March 1998
Vol 1., No. 3

The Quivira Coalition

Sharing Common-Sense Solutions to the Rangeland Conflict

Contents

It's the Watershed, Stupid

by Sid Goodloe, rancher

When the word "riparian" became a buzzword, I had no idea what people were referring to. After I looked it up, I was still pretty much in the dark until it finally dawned on me that I was actually bringing back a "riparian area" here on the Carrizo Valley Ranch without knowing it had a sophisticated name.

I had become aware that something was drastically wrong with this ranch (I could have used the word "ecosystem" here, but I didn't know what that meant either). The canyons and draws had straight cut sides with nothing in the bottom but boulders. When it rained, you could almost walk on the run-off because it carried so much silt. It didn't take a lot of scientific research to come to the conclusion that something upstream was terribly wrong.

I began to notice how young and close together the piñon, juniper, and ponderosa trees were, and how little herbaceous growth occurred under them to hold the soil. Sheet erosion was moving a lot of that top soil and accelerating water flow. Gullies were prominent, and all of this led to scoured-out canyons and draws at the lower elevations of the watershed.

(con't on page 18)

Editor's Note

This is our second newsletter on riparian areas--the first one (November 1997) was on defining the nature and importance of riparian zones; this one explores the important and controversial issue of riparian management.

Upcoming issues will focus on grazing in Northern New Mexico, endangered species, and development vs. open space and the role of public lands managers.

If you want to see earlier issues, just call or write us and we will send them to you.

Award From Wildlife Society

The New Mexico Chapter of the Wildlife Society has given Jim Winder its Conservation Award. Below is the text of the award letter and excerpts from the nomination letter by Dale Jones, 1998 President of the New Mexico Chapter. The nomination was endorsed by Cliff Mendel of the Albuquerque Chapter of The Wildlife Federation and Richard Becker of the New Mexico Riparian Council.

Dear Mr. Winder:

I am please to inform you of your nomination for, and subsequent winning of, the Conservation Award from the New Mexico Chapter of The Wildlife Society. The New Mexico Chapter presents this award to individuals who have contributed significantly to the conservation of wildlife or wildlife habitat in New Mexico. The fact that you have been able to double your stocking rate while still improving the ecological health of your lands is truly impressive. The New Mexico Chapter of The Wildlife Society recognizes and appreciates your efforts at maintaining healthy ecosystems. We also applaud your many efforts to educate and remove the false dichotomy people often establish between an environmental or ecological point of view, and properly sustained use of natural resources. As co-founder of the Quivira Coalition, you must be proud of their efforts to diffuse the "battlefield" between livestock operators and environmental interests.

We regret you could not attend our annual meeting on Feb. 7, and understand you're busy educating and exchanging views. We hope your ranch tour was as constructive as we've heard others have been. . . .

The Wildlife Society is a nonprofit scientific and educational organization of professionals active in wildlife research, management, education, and administration. The Society is concerned with the scientific management of the earth's wildlife resources and their habitats. The organization has over 9,600 members in over 60 countries. The New Mexico Chapter currently has over 150 members, most of whom work as wildlife biologists.

More information about The Wildlife Society and its positions are available from myself or Dale, or at the internet site: www.wildlife.org

Sincerely,
Brian A. Locke, Ph. D.
Chapter President, 1997

Mr. Winder is a rancher who has turned his ranch into a demonstration area of what intensive livestock management can do, and mean, to an entire ecosystem, including riparian habitat. In so doing he has doubled his stocking rate, proving that conservation and economic gain can go together. With a 4 wheeler, a dog, and a whistle, Jim moves livestock at frequent intervals throughout his 67 electric fenced pastures. . . .[H]e achieves maximum use with maximum protection. As a result, his riparian areas are improving with use,

(con't on page 19)

The Quivira Coalition
535 Cordova Road,
Suite 423
Santa Fe, NM 87501
(505) 466-4935 (fax)

Founders:
Jim Winder
(505) 267-4227
jrwinder@aol.com
Courtney White
(505) 982-5502
wldwst@rt66.com
Barbara Johnson
(505) 466-4935

Editor:
Barbara Johnson
(505) 466-4935

The Quivira Coalition Newsletter is published by **The Quivira Coalition** 6 times a year.

Subscriptions are available for $15 a year. Please send a check or money order to The Quivira Coalition, 535 Cordova Road, Suite 423, Santa Fe, NM 87501. Send address changes to the same address. Please allow 4-6 weeks for processing.

Printed on Recycled Electrons Worldwide

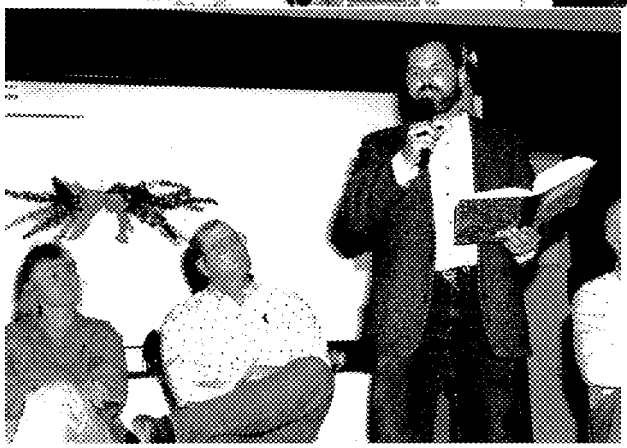
From The Founders

Jim Winder
Courtney White
Barbara Johnson

Events have been occurring so rapidly that it is hard to believe the Quivira Coalition was founded only eight months ago. In the fall we received a rush of press and positive editorials from around the state. Barbara and Courtney have been interviewed on the radio. Jim has been deluged with visitors to his ranch. And in December we received a grant from the New Mexico Community Foundation for workshops and other educational forums.

Like a rock dropped into a pool, Quivira ripples are spreading out in all sorts of interesting directions. A conservation organization wants to count birds in our riparian demonstration areas; a National Forest is considering "Quivira-style" solutions to help heal landscapes degraded by poor livestock management; a ranch in the north wants to entirely change the way it manages its cattle; and an environmental planner wants to help communities get on their feet economically and environmentally. The list goes on.

Dan Dagget showing slides to an attentive audience in Silver City. (Photo by Courtney White)



Craig Miller of Defenders of Wildlife speaking during the panel discussion. Seated on the dias with him are local conservationist Sally Smith and rancher David Ogilvie. (Photo by Courtney White)

Best of all is what happened on January 17th, in Silver City. The Quivira Coalition sponsored an all-day workshop on ecologically sensitive ranching, featuring Dan, Kris, Jim, and a panel of local speakers. We anticipated 50 people would attend, and ordered an extra ten lunches, just in case. Imagine our surprise when nearly 100 people showed up! And most of them stayed to the end, asking questions, and wondering what they could do to help.

It was extremely encouraging. It proved to us that a lot of people are searching for common-sense solutions to the grazing debate and are willing to spend a whole day inside, in the dark, listening to new ideas. We were over-

(con't on page 15)

Managing Change: Livestock Grazing on Western Riparian Areas

Condensed from a 1993 report for the Environmental Protection Agency

"To protect your rivers, protect your mountains." -- Emperor Yu of China, 1600 B.C.

Things are changing on western rangelands. For much of the Nation's history, western rangelands were mostly thought of in terms of how much livestock grazing they provided.

Riparian areas--lands adjacent to streams where vegetation is strongly influenced by the presence of water--may comprise less than 2% of total land area in the western U.S. For decades, they generally were treated as "sacrifice areas" impractical to manage within the context of vast uplands. Wetlands were "wastelands" to be drained and put to productive use. Those days are over.

Today, one of the most powerful forces of change on the range is society's growing awareness of the value and vulnerability of western rangeland riparian areas and wetlands. This awareness is being translated into a growing body of laws, policies, and regulations. These require changes in rangeland grazing practices necessary to protect and enhance ecosystem diversity and water quality on rangeland watersheds.

Change, especially significant change, is difficult. Political fireworks are inevitable when the irresistible force of change meets the immovable object of tradition. However, many livestock operators have acknowledged the need for change. They are changing or beginning to think seriously about how to change their grazing practices to improve riparian/wetland conditions.

Why change? Why not just hunker down and resist the tide of change sweeping western rangelands? Maybe it will pass over and leave things pretty much the way they are. Thoughtful livestock operators aren't betting on it. They find good reasons to get out in front of, and manage, change.

It's Good Business

If your riparian areas are in bad condition, chances are good you are missing an opportunity to make more money. Riparian areas typically are much more productive than an equivalent amount of adjacent upland. Improper grazing reduces the amount of forage produced on your most productive land. **You lose money**.

Cattle are attracted to and tend to loaf in riparian areas, particularly after upland forage dries out. Riparian vegetation can be severely overgrazed. The much more abundant upland forage can be significantly underutilized. **You lose money.**

Overgrazing riparian vegetation makes streambanks more vulnerable to the destabilizing effects of livestock trampling and the erosive force of water, exposes soils to drying out by wind and sunlight, reduces water storage capacity of the riparian area, reduces shade and thereby increases water temperature, encourages invasion of undesirable plants, speeds up runoff, and reduces filtration of sediment necessary for building streambanks, wet meadows, and floodplains.

These things typically result in loss of livestock forage, reduced numbers and diversity of fish and wildlife, degraded water quality, reduced property value,

(con't on page 5)

and frequently cause serious property damage. **You lose money.**

It's Good Citizenship

Proper grazing practices on upland and riparian areas of western rangelands are, above all else, a matter of good citizenship. The costs of degraded riparian areas and unstable stream channels don't stop on-site. They are transferred to your downstream neighbors, some of whom may be thousands of miles away. A watershed can be a big neighborhood. From a watershed/water quality perspective, livestock grazers are their neighbors' keepers.

Improper grazing of upland vegetation can expose soils to the erosive impact of rain drops, reduce water infiltration, and accelerate runoff. This can erode topsoil and cut rills and gullies, concentrating runoff, deepening gullies, lowering water tables, and increasing sediment production.

Riparian areas in poor condition are unable to buffer the effects of accelerated runoff. Stream channels downcut or erode laterally, accelerating erosion. The adverse effects of improperly grazed uplands and riparian areas accumulate and flow downhill. As the people affected become aware of the source of their problem, they naturally demand corrective laws and regulations requiring changes in grazing practices.

Yes, It Is Complicated

Wherever you are, whatever your particular riparian grazing problem, there are three basic ways to treat it. They are:

1. Exclude livestock from the riparian area with stream corridor fencing;
2. Put riparian areas in separate pastures to get tight control over the season, duration, and intensity of livestock use; and
3. Herd or use some other grazing strategy to limit the season, duration, and intensity of grazing in riparian areas.

Whatever your riparian improvement objective--improved water quality, pasture damage control, improved forage production, or more fish and wildlife--you don't have to have all the answers before you get started.

In most cases, the immediate objective should be modest: to get deteriorated riparian areas and streams started on an improving trend. Once that happens, changes in plants and streambanks usually will suggest common-sense next steps.

If rangeland watersheds are overstocked, they will be overgrazed and their long-term productivity will deteriorate, no matter how well you otherwise manage your livestock. If you undermanage your livestock, rangeland riparian areas probably will be overgrazed, no matter how understocked you are.

From a riparian/water quality perspective, how many head often is less important than where, when, and for how long.

Some Suggestions

➡ Limit grazing intensity and season of use to provide sufficient rest to encourage plant

(con't on page 17)

Managing Change: Livestock Grazing on Western Riparian Areas

(con't)

Two easy-to-read and very informative documents: "Livestock Grazing on Western Riparian Areas" (1991) and (1993) are available from
The Environmental Protection Agency
Region 8
999 18th Street, Suite 500
Denver, CO 80202-2466

Anticipation On Macho Creek

by
Dan Dagget

"...I'm really looking forward to going back to Macho Creek in a couple of years to see the results of the Coalition's work. I'm looking forward to it because I know how quickly and dramatically an area like this can heal. I know because I've seen it happen before."

Riparian areas are nature's common ground. That's especially true in the arid southwest where these real-life oases play an essential role in the lives of 80% of both resident and migratory wildlife species. Riparian areas are where nature allocates the greatest diversity, both plant and animal, and the most vitality. They're the commons where all the good and bad effects of the surrounding watershed come to roost. (See Sid Goodloe's article on page 1.) They're also the place where most of us go to indulge in our favorite recreations.

Lately, riparian areas have begun to serve as common ground in another way. They have begun to serve as learning centers where ranchers and environmentalists can work through their disagreements and develop more effective ways of living in sustainable and adaptive fit with their environment, and with one another. Because these well-watered, fertile areas answer the questions we ask of them so quickly—Does this type of management work? How about this one?—they are ideally suited to serve as teachers.

A couple of weeks ago, during the Quivira Coalition's grazing workshop and field trip at Silver City, New Mexico, about 35 people visited one such area that will be the site of the Coalition's first effort to create a riparian learning site. This area, along Macho Creek in Sierra County, presently shows the effects of the long-term stress of continuous grazing. There we saw 20-year-old trees that haven't grown much higher than your knee and look more like warts than trees because of the constant pruning of nibbling cows. We saw soil that is barren and as hard as cement because of the constant trampling of cattle hanging out in the coolness of the valley. But we saw something much more important than all that. We saw a huge amount of promise and potential.

As we took a close look at the area along Macho Creek, I was impressed by how many grass plants have managed to persist in spite of all that grazing and trampling. And I saw plenty of soil well fertilized and ready to nurture a recovery. With all that potential in mind, I'm really looking forward to going back to Macho Creek in a couple of years to see the results of the Coalition's work. I'm looking forward to it because I know how quickly and dramatically an area like this can heal. I know because I've seen it happen before.

Date Creek

One such experience happened last year, on Date Creek, west of Phoenix, Arizona, near the little crossroads outpost of Congress. My first visit to Date Creek, in 1992, was at the suggestion of Matt Peirce, a wildlife manager for the Arizona Game and Fish Department (AGFD) and a dedicated environmentalist and environmental educator. I had run into Matt at a meeting of the Arizona Association for Learning in and about the Environment (A.A.L.E.), and he had told me about the incredible results a rancher named Phil Knight had achieved in restoring

(con't on page 7)

the riparian habitat along this desert stream. Matt told me that what made this restoration even more remarkable was that it had been achieved while cattle continued to graze the area at least part of the year.

Matt assured me that he hadn't been spiking his salads with locoweed, and said that the stream had become so lush, in spite of the continued grazing, that he was trying to convince AGFD to reintroduce beaver into the area.

My First Visit

My first visit to Date Creek was as part of a field trip led by Phil Knight and sponsored by a group named 6-6, of which I was a member. (The group reflected the attendance at its first meeting—6 ranchers and 6 environmentalists.) Also on this field trip were some of the most respected riparian ecologists in the southwest (Dr. Duncan Patten and Julie Stromberg of the Arizona Riparian Council and Scott Millken of the Arizona Native Plant Society). Karan English (then a state senator and later a U.S. Congressperson), an Arizona Game and Fish Commissioner, and activists from a number of environmental groups including the Arizona Nature Conservancy, the Sierra Club, and the Grand Canyon Trust based in Flagstaff came along too. So did a couple of members of Earth First!

Date Creek is a medium-sized desert stream, ephemeral through some of its reaches and perennial along others. It flows from the Date Creek Mountains, located northwest of Wickenburg, to Alamo Lake where it joins the Bill Williams River, a tributary of the lower Colorado. Along its course, Date Creek passes through a unique biome where the Sonoran and Mojave deserts mix. Beyond the cottonwoods and willows that line its banks, Joshua trees and giant saguaros stand shoulder to shoulder.

400 Head on a 2-mile Stretch

For roughly 25 years, Phil Knight has been grazing more than 400 head of cattle on a two-mile stretch of the Date Creek riparian area during the dormant season from November to March and resting it the remainder of the year. In spite of the fact that it is grazed so heavily, or as Phil would have you think, because of it, the stream has been described as one of the healthiest in the state.

On our field trip, there was surprisingly little evidence that 400 cattle had grazed where we were walking a short two months before. To be sure there were cow pies to be found, but they were mostly hidden by the bright green stands of cattails, grasses, and sedges that crowded the stream. In places the heavily vegetated banks narrowed the creek to less than two feet of clear rushing water.

Cottonwoods and willow saplings (some over 20 feet tall) grew so dense in places that they were hard to walk through. At the water's edge, paintbrush and various DYCs (damned yellow composites) were in full bloom. Clumps of grass bent over the flow and brushed the surface with their blade tips. One alert observer noticed a

(con't on page 8)

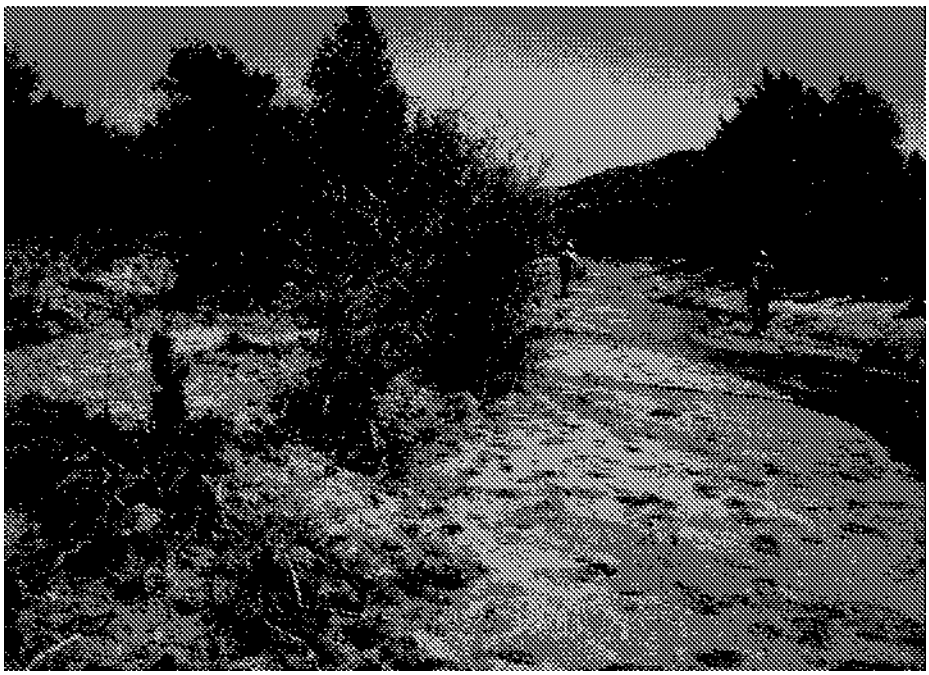
Anticipation On Macho Creek

(con't)

Anticipation On Macho Creek

(con't)

family of recently hatched spiders clinging to one of those clumps. Minnows flashed in the riffles. Overhead a pair of common blackhawks, a threatened species, keened a warning to us intruders. The birdwatchers identified songbirds flitting through the willows.



The Murphys' Ranch, 1992.
(Photo by Dan Dagget)

Impressive Results

We sloshed along between pauses for Knight to tell what he had done to get such impressive results. To help this area recover from more than a century of year-round grazing, he uses a plan based on the principles of Holistic Management (formerly known as Holistic Resource Management or HRM). To most people this style of management means lots of cattle for a very short time—time measured in days rather than seasons or years, the standard measure for grazing rotations. But Knight keeps his cattle in his riparian pasture for as many as six months, much longer than most HRM ranchers would ever think of doing. "Sometimes it takes that long to get them to use that tough old tobosa grass," he said.

As we wandered farther upstream, the discussion within our group became more pointed. Some disagreed with Knight's assessment of the health of the area and the reason for its recovery. Patten and Stromberg noted the presence of several species of non-native plants and offered their opinion that grazing encouraged the growth of these exotics. Others remarked that the same species are present in areas that have never been grazed by cattle, the bottom of the Grand Canyon, for instance. And that those same plants are present in the Nature Conservancy's Hassayampa River Preserve a short distance away, which also is not grazed by cattle.

Finally, someone said what many of us had been thinking all day but keeping mostly to ourselves. "If this place looks this good with cattle, think how good it would look with no grazing at all."

One person's response to that question went right to the heart of the matter. "It's a good question," she said, "But I think it misses the point. For one thing, we really don't know how good Date Creek would look without cows, but we know it looks pretty darned good with them. For another," she continued, "if we got rid of the cows, we'd also get rid of Phil Knight. Then who's going to take

(con't on page 9)

Anticipation On Macho Creek
(con't)

such good care of the place?"

The Ranch Upstream

I started this article telling about the feeling of satisfaction that comes from seeing an area recover from dung-splattered barrenness to lush and teeming health, and I realize Phil Knight's stretch of Date Creek was already in good shape when I first saw it. Such was not the case, however, with the ranch upstream. The heartiest of hikers on that first field trip to Date Creek kept slogging till we made it to the upstream limit of Phil's ranch. We wanted to see how his management compared to the neighbor's. The contrast was pretty stark.

Instead of being covered with grasses and sedges, the streambanks upstream of Phil's fence were bare gravel amply dotted with cow splats. The water wandered in shallow ribbons laced with green scum that indicated it was polluted and overheated. What young cottonwoods did exist were chewed and trampled. In spite of the fact that the growing season was well underway, tracks deeply gouged and still moist indicated that cows were still present. No flowers or birds were apparent. I took several photos.

What I didn't know at that time was that the upstream ranch had recently changed hands, and that the new owners, John and Joan Murphy, were impressed by Phil's success and just as eager as he to be a boon to nature rather than a scourge upon it. At about the time that Matt Peirce was able to get two beavers to reintroduce on Date Creek, the Murphys undertook a recovery project almost identical to the one the Quivira Coalition has planned for Macho Creek.

Four years later, last May, I took a hike back to that fence on Date Creek and the site of my earlier photos. In the meantime, I had heard that the beavers had moved from Phil's ranch to the Murphys'. As I neared the site of their new dams, I flushed a flock af mallards. A great blue heron went flapping and squawking. Gambels quail sprinted through the greenery. I counted at least eight beaver dams. In some places the beaver had dug canals to create travelways. Water oozed from the ground. Where there had been little more than bare gravel, vegetation now grew profusely. There were more cottonwood seedlings and saplings than I could count, and cattle were still grazing the place during the dormant season. Just as they will be on Macho Creek when its recovery has been just as dramatic, and I'm back to enjoy the experience.

The Murphys' Ranch, September 1997. (Photo by Matt Peirce)

Riparian Resources, Opportunities For Cooperation

by Robert S. Jenks,
New Mexico
State Land Office

Riparian habitats are rare in New Mexico, comprising, by some estimates, less than one percent of the landscape. Since these areas tend to be linear and limited in acreage, management has historically been applied in accordance with strategies designed for more dominant habitat types, typically surrounding upland areas. Management practices, when misapplied, have resulted in profound consequences to these fragile environments. The resulting problems are further complicated by the fact that most riparian habitats, as they weave their way downgradient, pass through a myriad of administrative and political boundaries.

Value Inversely Proportional to Rarity

The importance of riparian areas for wildlife habitat, biological diversity, water quality, sustained water yield, economic opportunity, recreational uses, and aesthetic values is perhaps inversely proportional to their rarity. Riparian habitat on State Trust land is relatively rare, as most State Trust land occurs in the lower, more arid environments. However, because they are so rare and isolated, they are of particular importance to the Trust.

Often, exploiting land and resources for economic benefit and preserving ecological values are considered to be mutually exclusive. There has been a historical dichotomy of management practices that tend to focus on one or the other, without employing critical analyses to develop creative means for achieving both desirable economic and ecological outcomes. Research and numerous success stories are illustrating that these traditional views of natural resource management are unsupported in most cases.

The New Mexico State Land Office (SLO) is responsible for approximately 9 million acres of land for the explicit constitutional purpose of generating revenue for beneficiary institutions such as the public schools and universities. The SLO has the obligation to prudently manage the land-based assets of the Trust by employing two concepts: use Trust assets to generate revenue for designated beneficiary institutions, and protect Trust assets against waste and degradation. Riparian habitats represent both an economic asset and an asset that must be managed to preserve options for future beneficiaries.

30,000 Leases

The SLO generates revenue by leasing State Trust land for various income-producing uses, typically the extraction of Trust assets or marketing of particular land attributes. There are approximately 30,000 active leases permitting a myriad of uses on State Trust land, administered by field specialists with responsibility for several hundred thousand acres each. Obviously the staffing is insufficient to work closely with the many users of State Trust land. For that reason, it is critical that the SLO develop a cooperative working relationship with the lessees and rely on the users of the

(con't on page 11)

land to exercise a custodial role of care and protection for the land.

In the history of the SLO, a comprehensive inventory of the features and attributes that comprise State Trust land has never been done. Previous Commissioners have assessed and produced a generalized quantification of land classifications and uses, an important first step, but it is obvious that the absence of more detailed and basic inventory data is a significant impediment to making fully informed decisions over the use and management of State Trust land.

This year, the Legislature approved limited funding to move forward with a comprehensive inventory effort that will permit more effective management of State Trust land. The results will afford the means for the SLO to provide predictability, stability, and strong economic support for our beneficiaries, while maintaining healthy land through responsible stewardship. An automated information management system to manage relevant geospatial, numeric, and narrative data is now functional at the SLO.

Biological Inventory

The SLO has contracted with the University of New Mexico Biology Department, and entered into Memoranda of Understanding with other State universities, for the compilation of biological inventory data that will reflect the relative distribution and abundance of the numerous site specific and ubiquitous attributes occurring on State Trust land, including biological features associated with riparian habitats.

Agency personnel are participating in various interagency programs and are involved with several Statewide organizations dedicated to working with people and communities to achieve environmental and economic health success stories.

Cooperation vs. the Adversarial

There are many that elect to be critical of current efforts to bring about riparian and natural resource management successes through the development of cooperative working relationships, believing instead that immediate results will only be gained through adversarial means. It is typically those same critics who will not come forward to offer assistance, support, or cooperation, instead choosing to foster dissension and create conflict. Using that approach begs the question, will the results of using those tactics be lasting?

Solutions will depend on our ability to be innovative and design integrated management strategies that meet human needs while maintaining biological integrity. Such management strategies, however, will work only through a cooperative effort between the many responsible agencies, private interests, and organizations to develop a comprehensive approach for managing riparian habitats that transcends administrative boundaries.

The SLO believes that communication, collaboration, and cooperation are the keys to building the bridges necessary to serve the interests of both current and future generations.

Riparian Resources, Opportunities For Cooperation

(con't)

The Quivira Coalition is financially supported by a grant from the New Mexico Community Foundation and by individual donations from readers like you.

The Far Horizon

by Courtney White

"All great truths begin as blasphemies."
--George Bernard Shaw

Fortunately for progress, human beings never stop questing. If we did, we would stop learning, and the day we stop learning is the day we stop being human. The key to progress, both materially and intellectually, is education; without it we are stuck in stalemate. This is one of the reasons why we chose a newsletter as a primary vehicle for the Quivira Coalition--to educate, and be educated in turn.

The importance of looking and learning was driven home with force to me in early December while touring the Arroyo Chico, a tributary of the Rio Puerco, in the desiccated country west of Cuba, New Mexico. In less than 10 hours I learned a lesson about the tyranny of false expectations and the value of an open mind that I feel compelled to share.

It was a hard lesson; one that rubs against conventional thinking about repairing landscapes degraded by grazing. It is a lesson that some of my fellow environmentalists will find difficult to swallow, especially since it contradicts the rising trend toward bumper-sticker cure-alls to pressing environmental problems. At the same time it reinforced my belief that the ecological impact of grazing in the West is a complex problem that requires complex solutions, none of them easy. Relinquishing cherished preconceptions is painful, I know. So is change.

Taking a Tour

On a cold, but crystal-clear winter day, Jim Winder, Dr. Kris Havstad and I, representing the Quivira Coalition, together with environmental historian Bill deBuys and Forest Service grazing specialist Jerry Elson, inspected the Arroyo Chico at the invitation of Steve Fischer, watershed team leader for the BLM's Albuquerque office.

We were joined in the truck by Orlando Lucero, the grazing permittee whose allotment embraced the Arroyo Chico and its tributaries. An affable and open-minded fellow, Orlando sought advice from us, mostly on how to improve the land and his bottom line simultaneously. We were happy to help.

We also went because Quivira was invited by the BLM to look for another riparian demonstration project. Based on our experience at Macho Creek, we wanted to find a degraded riparian area, change the grazing management strategy there, and scientifically monitor the results. We believe that progressive cattle management and ecologically healthy riparian zones are compatible, and intend to back up that belief with data.

Steve thought the Arroyo Chico, which pours nearly 30% of the sediment load into the Rio Puerco, was a likely candidate. He was eager to have Quivira's help, especially our scientific knowledge. The Rio Puerco watershed has been the subject of much attention in recent years, culminating in the establishment of the multi-party Rio Puerco Watershed Management Committee (of which Quivira is a member), whose mission it is to heal land with innova-

(con't on page 13)

tive management strategies.

Healing has already begun. Over the last few years, the BLM had fenced out cows from the Rio Puerco itself and most of its tributaries--all except the Arroyo Chico. A well-known environmental group, based in Santa Fe, had leased some land from the State along the Puerco and "retired" it from grazing. A prohibition on all cows in all riparian areas seemed to be the only acceptable answer to the problem. Or was it?

The Arroyo Chico

We drove across the Chico, which was wider and held more water than I expected, and parked on the opposite shore. We climbed out of the truck, stretched our backs, and looked around. Tall, ugly, eroded banks greeted us impassively. It was a familiar sight in the Puerco drainage--the dramatic downcutting of loose silty soil.

Jim and Kris wandered off by themselves. Shortly afterward, they were involved in a great deal of finger-pointing and stooping to inspect the vegetative cover near the stream edge. A small herd of cattle shuffled away from their gesticulations, as if afraid of what they might overhear.

I wandered over, with a frown on my brow. "It looks good," Jim said to me unexpectedly, with a smile. "Everything I see here is on an upward trend. Orlando's doing a good job." Jim pointed to the ground beneath our feet. "Look at the toe of this bank," he continued, "it's stable, reclined, and well-rounded." It was also covered with grass. The tall, eroded banks behind us, in other words, were artifacts from an earlier age, not the results of recent grazing.

As we walked, Kris pointed out other indicators of riparian health--there was abundant western wheat grass, a perennial which cows normally eat to the ground, as well as salt grass and sacaton. There were coyote willows everywhere, very few of which showed any signs of being clipped by cows. The place was bursting with regeneration.

Jim said the uplands looked good, too. On the drive in, he saw lots of species diversity among the plants (not to mention the two large elk herds we spooked). He pointed back down at the ground. "Soil is being captured here," he said, "which is big news considering how highly erodable this stuff is." Kris concurred. Orlando's allotment was definitely on an upward trend.

There was one sign of trouble: a conspicuous lack of cottonwood regeneration. Orlando led us to one big tree, where we looked around for shoots, without luck. Kris pointed to a patch of alkali sediment on the Chico's bank. "Perhaps that's the culprit," he said. He recommended a chemical analysis of the soil, and the BLM agreed. Meanwhile, Jim pulled off a small branch of the cottonwood, sharpened it with his knife, and pole planted it in the ground. "Got to get it started sometime," he said with a smile.

No Fencing

Jim and Kris's recommendation to Orlando and Steve? No

(con't on page 14)

The Far Horizon

(con't from page 13)

fencing on the Arroyo Chico, at least not here. "Think about the message fencing sends," said Jim, "It says that management is the problem and that the only solution is keeping the cows out. That's the wrong message here. Orlando's doing a damn fine job."

Western wheat grass and captured sediment along the Chico. (Photo by Courtney White)

No fencing along a riparian area in the Rio Puerco drainage? It sounded like heresy. Steve said he came on the tour fully expecting to fence SOMETHING, and the BLM will likely present that option as one of its management alternatives. But here were Jim and Kris, talking about good cattle management in a riparian area, which has reversed the downward spiral of soil erosion and vegetation degradation, and recommending that cows be allowed to remain. That was quite a message indeed.

To be sure, Orlando's system needed to be tweaked. He grazes the Chico only during the dormant season (winter) with a relatively small herd. But he keeps his cows in the riparian area too long. Jim said he should move them out at the first sign of spring budding among the plants. That way, the vegetation gets a full growing season to do its thing.

There were other recommendations, but none changed the simple truth that Orlando, by grazing lightly in the dormant season and by moving his cows around on a regular basis, had allowed the riparian area along the Arroyo Chico to recover.

There is a good chance that Quivira will still establish a riparian monitoring project on the Chico. However, instead of documenting the resurrection of degraded land by a change in management style, we will be monitoring health, and the tweaks that are necessary to make land healthier. We will be monitoring hope, in other words.

Lessons Learned

For years, I have listened to the steady drumbeat of "kick the cows off" as the only solution to the deep damage in the Rio Puerco watershed. I mostly believed it, especially when I learned that the BLM, over the last few years, had fenced cows out along the Puerco's length. Rest, I knew, was certainly required in the riparian areas--possibly permanently.

Orlando Lucero's work along the Arroyo Chico, however,

(con't on page 15)

The Far Horizon

(con't)

muted the drumbeat. Certainly, significant portions of the Puerco are degraded to the point that fencing is required to help the land recover, and certainly there are poor cattle managers out there who deserve to have their cows fenced out. But as Orlando's example demonstrated, bumper-sticker solutions to this environmental problem will not work.

Ranchers in the Puerco watershed could learn from Orlando's example. He is still in business, his cows have access to water, and there is plenty of forage for cow and wildlife alike. The land is healthy, the family traditions continue, and open space is protected. It is very beautiful country--an enterprising real estate speculator or two could make a killing there. If we let them.

These are important lessons for environmentalists, too. Killing the cowboy is not necessarily a good thing, and may, in fact, be detrimental to our goals in the long run. The lesson learned on this tour focused on the dangers of looking at the world in black-and-white. "I win and you lose" will sink all ships. We need healthy land and we need healthy stewards to watch over that land. It is not an impossibility, not if we try.

Re-examining our preconceptions is the first step.

Kris Havstad and Jim Winder on the Arroyo Chico. (Photo by Courtney White)

From the Founders

(con't from page 3)

whelmed by their enthusiasm.

The workshop demonstrated to us that we need to grow as an organization and provide more opportunities for people to look, listen, and do. We need more on-the-ground projects, bird-counting, fence-building, and land-healing. We need to tap this font of enthusiasm and put it to work.

To this end, we will inaugurate a series of "talk/walk" workshops this summer which will be designed as "classrooms" for looking and learning. These seminars will be constructed in such a way that particular problems will be addressed with specific solutions--and we will go out on the land to see for ourselves. Eventually these trips will become projects. After all, making a difference ON THE LAND is what the Quivira Coalition is all about.

We hope you will join us.

Progress Report: Monitoring at Macho Creek

by Dr. Kris Havstad,
Chief Scientist, USDA's
Jornada Experimental Range

We described the development of a monitored approach to riparian area management in our November 1997 Quivira Coalition newsletter. To recap, this fall we initiated a project, at the request of the New Mexico State Land Office and with the concurrence of the lessee, to monitor a riparian area on Macho Creek in Sierra County. The purpose of this monitoring program was to provide a quantitative and unbiased basis for evaluating and recommending management actions relative to the health of this riparian zone.

A preliminary site assessment, using the standard protocol for riparian systems now employed by the Bureau of Land Management and the U.S. Forest Service, had been completed by State Land Office personnel in July 1997. This assessment resulted in the conclusion that the southern, lower portion of the allotment was functioning properly, yet was at risk but with an upward trend. The northern portion of the allotment was also functioning, but at risk and with no apparent trend.

At-risk conditions in a riparian area could mean deteriorated watershed conditions, such as excessive soil erosion, or lack of important vegetative features, such as few new seedlings, poor distribution of plant age classes, or absence of desired species. The lack of an apparent trend means that it is not evident that conditions within the area are improving.

An assessment results in an overall evaluation of resource conditions. However, routine monitoring is required to provide information on why current conditions exist and to evaluate current management practices. However, the initial monitoring data, or what is regarded as baseline information, should result in similar conclusions as a recent assessment. It is with repeated monitoring that an ability to evaluate management is created.

Our baseline data from our riparian area monitoring protocol supported the conclusions from the July assessment. Specifically, the allotment supports low vegetative cover, and desired riparian species, especially cottonwood and ash trees, are lacking. The potential of the site, though, remains relatively intact. Fragmented plant and litter distribution, low cover of desirable species, and poor vegetative structural features characterized our monitoring. However, the site should respond to some adjustment of grazing management practices.

Presently, the State Land Office and the lessee, with involvement from the USDA Natural Resources Conservation Service field office, are discussing and planning options for grazing management. It is our intent that our monitoring program will provide them with the data they need now and in the future to evaluate implementation of their management plan, and provide a basis for revising the plan as needed.

Monitoring is not an end point, but an initial step in securing the health of our rangelands.

vigor, regrowth, and energy storage.

➡ Ensure sufficient vegetation during periods of high flow to protect streambanks, dissipate stream energy, and trap sediments.

➡ Control the timing of grazing to prevent damage to streambanks when they are most vulnerable to trampling.

➡ Ask questions: Which plants will grow and reproduce on each site? Which plants do you want to encourage? When are streambanks most vulnerable to damage by livestock?

➡ Try winter grazing. Graze when plants are dormant. This provides total growing season rest and promotes plant vigor, seed and root production. This is generally an excellent strategy for recovery of deteriorated uplands and riparian areas.

➡ Monitor the results. Establish a few photo points--easily accessible, easily recognizable, permanent landmarks--from which to shoot each year's photos. Supplement the photo album with notes on the condition and trend of riparian vegetation, streambanks, and stream channels.

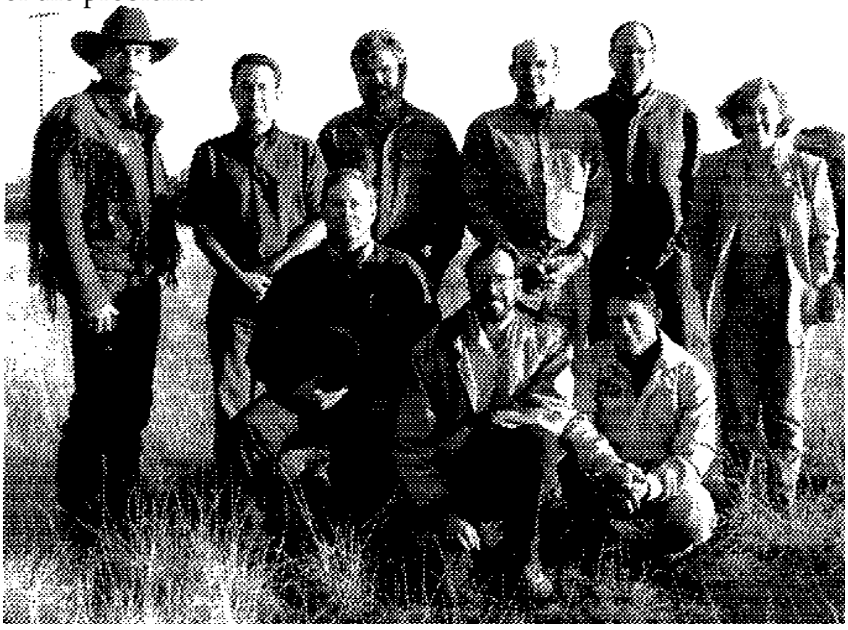
➡ Look around at adjacent riparian areas, both in your channel and in neighboring drainages. What you want to do is get an idea of the range of potentials for the area. You might find an area that has dormant season use, or that has been more heavily stocked, or that has had some sort of improvements. This will help set in your mind what is possible, and give you a reference for assessing your land.

➡ Investigate some inexpensive improvement practices, like pole plantings. Some times just small additions to an area can cause significant improvements to vegetative conditions along the channel, and improvements in cover along the channel can have quick impacts.

➡ Assess conditions above your riparian area. Some times existing conditions within the riparian zone are due to activities upstream. You are not only looking to improve existing conditions but trying to solve the causes of the problems.

Managing Change: Livestock Grazing on Western Riparian Areas

(con't from page 5)



Board of Directors

Our nine-member Board of Directors is now complete, with the addition of Virgil Trujillo, Manager of Ghost Ranch. We held our first official Board meeting in Silver City after the January 17th workshop and Courtney's wife, Gen, graciously volunteered to memorialize the occasion by taking this photo. Standing, from left to right, are Virgil Trujillo, Bob Jenks, Dan Dagget, Jim Winder, Kris Havstad and Barbara Johnson. In front (left to right) are Mark McCollum, Courtney White, and Frank Hayes.

It's the Watershed, Stupid

(con't from page 1)

"Year-long grazing by . . . excessive numbers of cattle, followed by increasingly efficient fire suppression, had provided optimum conditions for piñon, juniper, ponderosa, and sagebrush. These plants were . . .demanding so much more water that the aquifers were no longer producing permanent water flow that could sustain riparian conditions."

What Was It Like Before?

I knew this was not the way the "ecosystem" should function. What was it like before settlement and why did a thundershower turn these canyons and draws into a rock-rolling torrent of muddy water? Like most newcomers to New Mexico, I thought those piñon-juniper thickets belonged here. How could they be the cause of this silt-laden runoff? I thought trees stopped erosion. Was Carrizo Canyon actually at one time a meandering stream and riparian area?

The answer came one day when I was looking at some 500-year-old petroglyphs nearby. Among the rain gods, deer, and turkey were fish and beaver chiseled into the rock. How could fish live in this environment, and what self-respecting beaver would try to build a dam of cactus and alligator juniper? After perusing some 1880 surveyor's notes that indicated open grassland where now there was a solid canopy of invading trees, I came to the conclusion that something had to be done and quickly.

A little historical research made me aware of the number of livestock that had used this country, not only after the Civil War, but as far back as 1590, when the Spanish introduced sheep, cattle, and goats into the Southwest. The large increase in cattle numbers came after 1870. At that time we had 4.5 million head in the 17 western states. By 1884, the cattle population had exploded to 47 million. Year-long grazing by these excessive numbers of cattle, followed by increasingly efficient fire suppression, had provided optimum conditions for piñon, juniper, ponderosa, and sagebrush. These plants were not only outcompeting the grass, but were demanding so much more water that the aquifers were no longer producing permanent water flow that could sustain riparian conditions.

"Watershed Restoration"

I guess you could call what began here on Carrizo Valley Ranch over 30 years ago "watershed restoration." Our initial move was to attack the water-hungry invaders that were causing the problem. Once the brush had been thinned to pre-settlement levels, and a grass cover re-established, runoff was reduced to the point that I could now concentrate on healing the scoured-out canyons and draws. If beaver and fish had lived there before, what should I do to rehabilitate these areas now that the watershed was becoming more productive? I decided that since livestock are a lot like people --when it's hot and dry, or just dry, they like to stay around a cool place where there's something appetizing to eat and plenty to drink --perhaps I needed to change their grazing patterns.

I had noticed that the lower part of the ranch, where I had deferred grazing during the summers, had begun to grow vegetation and collect silt in the canyon bottoms. It was about that time that the word "riparian" began to appear in articles about public land grazing and in conservation magazines.

(con't on page 19)

Responding Rapidly

These areas that were rested during most of the growing season and grazed during the dormant season were responding much more rapidly than I believed possible. Now that the watershed was functioning properly, I had water even in the driest part of the summer. It supported all that new vegetation that was becoming established in what was now an authentic riparian zone. Forage production was so much greater there than anywhere else on the ranch that I decided to improve on that situation anywhere I could. There were some areas that could be deferred only by fencing. Once I bit the bullet and built the fences, the response was, again, much greater than I expected.

There are many side benefits to a sustainable riparian area- - one being the elimination of the need to chop ice in cold weather because now there is a running stream, where before a dry, scoured-out canyon existed. During the snowstorms of late December here in Lincoln County, it would have been very difficult to provide water to my cattle for several days had I not had ice-free running water in my riparian areas. In addition to a dependable water supply, willows and other riparian vegetation provide feed for livestock and wildlife even in deep snow. Growth and reproduction of these plants are stimulated by grazing or browsing during the dormant season.

Rewards

I have been rewarded both aesthetically and financially for a riparian rehabilitation. Intermittent ponds in the riparian area have fish and waterfowl and attract wildlife to the point that sometimes I wonder if I am going to have to exclude them also. So far no excessive damage has occurred, and my family and I enjoy the view as well as the income from fee-hunting.

Time-controlled grazing and piñon-juniper control have been the backbone of my management here on Carrizo Valley Ranch since that time. Using these management tools and a large helping of prescribed fire, the watershed above the Carrizo riparian area has been returned to pre-settlement vegetation (savannah and open woodland). Without this essential watershed rehabilitation and maintenance, the riparian area below would not be sustainable in years of sparse precipitation.

Now, with public attention focused on the less than 3% of our rangeland that is classified as riparian, I try to convey the broader aspect of the entire ecosystem and I say to them "No, no--it's the WATERSHED."

Award

(con't from page 2)

which is almost an unbelievable accomplishment.

I have heard Jim Winder talk and I have read some of his writings. He truly believes in a land ethic that would make Aldo Leopold proud. To hear a rancher support the Endangered Species Act; reject predator control; and favor the Mexican wolf introduction into New Mexico is refreshing to say the least. . . .

It's the Watershed, Stupid

(con't)

"During the snowstorms of late December here in Lincoln County, it would have been very difficult to provide water to my cattle for several days had I not had ice-free running water in my riparian areas."

JOIN US!

Would you like to join the Quivira Coalition? While we have finally received our non-profit status from the IRS and are beginning to receive grant money, we still rely on donations to produce this newsletter. If you would like to help us continue our educational mission, please send your contribution with this form to our Santa Fe address.

Yes! I would like to join the Quivira Coalition. I can contribute:

___$15

___$30

___$50

___$100

___Other

Contributions entitle you to receive this newsletter and notices of upcoming events and publications.

Thank You!

UPCOMING EVENTS

Grazing and Fire in Northern New Mexico--June 6, Peñasco

A "Talk/Walk" workshop on grazing, fire, and the ecology of the Sangre de Cristo Mountains of northern New Mexico will be held on June 6 in Peñasco. A series of short lectures will be followed by a site visit to a recent prescribed burn to examine ways that grasses and other natural plants can be returned to their former homes.

ECOLOGICALLY SENSITIVE RANCHING?
IS IT POSSIBLE?
A Free WORKSHOP in Roswell, sometime in mid-July.

DAN DAGGET - Environmentalist, author of ***Beyond The Rangeland Conflict: Toward a West that Works***

JIM WINDER - Cattle Rancher, Co-Founder of the Quivira Coalition

Dr. KRIS HAVSTAD - Supervisory Scientist, USDA/ARS Jornada Experimental Range

And a **Panel Discussion**

The purpose of this Workshop is to demonstrate to ranchers, environmentalists, land managers, and any interested member of the public, that ecologically healthy rangeland and economically robust ranches can coexist. The Speakers intend to teach that, under most circumstances, ecological goals, such as abundant wildlife, clear streams, hardy riparian zones, and healthy grasses, can be compatible with the commercial goals of livestock raising. For more information, call Courtney White (982-5502), Barbara Johnson (466-4935), or Jim Winder (267-4227).

Restoring Riparian Areas and Watersheds near Capitan, in August

A "Talk/Walk" workshop on restoring riparian areas and their watersheds to health will be held at Sid Goodloe's Carrizo Ranch, near Capitan. We will examine plant and wildlife diversity while discussing progressive ranch management techniques. Come take a look at another successful New Ranch.

The Quivira Coalition
535 Cordova Road, Suite 423
Santa Fe, New Mexico 87501

Non-Profit Org.
U.S. Postage
PAID
Santa Fe, NM
Permit No. 523