



# UNDERSTANDING RANGE MANAGEMENT

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Range managers assess land health by classifying range into four condition categories: excellent, good, fair, and poor, or some equivalent terminology. The system is based on an understanding of what plants should naturally be present on a given site. The scheme contains a number of biases against a full evaluation of ecosystem well-being. Nevertheless, the majority of public rangelands are rated in “fair” or “poor” condition, which means that most lands have lost half or more of the plant species expected.

One of the fundamental concepts in range management is the idea of “range condition.” This is a generalized measure of the ecological health of the landscape. Although different government agencies have their own preferred methods for determining range condition, all are predicated on the notion of a vegetative and soil climax state that naturally exists in the absence of disturbance by livestock. This idealized condition is a benchmark against which any changes or declines in health are compared. Given a certain set of physical parameters, such as precipitation, soil type, slope and aspect, range managers expect to see particular groups of plants growing on a site.

Ideally, range condition is evaluated by measuring the percentage of key plant species in the total vegetation within test plots. These plots should be located along random transects. The plant species composition on any individual site is compared with the theoretical climax plant community for that specific location, and the amount of deviation from the ideal is “range condition.” The usual means of producing credible results involves clipping all plants within a test plot, then weighing each species separately. The percentages of the desirable or climax plants for the site indicate how the site should be rated.

Range condition is indicated by four condition classes, which the Bureau of Land Management (BLM) terms excellent, good, fair, and poor. The Forest Service gives the categories different names, but the condition indicated is the same: potential natural community, late seral, midseral, and early seral. Any grazing allotment condition other than “excellent” or “potential natural community”—barring other factors such as wildfire or drought—is usually considered to be a result of overgrazing.

There are criticisms of this system. Some ecologists believe that the notion of a climax community is an overly restrictive benchmark. There may be far more natural variability on a healthy site than is recognized by the current assessment methodology. Also, plant communities do not necessarily move

through recognizable and predictable stages. On some sites, overgrazing may have precipitated such severe erosion that plants may never progress to “higher” successional stages.

Some range professionals argue that their management goals may specifically aim for “lower” successional stages. For instance, changing a grassland site to one dominated by sagebrush may be desirable if managers wish to promote mule deer numbers. In some places, native wildlife, such as prairie dogs, may prefer heavily grazed sites. Of course, where livestock are overgrazing the range, it is convenient for managers to state they are managing for lower ecological stages to “benefit” wildlife. All in all, however, the system of measuring range condition can work reasonably well to indicate how good a job range managers are doing—if the measuring is done objectively.

Range condition is very site-specific. Anyone trying to assess range condition has to understand how all physical and biological factors come together in a particular area to produce the vegetation observed. For example, a lot of bare soil or cactus on a site—conditions often indicative of overgrazing—may lead people to assume there’s a problem. However, in some areas, on certain types of sites, cactus and bare dirt may be natural and healthy.

Range managers also observe the trend of range condition. By repeatedly visiting a site over a number of years, managers can usually determine whether a particular site is improving or declining in productivity. Among the factors considered are the amount of bare soil; the occurrence of weedy, invasive species; and the presence of young seedlings of climax species. An upward trend means greater productivity; a downward trend means less productivity. Trend may also be stable—in other words, conditions are not changing. It is important to realize that stable does not necessarily mean good. On BLM lands, 64 percent of the rangelands are considered to be in stable condition, but much of this land is also in poor condition. Too often, the range simply cannot be in any worse shape because it is already at “rock bottom.”

Though the above-described method of evaluating range condition is reasonably reliable, the ideal procedure (random placement of test plots, clipping and weighing of vegetation, and so forth) typically is not used, because of time

Cattle manure and trampled spring, Bureau of Land Management lands, Lemhi Valley, Idaho.

and funding constraints. On most public lands, the “ocular” method is often the only way in which range condition and trend is evaluated. To use the ocular method, a range manager merely walks—or in far too many cases, drives by—an allotment, eyeballing the range. Although experienced range managers can estimate range condition with a fair degree of accuracy, evaluation is still subject to many biases of the observer. It is entirely possible that an allotment could be rated in “fair” condition by one person, and in “good” or even “excellent” condition by another. Referring to such ocular methods, many range professionals say that range management is as much art as science. In response, critics have said that “range management is heavy on the art and lean on the science, and like art everywhere, beauty is in the eye of the beholder.”

Certainly the ocular method is open to much abuse. A range manager who wants to show how his or her management schemes have improved the range has powerful incentive to see improvement when doing an ocular evaluation. Reporting can be purposefully deceptive, or the bias may not even be recognized by the observer. In any case, since most allotment management plans only call for “improvement,” no matter how small or how long it takes, there is plenty of wiggle room to allow officials to do their jobs without really bettering the conditions on the ground.

The definitions of range condition categories, in and of themselves, allow for rather deceptive evaluations. For instance, a site can have as little as 51 percent of the expected plants and still be classified as in “good” condition. Most people equate the term *good* with a situation that is quite desirable, yet can a site that has lost nearly half of its desirable plant species really be termed *good*? Even the word *fair* is a euphemism since a site can have lost as much as 74 percent of its preferred species—by any reasonable measure, an ecological disaster—yet still be called “fair-condition” range.

The lag time between the onset of degradation and visible downward trend in range condition also makes traditional range evaluation procedures problematic. Accelerated soil erosion and soil compaction usually precede loss in plant vigor and changes in plant composition. By the time a change in range condition is detected, critical thresholds may have been exceeded.

Another problem in range management is reliance on plant productivity and composition as the sole measures of range health. Other values are not con-

sidered. Even range rated as being in “good” or “excellent” condition can still be deficient in terms of its animal community and what it provides for wildlife habitat. For example, cattle might be brought onto a site with ten-inch-tall grass of the preferred climax species. The cattle quickly chomp away, reducing the overall height of the grass to one inch. Then the cows are immediately withdrawn before they can damage the plants further. Since the desired plants are still on the site, albeit shortened considerably in height, the site would rate as “excellent.” Yet, for a sharp-tailed grouse that requires more than eight inches of grass cover to hide successfully from predators, the site is certainly not in excellent shape. Or, the range may be below par in its ability to hold soil moisture. The lack of standing grass stems may allow snow to blow away instead of being trapped on the site. Thus, the soil gradually dries out—which almost certainly signals an eventual change in the plant community, among other things, even if there is no immediate alteration of the species present.

In most cases, range condition refers to the entire allotment. In the West, many parts of an allotment scarcely ever receive livestock grazing. They are too steep, too far from water, too high, too rugged. Yet these unused lands are averaged in with the overall range condition for the allotment. Heavily impacted areas, such as wet meadows and riparian areas, are considered with parts that receive little or no grazing pressure. The result is that many allotments are rated as “good” or “fair” while areas within the allotment actually used by livestock are severely overgrazed. These same beat-up portions of an allotment also tend to be the most ecologically important, the most critical to supporting a wide array of native species.

Even operating under the biases described above, the majority of public rangelands in the West have been rated in “fair” or “poor” condition by range managers. Less than 3 percent are rated “excellent.” This is an enormous indictment of the livestock industry.

Finally, in addition to all the problems already described, a significant number of allotments are monitored only infrequently, or not at all. According to a General Accounting Office (GAO) study, two-thirds of BLM allotments and one-fourth of Forest Service allotments do not have management plans or data. Another GAO study states that as many as one-third of BLM allotments on some districts have never been visited by range managers at all!

*Debating about the proper number of cows to have on an allotment is like arguing over which seat to take on the deck of the Titanic.*

—Andy Kerr, livestock grazing activist, 2001

This excellent-condition rough fescue grassland is in Glacier National Park, Montana, which is off-limits to livestock. Rough fescue is a grass species characteristic of areas with higher summer moisture. Under natural conditions, it grows commonly and abundantly within its range. However, it tends to disappear under even moderate livestock grazing pressure, and the species has declined significantly throughout the West.

