Public Lands Foundation

Biological Diversity and the National System of Public Lands

Executive Summary

The Public Lands Foundation (PLF) strongly supports the conservation of biological diversity on public lands and waters within the National System of Public Lands and encourages BLM managers to maintain current levels while restoring, where feasible and appropriate, biological diversity on the lands and water they administer. It is neither practical nor possible to conserve or restore every element of biodiversity. Priority must be placed on assuring that opportunities for future decisions based on advanced science are not thoughtlessly foregone, while recognizing that legally and socially mandated uses of public lands should and will continue.

Background

It is a generally accepted conclusion that the earth is losing biological diversity at an unprecedented rate and that this loss will have significant, if uncertain, economic, social, and ecological consequences. The loss of biological diversity reflects accelerating human demands on natural systems globally and any comprehensive solution necessarily requires a coordinated, global effort. How BLM manages the 253 million surface acres and 700 million mineral estate acres under its jurisdiction will play a significant role in any national or global effort directed at conserving biological diversity. At issue then, is what priority, practices, and policies should be embraced by BLM with respect to biological diversity, given the current science and competing new and historical uses of the public lands.

There are numerous definitions of biological diversity (biodiversity). One is “the variety of life and its processes, including the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur.” This definition was developed and accepted by the participants, including the BLM, in the Final Consensus Report of the Keystone Policy Dialogue on Biological Diversity on Federal Lands issued April 1991.

Biodiversity can be further defined from the narrowest to the broadest perspective. For example, genetic diversity is the variety of genetic building blocks found among individual representatives of a species. Although less obvious than species diversity, genetic diversity is crucial to a species' survival. A varied gene pool provides for resilience in the face of environmental stresses, a hedge against an unknown future that allows a species to adapt to changing conditions. Species diversity is the variety of living organisms found in a particular place, for example, the hundreds of different species found in a ponderosa pine forest, including plants, birds, mammals, and a host of

less visible organisms. This is the level of biodiversity that usually receives the most attention. Ecosystem diversity is the variety of species and ecological processes—both their kind and their number—that occur in different physical settings. Examples of ecosystems include an old-growth forest, a riparian area, or the Sonoran desert. Landscape diversity is the geography of different ecosystems across a large area and the connections among them. For example, a landscape interspersed with grasslands, shrub lands, meadows, ponds, streams, wetlands, and forests has more diversity than one with a broad expanse of mostly grassland.

Discussion

Biological diversity is becoming a priority management objective among conservation groups and agencies including the BLM. Unfortunately, like so many buzzwords, biodiversity has many shades of meaning and is often used to express vague and ill-thought out concepts. This lack of clarity is partly because of the complexity and breadth of the subject. Diversity is a fundamental property of every living system. Because biological systems are hierarchical, diversity manifests itself at every level of the biological hierarchy, from molecules to ecosystems. The development of hypotheses on which to build either a research program or a basis for conservation and management is made especially challenging by this all-inclusive nature of biological diversity.

For a long time, concerns about biodiversity have focused on threatened and endangered species of plants and animals, but these represent only one aspect of a larger issue. Conservation of the full variety of life, from genetic variation in species populations to the full richness of ecosystems on Earth should be the objective.

Maintenance of, and in some cases restoration of, biological diversity is essential to sustain production of both commodity and non-commodity public land resource values. Some elements of biological diversity are more important than others. It is unrealistic to think that every aspect of a biota can be restored or preserved. Priority must be given to rare species, communities, and ecosystems and, within these levels, elements that are critical to nutrient cycling, energy pathways, and predator-prey relations.

The amount and kind of diversity to be saved are tied closely to land ownership. All public and private lands are important to the solution of this issue, but the opportunities available to each differ. Regional biological diversity can be achieved best by coordinated efforts between public and private landowners. These efforts must recognize the different goals, interests, and potential contributions of different landowners.

The human role needs to have greater emphasis in all discussions and dissertations about biodiversity and ecosystems. We tend to look upon the human role as that of an overseer of the ecosystem and its diversity rather than as an integral and important part of ecosystem biodiversity. In other words, we tend to "think" ourselves right out of the ecosystem. Humans are an important part of an ecosystem, can greatly affect an ecosystem both positively and negatively, and because they can think are able to change or moderate the way in which they operate within or impact the ecosystem.

PLF Position

1. The Public Lands Foundation strongly supports the conservation of biological

diversity on public lands and waters within the National System of Public Lands and encourages BLM managers to maintain current levels while restoring, where feasible and appropriate, biological diversity on the lands and waters they administer. The PLF believes it is neither practical nor possible to conserve or restore every element of biodiversity. Priority must be placed on assuring that opportunities for future decisions based on advanced science are not thoughtlessly foregone, while recognizing that legally and socially mandated uses of the public lands should and will continue.

2. Policies and practices, whether on a national, regional or local scale, and whether applied to an immediate resource allocation decision or in a Resource Management Plan, should consider the impact upon biodiversity of any actions that result from such policies or practices.

3. Conservation strategies that protect local, regional, and global biodiversity should be advanced.

4. Investments should be made in cooperative research among entities in an effort to better understand the nature of biodiversity and the impact of land management decisions on the future of natural systems.

5. Federal and private landowners within ecosystems should strive to develop partnerships in an effort to maximize the potential of all lands whether for consumptive uses or to attain objectives such as the preservation or restoration of biological diversity.

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