

# Clearing The Waters Newsletter

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## Guest Editors:

Chris Canavan  
Dave Menzie  
Matt Schultz

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## New Mexico Watershed Forum Recap

By Rich Schrader, River Source

The first ever New Mexico Watershed Forum "From Mountaintop to River Bottom: Restoring New Mexico's Watersheds" was held for three exciting days in Albuquerque, New Mexico, and in the forests, valleys, and wetlands by the Jemez Mountains. More than 300 participants representing over 115 different organizations attended. The forum provided an opportunity to learn about watershed restoration techniques; increase collaboration and communication about watershed restoration; network with watershed groups across New Mexico; and share successes, challenges and innovations. Major discussions focused on creating a state-wide alliance of watershed groups, new research and collaborative approaches in the face of climate change and potentially shrinking funding sources, monitoring approaches for restoration project effectiveness, and service learning that engages youth with wildlife and park management objectives.

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A plethora of informal discussions, network connections, and exhibits took place in the venue hallways. Photo from River Source

**NMED Surface Water Quality Bureau's  
Watershed Protection Section**

[www.nmenv.state.nm.us/swqb/wps](http://www.nmenv.state.nm.us/swqb/wps)

*FORUM continued from page 1*

The statewide forum reached a broad audience composed of agencies, organizations, professionals, educators and citizens with an interest in watershed management, restoration and protection. Over 50 speakers presented at the event including the keynote speaker, Brad Lancaster, an expert on water harvesting techniques in dryland areas. A plenary session initiated the first day with the theme “Building Alliances Across Boundaries.” The second day consisted of workshops to “share our watershed knowledge” including sessions on “How to Form and Sustain a Watershed Group,” “Funding Your Watershed Project,” and “Resolving Environmental Conflict in Collaborative Forestry Projects.” Informal discussions, network connections, and information for people doing watershed restoration on the ground filled the rooms and hallways. The third day offered a field trip to watershed restoration sites in the Jemez area to demonstrate on-the-ground techniques and highlight specific outreach and collaborative efforts.



Hoot Gibson, former president of the Cimarron Watershed Alliance, presents panelists with questions during the first day plenary session. Photo from River Source



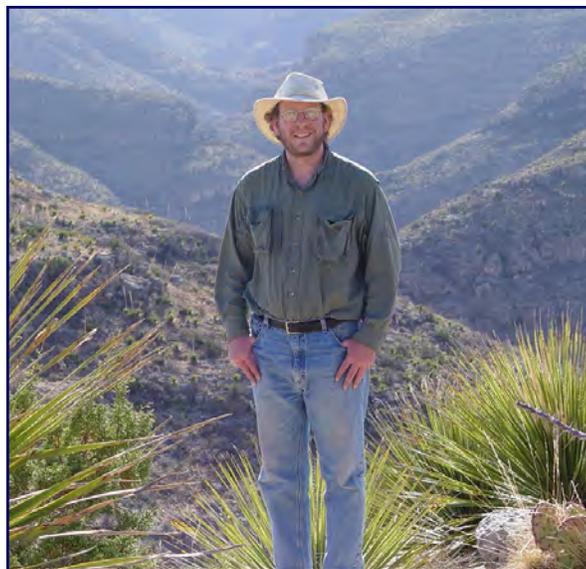
Brian Wimberly of Santa Ana Pueblo's Department of Natural Resources describes the on-going treatment and monitoring work for the Rio Grande bosque north of Bernalillo. Photo from River Source

Planning for the forum began in 2006 with the mission statement: “To promote local leadership for watershed restoration throughout New Mexico by providing an opportunity for citizens to come together, share successes, challenges, innovations, network and discuss watershed issues.” We need to find ways to collaborate across political boundaries as the watershed approach requires, so that we can leverage resources efficiently, improve communication and share data and information with people doing the same kind of work hundreds of miles away in other parts of New Mexico and around the West. The staff at River Source were honored to help organize the Forum and look forward to staying connected and collaborating with new friends and colleagues we met at the first-ever.

*The Watershed Forum was sponsored by the New Mexico Environment Department, the U.S. Environmental Protection Agency, the New Mexico Energy, Minerals and Natural Resources Department Forestry Division, and the New Mexico Forest and Watershed Restoration Institute, in collaboration with the New Mexico Department of Game and Fish and the New Mexico Department of Agriculture with organizational assistance provided by River Source. Proceedings from the Watershed Forum will be available at [www.watershedforum.org](http://www.watershedforum.org) in November 2008.*

## *WPS Welcomes New Program Manager*

**Abe Franklin** has recently become the new Program Manager for the Watershed Protection Section of the New Mexico Environment Department's Surface Water Quality Bureau. Abe, a veteran of the Section for close to 10 years, previously led the Restoration and Implementation Team. Based in Santa Fe, he has worked for several years developing the nonpoint source pollution program in the San Juan Basin, and consequently became familiar with many aspects of the Clean Water Act and water quality. His previous work experiences include remote sensing research and development for a small engineering company, marine fisheries observation on Alaskan factory trawlers, and lab assistance in environmental microbiology research. His degrees are in Environmental Biology from New Mexico Tech (B.S.) and Natural Resources Management from the University of Nevada in Reno (M.S.), where he developed riparian vegetation mapping methods using high-resolution remote sensing. He was born in Alamogordo, and grew up there and in the Sacramento Mountains south of Cloudcroft.



*Abe Franklin  
Program Manager  
Watershed Protection Section*

## *WPS Welcomes New Silver City Field Office Employee*

**Matt Schultz** is our new Environmental Scientist-Specialist for the Surface Water Quality Bureau, Watershed Protection Section based out of the Silver City Field Office. Matt received an undergraduate degree in Biology from Grinnell College, and a Master's degree in Ecology from Colorado State University. In addition, he has close to 10 years experience working for the Department of Interior and research institutions across the Southwest and the Pacific on the design, implementation, and monitoring of ecological restoration projects. Occupying a niche between natural resource management policy and science, he has worked on terrestrial and riparian vegetation community restoration, mine reclamation, threatened and endangered species issues, and biocultural restoration; and investigated community assembly rules, fire effects, disturbance regimes, exotic species invasion, soil-plant-microbe interactions, facilitation, resilience, and long term ecological change. He looks forward to being involved with cooperative conservation projects that involve multistakeholder consultation processes, capacity building, and relations to promote and protect ecosystem services and watershed functions. "I have long been fascinated by the scientific, economic, historical, and cultural dimensions encompassed by restoration ecology. I see my future role developing sustainable, ecologically sound, and politically acceptable restoration solutions. Every degraded ecosystem poses unique challenges, but every degraded ecosystem also possesses avenues to rehabilitation."



*Matt Schultz  
Environmental Scientist-Specialist  
Watershed Protection Section*

## “A Project for Old Men”

by Moises Sandoval



**Moises**



**Arsenio**

*“I feared we might not be able to provide our share of the labor, even with assistance from Adam, himself in his mid-60s.”*



**Adam Berg**



**Steve Reichert**

We had no idea what we were getting into when Steve Reichert from the Tierra y Montes Soil and Water Conservation District suggested an erosion control project on our 600-acre ranch within the Sapello watershed in San Miguel County. We began to see what he was talking about after a guided tour of projects on neighboring land. Three booklets broadened our understanding: “An Introduction to Erosion Control” by Bill Zeedyk and Jan-Willem Jansens; “Livestock Grazing on Western Riparian Areas,” a publication of the Northwest Resource Information Center for the Environmental Protection Agency, and “Water Harvesting from Low Standard Rural Roads”, by Bill Zeedyk. But we still could not envision being able to carry out the project.

The Sandoval Ranch is owned by the Sandoval Corporation, whose board consists of five brothers and a sister-in-law, the widow of one of the original partners. I, the oldest brother, organized them to buy the land in 1960 so that it would remain in the family. We saw great value in keeping land owned by our great grandfather, Estanislado Sandoval, born in 1819 in nearby Manuelitas. Later the land was incorporated to maintain its integrity, but not all members of the board are as enthusiastic about the land as my brother Arsenio and I. We both have homes on the property. As treasurer, I could imagine the eyes of some of the board members glazing over if I suggested contributing money to hire the labor required. Fortunately our neighbor and good friend, Adam Berg volunteered and played a key role. When Steve was looking for landowners who could participate in projects to reduce erosion and improve water quality as part of a Clean Water Act §319(h) grant, Adam suggested our ranch. A wonderful coincidence was that Steve and I had known of each other years ago through the Catholic Foreign Mission Society.

Reflecting the sentiment of the recent movie, “No Country for Old Men”, (which was partially filmed in Las Vegas, NM), Arsenio and I, both in our mid to late 70s, felt this was “no project for old men”. I feared we might not be able to provide our share of the labor, even with assistance from Adam, himself in his mid-60s. The project was to prevent further downcutting of the arroyos that had developed many years ago. The design included preventing and slowing headcuts, draining the roads that we would keep, closing other roads and creating meanders inside the deeper arroyos to slow down erosion and build the surface back up.

*Continued on page 5*

**PROJECT** *continued from page 4*

Most of these structures required lots of rocks and pine poles which were accessible from the nearby hillsides. We found good rock sources nearby and we also realized we had the perfect vehicle to maneuver through the forest to build the log structures, Zuni bowls, one-rock and filter dams. It was a Kubota utility vehicle with a dump box that has a load capacity of half a ton. Adam and I purchased it together several years ago, to take our wives and guests to areas they would otherwise not be able to get to.

Under Steve's supervision, we moved an estimated 15 tons of rock to 29 head-cut structures and filter dams. As the structures built by hand were completed, heavy machinery was brought in to install a cross vane, very large head-cut structures using huge boulders and filter dams. In addition, 19 rolling dips were created on the roads to facilitate drainage and improve the condition of the roads. By that time, I was so enthused about making the roads self-maintaining (the role of the rolling dips) that I paid out of my own pocket for four more on the road leading to my house.

When the job was finally over, our use of the Kubota, our labor and the material onsite covered our "in-kind" match requirements for the project. We had no out of pocket expenses other than diesel fuel. We need not have worried about raising money to pay our share.

For us old men, it was hard, often painful work, resulting in aching backs, worn out tendons and atrophied muscles. But we were inspired by the memories of lush meadows we had seen in our youth growing up on this land. Many in my family were born there or nearby and lived in the area until the Great Depression and opportunities of World War II led us to Colorado and beyond. The meadows disappeared decades ago as the arroyos deepened and lowered the water table. The conservation work we did and the forest thinning we are doing now will one day bring the meadows back. The changes may take years, perhaps too long for us to see the meadows again in our lifetime, but our children and grandchildren will see them and that is good enough. Keeping the land undivided and trying to return it to its pristine beauty was worth the work.



**A big filter dam on an arroyo**



**The Kubota, a real workhorse**

*"Keeping the land undivided and trying to return it to its pristine beauty was worth the work."*



**One of 19 rolling dips**

# 319 Project Profile

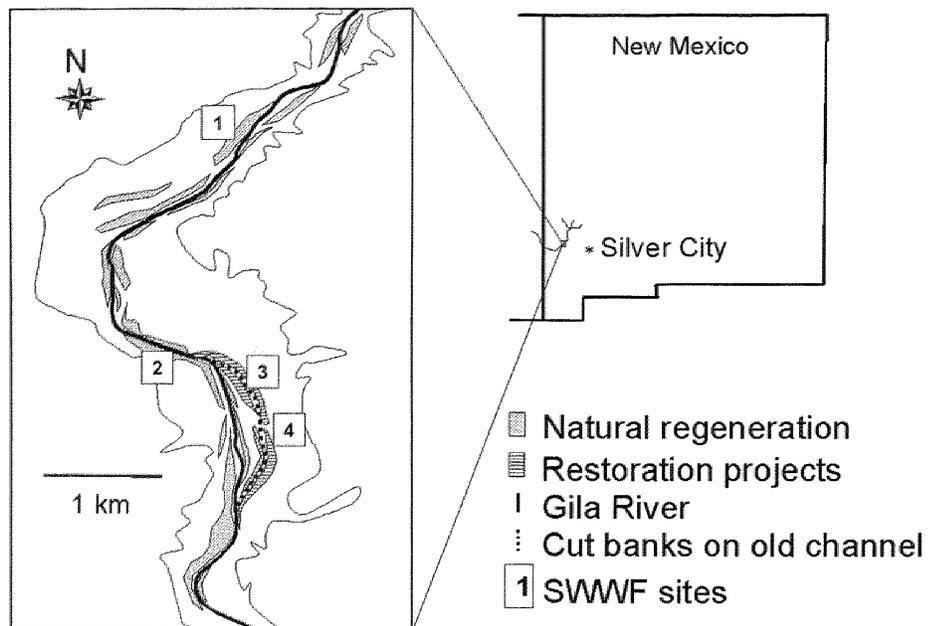
## Riparian Restoration on the Gila River – a Success Story

By David Menzie, SWQB Silver City Field Office

In the early 1990s, SWQB placed the Gila River from Mangas Creek downstream to the USGS gaging station at Redrock on its list of impaired surface waters due to turbidity and suspended sediments caused by streambank destabilization. This impaired reach included the Gila National Forest (GNF) “Bird Area”. The GNF decided to address the impairment on forest lands with a combination of best management practices designed to restore the riparian corridor. The main goals for the GNF project were to 1) reduce the turbidity and sediment load and, 2) increase quality habitat for the Southwestern Willow Flycatcher. Total cost of the project was reported as \$133,000, and SWQB participated in the project by providing \$70,000 for watershed restoration under section 319 of the federal Clean Water Act.

**Probable sources** for the poor condition of the Bird Area were identified as historical agricultural practices on the floodplain, uncontrolled grazing throughout the riparian corridor and removal of riparian trees in the mistaken belief that it would increase stream flows. The result of these past practices was accelerated erosion along the channel/floodplain interface. Thousands of linear feet of raw cut banks were being severely impacted with every moderate to high flood flow and large quantities of fine-grained floodplain were being lost to erosion. The loss of riparian habitat was impacting the Southwestern Willow Flycatcher and the introduction of excessive fine-grained sediment in the gravel/cobble substrate was impacting the loach minnow.

**Restoration methods** chosen by the GNF to address this problem relied on active vegetation techniques. The GNF needed solutions that provided for low long-term maintenance cost, effectively reduced bank erosion, and addressed the habitat needs of the Southwestern Willow Flycatcher. Robust vegetation along the bank and within the floodplain increases roughness thereby decreasing flow velocities and erosion. Vegetative bank armoring is the only armoring method that increases in extent and strength through time without additional cost.



**Gila River Bird Area** – Location map indicating areas of natural regeneration, active restoration sites, the Gila River, cutbanks, and Southwestern Willow Flycatcher (SWWF) breeding sites (Boucher et al, 2003).

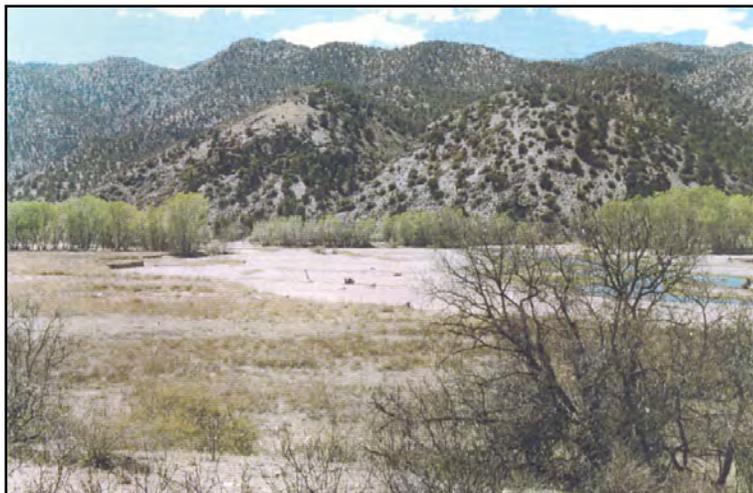
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## **BIRD AREA** *continued from page 6*

Beginning in 1995, the GNF aggressively pursued a program of riparian restoration to address the problem. Cattle were excluded from grazing in the area and heavy equipment was used to lay back vertical cut banks between the channel and the floodplain. Along selected reaches, cobble and other overlying substrate materials were removed to groundwater level so that thousands of willow whips and cottonwood poles could be planted.

**Results** from the restoration of the Gila Bird Area exceeded expectations (see photos). Pole plantings of riparian trees grew rapidly and the GNF estimated the survival rate at greater than 90%. Natural revegetation augmented the planting effort both within and outside of the active restoration areas. In small wetlands adjacent to the channel, cattails and bulrushes were established. Woody riparian plants increased in density and more than 40 ha of dense riparian areas were created providing the critical habitat for the Southwestern Willow Flycatcher. Fine-grained floodplain sediment being introduced to the channel's gravel/cobble substrate was reduced as the cut banks stabilized with new vegetation. One of the initial concerns was that large scouring flood flows would destroy the vegetation before it became established. This concern was put to rest after an estimated 19,000 cubic feet per second flood flow inundated the project area in September 1997. New vegetation not only survived the 1997 flood but also additional moderate floods in the winter of 2005, the summer of 2006, and the again in the winter of 2008.

For more information on the Gila Bird Area Riparian Restoration Project see the following report. *Boucher, P.F., Stoleson, S.H., Shook, R.S., Pope, R.D., and J. Monzinger. 2003. Riparian Restoration on the Gila River, New Mexico, Creates Breeding Habitat for Southwestern Willow Flycatchers. Studies in Avian Biology 26:135-142.*



May 1996 prior to restoration (Gila National Forest photo)



August 1999 three years after restoration (Gila National Forest photo)



August 2008 twelve years after restoration (NMED SWQB photo)

# ANNOUNCEMENTS

*November 19–21<sup>st</sup>, 2008* – NM Vegetation Management Association Annual Conference  
“What’s your mode of action?” Hilton Albuquerque

[www.nmvma.com](http://www.nmvma.com)

*November 20<sup>th</sup>, 2008* – Sapello Watershed Group Core WRAS Committee meeting at the  
Tarbiyat Baha’i Center, Las Vegas at 4PM.

*November 20<sup>th</sup>, 2008* – Forest Guild - NM Forestry and Climate Change Workshop,  
Albuquerque Grand Hotel, [www.forestguild.org/nmfccworkshop.html](http://www.forestguild.org/nmfccworkshop.html)

*January 8-9<sup>th</sup>, 2009* – NM Chapter of Society for Range Management Winter Meeting  
Albuquerque Fairfield-Hilton Complex

*January 14<sup>th</sup>, 2009* – Riparian Council Meeting 10 am BohannonHuston, Albuquerque

*January 15<sup>th</sup>, 2009* – New Mexico Water Dialogue Annual Meeting  
“Bringing Water Accountability to Water Planning: Do We Need A Crisis?”

[www.nmwaterdialogue.org](http://www.nmwaterdialogue.org)

*January 22-23<sup>rd</sup>, 2009* – Transboundary Water Crises: Learning from Our Neighbors in  
the Rio Grande (Bravo) and Jordan River Watersheds. Corbett Center, New  
Mexico State University, Las Cruces <http://wrri.nmsu.edu/conf/rgrij/conf.html>



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