

# A Century of Managing Rangelands on National Forests

Or

## It Ain't Easy Being a Range Con in the New West

By

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A century ago, the Forest Reserves were transferred from the Department of Interior to the Department of Agriculture to be managed by the newly established United States Forest Service. That same year, on June 13, 1905, the Chief of the Forest Service, Gifford Pinchot, released regulations and instructions for the use of the Forest Reserves. These instructions included the following phrase that has long been considered the primary guiding principle for the management of the National Forests, “In the management of each reserve local questions will be decided on local grounds; ...from the standpoint of the greatest good of the greatest number in the long run”<sup>1</sup>. The Organic Administration Act of 1897 provided the legal foundation for the management of the Forest Reserves (In 1907 the name Forest Reserves was

**Forest Service Mission** (FSM 1020.21)–  
*Caring for the Land and Serving People*

1. Advocating a conservation ethic in promoting the health, productivity, diversity, and beauty of forests and associated lands.
2. Listening to people and responding to their diverse needs in making decisions.
3. Protecting and managing the National Forests and Grasslands so they best demonstrate the sustainable multiple-use concept.
4. Providing technical and financial assistance to State and private forest landowners, encouraging them to practice good stewardship and quality land management in meeting their specific objectives.
5. Providing technical and financial assistance to cities and communities to improve their natural environment by planting trees and caring for their forests.
6. Providing international technical assistance and scientific exchanges to sustain and enhance global resources and to encourage quality land management.
7. Helping States and communities to wisely use the forests to promote rural economic development and a quality rural environment.
8. Developing and providing scientific and technical knowledge aimed at improving the capability to protect, manage, and use forests and rangelands.
9. Providing work, training, and education to the unemployed, underemployed, elderly, youth, and disadvantaged in pursuit of the agency's mission.

changed to National Forests). The 1907 Act stated that the purpose of the Reserves was to secure favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of the citizens of the United States. Even though timber was of primary concern at the time, the reality was that the greatest impacts and resulting conflicts revolved around grazing on the public lands. The complexities and controversies surrounding use of the forage resources on the National Forest and National Grasslands continue undiminished today. As the Forest Service celebrates its centennial, it is interesting to look back and realize that the basic mission of the National Forest has expanded but remains essentially unchanged since 1905 (see side bar Forest Service Mission<sup>2</sup>).

When the Forest Reserves were transferred from the Department of the Interior to the Department of Agriculture, the intent was for the National Forests to be working landscapes that provided goods and services for the citizens of this country. During the 20<sup>th</sup> century, management of the National Forests evolved to

- Objectives of the Range Program  
For the National Forests and Grasslands (FSM 2202):**
1. To manage range vegetation to protect basic soil and water resources, provide for ecological diversity, improve or maintain environmental quality, and meet public needs for interrelated resource uses.
  2. To integrate management of range vegetation with other resource programs to achieve multiple use objectives contained in Forest land and resource management plans.
  3. To provide for livestock forage, wildlife food and habitat, outdoor recreation, and other resource values dependant on range vegetation.
  4. To contribute to the economic and social well being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on range vegetation for their livelihood.
  5. To provide expertise on range ecology, botany, and management of grazing animals.
  6. To promote the development of grassland agriculture and sustained yield management of the soil, water, forage, fish and wildlife, recreation and timber resources.
  7. To demonstrate sound and practical principles of land use to favorably influence nearby areas and economies.

compliment this concept of working landscapes with the recognition of the multiple uses that were to be provided on the forests. As listed in the Multiple-Use, Sustained-Yield Act of 1960, they are: outdoor recreation, range, timber, watershed, wildlife and fish<sup>3</sup>. In our particular field of interest, when we look back to the formative years of the National Forests, the primary objectives of the Range Management Program were well stated, comprehensive and remain valid today. (See side bar Objectives of the Range Program for the National Forests and Grasslands<sup>4</sup>)



Unknown photographer

Courtesy U.S. Forest Service

Figure 1 – Early forest rangers packing into the West Elk Mountains, Gunnison National Forest in 1911.

Recognizing such a thing as the multiple-use concept and developing the above stated objectives was noteworthy and time well spent, but the reality of the Range Management Program on the National Forests

was a great deal more contentious. When the National Forests were set aside, the first order of business was to develop some semblance of control over use of the resources. The early day Forest Rangers were directed to get out on the ground and become familiar with the country, see Figure 1. Additionally, they were instructed to issue permits for grazing use and institute a fee system. Neither endeavor was especially welcomed with

open arms by ranchers in the west. A good example of conditions during the early years are characterized in this anecdote by Benjamin C. Heilman, one of the first forest rangers on the Gunnison National Forest. In 1933 Heilman wrote a summary of his 25 years of working for the Forest Service. This account refers to an event that took place on Black Mesa in 1910. *Old time cowmen and timber operators were the principal users of the Forest, and, as their use had never been restricted, they were not favorable to administration which, as they expressed it, "Interferes with our business." A half dozen drunken cowboys thought it would be a proper demonstration of their attitude to pull down and burn a trail sign..... I went to a round-up and after the branding was done called them together and asked them what they did with the sign at Mesa Creek. Their reply was*

*"We burned it, what are you going to do, arrest us?" I said, "No! I am not going to arrest you, but that sign cost the Government money to paint it and ship to me, it took me*

**Pinchot's Guide to the  
Behavior of Foresters in Public Office**

A public official is there to serve the public and not run them.

Public support of acts affecting public rights, is absolutely required.

It is more trouble to consult the public than to ignore them, but that is what you are hired for.

Find out in advance what the public will stand for. If it is right and they won't stand for it, postpone action and educate them.

Use the press first, last and all the time if you want to reach the public.

Get rid of attitude of personal arrogance or pride of attainment of superior knowledge.

Don't try any sly or foxy politics. A forester is not a politician.

Learn tact simply by being absolutely honest and sincere, and by learning to recognize the point of view of the other man and meet him with arguments he will understand.

Don't be afraid to give credit to someone else even when it belongs to you; not to do so is the sure mark of a weak man, but to do so is the hardest lesson to learn; encourage others to do things; you may accomplish many things through others that you can't get done on your single initiative.

Don't be a knocker; use persuasion rather than force, when possible; plenty of knockers are to be had; your job is to promote unity.

Don't make enemies unnecessarily for trivial reasons; if you are any good you will make plenty of them on matters of straight honesty and public policy, and you need all support you can get.

*Originally proposed by Gifford Pinchot during his lectures at the Yale School of Forestry, 1910-1920.*

a day with a saddle and pack horse to put it up, and we want it left there. If you will replace it with one as good or better, I will not even make a written report of it, but I will tell the Supervisor when I see him. But, I'm telling you this, I am not establishing any precedent, if you continue such acts, I don't know what I will do the next time. I may get meaner than H\_\_! They said, "All right, we will put up a good sign," and they did put up a better one than had been there.<sup>5</sup> This is an excellent example of item eight in Gifford Pinchot's *Guide to the Behavior of Foresters in Public Office*, see sidebar. In today's world this form of conflict resolution is all too often replaced with process-

oriented legalities.



Arthur Cramer, 9-20-1949 Courtesy Denver Public Library



David Bradford 9-20-2000 Courtesy U.S. Forest Service

Figure 2 – Photo Comparison of Trail Gulch. In 1949 the allotment was grazed season-long by 244 cow/calf pairs from June 1 to October 15, 1949. Caption on back of photograph noted “Stream channel cut-down, willows out, range poor to depleted. West Divide cattle allotment.” Precipitation for the year was 110% of “average. In 1950 this area was added to Muddy Sheep allotment. In 2000 1,046 ewe/lamb sheep grazed the site for ten days in mid-July. Precipitation for 2000 was 80% of long-term average.

For nearly fifty years, there were legal challenges and ongoing controversies. The primary focus of the range program was to reduce livestock numbers and shorten the grazing season as early inventories showed poor plant conditions. Livestock numbers and seasons of use were gradually reduced, restoration programs were implemented the science of range management began to be

introduced to the National Forests and Grasslands, see Figure 2.

By the 1960's, range conservationists were being hired and put to work providing a more scientific approach to conducting grazing on the National Forests. Rotational grazing systems were initiated that usually depended on substantial structural and non-structural improvements to make them successful, see Figure 3. In most cases the main objective of the "implementation of science" was to try and improve the productivity to the point where carrying capacity of the rangelands was more or less equal to the permitted use.



Joe O'Rourke

Courtesy US Forest Service

Figure 3 – Floyd Reed evaluating grazing use on Sunlight Mesa, Bighorn National Forest, 1972. Sagebrush sprayed, cross-fences constructed, water developments constructed and rotational grazing management was implemented in 1960's.

It is remarkable to observe the tremendous improvements that our predecessors made. By the late 1960's and early 1970's most of the allotments had benefited from some level of improved management. The rangelands were

beginning to recover from past abuse and conditions were improving across the West, see Figure 3. This progression of enhanced activities was discussed in

detail in our article in the *August 2003* issue of *Rangelands* titled “*A Range Management Review.*”

This brings us to the more modern era of rangeland management in which the two senior authors of this article spent their careers. In order to be successful, range conservationists were expected to blend their botanical skills with an understanding of livestock and wildlife preferences for occupying and using the landscape. Vegetative inventories continued to focus on measuring desirable forage species for use by grazing animals. It then followed that Allotment Management Plans were updated to obtain more even distribution of livestock and to alleviate conflicts between livestock and wildlife. Just like the early rangers, it was imperative that the range cons, more than anybody else, knew their country. They still needed to be able to travel into remote country, usually horseback, to do a competent job of caring for the resources.

Over the years, those in leadership positions within the Forest Service would comment on the fact that being an effective range conservationist was regarded as one of, if not the most, difficult jobs in the agency. It was universally recognized that to do a responsible job of managing the range program required an individual to be well rounded and conversant in a number of specialties. Communication skills began to be essential in order to conduct the agencies' business, both internally and externally, see Figure 4.

During our careers, things got a lot more complicated. Society demanded a more ecological approach to management of their public lands. The science of rangeland management was continually evolving and Congress passed a myriad of laws, followed



Justin McConkey

Courtesy US Forest Service

Figure 4 – Dave Bradford on a field tour to discuss possible land exchanges and grazing with National Park Service, Forest Service, grazing permittees and aids for Congressional representatives.

by numerous lawsuits, appeals, and rulings by the courts that had a direct impact on the way rangelands were acknowledged and managed. This all led to a continuing increase in process and detail that had to be documented in increasingly complex and extensive Environmental Assessments or Environmental Impact Statements.

Today a competent rangeland management specialist has to be intimately familiar with a wide spectrum of subjects to provide for the care and management of public rangelands, see Figure 5. The following chart displays the differences between the knowledge, skills and abilities required to do the job 25 years ago compared to today.

## Changes over the Past Twenty-five Years

### Rangeland Inventory

**25 years ago** - was centered on the Parker 3-Step Method almost exclusively.

**Today** - are more ecologically based. Soils and plant communities are considered and attributes are compared to "Desired Future Conditions." The Parker 3-Step transects have been replaced with methods that measure cover and frequency, including both circular macro plots as well as 100 foot long linear transects.

### Monitoring

**25 years ago** - of grazing use normally relied on ocular estimates and percent of plants used.

**Today** - is focused more on measuring forage left ungrazed, stubble heights, and determining plant recovery from defoliation.

### "Creek Bottoms"

**25 years ago** - were usually considered sacrifice areas that naturally had to be grazed out before livestock would move into the surrounding uplands.

**Today** - and riparian areas have become important. They are carefully considered in planning and conducting grazing use.

### Livestock handling

**25 years ago** - Salt was usually placed in convenient spots, in large quantities, and close to water. That was to make it easy for the cows to find the salt and then they could get a drink right after they ate some salt.

**Today** - Low-stress livestock handling techniques are being implemented to enhance livestock distribution, avoid sensitive areas, and to improve animal performance. Salt and other supplements have become attractants that are used sparingly, and are carefully located to enhance distribution of grazing animals. More and more, livestock are becoming "*key tools*" in fuels and vegetation management programs.

### Grazing plans

**25 years ago** - Range readiness standards were rigid and when the forage on the National Forest wasn't fully ready to graze, the livestock were forced to remain at the lower elevations, mostly BLM land. Most grazing allotments were divided into relatively few pastures and the pasture rotation sequences didn't vary much from year to year.

**Today** - focus on plant development and recovery. Landownership boundary lines are no longer barriers to improved management.

### Botanical

**25 years ago** - The biggest problem we had with noxious weeds was typically Canada Thistle

**Today** - skills have expanded to identify numerous weeds and a myriad of rare and/or sensitive plant species that must be recognized in the planning process.

### Wildlife

**25 years ago** - was recognized as being entitled to occupy the landscape and was expected to utilize areas where livestock grazing didn't normally occur.

**Today** - The needs of many species of wildlife – not just big game animals – and recreation use are key elements of an allotment management plan or AMP.

### Range Improvements

**25 years ago** – Fences were expected to hold cattle – four-strand barbed-wire fence was the standard. Stock ponds were the standard water development for livestock use.

**Today** – Improvements, such as temporary electric fence, are designed to influence livestock behavior and blended into the landscape to avoid conflicts with wildlife and with recreation. Spring developments to provide good, clean water for improved livestock health and performance are now the emphasis. Secondary low-flowing water sources are being developed and designed for both wildlife and livestock use.

### Technology

**25 years ago** – The IBM Selectric typewriter worked just as fast as you could push the buttons.

**Today** - such as Geographic Information Systems (GIS), Global Positioning Systems (GPS) and a variety of computer software programs designed to "make our lives easier" while organizing and keeping track of large amounts of data. This requires a whole new set of skills if a modern rangeland manager is to stay current with the profession.

### Outdoor

**25 years ago** – Range Cons were expected to spend 80% of their time in the outdoors, completing fieldwork. Employee was expected to be capable of walking, riding horses and use 4x2 and 4x4 vehicles.

**Today** - On top of all of this, outdoor and backcountry skills are still essential. All of the foregoing items mentioned lose their value if the individual can't maintain a close contact with every part of his or her assigned landscape.

### Goals

**25 years ago** - Range conservationists were encouraged to work closely with the grazing permittees to improve cooperation and get "good use" of the range. Our goal was to have our rangelands in "good condition".

**Today** - Rather than trying to achieve "good range conditions", contemporary rangeland managers are focused on ecological processes, healthy watersheds, and desired conditions.



David Bradford

Courtesy US Forest Service

Figure 5 – Justin McConkey surveys for slender cottongrass, *Eriophorum gracile* a Sensitive plant species. Site is a fen in the West Elk Mountains, Gunnison National Forest.

In summary, today's rangeland managers start off needing to know things that we assimilated over a number of years. The junior author of this article has already been exposed to more knowledge in four years than the two "older" authors in our first 15-20 years. In short, future rangeland managers will

need to know more and prioritize better than we did 15 years ago. The ability to remain focused on the goals of managing healthy rangelands, while staying proficient in new techniques, without "chasing rabbits", will be the challenge for current and future rangeland management specialists. We suggest that the Statutory Mission of the Forest Service, the Objectives of the various programs and Gifford Pinchot's *Guide to the Behavior of Foresters in Public Office* need to be reviewed periodically to make sure employees stay grounded in the basics that have served the profession so well for the past one hundred years. The complexity of the job will continue to increase over time as our society evolves and our knowledge expands. The challenge will be to remain responsive to these changes while attempting to avoid the "analysis paralysis" that has become so prevalent in recent years.

In spite of that, it still remains that a successful rangeland manager needs to know three basic principles that will remain constant:

1. KNOW YOUR COUNTRY.
2. KNOW YOUR COUNTRY.
3. KNOW YOUR COUNTRY.

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<sup>1</sup> Gifford Pinchot. *The Use of the National Forest Reserves*. Washington D.C. June 13, 1905.

<sup>2</sup> Forest Service Manual (FSM) 1000 Organization and Management, Section 1020.21 Statutory Mission, April 30, 1993.

<sup>3</sup> *Principal Laws Relating to Forest Service Activities*. U.S. Government Printing Office, Washington D.C. 1993.

<sup>4</sup> Forest Service Manual (FSM) 2200 Range Management, Section 2202 Objectives, January 24, 2003.

<sup>5</sup> Unpublished document. Letter by Benjamin C. Heilman, January 13, 1933. U.S. Forest Service files.