



C O N S E R V A T I O N Current

A Newsletter Published by the New Mexico Water Conservation Alliance

Water Conservation in Small Systems

Pete Gallegos, who founded the village's mutual domestic water system, greets visitors to Villanueva.



Consumers can play an important role in supporting conservation in small water systems, beyond phoning in obvious water leaks. Often small systems lack the resources to perform a comprehensive water audit. Volunteers can help by donating time, money, or offering moral support. Conservation can bring community members together around a common issue.

For more information on the New Mexico Rural Water Association, visit www.nmrwa.org.

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Senator tours Rio Rancho's Water Reuse Pilot Project

Senator Pete Domenici toured Rio Rancho's Water Reuse Pilot Demonstration Project on August 17th. The Project, which is funded by an \$800,000 grant from the State of New Mexico, employs an advanced membrane bioreactor and reverse osmosis to produce purified water that Rio Rancho hopes to use to recharge groundwater supplies. It is an element in Rio Rancho's comprehensive Water Reuse Strategy, which focuses on expanding reclaimed water usage, reducing groundwater withdrawals, and providing for aquifer recharge using advanced water reclamation and purification processes.

The pilot facility will continue performance and water quality testing through October 2004, and final pilot results are expected by the end of the year. Following the pilot, the City intends to seek federal and state funding assistance to build out the full-scale reuse system.

Not all municipal water conservation is urban. Small water systems and domestic wells provide water to many rural New Mexico households, and conservation in these systems is challenging, even though their per capita water use tends to be low. Some small systems are so short on water rights that conservation is a necessity (Las Trampas, for example, can only provide 35 gpcd, and is seeking means to increase what it serves its customers).

While in-home water conservation techniques don't differ a great deal from urban to rural communities, small systems do have special circumstances. Some are fully metered and have modern state-of-the-art infrastructure, but others lack individual meters, which makes any water accounting and conservation very challenging. Some rely on a single well, and all have few water sources relative to larger utilities. Conservation that reduces peak period use can make a large difference in the

capacity the system needs. Like urban water use, rural water use typically increases during drought, when water tables may fall below the reach of the well. Locating leaks in the system or in the household, is a challenge in an unmetered system.

Help for Small Systems

The New Mexico Rural Water Association (NMRWA) offers free technical assistance and training to small water systems. NMRWA assists systems in reducing Unaccounted for Water (UAW) by working onsite with system operators and managers. Reducing water loss often starts with improving system recordkeeping, before digging up leaky pipes. Errors in measurement, leaks, overflows, or theft can all contribute to UAW. As water becomes increasingly more precious due to drought and economic growth, small systems are obligated to reduce UAW as an alternative to developing a new supply source.

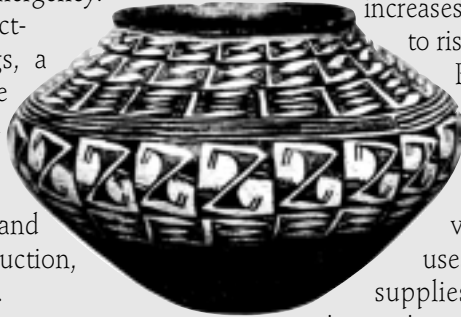
Zuni's Drought Contingency Plan

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Kirk Bemis of the Zuni Pueblo Water Resources Program told the Drought Summit how the Pueblo began drought planning in 1996, emphasizing long-term mitigation to reduce risk.

First, planners developed a monitoring system and Zuni-specific drought indices. The first monitoring report came out in May 2002; by July 2002, all indices indicated "emergency."

After holding impact-assessment meetings, a Drought Response Report was issued in August, recommending strategies for public outreach and for ranching, construction, and public watering.



The drought plan faced some challenges:

- Because Zuni water rights are in litigation, care must be taken with water supply and use data.
- In Zuni culture it is negative to focus on drought—a healthy community, in this view, will focus on abundant rain, in order to invite abundance. It was important to frame the drought plan to be consistent with cultural views of appropriate behavior, avoiding culturally-prohibited actions and attitudes.
- The Pueblo also faces "financial and political" drought—not enough resources for development and maintenance of the tribe's water and water rights. Zuni has no tribal casinos, no "cash cow" to financially infuse the water resources program.

To respond to these challenges, the plan sought to minimize short-term relief

efforts that make the tribe more vulnerable and dependent on government, and to emphasize long-term mitigation strategies to strengthen the tribe's resource management abilities and self-reliance. Bemis said one lesson of the planning process was that drought magnifies weaknesses in physical and governmental water infrastructure. Another important lesson was that while this increases the tribe's exposure to risk, it also increases the Pueblo's endurance.

Drought response actions included restricting municipal water to essential uses; arranging for water supplies for construction; improving wells shared by multiple ranchers; and modifying an old municipal well and tank for public water hauling. A livestock drought seminar was also held for Zuni ranchers. A well inventory was implemented for monitoring, development and protection, and a public information campaign kept the public informed via local radio, newspaper, flyers and meetings.

Zuni's emphasis on long-term mitigation to build strength and its recognition of the value of the community's capacity to endure, have special lessons for other New Mexico communities as we evolve strategies for adapting to water scarcity.

For more information, you may contact: Kirk Bemis, Hydrologist, Zuni Conservation Program, P.O. Box 339, Zuni, NM 87327, 505-782-5852 (phone), 505-782-2726 (fax) zuniwr@osogrande.com.

The Rural Community Assistance Corporation (RCAC) also helps rural and tribal communities increase their capacity to implement their own solutions to their problems. RCAC can help small groups create water conservation plans and obtain funding for water conservation planning, community education, and metering and system improvements. RCAC has offices in Santa Fe, Albuquerque and Las Cruces from which they cover the whole state.

For more information, visit www.rcac.org.

Literature Available

There is also free literature available through EPA which can help a small system get started. EPA's Water Conservation Plan Guidelines recommend that even small systems consider implementing universal metering, water accounting and loss control, costing and pricing, and information and education.

Online at www.epa.gov/nscep

How others do it

Jack Daniel, the Administrator of Nebraska's Department of Health and Human Services, spoke at the 2004 Drought Summit about how Nebraska's Drought Mitigation and Response Plan addresses small systems through well monitoring programs, leak detection surveys, and support for adoption of conservation ordinances and individual metering. In Nebraska, as in New Mexico, 80% of the water systems serve populations below 500.

Well monitoring is a central element in the state's support of small systems, creating a flow of information on static and pumping water levels that alerts the state and other technical assistance agencies to potential problems before the well begins pumping air. Historical and current information on system wells is published on the Environmental Health Service website, along with the measures being taken by the systems to deal with potential shortages.

See www.hhs.state.ne.us/enh/pws/drought/droughtsummary.htm.

Goodbye to a Good Friend

At a lunch at Sadie's on September 30th, the Alliance expressed its appreciation for Dave Allen's many contributions to New Mexico water-conservation education as chief of Reclamation's Albuquerque Office Water Conservation Field Services Programs. Allen, a motorcycle enthusiast, was presented with a Harley Davidson T-shirt and a gift certificate, as well as the conservation community's heartfelt thanks. Reclamation is reorganizing, and Dave is moving on to other responsibilities in the agency. The Alliance is grateful that Joe Alderete, our other Reclamation liaison, is still assigned part-time to water conservation activities. Chris Gorbach will be taking over Dave's responsibilities.



Keeping Urban Water Conservation Afloat

Jean Witherspoon's astute reflections on lessons learned were a high point of the Community Water Conference. Reviewing the challenges of the conservation program's "balancing act," Witherspoon noted that growth and stable demand must be balanced, as well as environmental and development needs, maintaining high-visibility while surviving consumer opposition, and responding to today's crisis while preparing for tomorrow's.

Among Jean's hard-won learnings about navigating political waters: Don't do

favors! Get past the four-year (my term) focus. We have to work within the political structure to succeed.

To stay afloat, Witherspoon says, the conservation office should

1. Use real data—credibility is critical!
2. Stay in the middle, relating to both poles of polarized groups.
3. Be real, be honest, be available, admit mistakes, and treat customers well. Your success is in their hands!
4. Be comprehensive. Include all customers: Share the "pain" and the benefits.

5. Institutionalize where possible. Identify a funding source; report progress; and keep in touch with your support.

One special challenge, she said, is to keep the utility staff engaged.



Protecting Our Most Valued Treasure

The Community Water Conservation Conference held August 31st to September 2nd at the Sheraton Old Town in Albuquerque, was cosponsored by the NMWCA with the Rio Grande Basin Initiative. It truly was a treasure house of information and a wonderful opportunity for networking and meeting new people in the conservation community.

The keynote talks by Mary Ann Dickinson, Executive Director of the California Urban Water Conservation Council, and Doug Bennett, Conservation Manager for the Southern Nevada Water Authority, set the tone.

Sessions were offered on three water management tracks—Indoor, Outdoor, and Strategic Planning. Attendees got updates on the most recent conservation work in the West.

Indoor Water Management: Several recent surveys, that can inform water-conservation policy decisions, were presented. Other presentations concerned the whole range of conservation policy tools: design of water rates, rebates, auditing, and training for homeowners and maintenance staff to keep low-water-use technologies working once they are installed.

Outdoor Water Management: Several presenters spoke about plants and irrigation systems for xeriscaping and landscape drought-management. Municipal landscaping policies may benefit from the information developed by surveys of New Mexico homeowners' attitudes towards landscaping options, and a model of the barriers to adopting landscape options. An El Rito, NM sustainable water plan was described that uses both water conservation and conjunctive management.

Strategic Planning: Reviews of both New Mexico and Texas' state water conservation initiatives were presented, as well as New Mexico's step-by-step outline for municipal water-conservation planning and San Antonio's guide for developing an effective stakeholder group. For small systems, there were papers on using desalination as a source of supply and on how small systems can evaluate unaccounted for water and improve system efficiency. Other papers covered grey-water systems; onsite wastewater treatment systems; hydrological models that can test alternative strategies; and very sophisticated municipal water demand forecasting.

The *Current* will draw on this treasure-house of conference information for this and future issues.

PowerPoint presentations from the sessions can be downloaded at spectre.nmsu.edu/watertaskforce.

February 24-26th 2005: **10th Annual Xeriscape Conference.** Albuquerque, N.M. Saturday, February 26th is free and open to the public!

Details at www.xeriscapenm.com/.

SAHRA, the center for Sustainability of Semi-Arid Hydrology and Riparian Areas, maintains a searchable database of newspaper articles on water issues called **Global Water News Watch.**

Check it out at www.sahra.arizona.edu/.

February 17-18, 2005: **AWWA Water Conservation Workshop,** Savannah GA. Excellent workshop sessions on each day. Meetings of AWWA's Water Conservation Division and related committees on the morning of February 19th.

See waterwiser.org or awwa.org.

News Bits



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2004 New Mexico Drought Summit



The NMWCA is proud to have been one of the nine co-sponsors of the State Engineer's Drought Summit this year. The two-day conference was packed with information on climate science and monitoring and drought response in New Mexico and throughout the West.

State Engineer, John D'Antonio, opened the Summit with an up-to-the-minute update on his Active Water Resource Management program. The keynote was given by Dr. Kelly Redmond, Regional Climatologist of the

Western Regional Climate Center at Reno Nevada, who took his audience on a whirlwind tour of NOAA's amazing climate maps. Dr. Redmond demonstrated that to evaluate drought severity, several time frames are important—the past three months, six months, sixty months. The drought isn't over when it rains. Derek Arndt, Oklahoma's climatologist, spoke about the National Integrated Drought Information System, which brings very local data together to increase the resolution of our drought picture. Other speakers

reported on wildfires, wildlife, resource management, recreation and economic development, drinking water, and water development. The article on Zuni's Drought Contingency Plan and the information on small-system conservation in Nebraska in the lead article are both drawn from the Drought Summit. Future issues will develop other topics presented.

Many of the presentations can be viewed as pdf's at www.ose.state.nm.us Click "Governor's Drought Task Force" and then "Drought Summit."



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