
VIEWPOINT

Changing Philosophies of Rangeland Management in the United States

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Ranchers and professional range managers have sometimes thought that they make major decisions controlling rangeland use. During certain periods of our history this may be true, particularly on private lands. But grazing use on public lands is more or less rigidly controlled by government, which is responsible and responsive to appropriate legislative bodies. And in our democracy, legislative representatives are likely to be strongly influenced by expressed public sentiments.

At times, the whole system pays little attention to problems of rangeland use, but at other times the attention of an aroused public is focused directly on these problems. Because we are currently enjoying such attention, it seems timely to examine the changing philosophies of rangeland management and the forces which bring about these changes.

Rangeland constitutes almost half of the total surface area of the United States and is by far the greatest single land use category. Even though rangelands are generally at the bottom of the scale in productive capacity, they are so extensive in area that they cannot avoid public attention for long. During recurring periods of public conservation enthusiasm (typified by the current "ecology" binge, the creation of the alphabet soup federal agencies of the mid-nineteen-thirties, and the conservation furor at the turn of the last century), major legislation is written to preserve natural resources, including ranges. Restrictive legislation usually provides for the establishment of a bureau in government to enforce provisions of the act. Then the policy becomes somewhat self-sustaining and very difficult to change without support from a powerful political group.

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Drought, economic depression, war, threatened population explosion, and other natural crises may impact government bureaus and change policies of rangeland use in various ways. Previously passed laws may be repealed, rewritten, or simply ignored to allow citizens to meet their real life problems of finding food, clothing, and housing. It may become socially acceptable to plunder the natural resource reserve for personal gain.

During "normal" times, between frenzy and famine, the smoldering forces of "preservation" and "exploitation" are more or less at a stand-off, unable to generate the great public outcry needed to bring about significant change.

In the following historical review, an account will be given of social, economic, and biological forces at work changing philosophies of rangeland management.

Early Attitudes: Free Uncontrolled Use

Soon after the original 13 states formed the Union, their nonprivate lands were deeded to the federal government. This acreage became the original public domain. In a relatively quick succession of purchases and treaties, over the period of 1803 to 1867, hundreds of millions of acres of land were added to the public domain, bringing the boundaries of the country approximately to their present location (Hibbard 1939).

Ownership of this vast surplus of land posed many serious problems for the relatively inexperienced federal government. Disposal seemed the wisest course, and various means were devised. Land sales offered in an attempt to raise funds for governmental operation were only partly successful. Homestead laws, beginning in 1862, transferred much of the best land into private ownership. Federal land grants were made to encourage development of railroads, canals, schools, prisons, and other improvements in an effort to stimulate settlement.

Essentially no provision was made for controlling grazing or other use of the

extensive undisposed public domain. In the beginning, stockmen used practically all of it without charge, or any semblance of control. As the government's disposal program proceeded, homesteaders fenced in the best agricultural lands and stockmen were forced to move to the less productive ranges not suitable for intensive crop agriculture. By controlling water holes and through mutual agreements worked out with neighbors, cattlemen frequently were able to maintain tenuous control of their occupied ranges. Itinerant sheep bands with nothing more than a sheep wagon for a headquarters moved across the ranges and further complicated a tense situation. This was the status of public domain lands in 1905 (Barnes 1925).

The range management philosophy of the government at this time was to avoid interfering with the stockmen's use of the range. Under this administration, public domain ranges were filled up rapidly to eventually become severely overstocked, and great damage was inflicted. The stockmen themselves, in responding to a questionnaire, overwhelmingly favored strict federal control of stocking and assignment of designated areas on the public ranges (Potter 1905).

The great public need during this period was for economic development of the land. But unmitigated greed mixed with a pure lack of understanding of the fragile nature of the western range resource brought widespread destruction of native cover and subsequent loss of topsoil.

During this same period, timber and other resources were being similarly exploited. National and state conservation organizations, such as the American Forestry Association, and many public spirited individuals raised a clamor about forest resources destruction. In the beginning, their efforts drew little attention; but with the leadership of Gifford Pinchot, newly appointed Chief Forester fresh from professional forestry training in Europe, and Theodore Roosevelt, the Rough Riding hero President, the entire political climate changed. By Presidential edict, clever

legislative finagling, and bull-headed persistence, they steered federal land policy on a steady course between private exploitation and public preservation. Pinchot's idea of management for "the greatest good to the greatest number" ushered in a new era for forestry, including not only trees, but forage, water, wildlife, and recreation. His "wise use" brand of conservation caught the imagination and support of sufficient power centers to bring it into practice on the newly established national forests and set it as a beacon for others to follow.

Wise Use

In 1905 the Forest Reserves were placed under the administration of the newly established Forest Service. In a report to the Senate that year, Forest Service Chief of Grazing Albert F. Potter recognized overstocking as "the greatest cause of range destruction and decreases in its carrying capacity." Grazing studies were made to determine "carrying capacity" of each unit, and specifications made of numbers permitted, seasons of use, and class of stock. Management philosophy, as expressed in the Forest Service "Use Book," included both biological and social objectives. It stated: "The Forest Service will allow the use of the forage crop of the reserves as fully as the proper care and protection of the forests and water supply permit." The regulations further specified that permanent operators who owned land for maintenance of the stock when off the national forests were to be given first preference in the issuing of National Forest Grazing Permits. The biological objective was to maintain the forage and the soil under full grazing use in a state of sustained yield in perpetuity. The social objective was to stabilize the livestock industry and to integrate use with other resource use: water, timber, wildlife, and recreation (Pinchot 1947).

Even though large acreages of unreserved public domain, as well as many private holdings, continued to deteriorate under unrestricted grazing use during this period, the practice of improved range management on national forests had a salutary effect. It led to the development of a system of practical range management principles and practices through practical experience and demonstrated the need for range research. Universities were stimulated to develop curricula leading to professional degrees. Range management became recognized as a distinct profession among land managers. Gradually, stockmen came to accept the philosophy of sustained yield on Forest Service ranges, and the social objective of making secure the forage supplies needed to stabilize the livestock industry began to be realized.

Perhaps the first comprehensive treatment of range management and principles

was published in 1915 by Jardine and Anderson. They defined range management as "the application of a system of range use which (accomplishes) in a broad sense the aims of regulated grazing; . . . it is the fullest and best use of the grazing resource consistent with the protection, development, and use of other resources." (Note that the professional range manager, by implication, is the key decision maker.)

In the years following Pinchot's establishment of range management on the national forests, the unappropriated public domain was used much as before, without control of livestock numbers or seasons of use. Grazing on private lands, in general, also suffered from lack of enlightened management. The Forest Service persisted in agitating for grazing regulation on all public lands and also attempted to spread the science to private land holdings through education. But stockmen successfully resisted, using their considerable political power to counter the relatively weak conservation groups.

War

During World War I many of the gains previously made in management of the national forests were temporarily reversed. The United States government took on the responsibility of feeding the world under the "Hoover Plan," which required heavy production of livestock from forest ranges. Overstocking was officially encouraged to meet quotas. Long-term permits were issued for excessive numbers, and in many instances, 25 to 30 years were required to return forest ranges to proper stocking levels.

In the meantime, organizations and agencies continued to press on for regulation on all public lands. In 1925, the Forest Service released a bulletin titled "The Story of the Range," authored by Chief of Grazing Will C. Barnes, which gave an historical account of the destruction of the range as a result of lack of proper livestock management. In this bulletin he openly proposed that the remaining unreserved public ranges be transferred to the U.S. Department of Agriculture and grazing regulated by the Forest Service. The Forest Service had implicit faith that, given the opportunity, it could bring order from chaos on these lands. Many of the stockmen operating on public domain ranges in winter trailed livestock to nearby national forest ranges for their summer feed.

Forest officers knew how to work with these stockmen on the Forest and believed they could extend regulation to the public domain. But interagency jealousies and entrenched administrative authority could not be moved in normal times.

Double Jeopardy: Depression and Drought

The greatest depression was compounded by the greatest drought. The

10-year depression came in 1929, and the drought came in 1932, 1934, and 1936 (with poor years in between). The depression ruined the market and the drought ruined production. Typical is the story of a farmer who shipped his hog to market in Chicago; transportation costs were \$3.25. The hog sold for \$3.00.

In this national crisis, the Taylor Grazing Act of 1934 became possible, initially bringing 80 million acres of grazeable unreserved public domain land into managed grazing districts. (Later additions expanded grazing districts to cover more than 160 million of the original 200 million acres of unreserved and unappropriated federal lands.) The Great Drought emphasized the overstocking situation and did much to convince the nation of the need for application of range management principles. Relief programs instituted to overcome the suffering of people in the Great Depression provided funds for research, range improvement programs, and college education in natural resource management. The Taylor Grazing Act established the Grazing Service in the Department of the Interior (in 1946 combined with the General Land Office to become the Bureau of Land Management) as the management agency with responsibility for saving these ranges from destruction. Much of the art and science of range management as developed by the U.S. Forest Service was adopted directly, where applicable.

Several other conservation agencies were born during this same period, including the Soil Erosion Service (later the Soil Conservation Service) and the Agricultural Adjustment Administration (later the ASCS). State governments found guidance in federal legislation, and many western states established agencies which initiated grazing policies on state lands. An "Interagency Range Committee" formulated uniform grazing inventory procedures. Professionally trained range managers were in demand, and western land grant colleges rose to the occasion.

In 1936, the U.S. Forest Service released a document titled "The Western Range—A Great But Neglected Natural Resource" in response to Senator Norris' resolution. This was a detailed report of the extent and condition of the range, as well as recommendations for its future management and renovation. As defined in this report, the objectives of range management were to "restore and maintain in perpetuity on a sustained yield basis, and utilize all of the resources of the land."

The thrust continued to be oriented primarily toward the economics of the livestock industry for the next two decades, as indicated by textbook definitions. Stoddart and Smith (1943) said, "Range management is the science and art of planning and directing range use so as to obtain the maximum livestock production

consistent with conservation of the range resources." Sampson's definition (1952) was similar, stating, "Range management is the science and art of procuring maximum sustained use of the forage crop without jeopardy to other resources or uses of the land." Stoddart and Smith's second edition (1955) changed the wording slightly (but not the philosophy) to read "the science and art of obtaining maximum livestock production from range land consistent with conservation of the range resource." There were few dissenters, as most seemed preoccupied with overcoming the depression, winning the Second World War, raising big families, and making certain that their children had all the niceties their parents were denied by the Great Depression.

What's This? Money Isn't Everything?

Following World War II, the national economy enjoyed a long period of increasing industrial production, and individual incomes spiraled. Populations shifted to metropolitan centers as agriculturalists, also adopting modern chemicals, machines and management practices, increased individual production phenomenally. The "affluent society," as it came to be called, developed attitudes and tastes which were quite changed from the predominantly agricultural economy of a few decades earlier. Significantly, the balance of political power, under legislative reapportionment following the "one man one vote" concept, moved to the burgeoning urban centers. There, city dwellers became accustomed to thinking of food as always available at low prices and in great abundance on supermarket shelves.

The new generation often found that securing the material things their parents struggled for (food, clothing, and shelter) was no challenge. In fact, they had more of everything than they needed to the point where some even felt a revulsion of material things. Spin-off from the great productive capacity of the country allowed them to live comfortably, if frugally, without employment. A philosophy of "zero population growth" and a "no-growth economy" evolved. Their interests turned to aesthetics such as environmental quality, rare and endangered species, wild and scenic rivers, and the preservation of wilderness. College students anxiously demonstrated membership in the "cult" by wearing ragged blue denims, beards, long stringy hair, and the ubiquitous back pack filled with books.

Recreation organizations sprung up in the most unexpected places. Bird watchers' clubs, rock hound clubs, dune buggy clubs, motorcycle clubs, four-wheel drive clubs, snowmobile clubs, hiking clubs, bicycle clubs, and recreation vehicle clubs, to name a few, spread over the ranges from Mexico

to Alaska. Old-line conservation organizations, such as the Sierra Club, Izaak Walton League, Audubon Society, American Forestry Association, Wildlife Federation, and Wilderness Society, grew phenomenally in memberships (some exceeded 100,000). "Instant Ecologists" appeared in the ranks of every discipline, profession, and walk of life. Housewives abandoned their kitchens to join the Crusade. "Ecology" became the stock-in-trade subject of customer conversations with barbers and shoe salesmen (for those who continued to have haircuts and wear shoes).

The conflict for use of the public lands grew to such proportions that from time to time it occupied the center of national attention, with significant political, social, and economic impacts. Land managing agencies were caught between the preservationists, the recreation developers, and the consumptive users (including the stockmen).

Legislators in this republic opened their ears, and the new laws which appeared were a direct response to the attitudes of the changing electorate. For example, the Wild Horse and Burro Preservation Act passed in a flush of emotion expressed by millions of city dwellers, some of whom were led to believe they could capture their very own wild horse and raise it in their back yard. Stockmen were made to seem, in the public eye, selfish profiteers taking for themselves that which belonged to the public. The thought that "token grazing fees" paid for grazing permits would readily be foregone in favor of preserving the ranges for public recreation (or even no use at all) gained wide acceptance. The Bureau of the Budget, following an agency-wide study, more than quadrupled grazing fees recently in effect.

Priority for livestock grazing use on public ranges reached an all-time low in U.S. history. Consideration of the needs of big game animals progressively took precedence over domestic stock in agency grazing plans and research programs. Consideration for nongame species, and in particular, rare and endangered plant and animal species, was given highest priority.

A new range management text, third edition, was written during this period and released in 1975 (Stoddart, Smith, and Box). The tone throughout the book was heavily colored with the constraints placed on range management by the broadly changed social needs outlined above. The new definitions of range management clearly reflects this change in philosophy, as well as some sharpening and modernization of terms. It reads: "Range management is the science and art of optimizing the returns from rangeland in those combinations most desired by and suitable to society through the manipulation of range ecosystems."

Note the change! The more sophisticated economic term "optimizing" has replaced the impractical idea of "obtaining maximum" production. The addition of the phrase "manipulation of range ecosystems" is largely a modernization of terms and an extension of past ecological thought. More significant though, is the change in what is expected to be produced. "Livestock production" has become "returns from rangeland in those combinations most desired by and suitable to society." Certainly this is an expression of altered philosophy in range management, reflecting accurately the mood of current social attitudes, developed in the fire of social and political debate. In the future, the people, represented primarily by activists, are expecting to make the decisions regarding what the highest priority uses of the range will be. In many instances that could mean rock hounding, hunting and fishing, open space, wildlife, water, timber, or just beautiful scenery. It may or may not include the production of livestock.

Professionals have the responsibility of being able to manage the ranges to attain these objectives as determined by the public. As professionals, we can no longer expect to have our personal opinions about priorities accepted without questions. But neither can we afford to neglect expressing our opinions on these subjects, where we may have the best information about land use priorities available.

People tend to be somewhat like sheep. They often fatuously follow the latest fashion, not only in clothes but in social action. With much increased leisure time, with a TV in every living room, and a newspaper on every doorstep, the writhings of public opinion are becoming more convulsive and violent with the passing years. Self-styled experts gain reputation and remuneration by making shocking statements, sometimes without reference to facts. People routinely fall in behind them and march off on another crusade. If the crusade wanders out onto the range, cool headed professionals are needed.

Political scientist Norman Wengert says: "In an age of insecurity, the timid among us squirm and fidget when confronted with controversy. They mistake social conflict for social disorganization. Dispute and disagreement—the elements of political struggle—are too often frowned upon. Yet these are the essence of the democratic process in twentieth-century America. And it is through this process that the public interest may be identified and achieved, for the public interest is not some object principle handed down to mortals from above. It is what we, the public, believe and feel as a result of our experience, as a result of our collective judgements. This has been the basis of the political struggle over resource policy."

World Hunger?

Predictions of the future always bear some hazard; but signs are becoming clear that new attitudes are forming which will again change national policies. The unemployed and workers threatened with insecurity by environmentally related restrictions on economic activities are having second thoughts about their zeal for the cause. Students these days are interested in jobs. Businessmen are expressing their needs more persuasively and eloquently, and sympathy for their point of view is appearing publicly.

Renewed interest is appearing for the range as a source of food. Range forage is becoming recognized as an alternate to feed grains, which thus might be saved for direct human consumption. Appropriations for

range research have ended their long downward trend. "Red meat production" is a common phrase in titles and bodies of publications expressing fears of the future.

Perhaps range livestock production will have a new day!

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