APPENDIX 7

Standards for Public Land Health

PREAMBLE

Humans use and derive benefits from public lands administered by BLM in Colorado in many ways: to earn a livelihood, to recreate, for education, for science, and to enjoy and appreciate open spaces and irreplaceable cultural heritage resources. Healthy public lands and the uses of those lands contribute to the health and economic well-being of Colorado communities. In turn, healthy human communities create healthy public lands by conserving, protecting, and properly utilizing public land resources and by effectively resolving conservation issues. Healthy public lands and healthy human communities are interrelated; therefore, social, economic, and environmental considerations must be properly balanced.

The interdependent relationship between human communities and their public land brings together people of diverse backgrounds and interests. Open, honest, and sincere interactions, in a spirit of trust and respect, are essential to achieving and maintaining healthy public lands. While all individuals have a voice in public land management goals, the responsibility to maintain healthy public lands ultimate falls with the users of those lands.

To help determine what constitutes healthy public lands, Standards for Public Land Health, by which the health of the land is measured, were established. This document defines such standards for BLM lands in Colorado.

INTERPRETATION

Standards and guidelines can be an effective communication tool, providing a common understanding of expected resource conditions and acceptable management practices. Although the standards are the measures by which health of the land will be assessed, the results of these assessments are not well-suited for direct reporting of accomplishments. Any reporting of progress associated with application of these standards will need to consider and address the following factors:

- Standards and guidelines for each state will be different.
- To be meaningful, public land health assessment must be determined based upon all standards and not solely upon each individual standard.
- It will be many years before a full assessment of public land health is completed. Initially, statistics concerning public land health may be skewed due to the priority setting process which directs management attention to lands where problems exist.

Standards describe conditions needed to sustain public land health, and relate to all uses of the public lands. The standards are written in a two-part format. The standard is first described in a statement. Then indicators which relate to the standard are identified. The indicators help define the standard and describe features which are observable on the land. Additional indicators may also be applicable to some sites, and some indicators may not apply to every specific site. While a site should match the indicators it is not necessary for each site to perfectly match all the indicators to comply with the standard.

The appropriate use of resources will be determined by the authorized officer on a case by case basis, in consultation, coordination and cooperation with local cooperators and the interested public and in accordance with law and regulation.

Standards are observed on a landscape scale. It is not possible for each acre to achieve every standard. For example, a mosaic of vegetation types and age classes may produce the diversity associated with a healthy landscape; however, some individual vegetation communities within the mosaic may lack diversity.

Standards always relate to the potential of the landscape. Climate, landform, geologic, and biologic characteristics are factors that affect potential. Each landscape has a specific ability to provide values important to humans such as timber, livestock forage, water, wildlife, and minerals. Therefore, the potential of a site can also be altered through a wide variety of human socio-economic factors. When this occurs, a new potential exists. The authorized officer, through the consultation process, will evaluate the site based on its new potential. Comparative analysis of nearby landscapes (that appear to have similar climate, geology, landform, biologic and socio-economic characteristics) is considered the most reliable means to identify the potential landscape.

It is common for landscapes with nearly identical potential to differ, in their appearance, and in the values they provide. Variability results from both natural plant succession patterns, and human uses. While the climax plant community is significant as an indicator of potential, the climax community does not automatically provide the comparative basis for evaluating the standard. In many circumstances local goals will identify a different plant community which provides the most optimum values. When this occurs, the plant community identified in the local goal replaces the climax community as the foundation for evaluating the standard.

Often, existing information will be sufficient to determine public land health. It is not always necessary to collect measurable baseline data for each standard on each site to determine public land health. However, baseline data is important to establish so that changes can be observed and measured. The BLM's authorized officer will determine the amount and type of data each situation requires in consultation, coordination and cooperation with local cooperators and the interested public. In areas where the standards are not being achieved, current uses and management actions will be reviewed and modified if necessary to assure significant progress toward achieving a healthy ecosystem.

APPROVAL

The Standards for Public Land Health were evaluated through an Environmental Assessment in 1996. The BLM State Director issued a Decision Record and a Finding of No Significant Impact on November 8, 1996, with Approval for Implementation coming from the Secretary of the Interior in February 12, 1997. The decision amended the Royal Gorge Resource Management Plan. The standards supplement the existing decisions in the RMP.

STANDARD 1: *Upland soils* exhibit infiltration and permeability rates that are appropriate to soil type, climate, land form, and geologic processes. Adequate soil infiltration and permeability allows for the accumulation of soil moisture necessary for optimal plant growth and vigor, and minimizes surface runoff.

Indicators:

▪ Expression of rills and soil pedestals is minimal.
▪ Evidence of actively-eroding gullies (incised channels) is minimal.
▪ Canopy and ground cover are appropriate.
▪ There is litter accumulating in place and is not sorted by normal overland water flow.
▪ There is a diversity of plant species with a variety of root depths.
▪ Upland swales have vegetation cover or density greater than that of adjacent uplands.
▪ There are vigorous, desirable plants.

STANDARD 2: *Riparian systems* associated with both running and standing water, function properly and have the ability to recover from major disturbance such as fire, severe grazing, or 100-year floods. Riparian vegetation captures sediment, and provides forage, habitat and bio-diversity. Water quality is improved or maintained. Stable soils store and release water slowly.

Indicators:

▪ Vegetation is dominated by an appropriate mix of native or desirable introduced species.
▪ Vigorous, desirable plants are present.
▪ There is vegetation with diverse age class structure, appropriate vertical structure, and adequate composition, cover, and density.
▪ Streambank vegetation is present and is comprised of species and communities that have root systems capable of withstanding high streamflow events.
▪ Plant species present indicate maintenance of riparian moisture characteristics.

▪ Stream is in balance with the water and sediment being supplied by the watershed (e.g., no headcutting, no excessive erosion or deposition).
▪ Vegetation and free water indicate high water tables.
▪ Vegetation colonizes point bars with a range of age classes and successional stages.
▪ An active floodplain is present.
▪ Residual floodplain vegetation is available to capture and retain sediment and dissipate flood energies.
▪ Stream channels have appropriate size and meander patterns for the streams' position in the landscape, and parent materials.
▪ Woody debris contributes to the character of the stream channel morphology.

STANDARD 3: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes.

Indicators:

▪ Noxious weeds and undesirable species are minimal in the overall plant community.
▪ Native plant and animal communities are spatially distributed across the landscape with a density, composition, and frequency of species suitable to ensure reproductive capability and sustainability.
▪ Plants and animals are present in mixed age classes sufficient to sustain recruitment and mortality fluctuations.
▪ Landscapes exhibit connectivity of habitat or presence of corridors to prevent habitat fragmentation.
▪ Photosynthetic activity is evident throughout the growing season.
▪ Diversity and density of plant and animal species are in balance with habitat/landscape potential and exhibit resilience to human activities.
▪ Appropriate plant litter accumulates and is evenly distributed across the landscape.
▪ Landscapes are composed of several plant communities that may be in a variety of successional stages and patterns.

STANDARD 4: Special status, threatened and endangered species (federal and state), and other plants and animals officially designated by the BLM, and their habitats are maintained or enhanced by sustaining healthy, native plant and animal communities.

Indicators:

▪ All the indicators associated with the plant and animal communities standard apply.
▪ Suitable habitat is available for recovery of endemic and protected species.

STANDARD 5: The water quality of all water bodies, including ground water where applicable, located on or influenced by BLM lands will achieve or exceed the Water Quality Standards established by the State of Colorado. Water Quality Standards for surface and ground waters include the designated beneficial uses, numeric criteria, narrative criteria, and antidegradation requirements set forth under State law as found in (5 CCR 1002-8), as required by Section 303(c) of the Clean Water Act.

Indicators:

▪ Appropriate populations of macroinvertebrates, vertebrates, and algae are present.
▪ Surface and ground waters only contain substances (e.g., sediment, scum, floating debris, odor, heavy metal precipitates on channel substrate) attributable to humans within the amounts, concentrations, or combinations as directed by the Water Quality Standards established by the State of Colorado (5 CCR 1002-8).