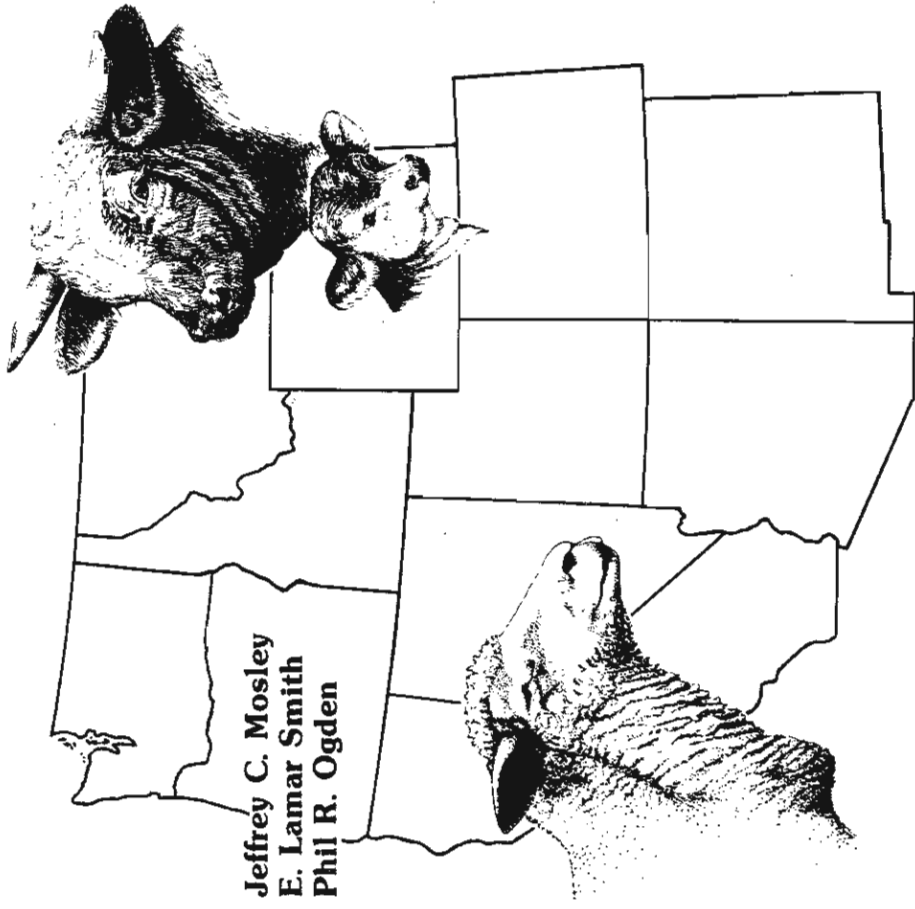


Seven Popular MYTHS About Livestock Grazing on Public Lands

Jeffrey C. Mosley
E. Lamar Smith
Phil R. Ogden



University of Idaho
Idaho Forest, Wildlife and Range Experiment Station

University of Arizona
Agricultural Experiment Station

(Second Edition) August 1990

**SEVEN POPULAR MYTHS
ABOUT
LIVESTOCK GRAZING ON PUBLIC LANDS**

**Jeffrey C. Mosley
E. Lamar Smith
Phil R. Ogden**

Published by the
**Idaho Forest, Wildlife and Range Experiment Station
College of Forestry, Wildlife and Range Sciences
University of Idaho
Moscow, Idaho 83843**

and the
**University of Arizona Agricultural Experiment Station
University of Arizona
Tucson, Arizona 85721**

**Second Edition
August 1990**

*Illustrations by Lorraine Ashland, graphics artist, Idaho Forest,
Wildlife and Range Experiment Station.*

Introduction

The Bureau of Land Management (BLM) and U.S. Forest Service (USFS) collectively manage 315.8 million acres within the 11 western states: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming (USDI-BLM 1989, USDA-FS 1989). By law, these lands are managed to provide sustained production of multiple, renewable natural resources (FLPMA 1976, NFMUA 1982). These resources include water, lumber, recreation, wildlife habitat, and livestock forage. This report concerns current issues surrounding the harvest of livestock forage on western public lands.

In recent years, livestock grazing on public lands has become embroiled in a flaming controversy fueled by misinformation. The purpose of this report is to provide factual, well-documented information to those people—sportsmen, conservationists, students, teachers, legislators, and others—genuinely concerned about public land livestock grazing. Our goal is to aid and promote decision-making based on factual information, rather than on uninformed perceptions or special-interest propaganda. Specifically, we seek to dispel seven popular myths about livestock grazing on public lands.

The authors are assistant professor, Department of Range Resources, University of Idaho, Moscow 83843; and associate professor and professor, Division of Range Management, School of Renewable Natural Resources, University of Arizona, Tucson 85721. Authors wish to thank Carrie Mosley for inspiration and assistance and for constructive comments on earlier drafts of this report. Authors also thank Kendall Johnson, John Lacey, Ken Sanders, George Savage, and Lee Sharp for their helpful reviews of an earlier draft. This report is jointly published as Idaho Forest, Wildlife and Range Experiment Station contribution No. 513 and the University of Arizona Agricultural Experiment Station bulletin 9018.

Public lands in this report are defined as lands administered by the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS) in the 11 western states. Lands administered by other federal, state, and local government agencies are excluded. This report focuses on the 11 western states because 92% of all livestock grazing administered by the BLM and USFS occurs within these states (USDA-FS 1989, USDI-BLM 1986). The BLM and USFS regulate livestock grazing on 161.8 million acres (USDA-BLM 1989) and 44.6 million acres (SRM 1989), respectively, in the West.



Myth 1: Livestock grazing on public lands plays an insignificant role in U.S. cattle and sheep production.

Fact: In 1988, the 11 western states supported 20% (7.5 million) of the nation's total beef cows and replacement heifers and raised 19% (7.5 million) of the nation's calves (USDA 1989). Because 50% of the beef cows in the 11 western states graze at least part of the year on public lands (Gee 1984), public land livestock grazing supported 10% (3.8 million) of the nation's beef cattle breeding herd. Beef cattle production in several western states depends heavily upon public land forage. For example, 88% of the beef cows in Idaho, 81% in Nevada, 64% in Wyoming, and 63% in Arizona graze at least part of the year on public lands (Gee 1984).

U.S. sheep and wool production is even more dependent than cattle production upon public land forage. In 1988, the 11 western states supported 51% (3.6 million) of the nation's total stock ewes and raised 48% (3.5 million) of the nation's lamb crop (USDA 1989). In 1987 (the most recent year from which data are available), the 11 western states also produced 52% (44.6 million pounds) of the nation's shorn wool. Although the exact percentage of western sheep that graze public lands is not known, 30-40% of the sheep within the 17 western states, which include Texas and the Great Plains, harvest public land forage (Gee and Madsen 1983). Because little public land exists in Texas and the Great Plains, sheep dependency in the 11 western states likely exceeds 40%. Calculations using the conservative 40% dependency figure reveal public land grazing supports 20% (1.8 million) of U.S. stock sheep and produces 21% (17.8 million pounds) of U.S. shorn wool. This is not an insignificant contribution.

Without public land grazing, nearly all of the 1.4 million stock ewes and 3.7 million beef cows and replacement heifers that utilize public lands—or 47% of all the beef cows and stock ewes that graze in the 11 Western states—would be eliminated. This is because livestock grazing on public lands is usually wholly integrated with live-stock grazing on private lands. Summer ranges in much of the West are commonly located on public land in moun-

tainous terrain that is covered with snow during the winter and can be grazed only in summer. Winter ranges are at lower elevations, often on private lands, where winter storms are less severe. In the Southwest, grazing may be year-round on public lands, with the seasonal movements of livestock dictated by availability of drinking water. These water sources are often located on private lands. In the more northern latitudes, livestock must be fed hay during winter, hay that is grown on the lower elevation private lands during summer when livestock are grazing higher elevation public lands. Consequently, the use of private and public grazing lands in the West is often entirely inter-dependent. While only a portion of a livestock herd's yearly forage needs may be supplied by public lands, the public lands serve as "critical habitat" because there is no available substitute (CAST 1986).

The significance of public land forage to U.S. cattle and sheep production is often misinterpreted when people learn that only 1% of the sheep and cattle (beef and dairy) feed consumed in the U.S. is supplied by public lands (calculated from USDA 1989, USDA-FS 1989, USDI-BLM 1989). But this percentage is based upon the total amount of feed consumed by all cattle and sheep, including feed consumed in feedlots where older, larger animals are fed heavy rations to reach slaughter weight. Public lands supply a small percentage of the total feed consumed partially because their primary product is small livestock—lambs and beef calves—that do not eat as much as older, larger animals.

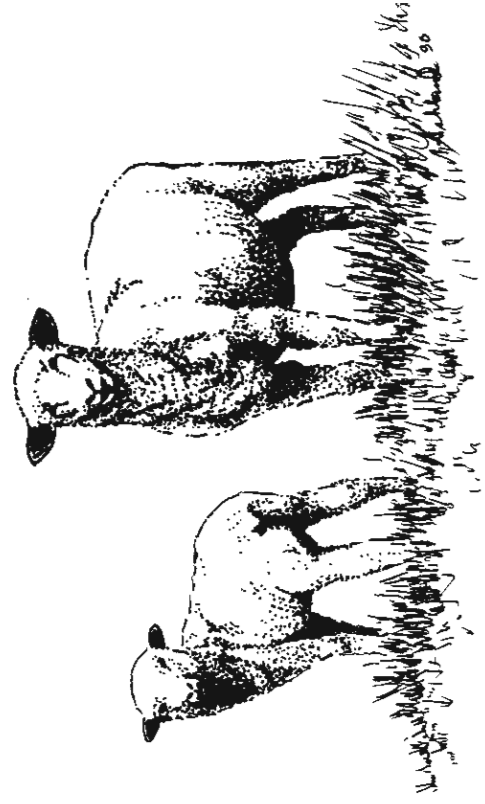
The true significance of public land forage is that it provides an integral feed source for producing the initial inputs (i.e., calves and lambs) into the beef and sheep production cycles. After weaning, lambs and calves from public land-dependent ranches are shipped elsewhere for further grazing or feeding to slaughter weights (largely in Texas, Oklahoma, Nebraska, and eastern Colorado), where they consume large quantities of feed. The livelihoods of many Great Plains and Midwest ranchers, feedlot operators, and meat packers depend upon the continued supply of calves and lambs raised on ranches dependent upon public land forage.

Myth 2: Livestock grazing on public lands makes an insignificant contribution to the U.S. economy and the western livestock industry.

Fact: Beef cattle and calves grazing in the 11 western states were valued in 1988 at \$7.7 billion, or 20% of the nation's total value of beef cattle not in feedlots (USDA 1989). Because 50% of the beef cattle that graze in the West utilize public land forage (Gee 1984), public land-dependent cattle are worth \$3.8 billion. In 1988, stock sheep and lambs in the 11 western states were valued at \$398 million, or 49% of the nation's total value of stock sheep (USDA 1989). Because at least 40% of western sheep utilize public land forage (Gee and Madsen 1983), public land-dependent sheep are worth \$159.2 million.

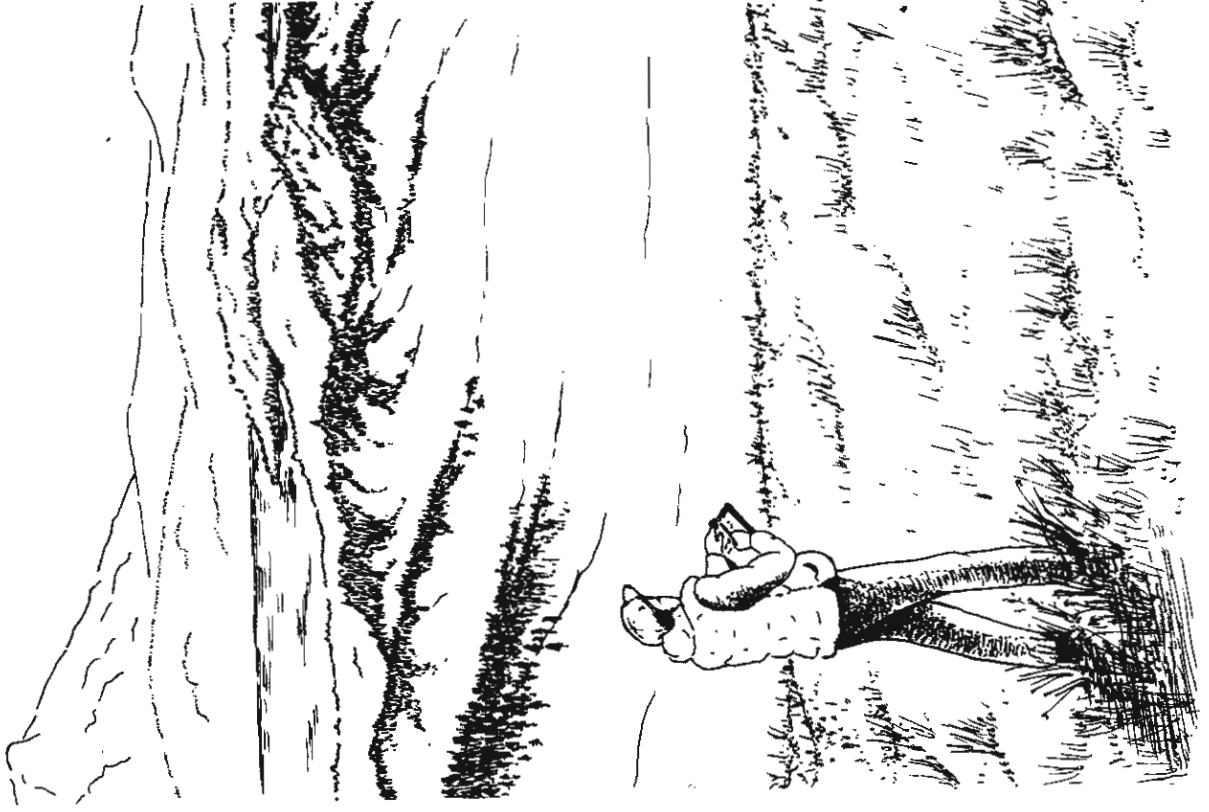
In addition to the \$4.0 billion invested in sheep and cattle that graze public lands, an annual value of production is also derived from these animals. The 1986 annual value of production from all grazing beef cattle and stock sheep in the 11 western states was \$3.3 billion, or 21% of the nation's total annual value of production from grazing beef cattle and stock sheep (USDA 1987). In 1986, cattle and sheep relying on public lands produced an annual value of over \$1.6 billion. For several western states, the value of public land livestock production is an important component of the state economy. For example, beef cattle production dependent upon public land forage comprises 2.0% of Montana's and 1.9% of Idaho's gross state product (USDA 1987, USDC-BEA 1988). Similarly, Wyoming and Nevada derive 1.2% and 0.4%, respectively, of their gross state product from cattle that use public lands (USDA 1987, USDC-BEA 1988). These "small" percentages of gross state product, however, do not indicate an insignificant contribution. For comparison, Kansas derives 1.7% of its gross state product from wheat production, corn production comprises 1.0% of Illinois' gross state product, and Florida receives 0.4% of its gross state product from oranges (USDA 1987, USDC-BEA 1988). These figures reveal that cattle grazing on public lands plays a vital role in the economies of several western states. Public land-dependent cattle are more important to both Idaho and Montana than wheat is to Kansas; more important to Wyoming than corn is to

Illinois; and equally important to Nevada as oranges are to Florida. It should be noted that the above economic values relate only to cattle and do not include the additional contributions from public land-dependent sheep and wool production.



Myth 3: Low federal grazing fees encourage excessive numbers of livestock on public lands.

Fact: Just as the federal government collects fees for camping in public land campgrounds, the BLM and USFS collect grazing fees from ranchers whose cattle and sheep harvest public land forage. The number of animals that ranchers are allowed to graze is determined by the BLM and USFS. Professionally trained BLM and USFS personnel also specify when and where grazing can occur (USDA-FS and USDI-BLM 1986). The number of livestock permitted is based upon the land's capacity to support grazing livestock, as determined by ecological characteristics such as soil type and precipitation received, and with consideration of other natural resource uses and values. Because grazing fees do not affect a unit of land's ecology, grazing fees cannot affect the land's grazing capacity, nor the number of animals permitted to graze. The grazing fee is a political and economic decision made by Congress, whereas grazing capacity is an ecological decision made by the BLM and USFS. Current grazing fees can affect actual numbers of animals grazed on public lands only if grazing fees become unaffordable to permittee ranchers, thus forcing them out of business.



Myth 4: Federal grazing permittees receive an unprecedented subsidy because BLM and USFS administration of livestock grazing permits costs the federal government more than is generated by grazing fees.

Fact: BLM and USFS administration of grazing permits costs the federal government more than is currently generated directly by grazing fees. But the difference is less than commonly perceived. A BLM study determined that only 68% of the total costs of the BLM's rangeland program relates to livestock grazing (USDA-FS and USDI-BLM 1986). The remainder of the budget covers legislatively mandated requirements for basic rangeland conservation. These duties include providing baseline vegetation inventory data and monitoring the ecological condition of public lands. In 1983, the cost of these non-livestock activities was \$176 million (USDA-FS and USDI-BLM 1986). Additionally, without livestock grazing, the federal government would be forced to absorb the permittees' costs for maintaining and replacing water development projects that benefit wildlife and wild horses and burros. These annual permittee costs were estimated to total \$5.7 million in 1983 (USDA-FS and USDI-BLM 1986). When both the non-livestock grazing costs and the water development maintenance costs are accounted for, only 58% of the BLM's range management program costs relate to administering the livestock grazing program. Thus, in 1983 the BLM would have spent \$23.3 million for conservation of public grazing lands and \$32 million administering the grazing program. In turn, the BLM collected \$16.7 million in grazing fees, resulting in a \$15.3 million net expenditure for its livestock grazing program. A grazing fee of \$2.44/AUM¹ would have precluded the need for any federal subsidy (USDA-FS and USDI-BLM 1986).

In 1988, the USFS spent \$32.8 million on its range management program. If the USFS and BLM spend a similar percentage of their range management funds on livestock grazing (i.e., 58%), then in 1988 the USFS spent \$19 million administering its livestock grazing program

¹An AUM (Animal Unit Month) is the amount of feed or forage required by one mature cow or the equivalent for one month.

while receiving \$8.7 million in grazing fee receipts (USDA-FS 1989). This difference resulted in a \$10.3 million expenditure by the USFS to administer its livestock grazing program.

Livestock grazing is not the only public land activity that costs more to administer than is generated by user fees. For example, in 1988 the USFS operated its wildlife and fish habitat management program at a net loss of \$47.4 million and its recreation program at a net loss of \$89.4 million (USDA-FS 1989). These deficits constitute an astounding subsidy of \$136.8 million to campers, hikers, photographers, birdwatchers, hunters, fishermen, white water rafters, and others (Fig. 1).

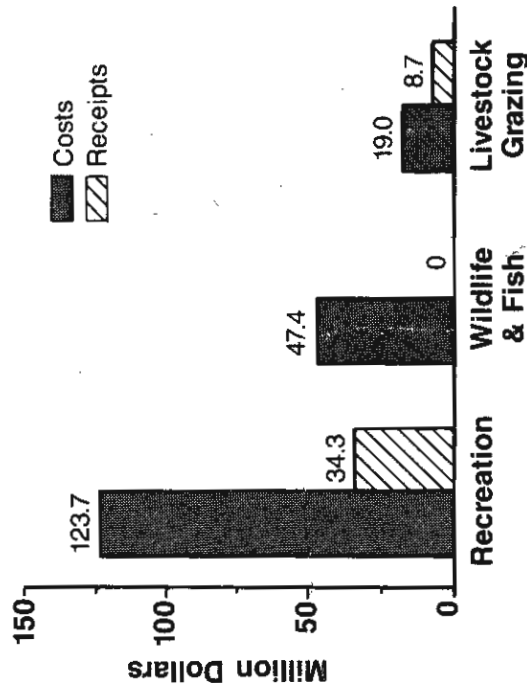


Figure 1. Estimated costs and receipts from the U.S. Forest Service administration of recreation, wildlife and fish, and livestock grazing in 1988.

Myth 5: Public land grazing fees are low relative to private land lease rates, thus providing federal grazing permittees a subsidy and an unfair economic advantage over non-permittee ranchers.

Fact: Ranchers leasing private lands usually pay more per AUM than the amount paid by public land permittees. For example, in 1982 the public land grazing fee was \$1.86/AUM, whereas the average private lease rate for nonirrigated grazing land in the West was \$743/AUM (Brokken and McCarl 1987). However, this disparity does not result in an unfair economic advantage for permittee ranchers. A recent study by the U.S. Department of Agriculture's Economic Research Service found that for western cow/calf enterprises there was no significant difference in net receipts between permittees and nonpermittees (USDAFS and USDI-BLM 1986).

There are two main reasons why the difference between private and public grazing fees does not provide an economic advantage for federal permittees. One reason is that federal permittees incur greater operating expenses for items such as transportation and herd management. For example, in Idaho in 1982, total non-fee costs averaged \$14.59/AUM on public lands compared to \$7.54/AUM on private lands (Obermiller and Lambert 1984).

The second reason why public land grazing fees do not provide federal permittees an economic advantage is that federal permittees incurred extra costs when they acquired their ranch properties. That is, when permittee ranchers bought their ranch properties, they paid for the land's increased value (either through capital outlay or increased inheritance tax) that was gained from having a public land grazing permit assigned. The value of the grazing permit was capitalized into the value of the private ranch property and paid by the permittee in the form of interest (or in opportunity cost associated with the use of equity capital if no money was borrowed to purchase the ranch property). This financial reality exists for almost all federal permittees because from the time public land grazing permits were first assigned to individual ranches, largely from 1905-1940,

almost all ranch properties have transferred to new owners (Nielsen and Workman 1971).

While the BLM and USFS do not formally recognize permit value as an entitlement to permittees, the increased value of a ranch due to its grazing permit is recognized by other branches of the federal government. For example, the Internal Revenue Service taxes the value of the grazing permit, and banks insured by the Federal Deposit Insurance Corporation accept the value of grazing permits as collateral for loans (Rimbey 1989).

It also is important to remember that from the inception of U.S. land policy, the federal government did not administer its lands as an ordinary proprietor seeking to sell products (e.g., timber and forage) at the highest possible price. Rather, these products were initially offered either free or at very low prices to encourage citizens to settle and develop the West. Just as land was given to railroad companies in return for establishing transportation routes, grazing permits were given to ranches in return for citizens risking their lives and capital to establish a tax base for schools and local governments (Dana and Fairfax 1980). Continued existence of ranching operations that harvest public land forage remains official U.S. policy (FLPMA 1976, NFMUA 1982).



Myth 6: Livestock grazing on public lands is causing the ecological condition of these lands to deteriorate.

Fact: Public lands were severely abused in the late 1800's and early 1900's due to improper livestock grazing. In some locations, soil and vegetation are still recovering from these past abuses. Also, improved livestock grazing management is needed even today in many areas. But generally, public lands are currently in the best condition that they have been in this century, and the improvement is continuing.

Eighty-eight percent of USFS lands and 79% of BLM lands are either improving or stable in ecological condition (the trend is undetermined on an additional 6% of BLM lands) (SRM 1989). Similarly, 76% of the 44.6 million acres of USFS land suitable for livestock grazing have a satisfactory livestock forage resource value rating (SRM 1989). A satisfactory rating means that current management practices adequately protect the soil and are acceptably maintaining or improving plant species composition and production.

Descriptions of the percentages of land within various ecological condition classes are difficult to understand and interpret. Traditionally, the BLM and USFS have described ecological status in terms of four or five range condition classes: "excellent," "good," "fair," "poor," or "very poor." These classifications reflect comparisons between a site's existing vegetation (i.e., which plant species are present and their relative amounts) and what the site could potentially support if natural plant succession progressed unimpeded through time. An "excellent" rating meant the existing vegetation closely resembled its natural potential, whereas a "poor" rating meant the existing vegetation was very dissimilar to its natural potential. Traditional range condition ratings are not, by definition, formulated to describe whether current management is successful, but merely to characterize a site's vegetation relative to its natural potential.

Unfortunately, some persons have concluded that "fair" or "poor" ratings are synonymous with unsatisfactory, implying that current management practices need to be

changed. This may or may not be true, depending upon which plant species and relative amounts are desired on a site. Often multiple uses (e.g., wildlife habitat, camping, hiking, livestock grazing) are best provided when a site's vegetation is very different from its natural potential composition. For example, deer forage is usually maximized on a site when shrubs and forbs are abundant, rather than perennial grasses. But if such a site's natural potential were abundant perennial grasses, its existing vegetation would be judged very dissimilar from its potential. Accordingly, this site would be reported in a "lower" condition class (e.g., "fair" or "poor"), even though the site may currently support the desired plant species in the desired relative amounts.

The misinterpretation of range condition ratings has prompted the BLM and the USFS to change their methods of reporting ecological condition. While not perfectly synonymous, the traditional terms "excellent," "good," "fair," and "poor" are being replaced by the more appropriate terms "potential natural community (PNC)," "late-seral," "mid-seral," and "early-seral." These new terms better describe a site's existing vegetation relative to its natural potential and do not inject subjective bias as do qualitative terms such as good or poor.

The USFS has adopted the new terms, while the BLM has begun the conversion but currently still reports the traditional ratings. In 1987, the ecological status of USFS lands suitable for livestock grazing was rated as 15% PNC, 32% late-seral, 38% mid-seral, and 15% early-seral (SRM 1989). In 1988, ecological status of BLM lands was rated as 4% excellent, 30% good, 38% fair, 17% poor, and 11% unclassified (USDI-BLM 1989).

Myth 7: Livestock grazing on public lands is causing a decline in big game populations on these lands.

Fact: Livestock grazing occurs on about 93% of BLM lands in the West (USDI-BLM 1989), and big game populations on these lands are steadily increasing. In the 11-year period from 1977-1988, the total big game population (includes barbary sheep, bear, bighorn sheep, bison, caribou, deer, elk, javelina, moose, mountain goat, and pronghorn antelope) grew from about 1.5 million to 1.9 million, a 31% increase (USDI-BLM 1978, 1989). Pronghorn antelope increased from about 199,000 in 1977 to 296,000 in 1988, a 49% increase. Deer (includes black-tailed, mule deer, and white-tailed) increased from about 1.2 million to 1.4 million, a 25% increase. Elk increased 38%, from about 104,000 to 143,000.

Big game populations on USFS lands in the West also are increasing, while 32% of USFS lands in the West are classified suitable for livestock grazing (SRM 1989). From 1977 to 1984 (the most recent year from which data are available) the big game population grew from about 2.5 million to 2.6 million (USDA-FS 1977, 1984). Pronghorn antelope numbers grew from about 49,000 to 58,000, a 16% increase over 1977 levels. Deer increased 1% to 1.9 million, and elk numbers grew 8%, from about 429,000 to 464,000.



Summary

Western public lands are managed to provide the U.S. with sustained production of multiple, renewable natural resources. Products include water, recreation, lumber, firewood, open space, and forage for wild and domestic animals. The continued harvest of domestic livestock forage has become embroiled in controversy, a controversy fueled by misinformation and myth. Future discussions of public land livestock grazing policies should be founded upon facts, including these seven facts about livestock grazing on public lands:

1. Livestock grazing on public lands plays a significant role in U.S. cattle and sheep production.
2. Livestock grazing on public lands makes a significant contribution to the U.S. economy and the western livestock industry.
3. Low public land grazing fees do not influence the number of livestock allowed to graze on public lands.
4. The public land livestock grazing program costs the federal government more than is generated by grazing fees, but even larger "subsidies" exist for other public land management programs, including wildlife and recreation.
5. Federal grazing permittees do not have an economic advantage over non-permittee ranchers.
6. Ecological conditions of public lands are improving in the presence of regulated livestock grazing.
7. Big game populations on public lands are increasing in the presence of regulated livestock grazing.

Literature Cited

- Brokken, R.F., and B.A. McCarl. 1987. A theoretical evaluation of fee systems for private grazing on federal lands. USDA Economic Research Service Agricultural Economic Report 570.
- CAST (Council for Agricultural Science and Technology). 1986. Forages: Resources for the future. Report 108. Ames, Iowa.
- Dana, S.T., and S.K. Fairfax. 1980. Forest and Range Policy. 2nd ed. McGraw-Hill, New York.
- FLPMA (Federal Land Policy and Management Act). 1976. Public law 94-579; 90 Stat. 2743.
- Gee, C.K. 1984. The impact of alternative federal grazing fees on western livestock businesses. USDA Economic Research Service, PB85-128312.
- Gee, C.K., and A.G. Madsen. 1983. Sheep production in the 17 western states. Colorado State Agricultural Experiment Station Special Series 24.
- NFMUA (National Forests Multiple Use Act). 1982. Public law 86-517, 74 Stat. 215.
- Nielsen, D.B., and J.P. Workman. 1971. The importance of renewable grazing resources on federal lands in the 11 western states. Utah Agricultural Experiment Station Circular 155.
- Obermiller, F.W., and D.K. Lambert. 1984. Costs incurred by permittees in grazing livestock on public lands in various western states. Oregon State University Extension Service EM-8283.
- Rimbey, N.R. 1989. Federal grazing fees: The never-ending story. University of Idaho Cooperative Extension Service Bulletin 690.
- SRM (Society for Range Management). 1989. Assessment of rangeland condition and trend of the United States, 1989. Denver, Colorado.
- USDA (U.S. Department of Agriculture). 1987. Agricultural statistics. Washington, D.C.
- USDA (U.S. Department of Agriculture). 1989. Agricultural statistics. Washington, D.C.
- USDA-FS (U.S. Department of Agriculture-Forest Service). 1989. Report of the Forest Service—fiscal year 1988. Washington, D.C.
- USDA-FS (U.S. Department of Agriculture-Forest Service). 1984. Wildlife and fish habitat management in the Forest Service. Washington, D.C.

- USDA-FS (U.S. Department of Agriculture-Forest Service). 1977. Annual wildlife report. Washington, D.C.
- USDA-FS and USDI-BLM (U.S. Department of Agriculture-Forest Service, and U.S. Department of the Interior-Bureau of Land Management). 1986. Grazing fee review and evaluation: A report from the Secretary of Agriculture and the Secretary of the Interior. Washington, D.C.
- USDC-BEA (U.S. Department of Commerce-Bureau of Economic Analysis). 1988. Survey of Current Business 68:30-36. Washington, D.C.
- USDI-BLM (U.S. Department of the Interior-Bureau of Land Management). 1989. Public land statistics, 1988. Washington, D.C.
- USDI-BLM (U.S. Department of the Interior-Bureau of Land Management). 1978. Public land statistics, 1977. Washington, D.C.