Grazing Capability Calculations for the Kaibab National Forest

Summary by Ariel Leonard

The 1982 Planning Rule requires that the capability for producing forage for grazing animals be determined for suitable rangelands during forest planning. Capability is the potential of an area of land to produce resources and supply goods and services. Rangeland capability depends upon conditions such as climate, slope, landform, soils, and geology.

On the Kaibab National Forest (NF), the capability of lands to produce forage for grazing animals is based on two criteria, slope and forage production. Lands with slopes less than 40 percent that have the potential to produce more than 100 pounds of forage per acre are considered to be capable of producing forage for grazing animals. The ability to produce more than 100 pounds of forage per acre is based on existing Terrestrial Ecosystem Survey (USDA Forest Service 1991) data which incorporates considerations of climate and soils. Soil characteristics are influenced by physical components including landform and geology, as well as biological and climatic components. These criteria for determining capability are consistent with the management direction provided in the Region 3 Rangeland Analysis and Management Training Guide (USDA Forest Service, 1999) and with recommendations for assigning grazing capacity found in "Range Management: Principles and Practices, Third Edition" (Holechek et al, 1998).

Capability determinations in forest plans are coarse in nature, focusing on landscape-scale goals and objectives and apply under all climate conditions. Capability is not a final decision about allocation of resources and does not authorize grazing on specific pieces of land. Subsequent site-specific analyses conducted consistent with the forest plan are used to make final decisions concerning the authorization of grazing activities. Subsequent site-specific analyses conducted consistent with the forest plan are used to make final decisions concerning the authorization of grazing activities.

Capability is just one range analysis used for range management decisions. The Kaibab NF uses other range analyses to determine annual stocking levels and needed changes in management.. Grazing allotments are inspected at the beginning and periodically during the grazing season by District Range Management Specialists to make annual adjustments in stocking levels. This monitoring approach, commonly referred to as "stock and monitor" involves observing actual production and measuring the effects of actual stocking levels over time on utilization and utilization patterns, composition, vigor, soil cover, and other factors (including wildlife) and adjusting levels when changes to stocking levels are needed (Smith et al. 2012).

Additionally, condition and trend analysis are completed periodically, and are typically associate with site specific grazing authorization decision documents in compliance with the National Environmental Policy Act. More information about specific considerations and techniques for rangeland monitoring and assessment can be found in the "Guide to Rangeland Monitoring and Assessment: Basic Concepts for Collecting, Interpreting, and Use of Rangeland Data for Management Planning and Decisions" (Smith et al. 2012).

References

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