of plants. Usually refers to trees, tall shrubs and vines.

**-P-**

**Percolation** - The flow of a liquid through a porous substance.

**Plant Cover** - (1) The plants or plant parts, living or dead, on the surface of the ground. Vegetative cover or herbage cover is composed of living plants and litter cover of dead parts of plants. (2) The area of ground cover by plants of one or more species.

**Proper Functioning Condition** - Riparian-Wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high waterflows, thereby reducing erosion and improving water quality; filter sediment, capture bedload, and aid floodplain development; improve flood-water retention and ground-water recharge; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. (BLM Technical Reference 1737-9)

**-R-**

**Range Improvement** - Range improvement means an authorized physical modification or treatment which is designed to improve production of forage; change vegetation composition; control patterns of use; provide water; stabilize soil and water conditions; restore, protect and improve the condition of rangeland ecosystems to benefit livestock, wild horses and burros, and fish and wildlife. The term includes but is not limited to, structures, treatment projects, and use

of mechanical devices or modifications achieved through mechanical means.

**Riparian** - Referring to or relating to areas adjacent to water or influenced by free water associated with streams or rivers on geologic surfaces occupying the lowest position of a watershed.

-S-

**Seep** - Wet areas, normally not flowing, arising from an underground water source.

**Soil** - (1) The unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants. (2) The unconsolidated mineral matter on the surface of the earth that has been subjected to and influenced by genetic and environmental factors of parent material, climate (including moisture and temperature effects), macro- and micro-organisms, and topography, all acting over a period of time and producing a product - soil - that differs from the material it was derived in many physical, chemical, biological, and morphological properties and characteristics.

**Species** - A taxon or rank species; in the hierarchy or biological classification, the category below genus.

**Species Composition** - The proportions of various plant species in relation to the total on a given area. It may be expressed in terms of cover, density, weight, etc. Synonym *Vegetative composition*.

**Spring** - Flowing water originating from an underground source.

**Standards:** The goal to be strived for.

-T-

**Trend** - The direction of change in ecological status or resource value rating observed over time. Trend in ecological status should be described as *toward*, or *away from* the potential natural community, or as *not apparent*. Trend in a resource value rating for a specific use should be described as *up*, *down* or *not apparent*. Trends in resource value ratings for several uses on the same site at a given time may be in different directions, and there is no necessary correlation between trends in resource value ratings and trend in ecological status. Some agencies use *trend* only in the context of *ecological status*. Synonym *range condition trend*.

-U-

**Utilization** - The proportion of current year's forage production that is consumed or destroyed by grazing animals. May refer either to a single species or to the vegetation as a whole.

-W-

**Watershed** - (1) A total area of land above a given point on a waterway that contributes runoff water to the flow at that point. (2) A major subdivision of a drainage basin.



**Wetlands** - Areas characterized by soils that are usually saturated or ponded, i.e., hydric soils that support mostly water loving plants (hydrophytic plants).