



New Mexico
Environment
Department

CLEARING THE WATERS

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The Surface Water Quality Bureau Watershed Protection Section Receives New Mexico Riparian Council's 2002 Partnership Award

It was a beautiful fall day on Saturday, November 2 at the City of Albuquerque's Open Space Visitor Center. Canada geese and sandhill cranes were flying overhead; bright fall colors were displayed along the west edge of the Rio Grande bosque; and the air was filled with admiration for those who contributed to the goal of the event's host.

The host was the New Mexico Riparian Council (NMRC) and the event was the 2002 NMRC Annual Awards Ceremony. The NMRC is a nonprofit organization that works to educate the public on riparian issues through active development and participation in symposia, conferences, workshops and long-term restoration projects throughout New Mexico. Those being awarded contributed to this goal through partnerships, research, public awareness/education, and habitat enhancement.



Kim Eichhorst, biology doctoral candidate at the University of New Mexico, received the NMRC Award for Research for her work in identification of

insects that defoliate cottonwoods in the Rio Grande bosque.

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Partnership Award continued from page 1 The Public Awareness/ Education Award was presented to Molly Madden for her work in developing a Bosque Education Guide for second and fifth graders at Rio Grande Elementary School in Belen.

The Ciudad Soil and Water Conservation District, of Albuquerque, was awarded the Habitat Enhancement Award. District supervisors and staff have involved themselves in several projects that offer riparian benefits in an urban environment, including their Tijeras Project through the New Mexico Environment Department.

The Partnership Award was presented to the Watershed Protection Section (WPS) of the New Mexico Environment Department's Surface Water Quality Bureau. The NMRC said that, "The employees of the WPS have developed wonderful, productive relations with numerous land management agencies, private landowners and soil and water conservation districts, among others. They work hard to guide and encourage partners to achieve successful results in implementing numerous practices throughout New Mexico that improve riparian areas directly, as well as improving the health and proper functioning of watersheds as a whole, which is critical to sustaining healthy riparian areas."

The NMRC Achievement and Recognition Chairperson, Lucy Aragon, commented that she had interacted with WPS staff through several projects and public meetings. She nominated the WPS for the Partnership Award after witnessing the entire staff's effort and commitment during a Clean Water Act Section 319 Proposal Writing Workshop, held in Albuquerque in July of 2002. Additional complementary comments were offered by Bill Zeedyk, who noted the technical expertise that he has observed in a number of field excursions with WPS staff.

Michael Coleman, WPS Watershed, Wetlands, and Implementation Team Leader, thanked the NMRC on behalf of all of the WPS staff. He stated that it is

gratifying to be recognized as being effective at developing these statewide partnerships, especially since it represents achieving success towards one of the WPS priority duties. Coleman went on to thank the Riparian Council for their members' many contributions in preserving riparian health in New Mexico's waterways.

The Watershed Protection Section implements the Clean Water Act §319(h) Grant Program for the state, as well as other duties, under the direction of Program Manager Peter Monahan. Santa Fe staff includes (alphabetically): Michael Coleman, Abraham Franklin, Daniel Guevara, Michael Jaworski, Maryann McGraw, Bessie Muzumdar, Allen Pasteris, Betsy Reed, Delbert Trujillo, and Nina Wells. Julie Arvidson assists with the section's outreach and education programs. Mike Matush manages the Silver City field office, with Dan Claypool and David Menzie on staff.

Who's Got the Water?

Is there water on Zork? What's it like to be swimming in the Rio Grande? Who's got the water?

Nearly 1000 4th grade students from Albuquerque, Los Lunas and Rio Rancho learned the answers to these water questions and much more at the fourth Children's Water Festival, a celebration of water education, held at the Albuquerque Convention Center on October 17th and 18th.

Before the big day, the students' teachers gathered for workshops to share ideas about what the students will learn at the Water Festival. Teachers were invited to become partners of the Water Festival in an effort to expand learning and stimulate action. "We hope teachers, students and their families and friends will take action to conserve water and protect water quality", said Festival Steering Committee member Carol Edwards. Each teacher received a Resource Kit filled with materials to encourage water education in the classroom after the Water Festival.

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At the Water Festival, the Water Wizard, who knows all there is to know about H₂O, greeted the students as they got off the buses. Later, they met the Xeric City Scarecrow who assisted them as they built water filters to purify water from the Rio Grande. During the Festival students negotiated water-sharing agreements and looked for “bugs” in the water to determine its purity, created a mini-river and used a groundwater model to “see” how water moves underground.



Students participate in the exercise “why the water runs brown.”

This year, students from Highland and Rio Grande High Schools were Masters of Ceremony for Water Jeopardy, Bosque School students taught about Cottonwood forests, and Albuquerque Academy Environment Club members showed the 4th graders how to make an Edible Aquifer. “The younger students pay special attention because they really respect the older students,” said Festival Manager Susan Gorman.

Why a Water Festival?

In various ways, water has been in the news all summer. Back in May, we learned that we could not hike many of our favorite trails or visit those special places due to lack of water which increased fire danger. The fires of 2002 will be remembered for years to come, as many square miles of forests were wiped out, houses lost, and millions of dollars spent to fight the fires. All summer we waited for the monsoons to come, to wake to the sound of pattering on the roof or the special smell of new rain. Finally, a few mini-monsoons came late but the total precipitation for the year was 60% of normal.

As more people move to the Middle Rio Grande valley and drought becomes more prevalent, conserving and protecting water becomes more challenging. In 15 years these students will be facing water challenges head on. They will be the water engineers and managers, the voters and decision makers. They must have the facts, concepts, values and critical thinking skills to make educated decisions regarding water. Water Festival organizers hope that the Water Festival provides teachers and their students with some of those facts, concepts and values and that the Water Festival is a catalyst that sets off a chain reaction for even more water education to take place in every school and each home.

Dozens of organizations and individuals donated time, resources and money to make the Water Festival possible. More than 175 people guided groups of students, presented activities, assisted the presenters or did a variety of tasks to ensure that the event ran smoothly and that students had fun while they learned. Sponsors included the New Mexico Environment Department, Surface Water Quality Bureau and the US Environmental Protection Agency, Region 6 administering the Clean Water Act Section 319 Program; US Bureau of Reclamation; the City of Albuquerque, Public Works/Water Resources; Bernalillo County Environmental Health Department; Sierra Club; and the City of Rio Rancho Utilities Department/Water Conservation Office. Nine other organizations were also financial contributors to the Water Festival.

Planning is well underway for the first Santa Fe Water Festival to be held March 13th and 14th at the Sweeney Center. In January, planning will begin for the Middle Rio Grande Water Festival 2003.

For more information, contact Festival Manager Susan Gorman, at (505) 259-7190, or at <waterwiz@pioneerwest.net>. To learn more about future Children’s Water Festivals log onto <www.pioneerwest.net>.

BEST MANAGEMENT PRACTICES FOR GRAZING ACTIVITIES ON THE COYOTE RANGER DISTRICT JAROSA GRAZING ALLOTMENT

By Delbert Trujillo

The Watershed Protection Section (WPS) of the Surface Water Quality Bureau has been working in conjunction with the Santa Fe National Forest Coyote Ranger District (District) on the Jarosa allotment project to improve water quality. The Jarosa/Rio Puerco de Chama Riparian-Rangeland Management Project was established to reduce pollutants into the Rio Puerco de Chama, Jarosa Creek, and the Rito Rendondo watersheds. Since grazing is a primary source of activity in the allotment, various structures or Best Management Practices (BMPs) were introduced to alleviate watershed degradation resulting from grazing pressures in the allotment.

The droughts of 1996 and 2002 took a heavy toll on the allotment. Although livestock numbers were reduced, vegetation was severely stressed due to lack of precipitation. A rotational grazing system that allows grazed vegetation to rest was essential for recovery of the allotment. This type of system has been successfully used in other parts of the District with similar resource conflicts. In the Rito Chihuahueros watershed, the District implemented a rotational grazing system that was largely successful. Riparian density and diversity increased as soon as cattle were removed from riparian areas. Upland forage quality and quantity improved when the rotation system was implemented. Judging from the past success that the District experienced with rotational grazing, further use of this BMP would foster more achievements within the District.

The District applied and received a Clean Water Act §319(h) grant from the WPS to improve water quality and the riparian zones in the Jarosa allotment by diverting livestock away from the riparian areas. Water quality improvements to the

Jarosa allotment included divisional fencing (for rotational grazing), cattle guards, earthen dams, and trick tanks.

Trick tanks will help retain snowmelt and rainfall from a corrugated roof into a 10,000-gallon tank. Water from the tank will be delivered via gravity



flow into a trough at a lower elevation from the trick tank.



Earthen dams will retain sheet flow from rain and snowmelt. The dams have been located in waterless



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areas so that wildlife and livestock can be diverted away from perennial streams and riparian areas.

Fencing will divide and section the allotment so that rotational grazing can help rest sections in non-use. This technique helps heal the rested sections.



Cattleguards were installed to eliminate the need for gates. Cattleguards help streamline traffic and the process of having to open and shut gates. This helps secure livestock in designated sections of the allotment with no gates to be left open.



The Coyote Ranger District and the WPS have implemented and secured all of these BMPs to ensure good water quality in the Jarosa allotment. It is anticipated that the structures will help retain waters in areas that have not been used for grazing this reduces the stress on perennial streams and riparian zones. It also helps in grazing grasses by both wildlife and livestock in areas that have not been grazed in the past because of the lack of water resources in those dry areas.

New Mexico Celebrates Year of Clean Water

By Stephanie Stringer

October 18, 2002 was the 30th anniversary of the enactment of the Clean Water Act, marking a milestone in the efforts to protect our nation's water resources. To commemorate this anniversary, Congress proclaimed 2002 as the Year of Clean Water with the hopes of enhancing public appreciation for the importance of our water resources; celebrating water quality improvements; building a better understanding of remaining challenges and solutions; rekindling the public stewardship ethic and support for watershed protection programs; and educating our nation's young people. In support of the Year of Clean Water, America's Clean Water Foundation (ACWF), along with government agencies and private organizations, sponsored a series of national and watershed specific events designed to promote public involvement, provide education and outreach, support technical exchange, and document the status of water quality since the initial passage of the 1972 Clean Water Act. New Mexico participated in a number of these events.

Governor Gary Johnson proclaimed October 2002 "Clean Water Month," urging all citizens to contemplate the importance of Clean Water and to take action to protect and preserve this state's water resources for all New Mexicans. Having experienced extreme drought conditions this past year, the Governor and citizens of New Mexico have an even better understanding of the profound importance of this limited and precious natural resource.

John D'Antonio, Secretary of the New Mexico Environment Department (NMED), nominated Albuquerque Academy to participate in the National Youth Watershed Summit held from October 7 to 10, 2002. The team considered the trip an "incredible learning experience." (See *Students Attend National Youth Watershed Summit* article next page.)

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The NMED Surface Water Quality Bureau (SWQB) participated, along with numerous volunteer monitoring groups and the New Mexico Department of Game and Fish (NMDGF), in the first annual National Water Monitoring Day. On or around October 18, 2002, water quality monitors sampled waterbodies across the nation. The purpose of the event was to take a snapshot view of streams, lakes and coastal waters throughout the United States by collecting water quality data, both chemical (e.g. dissolved oxygen, pH, turbidity, nutrient content, etc.) and biological (e.g. aquatic insects and fish). Data collected will be compiled into a national online database and will be used to help identify changes in water quality over the past 30 years. In New Mexico, Greg Lewis, Director of NMED Water and Waste Management Division, along with SWQB staff, helped Victor Castagna's 7th grade science class from Cochiti Middle School gather data from the lower Santa Fe River. Castagna's class is one of numerous local water monitoring groups participating in New Mexico Watershed Watch, a program sponsored by NMDGF. This program, coordinated by Richard Schrader of River Source, works with volunteer groups to periodically collect data to evaluate water quality conditions. There are currently 20 teachers at 17 schools participating in the Watershed Watch

program. Many of those schools conducted local monitoring in celebration of National Water Monitoring Day, and some who registered their data on the national online database.

While the condition of our state's water quality has come a long way since the inception of the Clean Water Act, there is still a long way to go. We have cleaned up a large portion of water pollution originating from discrete, point sources, which are now regulated. However, pollution entering streams via stormwater runoff, or nonpoint source pollution, still poses a major threat to our state's water resources. By bringing government agencies, private organizations, community groups, and individuals together to work at the community and watershed level, we can create a positive change in our water quality for future generations. To find out more about what you can do to become involved in water quality issues in your watershed, contact Stephanie Stringer, Outreach Coordinator for the NMED SWQB at (505) 827-0418, 1190 St. Francis Dr. Santa Fe, NM 87505, or visit the SWQB website at <www.nmenv.state.nm.us/swqb>.

For additional information on the events discussed above visit the Year of Clean Water website at <www.yearofcleanwater.org>.

Cochiti School students perform flow and width survey of the Santa Fe River on National Monitoring Day using a tape measure, a timer and a golf ball.

Schools Monitoring on National Water Quality Month (October) New Mexico Watershed Watch Program (sponsored by New Mexico Department of Game and Fish and River Source)			
Teacher	School	Water Monitoring Location	Date of monitoring
David Gallegos	Pecos High School	Pecos River in town of Pecos	16-Oct
Victor Castagna	Cochiti School	Santa Fe River, La Bajada Village	18-Oct
Laura Marple	Santa Fe High School	Glorieta Creek at Glorieta Battlefield	25-Oct
Joe Avalos	Ruidoso High School	Ruidoso River at Two Rivers Park	17-Oct
Anna Gahl	Jemez Valley High School	Jemez River near Cañon	14-Oct
Leigh Hodderman	Cimarron High School	Cimarron River in town of Cameron	17-Oct
Ted Klopf (senior) and Alan Steker (teacher)	Santa Fe Preparatory School	Big Tesuque at Big T. campground and Rio en Medio below Ski Basin	October 17, 19, 24
Donna Schmitt	Farmington High School	Animas River in Farmington	19-Oct
Dan Shaw and Tom Allen	Socorro School	Jemez River at Battleship Rock and Las Huertas Creek on Forest Service campground	October 11, 14, 18, 21, 30
Scott Buchanan	Questa High School	Rio Cabresto at Lake Fork and in town of Questa, Red River above and below Molycorp Mine	16-Oct
Jay Garcia	Cliff High School	Gila River at the Box and 211 Bridge	30-Oct
Brad Schalko	East Montezuma High School	San Pedro Creek near Highway 14	17-Oct
Elias Maestas and John Elder	Parkway High School	Rio Santa Barbara near High School	October (date not set yet)



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STUDENTS ATTEND NATIONAL YOUTH WATERSHED SUMMIT

By Karen Temple-Beamish

The Clean Water Foundation invited a team of four high school students from each state in the nation to participate in the National Youth Watershed Summit to celebrate the 30th Anniversary of the Clean Water Act. The team from New Mexico included four students from Albuquerque Academy: Erin Ford, Danny Bowman, Jay Reidy, and Anna Putnum and their science teacher, Karen Temple-Beamish. The team spent four days at the Smithsonian Environmental Research Center in Maryland learning about water quality issues pertinent to the Chesapeake Bay. The team spent time aboard a research vessel on the Bay learning how to sample both biological and chemical indicators of water quality. They learned about the decline of Chesapeake Bay oysters and about current projects funded by the Smithsonian to try to recover the declining population of Blue Crab. They spent time in canoes on one of the Bay's tributaries to learn how invasive species and the current drought has impacted the health of this important estuary. The students were carried into the upper canopy of the forest by a crane to see how scientists study the influence of evapo-transpiration on water quality of the Bay. In addition to these incredible learning experiences, the students were taken to Washington DC to listen to speakers from NOAA, the EPA, and USDA to learn about the global implications of water quality. Upon their return to Albuquerque, the students participated in a National Water Monitoring day on Oct 18th. Water from the Rio Grande was sampled for dissolved oxygen, temperature, pH and turbidity. Data were sent in and compiled by the Clean Water Foundation in order to get a current snapshot of the health of our waterways.



Albuquerque Team in Washington DC



Anna Putnum measuring fish on Chesapeake Bay.

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Cochiti School students and NMED take bug samples of the Santa Fe River using different kick-net methods on National Monitoring Day.



WPS Welcomes Mike Matush to Silver City Field Office

The Watershed Protection Section recently enhanced their repertoire to include ranch management by hiring Mike Matush as the Silver City Field Office Team Leader. Before coming to New Mexico, Matush spent most of his time working with large ranching operations, engineering to control water, cultivation techniques, grazing systems and watershed management. Matush said "I spent most of my career identifying the needs of soils and plants, making selections and modifications to address those needs and then implementing the type of practice that makes a natural system work." When he moved to New Mexico he worked for a national laboratory assessing water, soils and plants for numerous radioactive metals and organics, and later worked for the New Mexico State Land Office as an environmentalist.

Matush envisions the Silver City field office as "setting the standard for work projects involving private landowners and watershed managers accompanied by good data collection for the future generations of conservationists."

FUTURE EVENTS

DECEMBER

2-5, The Association for Fire Ecology and the Western Section of the Wildlife Society will be holding the Fire Conference 2002: Managing Fire and Fuels in the Remaining Wildlands and Open Spaces of the Southwestern United States. The Conference will be held in San Diego, California. Log onto <<http://www.ice.ucdavis.edu/afe/confer2002.html>>, for more information.

JANUARY

19-22, The American Water Works Association will be sponsoring the Source Water Protection Symposium in Albuquerque, New Mexico. The symposium will consist of three workshops and one stakeholder meeting of water utility representatives, regulators, water consultants and water and wastewater professionals involved in source water protection. The workshops will focus on source water monitoring, best management practices, and public outreach and participation. For more information, log onto <<http://www.awwa.org/Conferences/swp/index.cfm>>.

FEBURARY

24-28, The International Erosion Control Association is hosting its 34th Annual Conference and Expo in Las Vegas, Nevada. The Conference will have two days of short courses including NPDES Phase II rules and regulations, and three days of technical sessions including workshops, technical papers, poster presentations and forums discussing the hottest erosion topics. Log onto <<http://www.ieca.org/public/calendar/details.cfm?id=117>>, for more information.

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