

# Holistic Resource Management in the West Elks – Why it Works

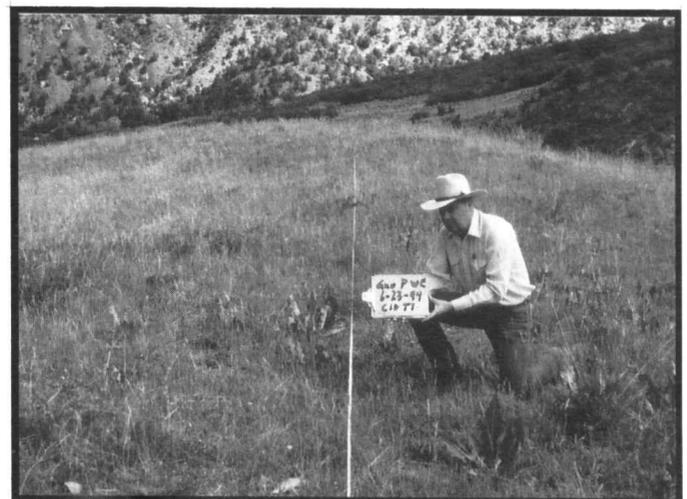
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In today's frequently antagonistic social climate, confrontation increasingly seems to be the rule for resolving differences. This trend can be seen in nearly every type of societal interaction, not the least of which is the public lands grazing issue. The West Elk grazing allotment in western Colorado may be an exception to that rule. The West Elk grazing allotment is composed of nearly 90,000 acres of the Gunnison National Forest and adjacent Bureau of Land Management lands, including nearly 60,000 acres of the West Elk Wilderness Area. This combination of public lands, livestock and wilderness provides ample opportunity for conflict. Yet there has been surprisingly little discord over livestock grazing on the allotment. How do cowboys and cows, recreationists and rangers mix peacefully in a National Forest Wilderness? The answer seems to be through Holistic Resource Management.

The West Elk grazing allotment is located in the North Fork of the Gunnison River valley in western Colorado, southeast of the town of Paonia. The economy in the valley is based on coal mining, fruit orchards and ranching. Specifically the West Elk allotment lies in the northwest portion of the West Elk Mountains. Elevations vary from 6,000 to 12,000 feet, with livestock grazing areas up to 10,500 feet. The topography and vegetation on the allotment varies from desert adobe hills and washes, juniper covered mesas, shrub blanketed mountain slopes, aspen cloaked ridges and subalpine parks. Precipitation varies from 7 inches annually at the lower elevations to over 40 inches at upper elevations. Five ranching families hold grazing permits to graze 1,056 cow/calf pairs on the West Elk allotment. Grazing of domestic livestock has been going on in this area since the 1880's and it has been authorized by grazing permit soon after the establishment of the Gunnison National Forest in 1905. When Congress created the West Elk Wilderness in 1964 and expanded it in 1980, it authorized the continuation of livestock grazing in the wilderness.

While grazing of domestic livestock has been going on in the West Elk Mountains for over 100 years, the West Elk allotment had its beginnings in 1981 when four separate allotments—McDonald Mesa (BLM), Reynolds Creek (BLM), Smith Fork (FS) and Minnesota (FS), were combined on a trial basis. Prior to 1981 three ranches ran cattle on the Smith Fork allotment and two ranches ran on the McDonald Mesa, Reynolds Creek and Minnesota allotments. The Smith Fork allotment followed a deferred-rotation grazing strategy and the Minnesota allotment followed a rest-rotation strategy, grazing the BLM allotments from May 21 to

June 21, and the National Forest from June 21 to October 10. The combination of allotments created a more logical management unit and eliminated some significant logistical problems. For example, prior to the combination the Smith Fork permittees had to trail their livestock over 10 miles across the Minnesota allotment when they moved from their early summer range to their late summer range. In 1986 the combination was formalized and the West Elk allotment was created.



A comparison of the above photo taken in 1969 and the one taken in 1994 (below) shows changes on one of the lower elevation sites of the West Elk Allotment Site showed strong increases in ground cover, especially western wheatgrass. Note: The 1994 photo was taken in a year of severe drought.



Steve Hinchman, left, Western Slope Environmental Council, Kyra Povirk, student, and rancher Karl Burns, right pay close attention as Forest Service Range Conservationist Floyd Reed describes how transects are read.

Initially the permittees grazed their livestock on the new West Elk allotment in a similar fashion to the way the old Smith Fork and McDonald Mesa-Reynolds Creek-Minnesota allotments had been grazed. A deferred/rest rotation grazing strategy was devised and a grazing schedule developed. Things went this way for about four years. Then in 1989 several of the permittees went to a Holistic Resource Management (HRM) course. They began using HRM principles in their management of the allotment.

In 1994 the permittees, the Forest Service and the BLM initiated efforts to include the community in the development of a HRM-based allotment management plan (AMP). Letters of invitation were sent to 250 individuals/entities. Over the next year 11 public meetings were held and an AMP was developed. Like most public lands AMPs, the West Elk AMP has objectives, management actions, range improvements and monitoring. But it is also based on an HRM Three-part Goal. The goal is critical as it describes or defines the end product that management is directed towards achieving. The elements of a HRM Three-part Goal are—1) Quality of Life statement, 2) Description of forms of Production and 3) A Landscape description. The goal is used to evaluate if all proposed management actions and decisions are helping to move towards the goal. This “testing” process helps insure that good decisions are made in the Planning stage—that is that only funds and efforts are expended on actions that will help accomplish the goal. Monitoring is on-going and tied to specific management actions. This helps identify problems early and provides for rapid feed-back in the planning process. This creates a dynamic planning process or Replanning, which provides considerable flexibility in management.

The Three-part Goal for the West Elk allotment is:

#### *Quality of Life*

“From now and into the future our goal is to maintain a safe secure, rural community with economic, social and biological diversity. We will promote a community that respects individual freedom and values, education and encourages cooperation. We agree to act as good stewards in maintaining a healthy ecosystem in the West Elk allotment and enjoy doing it.”

#### *Production*

“Our stewardship of the West Elk Allotment & Wilderness Area will foster abundant and diverse flora and fauna, clean air and water and stable soils. From this the local population can derive a stable livelihood, and local residents and visitors can enjoy the aesthetic and natural values of the area.”

#### *Landscape*

“Our landscape covers adobe ground, brushy mid-ground and mountain environments including many different habitat types that we are committed to maintaining. Our goal is to have a good water cycle by having close plant spacing, a covered soil surface and aerable soils; have a fast mineral cycle using soil nutrients effectively; have an energy flow that maximizes the amount of sunlight converted to plant growth and values the seclusion and natural aesthetics of the area.”

As part of the HRM-based allotment planning, the grazing plans for the year are developed in an open biological planning meeting. The meeting in 1994, and those since, have been held in the spring at the Paonia Town Hall. Invitations are sent to individuals who have expressed interest in being involved as well as through news releases in the local paper and radio station. The intent is to develop the annual plan on an inclusive rather than an exclusive basis. The specific details of grazing on the allotment that year are developed at the biological planning meeting. These details include livestock numbers, the grazing season, pasture sequence, grazing levels, mitigation measures, range improvements and monitoring. The individuals involved in these biological planning meetings have included the ranchers, environmentalists, wildlife managers, the Town of Paonia manager, outfitters, the Forest Service and the BLM. The biological plan is then incorporated into an Annual Operating Plan and approved by the Forest Service District Ranger and the BLM Area Manager. The plan is the basis for grazing on the allotment. This is referred to as planned grazing. Planned grazing is similar to a traditional grazing schedule in that a grazing schedule is drawn up. However the schedule considers many factors and the actual moves are determined by on-the-ground conditions and not merely the dates in the grazing schedule.

The key to planned grazing is the *monitoring of plants*, focusing on their growth. One of the effects of grazing on

plants is that it slows plant growth. Depending on soil moisture and temperature conditions, plants will begin to regrow between 7 to 20 days following grazing. On the West Elk allotment when cattle begin to graze the regrowth, they are moved to the next pasture. This usually allows plants to continue growing after cattle are moved. The traditional grazing schedule is based on utilization of plants by livestock. Livestock moves are based on estimates of how long it will take for livestock to consume a percentage of the available forage. Livestock utilization is monitored to determine when livestock should be moved. Utilization monitoring assumes that plants will grow to a fixed point during the growing season. For plants grazed season-long that is certainly true. However, grazed plants will regrow if livestock is moved off the area and if soil moisture is sufficient. What becomes important is not how much of the plant is consumed but how long the plant is grazed. Basing livestock moves on the amount of time they graze a pasture, reduces the opportunity to graze the regrowth and thus overgraze. When plants are allowed to regrow they will maintain/build vigor. Plants with improved vigor are better able to reproduce themselves, both through sexual reproduction and vegetative reproduction. This improvement is very noticeable on the West Elk allotment, especially in the lower elevation pastures.

Additional "on-the-ground" observations have shown that managing with a single herd has strongly affected livestock distribution and utilization patterns. Livestock have moved into areas they had not used before or not used until preferred areas were heavily grazed. The permittees also found that further "bunching" the cattle created a more even utilization pattern. They began increasing the number of pastures. This is accomplished mostly by herding—the use of riders, a good salting strategy, natural barriers and temporary electric fence. In 1986 the combined allotments had 11 pastures; in 1996 there were 32 pastures. However there are fewer miles of fence on the allotment today than in 1986 when the allotments were formally combined. Temporary electric fence is used increasingly. In many places it is used in a temporary fashion, being erected in a particular location to help hold cattle in a certain area, or to slow down cattle movement in the fall. In other places it is used in a more permanent fashion. Some permanent barbed-wire fences have been removed and the posts left permanently in place, using temporary electric tape while cattle are in the pasture. On the West Elk allotment some of these permanent, temporary fences are used for up to three weeks.

The increase in the number of pastures has had some additional side effects besides improving livestock distribution. First, it decreased the period of time that plants were grazed. This meant that after livestock were moved out of a pasture, there was a greater chance that there was still sufficient soil moisture for plants to grow. In fact this happens quite a bit. Depending on the year, in many of the pastures, the plants regrow after the cattle move out. This provides for improved plant vigor, better forage for wildlife and a

more aesthetically appealing landscape. This shorter grazing period has resulted in significant improvement in range conditions, especially in the lower elevation pastures that were in lower condition. Secondly, it reduces the area that livestock are in for any one period of time. This helps reduce livestock-recreation conflicts.

A natural inclination is to think that this many livestock moves will require a substantial number of riders. Initially the permittees believed this. They based this on past experiences in moving cattle, when they moved 4–5 times a season. On some of the longer moves they brought in up to 18 riders. They found this greatly increased the confusion. They discovered that they needed more help but that people were not necessarily the answer. Instead, they found that stock dogs were more of an asset in moving livestock than people. The dog of choice is the border collie. Most moves on the allotment are done with six riders or less but there are usually a dozen or more border collies. While the dogs are a tremendous asset, part of the improvement is due to cattle learning about the moves. The more the cattle are moved, the easier they become to move. Since they are always moving to fresh pasture they do not fight the moves as much. It becomes a more routine process.

Another on-the-ground change involved the permittees approach to salting. Prior to 1989, the permittees used approximately four tons of salt per grazing season. This followed the traditional theory of providing salt as a free-choice nutrition requirement. In 1989 they began decreasing the amount of salt they used. For the last two years, they have used approximately one ton of salt during the grazing season. They began decreasing the salt they used, primarily because they did not have the time to put that much salt out. Current research has shown that vegetation on western mountain rangelands provides all the nutritional requirements for livestock. The salt is merely an attractant. But it is a powerful attractant. The permittees use the salt as a significant part of their grazing program. Most salt is placed in 1/4 blocks in underused areas. In some pastures, no salt is used. Both because distribution is already good, or because the time in the pasture is short (3 days), or to make the cattle salt hungry and increase its attractiveness in the next pasture. The decrease in the amount of salt used has done two things; it has made salt more effective in improving their distribution and it has cut costs. The cost reduction comes in the form of less money for the salt but more importantly in significant savings in time to scatter the salt. The West Elk permittees have used this savings in time to increase their riding/herding time.

The biological plan for 1996 planned for the cattle to move 32 times in 4 months. Livestock moved onto the low elevation pastures in early May, then moved up the mountains and back down to low elevation pastures in the fall. The time in each pasture depended on the growth rate of forage plants. Each area was grazed only once in each calendar year. Time in each of the 32 pastures varied from three to 18 days.

One example of the flexibility in HRM involves one of the low elevation pastures—Cottonwood. This pasture consists of BLM land and prior to the passage of the Taylor Grazing Act in 1934 had been heavily grazed by transient sheep operations and local cattle ranchers. Following the establishment of the BLM a stocking schedule was set. By the 1970's the stocking was set at 85 cow/calf pairs for six weeks, May 10 to June 20. This meant the pasture was grazed for the majority of the growing season with limited opportunity for plant regrowth. The cattle then moved onto the National Forest following grazing on the pasture. When the West Elk allotment was created, the stocking was changed to 1056 cow/calf pairs for three days. This caused significant improvement, primarily major increases in western wheatgrass. However there were still areas that showed little or no improvement. The soils in this pasture are Mancos shale and locally are called "dobe" (adobe) soils. The soils are strongly clay and when the soil moisture is gone, the soil surface caps and inhibits plant seedling development. To try to improve soil conditions the group planned to concentrate the cattle on the two areas where soil conditions appeared to be a problem. The plan called for half the herd (500 pairs) to move onto the pasture May 14–May 23, ten days earlier than they had in the past. Livestock were held in the pasture for 10 days and fed supplemental hay on the two areas of concern. This caused the cattle to strongly impact the soil but still move off while there was sufficient soil moisture for plants to regrow that growing season. The initial results are very promising. Transects and photo points show that grasses are increasing and bare ground is decreasing.

A second example of flexibility in HRM involved incorporating two pastures of a private ranch adjacent to the West Elk Allotment into the grazing rotation. The ranch has a Colorado Division of Wildlife (DOW) easement, and is known as the McCluskey Wildlife area. The easement was acquired by the DOW in the 1970's, primarily to prevent development of this important big game winter range. Past management involved grazing 400 pairs of cattle from May 1 to June 15. This type of use meant that forage plants were heavily grazed during the major part of the growing season, with little or no opportunity to regrow. Since this occurred every year, desirable forage plants disappeared and the area became dominated by undesirable plants such as white-top. In 1993 the ranch changed hands and the new land-owner initiated changes to improve conditions. To help in his improvement program he requested funds from the North Fork Habitat Partnership Program (HPP)—a state cooperative program involving hunters, ranchers and the DOW. The program allocates funds from hunter license fees for improving big game wildlife habitat. The new owner requested funds for white-top weed treatment and seeding desirable grass species. One of the members of the North Fork HPP committee suggested that much of this work could be accomplished using livestock. Since the new land-owner did not own sufficient cattle to accomplish this, a plan to use the West Elk cattle was developed. The 2 pas-

tures from this ranch were incorporated into the grazing schedule and 550 pairs of the herd grazed from May 10 to May 20, just as the white-top was coming into bloom. Cattle were fed supplemental hay and cake to compensate for the low quality of the forage (white-top). Transects and photo points indicate the cattle reduced white-top cover, by actual grazing or trampling, by 60 percent. Following removal of the livestock, part of the area was seeded with either a rangeland drill or by broadcast seeding. The results seem favorable.

As the 1996 grazing season has ended, there have been a number of discussions on where things are. The number one priority is to finish the Environmental Analysis for the AMP. The groups who have participated in the process are still speaking to one another. There seems to be a consensus that there is progress and on-the-ground conditions are improving. As one member has described it the more minds with more perspectives on the same problem makes for better solutions. Has HRM solved all the problems on the West Elk grazing allotment? Certainly not. However it has created a sound process for management on the allotment. There is an on-going decision making process that is tied to a specific goal, uses open communication and makes flexible, ecosystem based decisions. Is this working? We think so.

Post-script: The Environmental Analysis was completed in the spring of 1997. The EA was signed without an appeal and the AMP implemented without an appeal.

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