

# Standards and Guidelines for Nevada's Mojave-Southern Great Basin Area

September 2006

## PREAMBLE - GRAZING

The Standards and Guidelines for grazing administration on Bureau of Land Management (BLM) lands in southern Nevada apply to livestock grazing. The Mojave-Southern Great Basin Resource Advisory Council (RAC) intends that the Standards and Guidelines will result in a balance of sustainable development and multiple use along with progress, over time, toward attaining desired rangeland conditions. Standards are expressions of physical and biological conditions required for sustaining rangelands for multiple uses. Guidelines point to management actions related to livestock grazing for achieving the Standards. Guidelines are options that move rangeland conditions toward the multiple use Standards. Guidelines are based on science, best rangeland management practices, and public input. Thus Guidelines indicate the types of grazing methods and practices for achieving the Standards for multiple use, are developed for functional watersheds and implemented at the allotment level.

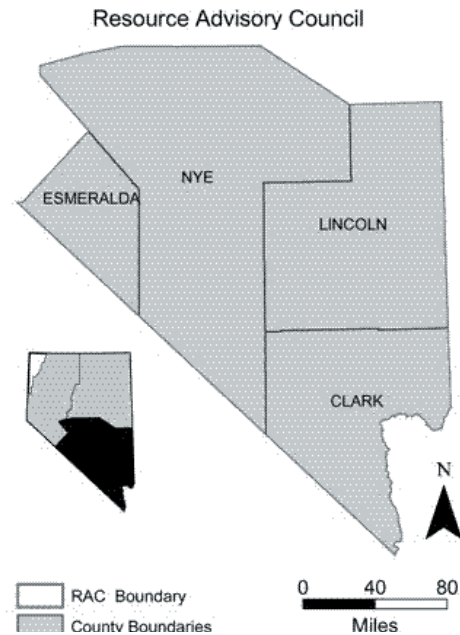
The Mojave-Southern Great Basin Resource Advisory Council recognizes that it will sometimes be a long-term process to restore rangelands to proper functioning condition. In some areas, it may take many years to achieve healthy rangelands.

The Resource Advisory Council may be requested by any party to assist reaching agreement in resolving disputes.

## STANDARDS AND GUIDELINES

### STANDARD 1. SOILS:

Watershed soils and stream banks should have adequate stability to resist accelerated erosion, maintain soil productivity, and sustain the hydrologic cycle.



### Soil indicators:

- Ground cover (vegetation, litter, rock, bare ground);
- Surfaces (e.g., biological crusts, pavement); and
- Compaction/infiltration.

### Riparian soil indicators:

- Stream bank stability.

All of the above indicators are appropriate to the potential of the ecological site.

## GUIDELINES:

1.1 Upland management practices should maintain or promote adequate vegetative ground cover to achieve the standard.

1.2 Riparian-wetland management practices should maintain or promote sufficient residual vegetation to maintain, improve, or restore functions such as stream flow energy dissipation, sediment capture,

groundwater recharge, and streambank stability.

1.3 When proper grazing practices alone are not likely to restore areas, land management practices may be designed and implemented where appropriate.

1.4 Rangeland management practices should address improvement beyond this standard, significant progress toward achieving standards, time necessary for recovery, and time necessary for predicting trends.

## STANDARD 2. ECOSYSTEM COMPONENTS:

Watersheds should possess the necessary ecological components to achieve state water quality criteria, maintain ecological processes, and sustain appropriate uses.

Riparian and wetlands vegetation should have structural and species diversity characteristic of the stage of stream channel succession in order to provide forage and cover, capture sediment, and capture, retain, and safely release water (watershed function).

Upland Indicators:

- Canopy and ground cover, including litter, live vegetation, biological crust, and rock appropriate to the potential of the ecological site.

- Ecological processes are adequate for the vegetative communities.

Riparian Indicators:

- 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.

Water Quality Indicators:

- Chemical, physical and biological constituents do not exceed the state water quality standards. The above indicators shall be applied to the potential of the ecological site.

## GUIDELINES:

2.1 Management practices should maintain or promote appropriate stream channel morphology and structure consistent with the watershed.

2.2 Watershed management practices should maintain, restore or enhance water quality and flow rate to support desired ecological conditions.

2.3 Management practices should maintain or promote the physical and biological conditions necessary for achieving surface characteristics and desired natural plant community.

2.4 Grazing management practices will consider both economic and physical environment, and will address all multiple uses including, but not limited to, (i) recreation, (ii) minerals, (iii) cultural resources and values, and (iv) designated wilderness and wilderness study areas.

2.5 New livestock facilities will be located away from riparian and wetland areas if they conflict with achieving or maintaining riparian and wetland functions. Existing facilities will be used in a way that does not conflict with achieving or maintaining riparian and wetland functions, or they will be relocated or modified when necessary to mitigate adverse impacts on riparian and wetland functions. The location, relocation, design and use of livestock facilities will consider economic feasibility and benefits to be gained for management of lands outside the riparian area along with the effects on riparian functions.

2.6 Subject to all valid existing rights, the design of spring and seep developments shall include provisions to protect ecological functions and processes.

2.7 When proper grazing practices alone are not likely to restore areas of low infiltration or permeability, land management practices may be designed and implemented where appropriate. Grazing on designated ephemeral rangeland watersheds should be allowed only if (i) reliable estimates of production have been made, (ii) an identified level of annual growth or residue to remain on site at the end of the grazing season has been established, and (iii) adverse effects on perennial species and ecosystem processes are avoided.

2.8 Rangeland management practices should address improvement beyond these standards, significant progress toward achieving standards, time necessary for recovery, and time necessary for predicting trends.

### STANDARD 3. HABITAT AND BIOTA:

Habitats and watersheds should sustain a level of biodiversity appropriate for the area and conducive to appropriate uses. Habitats of special status species should be able to sustain viable populations of those species.

#### Habitat Indicators:

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

#### Wildlife Indicators:

- Escape terrain;
- Relative abundance;
- Composition;
- Distribution;
- Nutritional value; and
- Edge-patch snags.

The above indicators shall be applied to the potential of the ecological site.

### GUIDELINES:

3.1 Mosaics of plant and animal communities that foster diverse and productive ecosystems should be maintained or achieved.

3.2 Management practices should emphasize native species except when others would serve better for attaining desired communities.

3.3 Intensity, frequency, season of use and distribution of grazing use should provide for growth, reproduction, and when environmental conditions permit, seedling establishment of those plant species needed to reach long-term land use plan objectives. Measurements of ecological condition, trend, and utilization will be in accordance with techniques identified in the Nevada Rangeland Handbook.

3.4 Grazing management practices should be planned and implemented to provide for integrated use by domestic livestock and wildlife, as well as wild horses and burros inside Herd Management Areas (HMAs).

3.5 Management practices will promote the conservation, restoration and maintenance of habitat for special status species.

3.6 Livestock grazing practices will be designed to protect fragile ecosystems of limited distribution and size that support unique sensitive/endemic species or communities. Where these practices are not successful, grazing will be excluded from these areas.

3.7 Where grazing practices alone are not likely to achieve habitat objectives, land management practices may be designed and implemented as appropriate.

3.8 Vegetation manipulation treatments may be implemented to improve native plant communities, consistent with appropriate land use plans, in areas where identified standards cannot be achieved through proper grazing management practices alone. Fire is the preferred vegetation manipulation practice on B. (1) The combined aerial parts of plants and

cannot be achieved through proper grazing management practices alone. Fire is the preferred vegetation manipulation practice on areas historically adapted to fire; treatment of native vegetation with herbicides or through mechanical means will be used only when other management techniques are not effective.

3.9 Rangeland management practices should address improvement beyond this standard, significant progress toward achieving standards, time necessary for recovery, and time necessary for predicting trends.

## GLOSSARY

Definitions are taken from “A Glossary of Terms Used in Range Management” developed through the Society for Range Management or Bureau of Land Management Technical Reference or from the Dictionary of Ecology, Evolution and Systematics except where noted. Other definitions are from Grazing Administration Regulations Code of Federal Regulations, Chapter 43 Sec. 4100.0.5. Definitions also include meanings that were developed by the Mojave-Southern Great Basin Resource Advisory Council to understand their intent in the Standards and Guidelines.

### -A-

**Annual Growth.** The amount of production of new above ground plant biomass for a given site during a given year.

### -B-

**Biodiversity.** The diversity of organisms in a region; made up of species diversity in individual community-types and the turnover of species across different community-types.

**Biological (Cryptogamic) Crust.** Community of non-vascular primary producers that occur as a “crust” on the surface of soils; made up of a mixture of algae, lichens, mosses, and cyanobacteria (bluegreen algae).

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

### -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. (BLM Technical Reference 4400-7)

**Climate.** The average or prevailing weather conditions of a place over a period of years. (BLM Technical Reference 4400-7)

**Conservation.** The planned management of natural resources; the retention of natural balance, diversity and evolutionary change in the environment.

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

**Cover.** a. (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.

b. (1) The combined aerial parts of plants and mulch, and (2) Shelter and protection for animals and birds. (BLM Manual 4400)

c. (1) Plant material, living (vegetative cover) and dead (litter cover) on the soil surface; (2) The area of ground covered by the canopy projections of a particular plant species, expressed as a scale or as a percentage of total ground surface area.

**Cultural Resources.** A broad, general term meaning any cultural property and any traditional lifeway value. (BLM Manual 8100)

**Cultural property.** A definite location of past human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. (Manual 8100)

### -D-

**Desert Pavement.** A cemented, hydrophobic layer of rocks or small pebbles that occurs over time on desert soil surfaces; prevents water infiltration into soils and wind/water erosion of the soil; often covered with a chemical varnish layer.

**Desired Natural Plant Community.** The type of plant community which is desired for a particular ecological site. This could include native and non-native species depending on the desired land use, but as a natural plant community it must have native species adapted to the climate and soil type as dominants or co-dominants in the community.

**Desired Plant Community.** Of the several plant communities that may occupy a site, the one that has been identified through a management plan to best

meet the plan's objectives for the site. It must protect the site as a minimum.

**Diversity.** (1) The absolute number of species in a community; species richness; (2) A measure of the number of species and their relative abundance in a community; low diversity refers to few species or unequal abundances, high diversity to many species or equal abundances.

**-E-**

**Ecological Processes.** Natural functions including the hydrologic cycle, the nutrient cycle, and energy flow (see also 43 CFR 4180.1(b)).

**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. (BLM Manual 4400)

**Edaphic.** Refers to the soil.

**Endemic Species.** Native to, and restricted to, a particular geographical region, community type, or specific habitat.

**Ephemeral Rangelands.** Rangelands characterized by low, highly seasonal and often episodic rainfall, resulting in annual plants comprising a significant proportion of annual primary production.

**Erosion.** (v.) Detachment and movement of soil or rock fragments by the action of 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*: Not native; alien; a species that has been introduced into an area.

**-F-**

**Forage.** The plant material actually consumed by (or available to) grazing animals.

**Fragile Ecosystems.** Uncommon ecosystems of limited distribution and size that support unique sensitive/endemic species or communities; ecosystems that have low resilience to environmental stress or to disturbance.

**Frequency.** The ratio between the number of sample units that contain a species and the total number of sample units.

A quantitative expression of the presence of absence of individuals of a species in a population. It is defined as the percentage of occurrence of a species in a series of samples of uniform size. (BLM Technical Reference 4400-4)

**-G-**

**Grazing Distribution.** Dispersion of livestock grazing within a management unit or area.

**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. (BLM Technical Reference 4400-4)

**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 and springs.

**-H-**

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

**Hydrologic Balance.** The balance between hydrological inputs (infiltration of incident precipitation, run-on) and hydrological outputs (run-off, deep drainage) for an ecological site.

**-I-**

**Infiltration.** The flow of a fluid into a substance through pores or small openings. The process by which water seeps into a soil, as influenced by soil texture, aspect and vegetation cover.

**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.

**Integrated Use.** To merge the use of each type of public land use through a series of land management practices.

**-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)

**Litter.** The uppermost layer of organic debris on the soil surface; essentially the freshly fallen or slightly decomposed vegetal material. (BLM Technical Reference 4400-4)

## -M-

**Management Objective.** The objectives for which rangeland and rangeland resources are managed which includes specified users 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. (BLM Technical Reference 4400-7)

**Monitoring.** Monitoring means the periodic observation and orderly collection of data to evaluate: (1) Effects of management actions; and (2) Effectiveness of actions in meeting management objectives. (43 CFR 4100.0.5)

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

**Multiple Use.** The management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals watershed, wildlife and fish, natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return of the greatest unit output. (Federal Land Policy and Management Act)

## -N-

**Native Species.** A species which is a part of the original fauna or flora of the area in question. Indigenous; living naturally within a given area and was part of the areas flora or fauna prior to human settlement of the region.

**Naturalized Species.** An exotic or introduced spe-

cies that has become established and exhibits successful reproduction in an ecosystem.

## -P-

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

**Productivity.** The potential rate of incorporation or generation of energy or organic matter (biomass) by an organism, population or trophic unit per unit time per unit area; plant productivity is termed primary production, and animal productivity is termed secondary production.

**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 root masses that stabilize streambank against cutting action; 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.

**Residual Vegetation.** Amount, cover, and species composition of the vegetation on a site after it has been grazed for a period of time.

**Resource.** Any component of the environment that can be utilized by an organism.

**Riparian.** Pertaining to, living or situated on, the banks of rivers and streams. 'Xeroriparian' refers to being situated on dry washes (ephemeral streams).

## -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.

**Soil Productivity.** The organic fertility or capacity of a given area or habitat.

**Species.** A taxon of the rank species; which is the basic unit, and lowest principal category, of biological classification; in the hierarchy of biological classification, the category below genus; a group of organisms formally recognized as distinct from other groups.

**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*.

**Surface Characteristics.** The amount of bare ground, litter, rock and basal cover of live vegetation, which may include cryptogams. (Nevada Rangeland Handbook.)

**Sustained Yield.** The achievement and maintenance in perpetuity of a high level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use. (FLPMA)

#### -T-

**Traditional lifeway values.** The quality of being useful in or important to the maintenance of a specified social and/or cultural group's traditional systems of (a) religious belief, (b) cultural practice, or (c) social interaction, not closely identified with

definite locations. Another group's shared values are abstract, nonmaterial, ascribed ideas that one cannot know about without being told. (BLM Manual 8100)

**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*. (BLM Technical Reference 4400-4)

#### -U-

**Upland.** Terrestrial ecosystems located away from riparian zones, wetlands, springs, seeps and dry washes; ecosystems made up of vegetation not in contact with groundwater or other permanent water sources.

#### -V-

**Vegetative Life Form.** The characteristic structural features and method of perennation of a plant species, e.g., annuals, perennial forbs, shrubs, trees and succulents.

#### -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).

In areas of arid low lying land that is submerged or inundated periodically by water, and is characterized by hydric soils that support mostly water-loving (hydrophytic) plants.



*Cow grazing  
on Nevada  
rangelands.*

# STANDARDS AND GUIDELINES IMPLEMENTATION PROCESS

It is a requirement that grazing permits and leases shall contain terms and conditions that ensure conformance with the approved Standards and Guidelines.

The implementation process for Standards and Guidelines will occur under two separate processes as described below:

1. During the supervision and/or monitoring of an allotment, if it is determined that the existing terms and conditions of a grazing permit are not in conformance with the approved Standards and Guidelines and that livestock grazing was determined to be a significant factor in the non-attainment of a standard, then as soon as possible, or no later than the start of the next grazing year, the terms and conditions of the permit/lease will be modified to ensure that the grazing management practices or the levels of the grazing use will be in conformance with the Standards and/or Guidelines. The modification of the terms and conditions of the permit/lease will be implemented by agreement and/or by decision.
2. The allotment evaluation process will continue to be the process used to determine if existing multiple uses for allotments are meeting or making progress towards meeting land use plan objectives, allotment specific objectives, Rangeland Program Summary objectives and land use plan decisions, in addition to the Standards and Guidelines for grazing administration. Additionally, allotment specific objectives may have to be developed or amended, objectives in the land use plans further quantified at the allotment specific level, and terms and conditions of permits changed or revised to reflect the Standards and Guidelines. Allotment evaluations will continue to be completed based on district priorities.
  - a. The allotment evaluation consists of or involves:
    - 1) The evaluation of current grazing use by all users (livestock, wild horses, wildlife) based on monitoring data analysis and interpretation;
    - 2) Recommendations to change or adjust grazing systems;
    - 3) Recommendations to change or adjust

- stocking levels; and
- 4) Establishment of stocking levels for wild horses.
  - b. The allotment evaluation also serves as the basis for either issuing multiple use decisions, agreements, or a no-change determination. Multiple use decisions are prepared subsequent to completion of land use plans and are based on the attainment or non-attainment of objectives established in the land use plans and allotment evaluations.

During the evaluation process, the existing terms and conditions of a permit will be evaluated to determine if they are in conformance with the approved Standards and Guidelines. If it is determined that the existing terms and conditions are not in conformance and that livestock grazing was a significant factor in the non-attainment, then as soon as possible or no later than the start of the next grazing year, the terms and conditions of the permit/lease will be modified to ensure that the grazing management practices or the levels of grazing use will be in conformance.

At the conclusion of the evaluation process, the multiple use decision process will continue to be used to establish:

- 1) The terms and conditions of the grazing permits;
- 2) The appropriate management level for wild horses and burros that occur within the allotment; and
- 3) Any recommendations for wildlife populations or habitat management actions required if it is determined that these actions are necessary.

The preamble to the final regulations contains additional information regarding implementation. The following preamble language is found on page 9956 of the Federal Register notice:

“... The Department intends that failing to comply with a standard in an isolated area would not necessarily result in corrective action. “The Department recognizes that it will sometimes be a long-term process to restore rangelands to



proper functioning condition. The Department intends that 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 the final rule that will require the authorized officer to take appropriate action upon determining that existing grazing management practices are failing to ensure appropriate progress toward the fulfillment of standards. . . .”

“In some areas, it may take many years to achieve healthy rangelands, as evidenced by the fundamentals, established Standards, and Guidelines. The Department recognizes, that in some cases, trends may be hard to even document in the first year. The Department will use a variety of data, including monitoring records, assessments, and knowledge of the locale to assist in making the “significant progress determination.”

The acceptance of progress toward reaching the desired end state is also addressed in the regulatory text in 43 CFR 4180.1 Fundamentals of Rangeland

Health which includes the “making significant progress toward” language in each of the four fundamentals.

The concept of “making progress toward” is a specific consideration when determining a course of action during implementation. Determining whether a standard is being met is a distinctly different concept from determining whether progress is being made toward or away from the standard. Determining a course of action is then dependent on a variety of factors, one of which is whether progress is being made toward the standard.

With regard to actions, it is the BLM’s policy and intent to work in a collaborative manner to achieve or maintain the Standards necessary for healthy, productive rangelands. It is not the policy or intent of the BLM to arbitrarily and immediately remove all livestock from an entire allotment based solely on finding a range site that is not meeting a standard. As a practical matter, the BLM has neither policy, intent, desire nor capability to arbitrarily remove all livestock where acceptable progress is being made toward meeting the Standards.



*Sloan Canyon in southeastern Nevada.*

# PREAMBLE - WILD HORSE AND BURRO MANAGEMENT

Nevada is an arid State. The Standards for rangeland health and Guidelines for wild horse and burro management on BLM-administered lands in southern Nevada apply to HMAs. The Mojave-Southern Great Basin RAC intends that the Standards and Guidelines will result in a balance of sustainable development and multiple use.

The standards for rangeland health will be reached and maintained by managing wild horse and burro numbers so as not to exceed Appropriate Management Levels (AML) for each HMA. Controlling wild horse and burro numbers through gathers and other control programs is essential.

Standards are expressions of physical and biological conditions required for sustaining rangelands for multiple uses. Guidelines point to management actions related to HMAs for achieving the Standards. Guidelines are options that move rangeland conditions toward the multiple use Standards. Guidelines are based on science, best rangeland management practices, and public input. Guidelines indicate the types of management methods and practices for achieving the Standards for multiple use and are developed for functional watersheds and implemented within HMAs.

The Mojave-Southern Great Basin RAC recognizes that it may be a long-term process to achieve proper functioning condition(s) on degraded rangelands. Healthy rangelands contribute to healthy herds.

The RAC may be requested by any party to assist in addressing issues related to these Standards and Guidelines.

## STANDARDS AND GUIDELINES

### STANDARD 1. SOILS:

Watershed soils and stream banks should have adequate stability to resist accelerated erosion, maintain soil productivity, and sustain the hydrologic cycle.

Soil indicators:

- Ground cover (vegetation, litter, rock, bare ground);

- Surfaces (e.g., biological crusts, pavement); and
- Compaction/infiltration.

Riparian soil indicators:

- Stream bank stability.

All of the above indicators are appropriate to the potential of the ecological site.

### GUIDELINES: (for Soils Standard)

1.1 Upland management practices should maintain or promote adequate vegetative ground cover to achieve the Standards.

1.2 Riparian-wetland management practices should maintain or promote sufficient residual vegetation to maintain, improve, or restore functions such as stream flow energy dissipation, sediment capture, groundwater recharge, and streambank stability.

1.3 When wild horse and burro herd management practices alone are not likely to restore areas, land management practices may be designed and implemented where appropriate.

1.4 Wild horse and burro herd management practices should address improvement beyond this standard, significant progress toward achieving standards, time necessary for recovery, and time necessary for predicting trends.

## STANDARD 2. ECOSYSTEM

### COMPONENTS:

Watersheds should possess the necessary ecological components to achieve State water quality criteria, maintain ecological processes, and sustain appropriate uses.

Riparian and wetlands vegetation should have structural and species diversity characteristic of the stage of stream channel succession in order to provide forage and cover, capture sediment, and capture, retain, and safely release water (watershed function).

Upland Indicators:

- Canopy and ground cover including litter, live vegetation, biological crust, and rock appropriate to

the potential of the ecological site.

- Ecological processes are adequate for the vegetative communities.

Riparian Indicators:

- 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.

Water Quality Indicators:

- Chemical, physical and biological constituents do not exceed the State water quality Standards.

#### GUIDELINES: (for ECOSYSTEM COMPONENTS STANDARD)

2.1 Management practices should maintain or promote appropriate stream channel morphology and structure consistent with the watershed.

2.2 Watershed management practices should maintain, restore or enhance water quality and flow rate to support desired ecological conditions.

2.3 Management practices should maintain or promote the physical and biological conditions necessary for achieving surface characteristics and desired natural plant community.

2.4 Wild horse and burro herd management practices will consider both economic and physical

environment and will address all multiple uses including, but not limited to, (i) recreation, (ii) minerals, (iii) cultural resources, (iv) wildlife, (v) domestic livestock, (vi) community economics, (vii) Areas of Critical Environmental Concern, (viii) designated wilderness (iv) and wilderness study areas (WSAs).

2.5 New facilities should be located away from riparian and wetland areas if existing facilities conflict with achieving or maintaining riparian and wetland functions. Existing facilities will be used in a way that does not conflict with achieving or maintaining riparian and wetland functions or they will be relocated or modified when necessary to mitigate adverse impacts on riparian and wetland functions.

2.6 Subject to all valid existing rights, the design of spring and seep developments shall include provisions to maintain or promote ecological functions and processes.

2.7 When proper wild horse and burro herd management is not likely to restore areas of low infiltration or permeability, land management practices may be designed and implemented where appropriate. When setting herd management levels on ephemeral rangeland watersheds, reliable estimates of production for drought conditions should be used to avoid adverse effects on perennial species and ecosystem processes and retain a desired minimum level of annual growth or residue remaining.

2.8 Wild horse and burro herd management practices should address improvement beyond this standard, significant progress toward achieving standards, time necessary for recovery, and time necessary for predicting trends.

#### STANDARD 3. HABITAT AND BIOTA:

Habitats and watersheds should sustain a level of biodiversity appropriate for the area and conducive to appropriate uses. Habitats of special status species should be able to sustain viable populations of those species.

Habitat Indicators:

- Vegetation composition (relative abundance of species);

- Vegetation structure (life forms, cover, height, and age classes);
- Vegetation distribution (patchiness, corridors);
- Vegetation productivity; and
- Vegetation nutritional value.

Wildlife Indicators:

- Escape terrain;
- Relative abundance;
- Composition;
- Distribution;
- Nutritional value; and
- Edge-patch snags.

The above indicators shall be applied to the potential of the ecological site.

**GUIDELINES: (for HABITAT AND BIOTA STANDARD)**

3.1 Mosaics of plant and animal communities that foster diverse and productive ecosystems should be maintained or achieved.

3.2 Management practices should emphasize native species except when others would serve better for attaining desired communities.

3.3 Wild horse and burro herd management should provide for growth, reproduction, and seedling establishment of those plant species needed to reach long-term land use plan objectives. Measurements of ecological conditions, trend, and utilization will be in accordance with techniques identified in the Nevada Rangeland Handbook.

3.4 Wild horse and burro herd management practices should be planned and implemented to provide for integrated use by domestic livestock and wildlife.

3.5 Wild horse and burro herd management practices will promote the conservation, restoration and maintenance of habitat for special status species.

3.6 Wild horse and burro herd management practices will be designed to protect fragile ecosystems of limited distribution and size that support unique sensitive/endemic species or communities. Where these practices are not successful, herd levels will be reduced or eliminated from these areas.

3.7 When wild horse and burro herd management practices alone are not likely to restore areas, land management practices may be designed and implemented where appropriate.

3.8 Vegetation manipulation treatments may be implemented to improve native plant communities, consistent with appropriate land use plans, in areas where identified standards cannot be achieved through wild horse and burro herd management practices alone. Fire is the preferred vegetation manipulation practice on areas historically adapted to fire; treatment of native vegetation with herbicides or through mechanical means will be used only when other management techniques are not effective.

3.9 Wild horse and burro herd management practices should address improvement beyond this standard, significant progress toward achieving standards, time necessary for recovery, and time necessary for predicting trends.

**STANDARD 4: WILD HORSES AND BURROS**

Wild horses and burros within HMAs should be managed for herd viability and sustainability. HMAs should be managed to maintain a healthy ecological balance among wild horse and/or burro populations, wildlife, livestock, and vegetation.

Herd health indicators.-

- General horse and/or burro appearance: Problems are often apparent and can be easily identified by just looking at the herd.

- Crippled or injured horses and/or burros: Excessive injuries can indicate problems.

Herd demographics indicators.

- Size of bands: A band with one stud or jack, one mare or jenny, and one foal indicates a problem. An oversized band also indicates there is a problem. Band sizes of 5-10 animals with one dominant stud per band is a good indicator.

- Size of Bachelor Bands: Large bachelor bands in the immediate vicinity of other bands could indicate potential problems.

Herd viability indicators.

- Heavy trailing into water sources may indicate a

significant problem with forage availability or water distribution. Animals may be traveling considerable distances to obtain water or forage.

- Waiting for water. When available water becomes so scarce that a waiting line develops, horses and burros are in trouble.

- Availability of water. Address legal and/or climatic considerations. Situations exist where wild horses and burros are present only because they currently have access to water which they could legally be deprived of under Nevada Water Laws. Situations exist where existing wild horse and burro populations are dependent upon water hauling. If water hauling were to cease these animals would die within a matter of days.

- Depleted forage near all available water sources. Adequate water and forage adjacent to water sources are essential.

#### GUIDELINES: (for WILD HORSES AND BURROS STANDARD)

4.1 Wild horse and burro population levels in HMAs should not exceed AML.

4.2 AMLs should be set to reflect the carrying capacity of the land in dry conditions based upon the most limiting factor: living space, water or forage. Management levels will not conflict with achieving or maintaining standards for soils, ecological components, or diversity of habitat and biota.

4.3 Interaction with herds should be minimized. Intrusive gathers should remove sufficient numbers of animals to ensure a period between gathers that reflects national wild horse and burro management strategies. Non intrusive gathers such as water trapping can be done on an “as needed” basis.

4.4 Herd Management Plans should be made with the best predictive information available. When emergency actions occur the Herd Management Plan should be re-evaluated.

4.5 Viable sex and age distribution should be a long-term goal of any wild horse and burro herd management plan. Sex and age distribution of the herd should be addressed when (after) AML has been reached.

4.6 When wild horse and burro herd management alone is not likely to restore areas, land management practices may be designed and implemented where appropriate.

4.7 Wild horse and burro herd management practices should address improvement beyond this standard, significant progress toward achieving standards, time necessary for recovery, and time necessary for predicting trends.

*Wild horses roaming Nevada's rangelands.*



# OFF HIGHWAY VEHICLE ADMINISTRATION GUIDELINES FOR NEVADA PUBLIC LANDS

## INTRODUCTION

The Nevada Northeastern Great Basin RAC, the Sierra Front-Northwestern Great Basin RAC, and the Mojave-Southern Great Basin RAC, as chartered by the Department of the Interior, have developed Guidelines for the administration of Off-Highway Vehicle (OHV) use on public lands within the State of Nevada. These guidelines are intended to promote cooperation among user groups, to share resources, and to minimize conflicts in accordance with the Nevada Standards for Rangeland Health. While recognizing the legitimacy and necessity of OHV use on public lands, it has become necessary to define guidelines for management of OHVs to ensure the protection of land health and the availability of the public lands for all multiple users. These guidelines are to assist land managers in administrative and planning decisions. Administrators may use the guidelines for managing for land health and making decisions with regard to restricting, or not restricting OHV activity. Additionally, administrators may use the educational guidelines as tools to provide training for land managers and to inform the public on OHV use issues and ethics. Planners should use these guidelines in developing timely plans for resources and recreation use, while addressing the increasing demand for OHV use.

## ON-THE-GROUND MANAGEMENT GUIDELINES

- Encourage OHV use on existing or designated roads and trails, except in closed areas, prior to land use plans being updated and road and trail inventories completed.
- Locate and manage OHV use to conserve soil functionality, vegetative cover, and watershed health. Manage OHV use to minimize the impact on the land, while maintaining OHV access.
- Manage OHV use by type, season, intensity, distribution, and/or duration to minimize the impact on plant and animal habitats. If seasonal closures become appropriate to minimize adverse OHV impact(s) on public lands resources, managers will strive to preserve public access by designating alternative routes.
- Manage OHV activities to conserve watershed and water quality.
- Monitor the impact(s) of OHV activities on all public land, water, air and other resources and uses.
- Maintain an inventory of existing road and trail systems.
- Manage OHV use to preserve cultural, historical, archaeological, and paleontological resources.
- Engineer, locate, and relocate roads and trails to accommodate OHV activities while minimizing resource impacts.
- Encourage cooperation in law enforcement among all agencies.
- OHV use pursuant to a permitted activity shall be governed by the terms of the permit.

## PLANNING GUIDELINES

- In land use plans or plan amendments, designate areas as open, limited, or closed to OHV use.
- Address OHV management including land use and/or route designations, monitoring and adaptive management strategies, such as applying the Limits of Acceptable Change process, when developing new land use plans or amending existing land use plans. Work closely with local, state, tribal, and other affected parties and other resource users in OHV planning.
- Establish and maintain an inventory of existing routes and trails as part of the land use planning process.
- Provide for other resources and uses in OHV planning. This includes livestock grazing, other recreational uses, archaeological sites, wildlife, horses and burros, and mineral extractions and coordinate with other users of public lands.
- Conduct an assessment of current and future OHV demand, and plan for and balance the demand for this use with other multiple uses/users when developing all land use plans.
- Include in land use plans, social/economic effects of OHV use, including special

recreation events.

- Integrate concepts of habitat connectivity into OHV planning to minimize habitat fragmentation.
- For addressing/resolving local site-specific OHV issues/concerns, use collaborative planning groups consisting of local representative(s), affected/interested group(s) and agency(s).
- Clearly identify route and area designations.
- Where land health permits, develop sustainable OHV use areas to meet current and future demands, especially for urban interface.

## **EDUCATION GUIDELINES**

- Cooperatively develop/improve public outreach programs to promote trail etiquette, environmental ethics, and responsible-use stewardship ethic.
- Promote/expand/disseminate materials from programs such as, but not limited to, “Tread Lightly!” and “Leave No Trace.”

- Provide OHV management education and training for managers, staff, partners and volunteers. Training should focus on the art practices and be tailored to meet local needs. Encourage communication between agencies, managers, staff, partners and volunteers to share expertise and effective techniques.
- Encourage the private sector, as well as the public sector, to conduct responsible marketing of activities on public lands while avoiding the promotion of products, behaviors and services that are inconsistent with existing regulations and land use plans.
- Develop communication and environmental education plan(s). Assess all situations where OHV use may require public information and education. Develop materials and programs appropriate to each situation.
- Utilize high use areas and special events to maximize the dissemination of responsible use education materials and concepts to the public.

## **GEOGRAPHIC AREA COVERED BY THE STANDARDS AND GUIDELINES**

The three RAC areas in Nevada are based on combinations of major land resource areas as developed by the Natural Resource Conservation Service for Nevada. This land classification system is recognized by the Bureau of Land Management, the Forest Service and other agencies as a basis for ecosystem data collection and analysis. The soil, vegetal and geophysical characteristics of each of the three areas are different and the text offered by the three RACs incorporates their understanding of the differing physical and biological needs of the rangeland ecosystems.

Recognition of these differences is critical to the successful protection of rangelands in Nevada. As a result of basing the RAC boundaries according to an ecosystem approach as opposed to strictly an administrative or jurisdictional

approach, the RAC’s advice and recommendations are more relevant to the on-the-ground management of natural resources. The area covered by the Standards and Guidelines is as follows. Adjustments will be made for grazing allotments that overlap the boundaries between the RAC areas.

The Mojave-Southern Great Basin RAC recommends actions to the BLM Nevada State Director for all or portions of Clark, Nye and White Pine counties. This includes all of the Las Vegas Field Office and portions of the Battle Mountain and Ely Field Offices.

# BLM NEVADA OFFICES

## NEVADA STATE OFFICE

State Director: Ron Wenker  
Associate State Director: Amy Lueders  
1340 Financial Blvd.  
Reno, NV 89502  
775-861-6590  
FAX: 775-861-6601  
Hours: 7:30am - 4:30pm weekdays

## BATTLE MOUNTAIN FIELD OFFICE

Field Manager: Gerald Smith  
50 Bastian Road  
Battle Mountain, Nevada 89820  
775-635-4000  
FAX: 775-635-4034  
Hours: 7:30am - 4:30pm weekdays

### Tonopah Field Station

Field Station Manager: Bill Fisher  
1553 South Main St.  
PO Box 911  
Tonopah, Nevada 89049-0911  
775-482-7800  
FAX: 775-482-7810  
Hours: 7:30am - 4:30pm weekdays

## ELY FIELD OFFICE

Field Manager: John Ruhs  
775 North Industrial Way  
HC33 Box 33500  
Ely, Nevada 89301-9408  
775-289-1800  
FAX: 775-289-1910  
Hours: 7:30am - 4:30pm weekdays

### Caliente Field Station

Field Station Manager: Ron Clementsen  
U.S. Highway 93, PO Box 237  
Caliente, Nevada 89008-0237  
775-726-8100  
FAX: 775-726-8111  
Hours: 7:30am - 4:30pm weekdays

## LAS VEGAS FIELD OFFICE

Field Manager: Juan Palma  
4701 N. Torrey Pines Drive  
Las Vegas, Nevada 89130-2301  
702-515-5000  
FAX: 702-515-5023  
Hours: 7:30a.m. – 4:15pm weekdays

## CARSON CITY FIELD OFFICE

Field Manager: Don Hicks  
5665 Morgan Mill Road  
Carson City, Nevada 89701  
775-885-6000  
FAX: 775-885-6147  
Hours: 7:30am - 5:00pm weekdays

## WINNEMUCCA FIELD OFFICE

Field Manager: Gail Givens  
5100 East Winnemucca Boulevard  
Winnemucca, Nevada 89445  
775-623-1500  
FAX: 775-623-1503  
Hours: 7:30am - 4:30pm weekdays

## ELKO FIELD OFFICE

Field Manager: Helen Hankins  
3900 East Idaho Street  
Elko, Nevada 89801  
775-753-0200  
FAX: 775-753-0255  
Hours: 7:30am - 4:30pm weekdays

## NAT'L WILD HORSE & BURRO CENTER AT PALOMINO VALLEY

Facility Manager: John Neill  
PO Box 3270  
Sparks, Nevada 89432-3272  
775-475-2222  
FAX: 775-475-2053  
Hours: 8:00am – 4:00pm weekdays