



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

A Newsletter Published by the New Mexico Water Conservation Alliance



## Forecasting Water Demand

profile of the population make a tremendous difference in how much water a given population will use.

**Persons per household:** U.S. population grew at about 1.1% per year during the three decades from 1970 to 2000; but the number of people per household (pph) declined from 3.3 to 2.59 during the same period. In Bernalillo County, during the same period, population grew at an average 1.9%/year; pph, however, declined from 3.29 to 2.47. Only about half the demand for new housing over this period is due to rising population, with the other half due to the trend to smaller households. Few 1970 water-demand projections would have included the effect of smaller households. Outdoor uses per capita increase as household sizes fall, since landscaping needs are scaled to the house rather than its occupants.

have a larger share of the housing stock. Outdoor uses rise as single family homes predominate: these use more outdoor water than condos or townhouses, which use more than apartments and mobile homes. Of course, the growing number of families with second homes increases water consumption per capita. This mix changes over time, and changes differently in different communities.

*For more information: Gary Woodard, Center for Sustainability of Semi-Arid Hydrology and Riparian Areas (SAHRA), University of Arizona  
520-626-5399 gwoodard@sahra.arizona.edu.*

The challenges of forecasting water supply are much discussed; Gary Woodard spoke at the Urban Water Conservation Conference last September about the complexity of forecasting water demand, which is much more challenging than it is perceived to be.

Water-demand forecasts usually consider population and price, sometimes supplemented by conservation policies and weather or climate factors. But the impact of growth on water demand is compounded by changes in the number of persons per household (a function of life expectancy, divorce rates, single-parent households, age at first marriage, and birth rates—all of which vary over time). In addition, the composition and age of the housing stock and the wealth and age

*"The track record of water use projection has been abysmal."*

~Robert Hirsch, Chief Hydrologist, USGS

**Age structures:** Water demand changes with the age structure of the population as well. Outdoor use in particular is far below average in infant-dominated households (average age below 10 years), rises above average for families with young children and soars for families with teenagers (average age 20-30), falling just below average for families of average age 30-60.

**Housing stock:** Changes in the mix of housing available can affect outdoor water demand. Indoor uses per capita fall as new homes, with more water-saving appliances,

## Legislation

### Water Efficient Technology (WET) Act, Representative Mimi Stewart

Several bills proposing water-user fees to support water needs were proposed in the 2004 legislature. While they generated lively discussion and significant support, none was enacted. The discussion has gone on between the sessions, and Representative Mimi Stewart will introduce a water-user fee bill, the Water Efficient Technology (WET) Act, in 2005. The WET Act would create a new, dedicated, recurring revenue stream of \$10-\$20 million dollars to support grants and loans for water-conservation technology and infrastructure. The revenues would come from a modest surcharge on municipal, domestic, commercial and industrial water uses, and be deposited in a WET Project Fund, bonded and admin-

*Legislation, continued on page 2*



## Children's Water Festivals Make Waves

Children's water festivals get kids interested in their water environment and prepare young people to take responsibility for their water future. It's no wonder they are more popular every year. PioneerWest, a community-education consultant, has recently produced a very useful CD, the *Children's Water Festival Toolkit*, containing "All the essential tools you'll need to plan and implement a Water Festival." This invaluable tool can be available free, by contacting Susan Gorman at 505-259-7190 or h2ofest@aol.com.

Santa Fe holds its Children's Water Festival 2005 on February 9<sup>th</sup> and 10<sup>th</sup> at the Sweeney Convention Center in Downtown Santa Fe. A traveling environmental education festival will visit 4<sup>th</sup> grade classes in Santa Fe public schools during the week of April 19<sup>th</sup>-23<sup>rd</sup>. Surface Water Quality Bureau of NMED, in cooperation with the City of Santa Fe Water Conservation Office and Santa Fe County Land Use Department, are bringing this fun and educational event to Santa Fe children.

Visit the Surface Water Quality Bureau of NMED at the Earth Day Festival at Silver City's Penny Park on Saturday, April 24<sup>th</sup>. They will provide information and answer questions.

The 8<sup>th</sup> Albuquerque Children's Water Festival, also for 4<sup>th</sup> grade students and their teachers, will take place in October.

McKinley County will hold its first Youth Water Awareness Day on Saturday, April 30<sup>th</sup>, 2005 from 8 am until 4 pm at Gurley Hall on UNM's Gallup Campus. Students of all ages are encouraged to create group or individual displays or science projects. Families are welcome. The festival will have something for everyone.

*For information on the McKinley County event, contact Elizabeth Barriga (505) 863-1289 ebarriga@ci.gallup.nm.us or Brie-Anne McKernan (505) 722-7355 x 109, desertradish@yahoo.com. For science projects or displays, contact Bill Bright (505) 722-0039, brightideas98@yahoo.com.*

*Legislation, continued from page 1*

istered by the New Mexico Finance Authority.

The WET Project Fund is seen as a source of grants and loans to water users for projects that reduce water waste, spread water supply further, and save tax investment in costly water-supply expansion projects. Proposals to purchase water rights to be held by the State for public use and benefit would also be eligible. Potential projects could include repair of leaky water mains; salt cedar eradication; water reuse projects, aquifer storage and recovery, and large-scale precision landscape irrigation management.

The estimated additional cost of the users' fees to the average Albuquerque household is \$1.00/month. In a water-opinion survey carried out by UNM's Institute for Public Policy during 2003, 67% of New Mexicans polled said they would pay more for water if the payments went for technology that helps to solve New Mexico's water crisis.

The N.M. Water Conservation Alliance voted at its January 13<sup>th</sup> meeting to support the concept of the WET Act: a water-use fee to finance water conservation projects. Alliance members had some questions about project evaluation and review and how grants would be awarded. Since there will not be another Alliance meeting before the legislative session, the Alliance decided to support the legislation's concept without endorsing the bill's particulars, which are in any case being reviewed and negotiated.

*For information on the WET Act contact at bethbardwell@zianet.com*

## NMSU's Water Task Force

New Mexico State University plans to request appropriations to support NMSU's three-year old Water Task Force, which provides NMSU research and teaching faculty with an avenue for focusing water discussion, research projects, and financial support. The Water Task Force is presently run exclusively on the grants it obtains (soft money), with no hard funds at all. Matching dollars will make it much easier for this valuable program to raise federal and foundation funds for NMSU's important water research and community outreach programs. The Water Task Force has sponsored the successful Water Lecture Series, as well as last September's Community Conservation Conference held in Albuquerque and co-sponsored by the NMWCA.

The request will be for a \$750,000 annual appropriation to NMSU, \$500,000 of which would be used for the Water Task Force. The remaining \$250,000 would support NMSU's turf projects (for example, research on irrigation of turf with saline waters).

At its January 13<sup>th</sup> meeting, the Alliance voted to support the Water Task Force budget request. The NMWCA resolution added that the Alliance will support water education and research at all the New Mexico universities, and looks forward to a future in which New Mexico universities can engage in cooperative curriculum and research efforts in this critical area.

*For information on the Water Task Force, contact LeeAnn DeMouche ldemouch@nmsu.edu.*

## NMWCA Officers Elected

NMWCA Officers were elected at the Alliance's January 13<sup>th</sup> meeting.

**Richard Chapman**, of SmartUse, was elected President.

**Katherine Yuhas**, of the City of Albuquerque, was elected Vice President.

**Cheri Vogel**, of the Office of the State Engineer, was reelected Secretary.

**Lonnie Burke**, of ResourceWise, was reelected Treasurer.

The service of these dedicated professionals is essential to the Alliance's growth, and is greatly appreciated. At the meeting, Jean Witherspoon was presented with an engraved mug in appreciation for her service to the Alliance. Her service included legislative testimony, sponsoring workshops, and taking a stand with congressional offices. She now serves as Past President.

## Newsbits

**10th Xeriscape Conference Adapting to Our Changing Reality, February 24th-26th (the 26th is free and open to the public) at the Albuquerque Convention Center**

The conference fee is \$100; register before February 18th. Robert Glennon, author of *Water Follies: Groundwater Pumping and the Fate of America's Fresh Waters*, and

Schlomo Aronson, Israeli landscape architect and creator of some of the most memorable landscapes in the arid world, will be keynote speakers.

All events on Saturday the 26th open to the public at no charge. There will be six free seminars during the day.

For information and to register:  
[http://www.xeriscapenm.com/2005\\_Conference/2005conference.html](http://www.xeriscapenm.com/2005_Conference/2005conference.html) or  
call 505/468-1021  
or e-mail [scott@xeriscapenm.com](mailto:scott@xeriscapenm.com).

**CONFERENCE SPECIAL EVENT  
GRAY WATER WORKSHOP  
SAT., FEBRUARY 26 9-12 AM**  
Art Ludwig, the graywater guru, will offer a workshop for plumbers, contractors, and landscapers. The charge for the workshop is \$40.00.

**The AWWA Water Conservation Workshops February 17th-18th, 2005 in Savannah, Georgia**

**WORKSHOP 1, THURSDAY**  
*Conservation Fundamentals & Innovations* provides an overview of the fundamentals of effective water conservation programs, and utility case studies from large and small providers throughout the country.

**WORKSHOP 2, FRIDAY**  
*Conservation: It's Not Just for Drought Anymore*, addresses the shift from conservation as a crisis management tool to a part of comprehensive water resources management, and includes a presentation by Jean Witherspoon on *Can We Afford to Conserve?*

**AWWA, Water Conservation Division Midwinter Meeting  
Saturday, February 19 • 8-12 am**

For information: <http://www.awwa.org/conferences/conserve/>

**NMWCA Meeting  
Thursday, March 10 • 1 pm at PNM, Albuquerque**

For information: Cheri Vogel (505) 827-4272 or [cvogel@ose.state.nm.us](mailto:cvogel@ose.state.nm.us)

## The Community Collaborative Rain, Hail, and Snow Study needs you!



Weather observations from citizen volunteers have been the backbone of our nation's climate observing system since the 1800s. Currently over 7,000 Cooperative weather stations collect data daily from all across the U.S. The Community Collaborative Rain, Hail, and Snow Study (CoCoRaHS) supplements this remarkable and important network, filling in the many large gaps between existing weather stations.

CoCoRaHS trains volunteer students and adults in a study of the fascinating and

complex patterns of weather. The program began in Colorado in 1998 as a science education project, spurred by a raging flood that had swept through parts of Fort Collins the year before, killing five people and causing \$200 million in damages. Nolan Doesken, Colorado's assistant state climatologist, said, "After the storm, about 300 citizens responded to an emergency request for rainfall measurements.... The enthusiastic interest shown by volunteers and the great value of the data verified the need for such a service, and CoCoRaHS was born."

The National Science Foundation's Division of Informal Education approved a three-year, \$897,000 grant last January to expand the program's infrastructure and extend it into neighboring states. Wyoming, Nebraska, and Kansas are at the early stages of organizing CoCoRaHS networks, and training will begin in March for New Mexico volunteers. The object is to generate good data on very local variations in precipitation for both research and prediction. Volunteers report their observations via phone and e-mail, and a website is under construction that will collect and display all of the reports.

Those persons receiving the training will receive a free rain gauge and the training to measure rain, hail and snow. Training sessions will be conducted in Albuquerque on March 9 at 1:30 pm at the Cooperative Extension Service and in Las Cruces on March 11 at 2:00 on the New Mexico State University Campus Wooten Hall Room 105.

For information on the training and to register please contact Leeann DeMouche ([ldemouch@nmsu.edu](mailto:ldemouch@nmsu.edu) or 505/646-3973) or Megan Johns ([mpeach13@hotmail.com](mailto:mpeach13@hotmail.com)) or visit [www.watertaskforce.org](http://www.watertaskforce.org).

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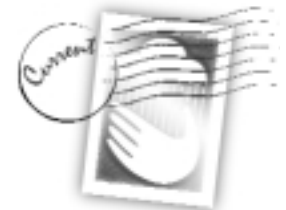
## Gray Water Brochure

The latest in the useful collection of quality water-conservation brochures published by the Office of the State Engineer (OSE) is *Using Gray Water In New Mexico's Residential Landscapes*.

The brochure covers the use of residential gray water based upon New Mexico's 2003 state law and following the regulations adopted by the N.M. Environment Department (NMED) as a result of that law. The legislation was a major step in encouraging the use of gray water instead of potable water for at least some landscaping needs.

The brochure was produced through a joint effort of NMED Construction Industries Division, OSE and building industry representatives. It outlines how homeowners can apply gray water in limited quantities to landscaped areas.

Look for the brochure on the OSE and NMED websites, or obtain a copy by calling 1-800-WATERNM or writing [waternm@ose.state.nm.us](mailto:waternm@ose.state.nm.us).



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