



THE QUIVIRA COALITION

2009 ANNUAL REPORT

2009: STAYING STEADY

Our goal in 2009 was to concentrate on our core mission. Like most nonprofits, The Quivira Coalition was buffeted by the financial tempest that rocked the nation in the fall of 2008. We knew that the next few years would be difficult, so we battened down our hatches and focused our energies on our core work: education, restoration and innovation.



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Highlights in 2009 included:

- Our 8th Annual Conference, "Living Leopold: The Land Ethic and a New Agrarianism," took place November 10-12, in Albuquerque, New Mexico and drew 500 participants.
- The publication (six years in the making) of *Let the Water Do the Work: Induced Meandering, an Evolving Method for Restoring Incised Channels*, a 258-page how-to manual by Bill Zeedyk and Van Clothier.
- Workshops on Comanche Creek, the Dry Cimmaron River, Red Canyon Reserve and Mesteño Draw.
- The placement of our first two New Ranch apprentices, Amber Reed and Sam Ryerson, at the San Juan Ranch in southern Colorado through our CARLY program.
- Continued capacity building through our partnership with the Ojo Encino Chapter of the Navajo Nation supported by a new grant from the Packard Foundation.
- Continued success with the New Ranch Network's small grant program which supported a variety of progressive grazing-related projects in northern New Mexico.
- Our cost-effective business style meant we were able to steer through the worst of the financial upheaval in good shape.

We could not do this without the help of our friends, supporters and five dedicated staff (see page 25). From all of us to all of you – our sincerest thanks!

It is our hope that in 2010 the financial situation will calm down, allowing us to expand our work once more. We are proud that we have been able to keep up with the changing times by providing grassroots resilience to local landowners, agencies and collaborative groups. It has been a long journey from our founding in 1997, but our goal is still the same: Keep the work in working western landscapes.

BACKGROUND: THE NEW RANCH

In November of 2007, the Board of Directors of The Quivira Coalition added the words "build resilience" to the mission statement of the organization, reflecting a new emphasis on meeting the expanding challenges of the 21st century. The mission statement now reads:

*The mission of The Quivira Coalition is to **build resilience** by fostering ecological, economic and social health on western landscapes through education, innovation, collaboration, and progressive public and private land stewardship.*

When The Quivira Coalition was founded in 1997, its principle aim was to explore a radical center among ranchers, conservationists, scientists and public land managers by focusing on the concepts of progressive cattle management, collaboration and improved land health. Our original mission was "to demonstrate that ecologically sensitive ranch management and economically robust ranches can be compatible."



CARLY Apprentice horse clinic on the San Juan Ranch, Saguche, Col., May 16-17, 2009. (Photo by Julie Bain)

We called this approach The New Ranch and described it as “an emerging progressive ranching movement that operates on the principle that the natural processes that sustain wildlife habitat, biological diversity and functioning watersheds are the same processes that make land productive for livestock.” It wasn’t a theoretical concept – it existed on a small but growing number of ranches across the region. We decided we could help by spreading the news.

We spent five fruitful years promoting The New Ranch through workshops, tours, outdoor classrooms, demonstration projects, publications, speaking engagements, media outreach, and other educational and bridge-building activities. It wasn’t just us – we were part of a broad effort at the time which successfully helped to expand the radical center in the West. More and more conservationists, policy makers, ranchers and others began to see there was an alternative to the constant brawling that had characterized the so-called grazing debate for decades. This wasn’t theoretical either – the collaborative process produced results as tangible as the good stewardship of The New Ranchers.

Partly as a result of this success, by 2002 we felt it was time to change The Quivira Coalition’s mission statement. The grazing debate had crested nationally and other conservation concerns were taking front stage. These included the accelerating loss of open space to sprawl (often on former ranch lands), the threat of noxious species to native biodiversity, the rise of recreational damage on public land; the threat of climate change to plants and animals (and people by extension); and a concern about how to best accomplish a generational transfer of knowledge and leadership.

Furthermore, our partnership with riparian restoration specialist Bill Zeedyk opened our eyes to a broader vision of land health and restoration involving grass, water, cattle and people. Our work correspondingly changed and expanded to include a major restoration project on Comanche Creek in the Valle Vidal unit of the Carson National Forest; the adoption of the Valle Grande Grassbank on Rowe Mesa, near Santa Fe; the creation of the New Ranch Network; the initiation of an Annual Conference; new workshops on ranch road repair, water harvesting, reading the landscape, monitoring and much more.

Good grazing was still the heart of our work, as was the radical center, but they became part of a larger effort “to foster ecological, economic and social health on western landscapes,” as our new mission stated. Our five-year plan, adopted in the fall of 2002, set straightforward goals: reach more people, affect more land and keep spreading the news.

(For more information on what we’ve accomplished, please see *At A Glance* on The Quivira Coalition website – www.quiviracoalition.org)

The Quivira Coalition works principally as a catalyst for change like the role a catalyst plays in a chemical reaction. Through our work we have lit sparks across the region that have grown over time into small bonfires of change. Through educational activities, we’ve encouraged ranchers to adopt conservation practices; environmentalists to value ranching; federal agencies to be more open to innovations; scientists to get more involved; and the public to consider the benefits of local, healthy food.

Although we were successful in our efforts, the world kept changing – which meant we needed to keep changing too.

Today: Building Resilience...One Acre at a Time

Although no one knows what the decades ahead will bring precisely, there are enough indicators of change to say with confidence that the 21st century will look a lot different than the 20th. Whether the concern is climate change, peak oil, ecosystem service decline, overpopulation, species extinction, food and water shortages, or something else, the challenges ahead are daunting and varied.

In the fall of 2007, The Quivira Coalition Board adopted a new five-year plan that focused on these challenges. Specifically, we chose to concentrate on building ecological and economic resilience. The dictionary defines resilience as “the ability to recover from or adjust easily to misfortune or change.” In ecology, it refers to the capacity of plant and animal populations to handle disruption and disturbance. Resilience also describes a community’s ability to adjust to ongoing change, such as shifting economic conditions or a steady rise in temperatures.

Two broad goals motivate our work on resilience:

Reversing Ecosystem Service Decline. In 2005, the United Nations published its *Millennium Ecosystem Assessment*, a global evaluation of ecosystem services on which human well-being and environmental health depend. These services include the provision of food, fresh water, wood, fiber, fuel, and biodiversity; climate, flood, pest and disease regulation; nutrient cycling, soil stability, biotic integrity, watershed function, and photosynthesis; and spiritual, educational, recreational, and aesthetic experiences.

Relocalizing Food. Relocalization will likely dominate our lives in the upcoming decades. The inevitability of rising energy costs mean more and more of our daily lives, from food production to where we work and play, will be increasingly relocalized at local and regional scales. This won’t be by choice, as it is currently, but by necessity.

The Quivira Coalition works towards both goals taking a “land health” approach to our work. By starting at the level of soil, grass and water we apply adaptive management methods that restore and maintain ecosystem functions.

In our plan, The Quivira Coalition aims to build resilience through:


- 1) **Improving land health.** We help address ecosystem service decline on a local level by managing land, conducting restoration projects, getting people involved in demonstration projects, encouraging land literacy and monitoring, and producing local food.
- 2) **Diffusion of knowledge and innovation.** We seek out ideas and practices that work and share them with a diverse audience. For example, a great deal of positive energy is being generated at the nexus of agriculture and ecology today by a number of farms, ranches, businesses and other organizations. Sharing these practices is critical to their adoption.
- 3) **Building local capacity.** We can continue to help build capacity (economic and ecological) among individuals, landowners, associations, watershed groups, and communities through hands-on training, workshops, clinics, mentoring, granting and other activities.
- 4) **Promoting the concept of “conservation with a business plan.”** Conservation needs to generate revenue to support itself. One way to accomplish this will be to work at the nexus of sustainable agriculture and ecology, especially as local communities become more willing to buy local products.
- 5) **Strengthen diverse relationships:** We continue to emphasize relationships – among people, between people and land, and between ecological processes. Unfortunately, these bonds have been damaged over the years. The job now is to mend these relationships and try to make them healthy again.

We accomplish these goals through three program areas:

1. **Education and Outreach**
2. **Land and Water**
3. **Capacity Building and Mentorship**

Since our founding, The Quivira Coalition's principle work has been educational. Over the years, we have focused on finding 'teachable' moments for diverse audiences through our outdoor classrooms, workshops, demonstrations projects, tours, lectures, conferences, publications and awards. Today, this program concentrates on (1) Our Annual Conference and Clarence Burch Award; (2) The New Ranch Network; (3) Publications and Web Sites; (4) Speaking engagements and other outreach opportunities. In each, we strive to disseminate innovation as widely as possible while maintaining our reputation for quality and integrity.

The Quivira Coalition's 8th Annual Conference



Living Leopold:
THE LAND ETHIC AND A NEW AGRARIANISM

"The only progress that counts is on the actual landscape of the back forty."
— Aldo Leopold

Wednesday–Friday, November 4–6, 2009

Embassy Suites Hotel, Albuquerque, N.M.

EDUCATION AND OUTREACH

THE QUIVIRA COALITION'S 8TH ANNUAL CONFERENCE, NOVEMBER 8-10, 2009

Despite the economic down turn, attendance of the 2009 Annual Conference, "Living Leopold: The Land Ethic and a New Agrarianism," was better than ever. Over 500 people attended the three-day event, 40 percent came from outside New Mexico, 123 identified themselves as ranchers, 74 as environmentalists, 64 as federal or state agency representatives, 16 as tribal, 85 as academics, 40 as members of the business community, and nearly 100 as members of the public.

They gathered to celebrate the centennial of the arrival of the great American conservationist Aldo Leopold to the Southwest as a ranger with the fledgling U.S. Forest Service. Over the course of a diverse and influential career, Leopold eloquently advocated a variety of critical conservation concepts, including wilderness protection; sustainable agriculture; wildlife research; ecological restoration; environmental education; land health; erosion control; biological holism; watershed management; and, of course, a

land ethic. Leopold is considered the mentor of what is being called a "new agrarianism", an intermixing of ranchers, farmers, conservationists, scientists and others who aim to create a regenerative economy that works in harmony with nature.

In this practitioners conference, we heard from speakers who are "living Leopold" in their work – people who are implementing his hopeful vision on the back forty, where the land ethic is alive and well.

The conference was divided into six sections, each honoring a different aspect of Leopold's thinking: Land Health, Conservation, Sustainable Agriculture, Restoration, Beauty and the Land Ethic.

Speakers

- **Dr. Patricia Richardson**, soil scientist, University of Texas, Austin
- **Steven Apfelbaum**, ecologist, Applied Ecological Services; Brodhead, Wis.
- **Dr. Dick Cates**, grassfed beef rancher and dairy professor; Wis.
- **Julie Sullivan**, environmentalist and rancher, San Juan Ranch; Saguache, Colo.

- **Dr. Sally Collins**, head of the USDA's new Office of Ecosystem Services, Washington, D.C.
- **Randy Udall**, energy expert; Basalt, Colo.
- **Tim and Katie Kline**, Amish farmers; Mt. Hope, Ohio
- **Tammy Herrera**, Ojo Encino Chapter of the Navajo Nation; Cuba, N.M.
- **Jen Johnson**, 5th generation rancher, graduate student, King Ranch Institute for Ranch Management, Texas
- **Amber Reed**, CARLY apprentice at the San Juan Ranch; Saguache, Colo.
- **Jed Meunier**, great grandson of Aldo Leopold and graduate student at CSU, Fort Collins, Colo.
- **Chet Vogt**, rancher and winner of the 2008 Leopold Conservation Award; Elk Creek, Calif.
- **Dr. Craig Allen**, forest scientist, USGS; Bandelier National Monument, N.M.
- **Rick Knight**, professor, CSU, Ft. Collins, Colo.; and Matilda Essig, artist; Elgin, Ariz.
- **Craig Sponholtz**, Dryland Solutions Inc., riparian restoration specialist; Santa Fe, N.M.
- **Linda Hasselstrom**, author and rancher; Hermosa, S.D.
- **Sid Goodloe**, rancher; Capitan, N.M.
- **Clare Kazanski**, great granddaughter of Aldo Leopold, Environmental Defense; Washington, D.C.
- **Dr. Gary Nabhan**, author and research social scientist, University of Arizona; Tucson, Ariz.

We were honored to be joined by Estella Leopold, Aldo's youngest child, and Dr. Susan Flader, a Leopold scholar at the University of Missouri.

We were also pleased to announce the publication of *Let the Water do the Work: Induced Meandering, an Evolving Method for Restoring Incised Channels*. The book debuted at the conclusion of a day-long symposium on the Induced Meandering method that honored Aldo Leopold's son Luna Leopold, and featured speakers:

- **Peter Warshall**, conservationist and former student of Luna Leopold; Tucson, Ariz.
- **Larry Schmidt**, consultant, former Program Manager of the National Stream Systems Technology Center, USFS, Rocky Mountain Research Station (Fort Collins, Colo.); Minden, Nev.



Tamara Gadzia, and *Let the Water Do the Work* authors, Bill Zeedyk and Van Clothier, cutting the celebration cake.

- **Stephen Monroe**, hydrologist, National Park Service; Flagstaff, Ariz.
- **Joan Bybee**, Mesteño Draw Ranch; Mountainair, N.M.
- **Steve Reichert**, Tierra y Montes SWCD; Las Vegas, N.M.
- **Nina Wells**, NMED~SWQB; Santa Fe, N.M.
- **Steve Vrooman**, Steve Vrooman Restoration Ecology, Santa Fe, N.M.
- **Gene Tatum**, Albuquerque Wildlife Federation; Albuquerque, N.M.
- **Glenda Muirhead**, Albuquerque Wildlife Federation; Albuquerque, N.M.
- **Steve Carson**, Rangeland Hands, Inc.; Santa Fe, N.M.
- **Craig Sponholtz**, Dryland Solutions, Inc.; Santa Fe, N.M.

Selected projects from around New Mexico were highlighted during a poster session and the day ended with a celebratory reception and book signing.

Concurrently, we hosted a day-long Range School entitled *Dung Beetles, Bats, Beaver, Wolves, and Elk – Oh My! Creating Harmony Between Livestock and Wildlife*. The goal was to explore practical strategies that promote coexistence between wildlife and livestock, including profitable economic approaches that promote conservation. Speakers included:

- **Dr. Patricia Richardson**, University of Texas; Austin, Texas
- **Dan Taylor**, Bat Conservation International; Calif.
- **Rick Danvir**, Deseret Ranch; Woodview, Utah
- **Timm Kaminsky**, Mountain Livestock Cooperative; Alberta, Canada

On Wednesday evening, we hosted the event “Reading Leopold: The Land Ethic Aloud; Essays, Excerpts, and Reminiscences of Aldo Leopold” which featured the three winners of the Aldo Leopold Writing Contest. Students in Grades 6-12 were encouraged to write a letter to Leopold telling him how or why his writings are important today.

Many people told us during the event, and in evaluation forms, that the conference was not only special but definitely one of our best.

We would especially like to thank the Onota Foundation whose grant enabled us to move the conference to a larger venue; concentrate more of the Executive Director’s time and travel on recruiting speakers; allow 32 speakers to participate in the conference; offer more scholarships; and conduct a broader outreach and publicity campaign. These developments will carry over to the 9th Annual Conference in 2010.

CLARENCE BURCH AWARD

The Clarence Burch Award is given by Andrew Dunigan and the Dunigan Family to honor the memory of Andy Dunigan’s grandfather, an innovative and enterprising rancher who courageously embraced new ideas and methods of “doing business.” The award recognizes individuals, organizations and others who have led by example in promoting and accomplishing outstanding stewardship of private and/or public lands.



Burch Award: Madison Valley Ranchlands Group (left, Charlotte and Lane Adamson, right - John and Donna Crumbley). Center: Andy Dunigan and Anne Wilson.

The goals of the Burch Award are consistent with the mission of The Quivira Coalition and its New Ranch paradigm, i.e., to explore innovative ideas in ranch management and build bridges between ranchers, environmentalists, public land managers, scientists and others with the goal of restoring western rangelands collaboratively.

During the Friday evening banquet, **The 8th Annual Clarence Burch Award** and a \$20,000 check were presented to the Madison Valley Ranchland Group, headquartered in Ennis, Montana.

The nominating letter by Todd Graham reads as follows: “In 1996 a group of long-time Montana ranchers began talking about the future of their agricultural valley. They faced a series of issues that focused their attention: large elk herds consumed forage on private lands that were reserved for cattle; wolves had been recently released next door in Yellowstone National Park and would soon make their way into the valley; environmentalists were suing to end livestock grazing on public lands; noxious weeds were crowding every corner of the valley; and ranches were being carved into subdivisions. Lying off the northwest corner of Yellowstone, their way of life in the Madison Valley was being increasingly threatened. They kept discussing these issues amongst themselves, and their concern grew.

But what to do about all this? These ranchers hoped to steer the course of the valley's future by creating a forum where people could come together and discuss community/valley concerns and also present ideas for solving those problems. From these discussions, the 501(c)3 Madison Valley Ranchlands Group (MVRG) was born. Even today, the notion of a bunch of ranchers forming a not-for-profit conservation organization is a head turner, but back then it was truly radical. Seeking diversity in their discussions and ideas for solving problems, MVRG invited government agency representatives, hunters, absentee ranch owners, as well as environmental groups to the table. Perhaps by getting enough different minds on an issue, a path forward may be found.

Working with these collaborators, MVRG launched multiple ventures to help work through the issues. It formed a committee to coordinate noxious weed control efforts across the valley's nearly one million acres. It formed a Range Riders program where cowboys placed on summertime grazing allotments would keep ranchers' cattle safe from wolves and grizzlies. MVRG would oversee the Range Riders, and area environmental groups helped fund the program. MVRG then tackled the controversial topic of unregulated population growth. It hosted a series of public forums where valley growth could be discussed. The result of these forums was the county's adoption of a growth policy

action plan. Each year, the group also hosts Living with Wildlife workshops to teach new subdivision residents how to reside within such an ecologically abundant setting. MVRG then invited state wildlife personnel, hunters, and landowners to discuss the valley's rapidly growing elk herd. Through a multi-year dialogue, the group began facilitating increased public hunting on private lands to help bring herd growth rates in line with desired objectives.

Through their efforts, MVRG learned that the collaborative process provides a meaningful way to engage people with divergent viewpoints. Folks may not always get along, but they can move forward together on important topics. When people learn to work with one another, new opportunities are formed."

OUTSTANDING LEADERSHIP IN THE RADICAL CENTER AWARDS

The Third Annual Recognition Award for Outstanding Leadership in the Radical Center is dedicated to the "four legs" of The Quivira Coalition's original "chair" – ranchers, conservationists, civil servants and researchers. We wish to recognize those individuals in each category who have shown remarkable and enduring leadership in the difficult job of working in the radical center – the place where people are coming together to explore their common interests rather than argue their differences, as author and conservation leader Bill deBuys has described it.

We believe that the radical center is where real change happens – on the "actual landscape of the back forty" as Aldo Leopold put it. But change needs strong leadership, especially in this era of seemingly endless partisanship. On behalf of the board and staff of The Quivira Coalition, we were honored to present the following "Outstanding Leadership" Awards for 2009:

- RANCHING - **Bill McDonald**, Sycamore Canyon Ranch, Douglas, Arizona
- CONSERVATION - **James Honey**, Sustainable Northwest, Portland, Oregon
- CIVIL SERVICE - **Frank Hayes**, US Forest Service (Retired), Duncan, Arizona
- RESEARCH - **Tom Moody** and **Stephanie Yard**, Natural Channel Design, Inc., Flagstaff, Arizona



James Honey receiving the Outstanding Leadership in the Radical Center Award for Conservation from Quivira Coalition Executive Director, Courtney White.

2009 NEW RANCH NETWORK

In 2009, the New Ranch Network funded 13 projects for a total of \$59,620. These funds were granted to The Quivira Coalition for us to grant out from Region 3 of the USDA Forest Service, The Dixon Water Foundation and the Natural Resource Conservation Service (NRCS).

The Dixon funds were for projects related to water in Texas and were granted to The Chihuahuan Desert Research Institute and Bat Conservation International. The Forest Service funds supported five projects/workshops that covered monitoring, riparian restoration, livestock and wildlife harmony, and an allotment range rider in New Mexico, Arizona and Colorado.

The Range Rider program was a Conservation Innovation Grant to The Quivira Coalition from the USDA-NRCS. This was a three year grant with the goal to enhance ecological conditions on grazing lands, help preserve the ranching tradition in Northern New Mexico and demonstrate a new model of collaboration in resource management. Over the three years, grants have been given to three grazing associations. Two of these associations used the funds to facilitate transferring skills from one generation to another within the same family. Workshops on low stress livestock management and planned grazing were part of the program. The program ended in 2009 and proved to be a success.

The target participants in all of the New Ranch Network projects ranged from students in grade 8-12 to adults with almost 600 people participating or attending workshops.

THE VALLE GRANDE RANCH WHIP PROJECT

In 2009, The Quivira Coalition contracted with the USDA NRCS WHIP on its Valle Grande Ranch on Rowe Mesa. This is their Wildlife Habitat Improvement



Tio Grande Range Riders move cattle, fall 2009. (Photo by Avery C. Anderson)



Placing bat netting over the completed pond, May 2009 (Photo by Courtney White)

Program. The Quivira Coalition partnered with Bat Conservation International to develop water improvements on the ranch to help encourage and identify the bat population in the area.

With the help of the NRCS representative and Dan Taylor from BCI, plans were developed to build a pond designed for wildlife and specifically for bats. During a workshop, the pond was created with the assistance of volunteers. In 2010, another wildlife drinker will be installed; brush management conducted; and counting and identify species will take place.

PUBLICATIONS

New Agrarianism, Journal #34 (June 2009)

From Courtney White: "With this issue of our Journal, we approach the culmination of much of what The Quivira Coalition has been trying to accomplish since our founding in 1997.

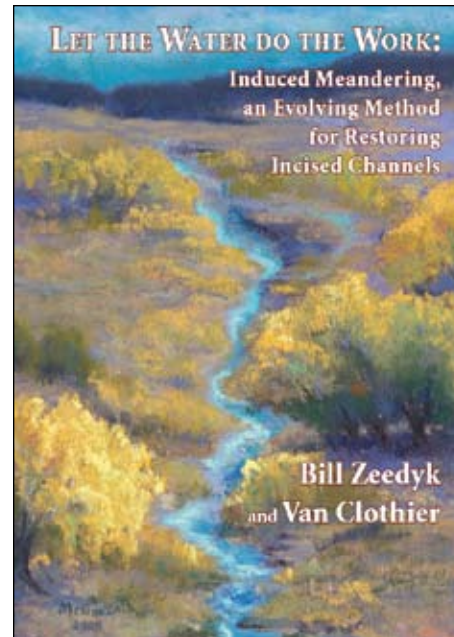
The idea of a new agrarianism encompasses nearly all our work over the past 12 years: grazing in nature's model, the radical center, land health, watershed restoration, bridging the urban-rural divide, progressive stewardship, education, collaboration, local food and resilience.

For awhile I had hoped that environmentalism would embrace these innovations, but as time went on, and new challenges arose, it became clear that we had started down a new path, heading in divergent directions. Not long ago, I came across the term "New Agrarianism" and when I began to explore what it meant, I saw its appeal. This was the unifying whole, the big circle that pulled everything together.

In order to introduce the term, I decided to reprint two essays here, one by Eric Freyfogle and one by Wendell Berry. Both were written around 2001 – too early, in my opinion. Both deserve to be read again because now the time is right.

We can't forget about the "Old Agrarianism." Much of what traditional communities still do, including the Amish and the villagers of northern New Mexico, are relevant and can teach the rest of us important lessons.

New or old or back to the future, whatever you want to call it, I hope the essays contained here resonate with you and where you live."



Let the Water Do the Work: Induced meandering, an Evolving Method for Restoring Incised Channels (November 2009)

In 2009, The Quivira Coalition published *Let the Water Do the Work* by Bill Zeedyk and Van clothier, an important contribution to riparian restoration. By **thinking like a creek**, one can harness the regenerative power of floods to reshape stream banks and rebuild floodplains along gullied stream channels. Induced Meandering is an artful blend of the natural sciences – geomorphology, hydrology and ecology – which govern channel forming processes. Induced Meandering directly challenges the dominant paradigm of river and creek stabilization by promoting the intentional erosion of selected banks while fostering deposition of eroded materials on an evolving floodplain. The river self-heals as the growth of native riparian vegetation accelerates the meandering process. Anyone with an interest in natural resource management in these uncertain times should read this book and put these ideas to work. Let's go with the flow!

Not all stream channel types are appropriate for Induced Meandering, yet the Induced Meandering philosophy of "going with the flow" can inform all stream restoration projects. Induced meandering strives to understand rivers as timeless entities governed by immutable rules serving their watersheds, setting their own timetables, and coping with their own realities as they

carry mountains grain by grain to the sea. Rivers are to be treasured and respected, never bullied or coerced. What would life be if there were no rivers to sustain us?

This how-to manual for restoring health and sinuosity to incised channels contains eight chapters, 252 pages, and is richly illustrated with 300 color photos, drawings, diagrams and graphics. Examples of successful treatments are described in detail. The book contains annotated references, a glossary and an appendix that includes field forms, worksheets and other tools for collecting and interpreting information pertinent to river and wetland restoration issues.

This book was supported by a grant from the Onota Foundation in memory of Longfellow Livingston and would not have been possible without the additional financial support of the Thaw Charitable Trust; Panta Rhea Foundation; Lumpkin Family Foundation; Pleiades Foundation; Sopris Foundation, New Mexico Trout; Taos Soil and Water Conservation District; Elkhorn Operations LLC; Ulupalakua Ranch; Sumner and Angie Erdman; Pima County, Arizona; Altar Valley Conservation Alliance; Truchas Chapter Trout Unlimited; Nick Martinez; Susan and Thomas Simons; Joseph T. Morris; Walter M. Taylor; Rancho Sierra Vista; Jon C. Rowley; Leslie Barclay; Christopher and Laura Gill; Robert A. Kasulaitis; J.W. and P.D. King; Rancho Burro Ciénega Ranch; and Thomas E. Sheridan.

Let the Water Do the Work Book Reviews

A) *Let the Water Do the Work* is currently being used as a text book by Assistant Professor Craig Conley at New Mexico Highlands University, Las Vegas, New Mexico for an upper division and graduate surface hydrology course. He says, "The book is equally at home in the class as it is in the field, expertly bridging theory and practice throughout. *Let the Water Do the Work* provides practical, no nonsense approaches to understanding the principles of hydrology, diagnosing and understanding surface hydrology challenges, and then detailing specific strategies and techniques to restore degraded systems. The book makes a challenging topic accessible to a broad range of readers. Al-

though the title says it is an 'evolving method,' this is clearly the work of a master who has distilled a lifetime of experience into 258 crisp pages. It is a unique contribution that provides students of ecology and resource management with a powerful set of tools to manage what is quickly becoming our most valuable natural resource."

B) Joe Trlica, Colorado State University, Fort Collins, Colorado for **Rangelands** magazine:

Why another book on 'How-to' fix problems in our watersheds? Because this new text on Induced Meandering works, is science based, and can be used by riparian specialists, government agencies, land-owners, and numerous volunteer organizations who are interested in helping streams recover from past human mistakes and natural perturbations. Zeedyk and Clothier's knowledge and experiences through years of working on the land in natural resources management, in teaching the principles of physics in water movement, energy dissipation, sediment transport and deposition, combined with actual field use of these principles, has resulted in a valuable new tool that can be used in many semiarid and arid areas of the world to initiate the process of stream stabilization.

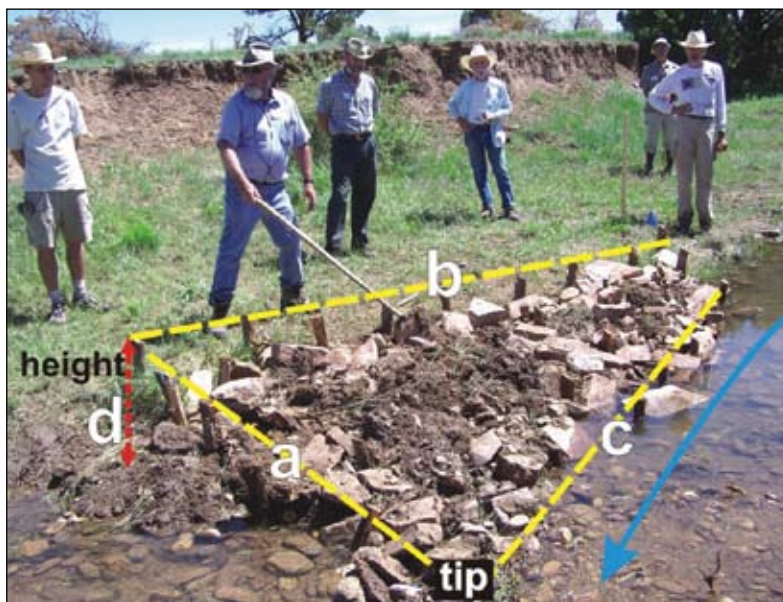
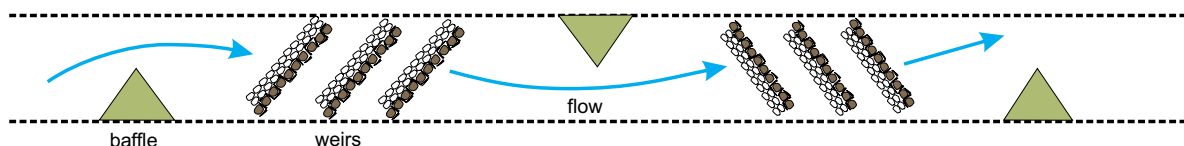


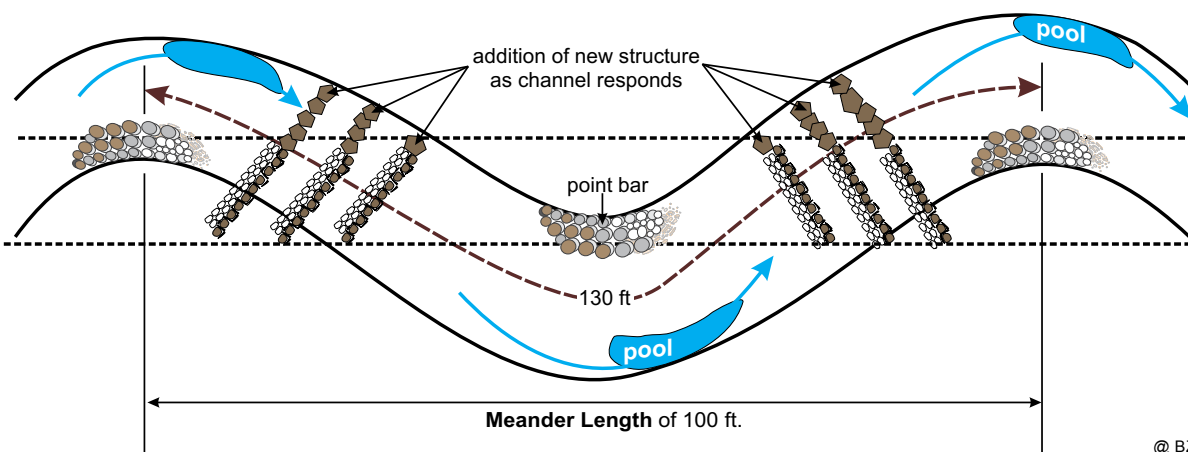
Figure 5-1 from *Let the Water Do the Work*. Picket and rock baffle schematic of dimensions. Photo from an Induced Meandering workshop on Mesteño Draw, New Mexico.

The Meandering Process

Before: Incised channel with a **Bankfull Width** of 10 ft., a **Channel Length** of 100 ft., and a **Sinuosity** of 1.00.



After: Meandering channel with a **Bankfull Width** of 13 ft, a **Channel Length** of 130 ft., and **Sinuosity** of 1.3.



@ BZ & TEG

Figure 4-3 from *Let the Water Do the Work*. Graphic representation of the Induced Meandering process. Schematic dimensions exaggerated (Adapted from Zeedyk 2003).

Zeedyk and Clothier have done an excellent job of writing in clear, concise and easily understood language. Numerous high quality pictures and figures show what the authors are discussing in the text. This book first describes how stream channels become incised, what some of our short term cures were in the past and why they did not work, how a stream functions, and principles of hydrology and stream mechanics in a way that is easily understood. Discussions of hydrology and stream physics as related to channel features, soil, vegetation and historical land uses are very helpful. They then describe in detail stream classification using Rosgen Level I and II surveys with abundant high quality diagrams and color photos.

The authors bring in the ideas of channel evolution and how induced meandering can be used to bring about some stream stability with targeted banks for erosion, deposition of materials in the bed and on

point bars, and the building of new flood plains. They describe materials and methods that can be used to help direct these processes to produce desirable outcomes. Most of these natural materials may be found on site, or purchased locally, and hand labor may be used to build most of these structures at low cost. The text concludes with how we can better read the landscape and work within the system to achieve desirable outcomes. Abundant information is included in the large Appendix, such as example watersheds, valley types, channel types, worksheets, field sheets, and other useful resources to be used in project planning, implementation, and monitoring.

Bill Zeedyk and Van Clothier have created a very usable text for those interested in stream restoration in an arid environment. These principles also apply to many other streams as well. They have found a way to work within the physical laws of nature to help in the recovery of degraded streams and gullies that are still prevalent in many areas of the world today."

Our Land & Water Program represents our commitment to land health, restoration, collaboration, and progressive stewardship of natural resources. Over the years, we have been engaged in a variety of work ranging from Induced Meandering projects to grassbanks to local food production. Today our work concentrates geographically on north-central New Mexico (Comanche, Cimarron, and Mora watersheds), our Red Canyon Reserve and the Santa Fe area. Additionally, we participate in various committees and coalitions that are also committed to implementing land health projects.



Volunteers repair elk-exlosures on the lower reach of Comanche Creek, July, 2009. (Photo by Avery C. Anderson)

LAND AND WATER

Comanche Creek

The Comanche Creek watershed is located in the Valle Vidal Unit of the Carson National Forest and is administered by the Questa Ranger District. Comanche Creek workshops are designed to support the goals of the Comanche Creek Rio Grande Cutthroat Trout Habitat Restoration Project. These goals are to improve the condition of the Comanche Creek watershed to meet current water quality standards and to restore normal hydrologic function to Comanche Creek and its tributaries while improving habitat for the Rio Grande cutthroat trout (RGCT), other native fish and aquatic species and for terrestrial wildlife. For more information on the Habitat Restoration Project visit the following Website: www.comanchecreek.org/

The purpose of the 2009 workshop was to assess and maintain structures that had been previously installed by The Quivira Coalition and other conservation groups in the Comanche Creek watershed over the life of the project, beginning in 2002. This maintenance addresses both natural wear and integrates ideas for improvements to structure design that have been gained since the structures were originally installed.

This maintenance will ensure that the work of the project's sponsors, partners and volunteers will continue to promote and protect the ecosystem services and biodiversity of the Comanche Creek watershed well into the future.

Sponsors. The Comanche Creek Habitat Restoration Project has benefited from a broad array of both public and private sponsors over the years. The 2009 workshop was no different. We express our deepest thanks to the following sponsors who helped make the 2009 workshop a resounding success.

- Embrace-A-Stream (EAS) Grant from Trout Unlimited's Truchas Chapter
www.truchas-tu.org/
- Patagonia Corporation's World Trout Initiative:
www.patagonia.com
- New Mexico Trout:
<http://www.newmexicotrout.org/>
- Carson National Forest
—Questa Ranger District
- Rangeland Hands, Inc.
- Zeedyk Ecological Consulting, LLC

Volunteers. The scope and sheer amount of good work done on Comanche Creek would not have been possible without the project's many dedicated volunteers. These volunteers come from all walks of life, are of all ages and have two things in common: a love of the land and a willingness to commit their free time to work for the betterment of our natural environment. The success of this year's workshop was due in large part to a total of 647 volunteer hours over four days of preparation and field work. Total volunteer hours reported to U.S. Forest Service included Quivira staff time of 205 hours for a total of 852 on-site work hours.

We were fortunate enough to have volunteers for the prep days of Tuesday through Thursday as well as the main workdays of Friday and Saturday. The greatest numbers of volunteers were 26 on Friday and 47 on Saturday.

Work Completed. Our July assessment ascertained the need for maintenance on 72 of the 229 total structures installed in the lower and upper reaches since the Project started. Staff had anticipated we would be able to service approximately 30 structures during the workshop. Due to the dedicated work of our team leaders and volunteers, the final total was 38 (14 vanes and 24 exclosures). In addition, five new post vanes were installed, while one vane was removed bringing the total number of structures to 233. All work was performed on lower reach structures; the upper reach will be addressed in 2010. The work done exceeded any of Quivira staff's expectations.

In addition to the instream and small exclosure work, members of the Boy Scouts of America deconstructed over 500 feet of a large cattle/elk exclosure that had outlived its usefulness. This effort gave our work a big boost forward.

In terms of materials we used, 324 cedar posts, 87 T-posts, and 19.5 tons of rock during the workshop. This leaves approximately 216 cedar posts in inventory for next year. Most of the T-post inventory was also used.

DRY CIMARRON

The Dry Cimarron Riverine Restoration Project, a 2008 State of New Mexico River Ecosystem Restoration Initiative Grant (awarded May, 2009), got off to a great start! The goal of the project is to restore the



Erosion control and bank stabilization workshop on the Dry Cimarron River, Folsom, New Mexico, June 2009. (Photo by Avery C. Anderson)

ecological function to approximately 5,680 feet of the Dry Cimarron River by reinstating a natural meander system. Planning and design was completed in 2009 with the professional input of Bill Zeedyk, Craig Sponholtz, Steve Vrooman, the implementation contractor Wesley Kendrick, and Quivira Coalition staff. The pre-implementation vegetation monitoring was completed in November of 2009 and Steve Vrooman is scheduled to complete the initial geomorphological survey this April.

Other 2009 activities on the Dry Cimarron included an erosion control and bank stabilization workshop, June 12-14 led by restoration specialist Craig Sponholtz. The workshop was funded through a grant from the National Audubon Society's *TogetherGreen* Fellowship that was awarded to Avery Anderson in September 2008. The workshop was organized into a half-day lecture, followed by two half-days in the field. Participants had a chance to design and build One Rock Dams, Zuni Bowls, Rock Mulch Rundowns, and Media Lunas. Twenty-four people attended, more than 10 rock structures were built and three sets of previously installed post vanes were repaired.

As part of the RERI grant we will return to the Dry Cimarron on Rainbow Ranch in 2010 to hand-install bank protection treatments in abandoned meanders that will be reconnected to the main channel during the September restoration work.

MORA RIVER

In 2008, The Quivira Coalition received a River Ecosystem Restoration Initiative (RERI) Grant to restore a reach of the Mora River. The project site is located near Watrous in Mora County on the Wind River Ranch. The primary land use impacts at the project site have been channelization to facilitate construction of an irrigation diversion dam, construction of an irrigation ditch and land leveling for crop production. The river is deeply incised and lacks sinuosity and an accessible floodplain.

The Wind River Ranch is privately owned and dedicated to ecosystem protection and restoration. This project will increase sinuosity and restore floodplain access to 2,691 feet of Mora River channel and will stabilize two headcuts that threaten the riparian area in Falcon Canyon. The Induced Meandering techniques used in this project will enhance the benefits derived from two ongoing projects adjacent to the area being funded by the U.S. Fish and Wildlife Partners for Wildlife Program and the New Mexico Department of Game & Fish.

In 2009, project design and implementation plans were completed; 404/401 permits and archaeological surveys were submitted and approved; and pre-implementation geomorphology, vegetation monitoring, photo documentation and mapping were completed. Treatments completed in 2009 included the repair of the irrigation diversion dam, the installation of a ditch plug to close a gap in the side channel, the harvesting of rock from the floodplain to reconnect the water table and maintain a natural levee, the creation of a bankfull bench and building of a boulder weir. In the fall of 2010, the final three instream treatments will be installed.

RED CANYON RESERVE

Located southwest of Socorro, New Mexico, nestled among the foothills of the San Mateo Mountains, the Red Canyon Reserve is a jewel being polished. Hard against the boundary of the Cibola National Forest, this 320-acre property was bequeathed to The Quivira Coalition by the estate of Michael Belshaw and is devoted to activities directed toward the preservation of the land and wildlife. The majestic and rugged Red Canyon bisects the property as it descends from the western

mountains and opens up onto the Rio Grande Basin to the east. Mule deer, antelope, mountain lion, javelina and many species of birds have been observed on the property.

During the RCR workshop, May 1-3, 2009, 32 volunteer participants and restoration contractors Steve Carson, Craig Sponholtz and Steve Vrooman built 14 structures using 55 tons of rock! Some volunteers came from as far as North Carolina and Los Angeles, California. Participants also toured the reserve with rangeland specialist Kirk Gadzia. Many thanks to all who donated their time and services.

PONIL CREEK RIPARIAN RESTORATION PROJECT:

This is an EPA 319 Water Quality collaborative restoration project between the Cimarron Watershed Alliance, Inc. (CWA) and The Quivira Coalition. Historical and recent management practices as well as an unfortunate natural disaster within the Ponil watershed have impaired its ability to function as a healthy aquatic ecosystem.



Volunteers build a media luna during the Red Canyon Reserve Ecological Restoration Workshop, May 1-3, 2009. (Photo by Avery C. Anderson)

Six specific contributors include:

1. Historical overgrazing of livestock within the riparian area;
2. Straightening and down-cutting of the stream channel caused by erosion from the railroad bed of the Cimarron and Northwestern Railroad built in 1905;
3. A large wildland fire in the headwaters (Ponil Complex 2002) which caused floods that further destabilized sections of the stream bank;
4. Current and historical browsing of new tree growth by elk;
5. Erosion from numerous low-water crossings; and
6. Introduction of certain noxious weed species along its banks.

All of these occurrences have contributed to the impaired condition in much of the Ponil. The overgrazing and overbrowsing, in conjunction with impacts from the 2002 fire, have reduced the riparian tree canopy, and the amount of effective shade which has lead to increased stream temperatures. The stream bank modification and destabilization also increased the temperature by reducing sinuosity which allowed a wider and shallower channel to develop. Additionally, the sedimentation and turbidity from stream crossings and upland sites with erosion problems have increased the mass loading within the creek which also increases temperature. The end result has been the inability of the Ponil to support high quality aquatic life.

Monitoring Activities

- Five permanent photo points have been installed and photos taken.
- Five thermographs were deployed in May. Sites for the other five thermographs were selected during the summer; three were deployed on a temporary basis in September. All 10 will be deployed in the spring 2010.
- Forty random canopy density measurements were taken across the project area in May and September.

Philmont Scout Ranch: View of post Ponil-Complex Fire riparian recovery just upstream from channel stabilization site.

Sub-projects

- **Cottonwood Restoration.** This activity will help reintroduce Ponil's bosque and reduce stream temperature by buffering sunlight entering the stream. Two exclosures have been completed and a third started for approximately 1.5 acres of treatment.
- **Low Water Crossings.** This treatment will stabilize and narrow stream crossings leading to reduced stream temperature and turbidity. Restoration at low water crossing #2 was mostly completed in October 2009. The cobble behind the cross vane will need to be added during low-flow conditions in 2010. Design and restoration of the two remaining low-water crossings is scheduled for 2010.
- **High Priority Channel Stabilization.** This treatment will stabilize a headcut moving up the main stem of Ponil Creek. The majority the restoration on the head-cut and cut-bank #2 was completed in October of 2010. The rock baffle and log vanes have been completed at the headcut, returning the creek to its original meander away from the head-cut. ROCS (Philmont Roving Outdoor Conservation School) will need to build the log drop structure and install three one rock dams below the headcut in 2010. In addition the rock baffle and log vanes will need to be planted with willows. The boulder baffles installed to mediate the cutbank will need to be planted with willows in 2010.





Barker Wildlife Area: view of a cutbank threatening the wildlife area's main access road. This area is slated for bank stability treatment.

Project Partners. Project partners include the CWA; Vermejo Park Ranch, Philmont Scout Ranch; New Mexico Department of Game & Fish; New Mexico Environment Department; Environmental Protection Agency; New Mexico State Forestry; the CS Ranch; Rangeland Hands, Inc.; Zeedyk Ecological Consulting LLC., and The Quivira Coalition.

CIMARRON WATERSHED-BASED PLAN

The Updated Watershed Based Plan (WBP) for the Cimarron Watershed is funded by an EPA 319 Planning Grant that will identify future implementation projects that can best achieve measurable water quality improvements in the watershed, focusing on the impaired waters as identified in the NMED/EPA 2008-2010 Integrated List. The Quivira Coalition along with hydrologist Joanne Hilton were contracted by the CWA

to write the grant in the spring of 2009. The CWA was awarded the grant in the summer of 2009. The work plan was approved in the fall of 2009.

The CWA retained The Quivira Coalition to administer and write the WBP. The Quivira Coalition will enlist the help of Ms. Hilton to address technical details of EPA's nine basic elements of a Watershed Based Plan. The plan will involve several public meetings to seek input on watershed restoration needs as well as site visits to listed streams in the Cimarron Watershed. We anticipate the plan will be completed in early 2011.

Partners include the CWA; Carson National Forest; Vermejo Park Ranch; Philmont Scout Ranch; New Mexico Department of Game & Fish; New Mexico Environment Department; Environmental Protection Agency; New Mexico State Forestry; the CS Ranch; Rangeland Hands, Inc.; Joanne Hilton; Cimarroncita Ranch; New Mexico State Parks, and The Quivira Coalition.

Part of The Quivira Coalition's philosophy is to encourage mentoring and capacity building opportunities for landowners, ranch-based collaboratives, and community organizations. To this end, we have formalized our Capacity Building and Mentorship Program. Within this program, we have implemented our Conservation and Ranch Leadership and Youth (CARLY) Program, which has placed two aspiring agrarians in year-long apprenticeships on a New Ranch,

and two summer interns in a three month program with The Quivira Coalition and Earth Works Institute. In addition, through the Capacity Building and Mentorship Program we have helped the Ojo Encino Chapter of the Navajo Nation build ecological and economic resilience on its land located west of Cuba, New Mexico. Both projects are good examples of leveraging resources for the benefit of the land and the next generation of land stewards.

CAPACITY BUILDING AND MENTORSHIP

CARLY: MENTORING THE NEXT GENERATION OF AGRARIAN LEADERS ...

There are few challenges more important at this moment in time than encouraging the next generation of leaders in conservation and ranching, and few are more daunting than creating the opportunities they need to learn from mentors and put their new knowledge to work.

Society faces a double-bind: just when we need to confront a crescendo of global challenges, including climate change, we face the additional challenge of decreased interest in nature and agriculture among today's youth. Not only has the population of farmers and ranchers dwindled to 2 percent of the total population (down from 40 percent in 1920), new research shows decreasing participation since the 1990s in outdoor pastimes, including hunting, fishing and camping, particularly by young people.

Which raises a very important question: *Who's going to pick up this vital work when the current generation of farmers, ranchers and conservationists retires?*

There is an urgent need, therefore, to create apprenticeship and internship opportunities for the next generation of conservation and agrarian leaders. Today's young adults (and young-at-heart) need on-the-ground opportunities to train with successful practitioners so that vital experience-based knowledge can be transferred to a new generation of pathfinders.



Amber Reed, first CARLY Ranch Apprentice. (Photo by Avery C. Anderson)

For the past 13 years, The Quivira Coalition has been a leader in conservation, land and riparian restoration, monitoring, outreach, and education. We have built a strong network of relationships with ranchers, farmers, conservationists, consultants and others involved with agriculture, business and land conservation across the West. This network, combined with our organizational strengths and our conservation focus, makes us uniquely positioned to implement a conservation and ranch apprentice/internship leadership program.



Sam Ryerson, second CARLY Ranch apprentice on San Juan Ranch, Saguache, Colorado. (Photo by John Mackay)

CARLY - *Conservation and Ranching Leadership and Youth* - is a leadership development program. We aim to strike a balance of mentorship activities and self-directed initiatives, with ample opportunities to attend workshops, classes and conferences that support apprentice/intern learning.

CARLY Ranch Apprentice Program. The CARLY Ranch Apprentice program is targeted at young people who have a *sincere commitment* to employment and life in sustainable agriculture. We seek applicants who are willing and able to make one to two year commitment to a mentoring program that offers experiential training in all aspects of a sustainable and resilient agricultural enterprise.

Aspects of the curriculum include animal husbandry, range health monitoring, pasture rotation planning, herding, road restoration and maintenance, range infrastructure maintenance, marketing grass-finished beef, business planning, and low-stress livestock handling. In addition, the curriculum includes a series of professional development opportunities. Apprentices emerge from the program with tangible skills, both technical and interpersonal, that are essential for successful employment as a ranch/land manager.

Early Successes. In spring 2009, The Quivira Coalition and San Juan Ranch, a sustainable ranching operation in the San Luis Valley of Colorado, partnered to launch the first iteration of the CARLY Ranch Apprentice Program. We had 58 inquiries for the position, and

ultimately hired Amber Reed, an extraordinary young woman from Leadville, Colorado.

Amber began her twelve-month Apprenticeship on April 1, 2009, and has had a very successful experience. In her six-month progress report she writes: "I am dividing my learning into thirds: practical skills, management and on-the-ground application. This division also suits my learning style. I like to observe how/why something is done, practice with someone and then complete the task on my own."

Having spent the first eight months immersed in the logistics of calving (on-the-spot training!), grazing management, low-stress stock handling, branding and diagnosing/treating livestock illnesses, Amber will focused the remainder of her apprenticeship on Holistic Management® goal setting, financial management for small businesses and livestock production plans. Ultimately, she will complete a Capstone Project to round out her apprenticeship – an element of the CARLY program intended to strengthen leadership skills.

Following on Amber's success, The Quivira Coalition and San Juan Ranch have hired a second CARLY Ranch Apprentice. On December 1, 2009, Sam Ryerson from Red Lodge, Montana, began his apprenticeship. Sam came to the CARLY Ranch Apprentice Program with a solid background in basic ranch skills, but is looking forward to working with George Whitten and Julie Sullivan, ranch owners, to sharpen his understanding of the business end of running a profitable and sustainable operation. He and his three horses (Tomato, Spud, and Raven) and two dogs (Belle and Faye) are settling into life in Saguache, Colorado.

Next Steps. In 2010 we intend to place three new CARLY Ranch Apprentices on the ground at ranches around the Southwest. Cooperating ranches include the San Juan Ranch (Saguache, Colorado), the Chico Basin Ranch (Colorado Springs, Colorado) and the 47 Ranch (McNeal, Arizona). All three of these ranches are managed in the New Ranch model, and their owners have demonstrated a genuine desire to mentor the next generation of agrarian leaders!

Summer Internship in Conservation. During the summer of 2009, The Quivira Coalition partnered with Earth Works Institute to host a joint Conservation Internship Program. The purpose of the Internship was to advance the careers of promising young adults through

on-the-job mentorship with both organizations. The 2009 interns gained experience in building outdoor classrooms, restoring riparian ecosystems, field monitoring and organizing community stewardship activities. Additionally, the interns were exposed to nonprofit administration and management by assisting with grant writing, project coordination and financial management. We hope to run a similar internship program in the summer of 2010.

In 2009, the CARLY program was funded through generous donations made by The Thaw Charitable Trust, The Dixon Water Foundation and the Albert I. Pierce Foundation.

OJO ENCINO: RE-GROWING A BIO-CULTURAL LANDSCAPE ON THE BACK FORTY

The Ojo Encino Chapter is located 30 miles west of Cuba, New Mexico, in heart of the Navajo country. Our work at Ojo Encino is focused on restoring land health. It's about reconnecting people to land. It's about creating new land management systems. It's about feeding the community. It's about maintaining traditions. It's about re-engaging youth. It's about caring for elderly. In essence, it's about rediscovering land ethic, and it requires building local capacity and strategies that make land-based activities economically viable and resilient in the face of climate change.

Today, we are continuing to systematically chip away at the daunting challenges and make real change on the ground. We do this with the generous financial support from the following organizations:

- EPA Targeted Watershed Grant Program
- The Christensen Fund
- The Packard Foundation

Our success on the ground is due to the tireless efforts of the following people:

- Watson Castillo
- Tammy Herrera
- Members of the Ojo Encino Ranchers Committee
- Roger Toledo, Ojo Encino Chapter President
- Elizabeth Stoney, Ojo Encino Land Board
- Rochelle Vandever, Ojo Encino Youth Crew Leader
- Barbara Johnson, Rio Puerco Alliance
- Steve Fisher, BLM
- Maureen Murphy, NRCS
- Craig Conley, The Quivira Coalition



Youth participant in a 4-H Horse Clinic at Ojo Encino.
(Photo by Avery C. Anderson)

- Avery Anderson, The Quivira Coalition
- Catherine Baca, The Quivira Coalition

Here are several of the programs that we devoted our time to in 2009:

Feral Horse - Youth Leadership Program. Driving across the Navajo Reservation, small groups of feral horses are a frequent sight on the landscape. While romantic at first glance, the darker side of this picture is that these unmanaged herds are overgrazing open range and undermining efforts of Native ranchers to restore rangelands to a healthy condition. In many cases, these horses have no training and provide little economic value to their owners. When herd populations grow to unacceptable levels, the BLM and BIA reduce numbers through roundups and auctions. In addition, drought years take their toll on the horse population through starvation. This scenario is repeated again and again throughout the Southwest. Nobody is happy with this situation but until recently, nobody has been able to come up with an alternative.

Horses and horsemanship are integral to Navajo tradition and culture. Many Navajo youth and adults, however, have lost a connection with their heritage of horsemanship and, as a result, an important aspect of their culture. This pilot program, financed by the Christensen Fund, addresses these issues in a positive manner. We expect the transition to a different way of horse herd management to take several years.



Students saddle their horses at 4-H Horse School in Albuquerque, New Mexico, June 2009. (Photo by Avery C. Anderson)

The program is based on youth education through horse training. Teaching tribal youth about the art and science of horsemanship, horse health management and grazing management, in combination with a horse training program, has created a more positive and interactive relationship between horses and people. It has added value to the horses as well.

Feral Horse Management. In addition to teaching Tribal youth about horses, we are also taking proactive measures to manage feral horses on Native lands. In the spring of 2009 our Navajo colleagues conducted a census of feral horses in the Ojo Encino community, an area of 78,770 acres. They counted over 700 horses and the number is well over 1,000 today, as many of the mares have since had foals. At that level, horses are eating all the available forage with nothing left for cattle, goats and sheep. Thanks to generous support from the Christiansen Fund, in the summer of 2009, Ojo Encino became the first Navajo Chapter certified to administer the immunocontraceptive PZP vaccine. PZP prevents mares from becoming pregnant for up to 22 months. To date they have immunized

over 30 horses and expect to complete over 100 by spring, 2010. The goal is to stabilize the population at about 350 horses. This is a number that the Ojo Encino Chapter believes is sustainable.

Erosion Control and Summer Youth Employment. Like the Feral Horse Youth Program, the Erosion Control Program aims to engage the Navajo Youth by providing a summer training program. In the summer of 2009, the crew leaders for the program attended a series of workshops led by restoration specialist Craig Sponholtz of Dryland Solutions, Inc. Then they struck out on their own during the summer – taking responsibility for site selection, design and construction of erosion control treatments. Over the course of the summer, they built dozens of structures, and, when assessed at the summer's end, Sponholtz commented that "not only was the rockwork outstanding, but the treatment designs laid out by the crew demonstrated their real understanding of the way that water and sediment move across the landscape."

This program will continue in 2010, with a new twist: site selection for some of the erosion control projects will be based on the results of an ongoing survey of historic agricultural fields in the area (see Hasbidito and Flood Water Farming Site Restoration project page 21). In general, old farm fields represented areas that, at one time, had high ecological significance. They were selected historically as areas for agriculture because they had rich soil and high moisture/nutrient content. More often than not these old flood water farming sites were abandoned when road construction and/or



Navajo horse trainer, Tom Chee, demonstrates ground work routine at Ojo Encino Horse Expo, October 2009. (Photo by Avery C. Anderson)

overgrazing changed their hydrology. Though they are now dry, the soil in these plots is generally still rich and we believe that restoring their water source will make them productive once again. Therefore, we are going to focus our erosion control efforts in the summer of 2010 on healing these once-productive pieces of land with the hope that they will be put into small-scale agricultural production once again.

Hasbidito and Flood Water Farming Site

Restoration. With generous support from the Packard Foundation, The Quivira Coalition has partnered with Hasbidito, a new and developing Navajo-run, community-based, nonprofit organization – to identify and restore three historic flood water farming sites in the Counselor/Ojo Encino/Torreon area. Hasbidito was created a year ago in the Counselor Chapter in response to a growing desire to bring entrepreneurial and community based businesses and activities to the area. The first sources of funding for the organization came from The Quivira Coalition (through the a Christensen Fund grant) and enabled Hasbidito to begin a backyard farming and a hoop house project.

In 2009, support from the Packard Foundation allowed The Quivira Coalition and Hasbidito to take the successful backyard farm project to the next level by expanding our focus. Abandoned flood water farming sites in the three chapter region have been inventoried, and in the coming months, several of these historic sites will be restored and put back into active agricultural production with the help of enthusiastic land owners.

This project has been a success on a number of levels. First, we were able to double the efficacy of the Christensen and Packard dollars by building on the early achievements in the backyard gardening project. Second, we were able to facilitate the development of a Navajo nonprofit organization,

which we hope will ultimately be responsible for developing strategic plans to implement projects and administering grants without outside assistance. Third, we now have a baseline understanding of the extent to which small-scale flood water farming historically influenced the landscape. And lastly, using the inventory created by our Navajo partners, we will work together to select, restore and plant three of the identified sites this coming spring.

Looking Forward. Over the course of the last four years, The Quivira Coalition has had the unique opportunity to work with the Ojo Encino Chapter of the Navajo Nation. What began as a two-day grazing management workshop has grown into a multifaceted conservation effort, including stream channel restoration, grazing management, vegetation management, monitoring and erosion control. In many places there has been a two-to four-fold increase in forage production, as well as numerous broader ecological benefits. Maybe even more importantly, the community is reengaged in the management of their land and adjoining Navajo Chapters are interested in adopting the “Ojo Encino Model.”



Navajo flood water farming site slated for restoration in 2010 by Hasbidito. (Google Earth Pro aerial photo)

FOUNDATION, GOVERNMENT, ORGANIZATIONAL, AND PUBLIC SUPPORT

Many thanks to those who contributed to The Quivira Coalition in 2009.

Major

Audubon TogetherGreen
Anonymous
Barbara Roastinger & Henry Oliver II Family Fnd
Bradshaw-Knight Foundation
Christensen Fund
Compton Foundation
Dixon Water Foundation
Healy Foundation
Judith McBean Foundation
Lydia B. Stokes Foundation
Martha Ellen-Tye Foundation

McCune Charitable Foundation
Messengers of Healing Winds Foundation
Onota Foundation
Packard Foundation
Panta Rhea Foundation
Patrick A. Dunigan
River Ecosystem Restoration Initiative
Robert Jespersen and Sylvia Y. Atencio Jespersen
Thaw Charitable Trust
USDA - Forest Service Region 3
USDA - Natural Resource Conservation Service
(WHIP and CIG)

Sustaining

Albert Pierce Foundation
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New Mexico Community Foundation
Patagonia
Pleiades Foundation
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Rio Grande Return
Sierra y Llanos, LLC
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Taos Soil and Water Conservation District
William S. Cowles, Jr., Los Trigos Ranch

Contributing

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Robert Jenks
Santa Fe Garden Club
Susan J. Brook
Terry S. Pierce
Thomas and Susan Simons
William L. Slick

QUIVIRA COALITION PARTNERS

Albuquerque Wildlife Federation	Jeremy Smith	Sandy's Services, LLC
Authorize.net	John West	San Juan Ranch
Avery Affholter	Julie Bain	Santa Fe Watershed Association
Barbero Grazing Allotment	Justin Cook	Sheryl Russell
Bat Conservation International	Kim Schiffbauer	Southwest Grassfed Livestock Association
Capital Electric	Lois Mee	Steve Vrooman Restoration
Cañon Bonito Ranch	Maryann McGraw	Stream Dynamics, Inc.
Cañon Rio Creations, LLC	Mary Maulsby	Studio X
Capulin Grazing Allotment	McNultyZahm, LLC	Sulica Fund
Center Conservation District, Center, Colorado	Mike and Daniel Archuleta	Taos Soil and Water Conservation District
Chihuahuan Desert Research Institute	Mollie Walton	Tarry Pesola
Cibola NF, Sandia Ranger District, Sandia Ranger Station	Nansy Carson	Tio Grande Livestock Association
Cimarron Watershed Alliance	New Mexico Department of Game and Fish	Todd Graham
Community Bank, Santa Fe	New Mexico Environment Department ~ Surface Water Quality Bureau	Trish Jenkins
Conservation Fund	New Mexico Trout	Trout Unlimited - Truchas Chapter
Craig Conley	Nick Martinez	Tusas Grazing Allotment
Deborah and Nils Myrin	Nina Horochowski	University of Arizona, School of Natural Resources
Direct Mailing Services, LLC	Ojo Encino Rancher's Committee	United Parcel Service
Drylands Solutions, Inc.	Paper Tiger, Santa Fe	US Forest Service, Region Three
Earth Works Institute	Pecos/Las Vegas Ranger District, USFS	USDA Natural Resource Conservation Service
Ellen Herr	Pritzlaff Ranch	USDA NRCS Las Vegas Office
Embassy Suites, Albuquerque, N.M.	Questa Ranger District, Carson NF	Wind River Ranch
Environmental Protection Agency	Quivira Coalition Board of Directors	Wolf Springs Ranch
Four Corners Institute	Rainbow Ranch	Zeedyk Ecological Consulting LLC
Gen Head	Rangeland Hands, Inc.	
Gene Baca	Resource Management Services, LLC	
George Long	River Source, Inc.	
Hasbídító	Rio Grande Insurance - Sam Levy	
Hernandez Plumbing	Rio Puerco Watershed Alliance	
Holistic Management International	San Antone Livestock Association	
I.T. Partners, Inc.		

*Many thanks to
Cullen Hallmark
for all his work
on behalf of
The Quivira
Coalition.*

2009 CASH FINANCIAL REPORT

All financial documentation is shown before 990 tax reporting and annual audit. Assets, Ordinary Income and Expenses ending December 31, 2009

EXPENSES

Advertising and Promotion	\$3,460
Computer Hardware/Software	\$4,320
Event Food	\$40,165
Organizational Insurance	\$11,755
Licenses and Fees	\$7,729
Program Materials and Supplies	\$22,152
Payroll Expenses and Benefits	\$319,775
Postage and Delivery	\$4,080
Professional Fees	\$157,686
Printing and Reproduction	\$43,829
Property Taxes	\$1770
Venue and Equipment Rental	\$12,706
Resale Products	\$8,525
Communications and Utilities	\$9,992
Travel	\$49,525
Maintenance and Repairs	\$5,015
Valle Grande Ranch Expenses	\$38,040
Donations and grants Given	\$105,613
Other	\$7,869

TOTAL EXPENSES \$854,006

ASSETS

Current Cash	\$183,898
Fixed Assets	\$1,588,972
OTHER ASSETS	\$6,045
TOTAL ASSETS	\$1,774,474

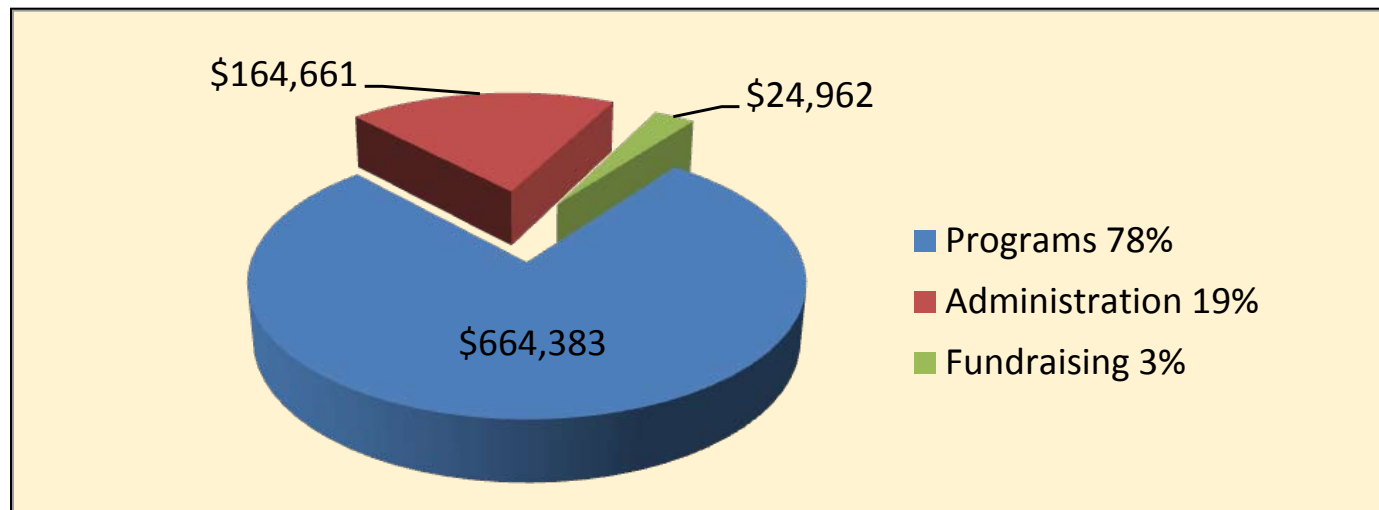
LIABILITIES

Current	\$8,698
Long Term	\$90,923
TOTAL LIABILITIES	\$109,621

INCOME

Program Contractual	\$49,082
Program Grants	\$384,902
Public Contributions	\$283,055
Registration Fees	\$45,112
Product Sales	\$24,952
Rent	\$25,112
In-Kind	\$37,391
Other	\$3,872

TOTAL INCOME \$853,488



2009 BOARD AND STAFF

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Educator, Rancher

Sid Goodloe, Vice Chair
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US Forest Service Dist. Ranger, Retired

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Tim Sullivan
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*Affiliations of the board members are listed to convey the breadth of experience that these individuals bring to the governance of The Quivira Coalition.

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