



CONSERVATION

Current

A Newsletter Published by the New Mexico Water Conservation Alliance

Albuquerque Adopts New Measures

Three new pieces of water conservation legislation were approved by the Albuquerque City Council late last year.

The "Water by Request" ordinance requires lodging facilities to place signs in rooms to encourage visitors to avoid daily washing of sheets and towels. Secondly, restaurants are only to serve water when the customer requests it. They may use table tents and placards, provided by the city if wanted, to inform customers of this practice.

A third provision of the new ordinance directs the city to cooperate with other governmental and busi-

ness facilities to post signs encouraging reduction of water use. While the savings achieved through the hospitality industry requirements will be "buried" in a facility's overall reductions, savings from eliminating just one laundry wash per week per room for the city's approximately 15,000 hotel rooms are expected to be over 100 million gallons of water per year.

The city also amended its earlier resolution establishing a xeriscape rebate and increased the amount of the rebate from 15 to 25 cents per square foot. The maximum rebate allowed increased from \$250 (1,667 square feet) for all customers to \$500 (2,000 sq.ft.) for single-family customers and \$700 (2,800 sq.ft.) for apartment and non-residential customers. Given the hot, dry summer and resulting higher water use experienced in 2000, the rebate was increased to encourage more customers to xeriscape.

Lastly, a resolution calling for the establishment of a Drought Management Task Force and submittal of a drought management plan to the City Council by April was approved. While the city does not plan to be using surface water until 2004 or 2005, a drought management plan is needed to meet state requirements for submittal of a diversion permit request, to respond to state initiatives for drought plans for all water systems, and to possibly set conservation program criteria for implementation of drought measures.



Albuquerque Shows Water Saving Results

Since Albuquerque began its water conservation program in 1994, the city and its citizens have:

- Reduced water use from 250 gallons per capita per day to 209 gpcd.
- Saved enough water to supply the city's water needs for one year.
- Saved \$114 million in water production costs.
- Converted 35,472 high-water-use toilets to water-saving 1.6 toilets.
- Converted 1,231 high-water-use clothes washers to water-saving models.
- Converted 711 traditional landscapes to xeriscapes.
- Performed 18,562 home water audits.





CTSI Designs Water Use Prediction Model for Albuquerque

By Richard Chapman, CTSI Albuquerque Program Manager

Albuquerque's residential water conservation audit and retrofit program is performed by CTSI, a company based in Tustin, California. The program provides free water conservation audits on single-family homes and multi-family complexes (apartments, townhouses, condominiums, etc.). In just less than two years, CTSI has conducted about 10,000 audit/retrofits, about 75 percent of which are for multi-family units.

The program needed a good prediction tool for determining the probable effect of our water conservation efforts for these multi-family units. The most significant studies that could be used to develop this model were focused on single-family homes. With the help of these studies, discussions with CTSI management, and the concurrence of Albuquerque's Water Conservation Program staff on the basis for the assumptions, the model was designed. CTSI staff converted the model design to a Microsoft Access database format so that reports could be run quickly, drawing data obtained from the audits and entered into the database.

CTSI expects the most challenging and fun part of this project will be validating the model with actual water histories.

Over the course of the next few months, CTSI staff will be comparing actual water use data for the year before the city's audit/retrofit date with the year after the audit. The results will be compared to the prediction model, and the model will be adjusted to more closely match actual water use. We hope our prediction model can be useful in helping others determine the potential water savings of multi-family audit and retrofit programs in various regions of the United States.

Albuquerque's audit and retrofit program for multi-family complexes provides the following services:

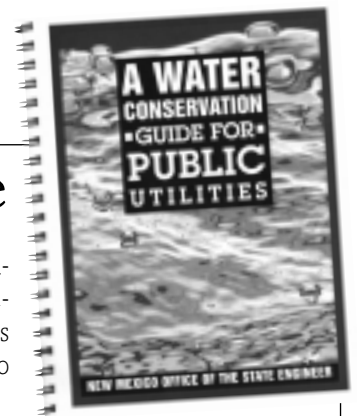
- Measures the water flow in gallons per minute for kitchen and bathroom faucets and showerheads.
- Installs a 2.2 gpm aerator in kitchen faucets flowing at higher than 2.2 gpm.
- Installs a 1.5 gpm aerator in bathroom faucets flowing at higher than 1.5 gpm.
- Installs a 2.5 gpm showerhead to replace showerheads which exceed 2.5 gpm.
- Dye tests toilets to determine if flappers are leaking or if a toilet is running due to improper water-level settings.
- Installs a toilet tank displacement bag containing about .5 gallons of water whenever practical.

- Reviews and makes recommendations to property owners regarding more efficient irrigation opportunities for outdoor landscaping.
- Requests information on the average occupancy per apartment and the complex vacancy rate from apartment managers.

CTSI then puts all of the findings into our database and prepares a report using the following water assumptions:

- A 337-day-per-year occupancy (since people are not always home) – allowing for 27 or 28 days for vacations and other full days away from home
- Kitchen faucet use – 10 minutes per person per day
- Bathroom faucet use – 5 minutes per person per day
- Showerheads – 10 minutes per person per day
- Toilets – 5 flushes per person per day

The model shows water savings prediction rates ranging from 12 to 26 percent for indoor use and from 6 to 16 percent for entire complexes. Some smaller complexes do not irrigate landscapes.



Municipal Conservation Guide Available

The New Mexico Office of the State Engineer has recently published *A Water Conservation Guide for Public Utilities*. The guide outlines the steps that a municipal water supplier should take in preparing a water demand analysis, creating a water conservation program, and developing a drought contingency plan. It also includes eight case studies from New Mexico municipalities which have already implemented water conservation measures.

Although water rates are an important water conservation tool, a discussion of them is not included in this guide. A companion guide on water rates is expected to be published by the New Mexico Public Regulatory Commission later in the year.

The water conservation guide was introduced at a workshop on Drought-Proofing Your Community, held in March in conjunction with the New Mexico Rural Water Association's annual conference in Albuquerque.

Copies are available free of charge from the Office of the State Engineer. Call 1-800-WATER-NM or e-mail waternm@seo.state.nm.us with your request.

Reclamation Funds Projects and Assists Entities

Early this year, the U.S. Bureau of Reclamation's Albuquerque Area Office awarded 27 grants for water conservation planning, education and demonstration projects to entities in New Mexico.

To be considered for grant funding, requests for proposals must be submitted to the Albuquerque office between the months of October through December. Applications for requests for pro-

- facilitating planning among entities by encouraging and developing partnerships and agreements; and
- conducting field visits to assist with resource inventories and water conservation plans.

Examples of the types of projects funded are:

Title of Proposal	Type of Proposal	Name of Applicant
Children's Water Festival	Education	Rio Grande Restoration-Children's Water Festival
2nd Annual Water Conservation Solutions Expo 2001	Education	City of Las Vegas Water/Gas Department
Water Measurement Devices on Rio Hondo Canals	Implementation	Office of the State Engineer
Ambrosio Chavez Community Ditch Pipeline	Implementation	Upper Hondo Soil & Water Conservation District
Water Conserving Landscape Demonstration	Demonstration	New Mexico Highlands University
Science & Technology for Irrigated Chili Growers	Demonstration	La Union Soil & Water Conservation District
Middle Rio Grande Water Assembly	Planning	Middle Rio Grande Water Assembly
Water Management/Conservation Plan	Planning	Ft. Sumner Irrigation District
Water Management/Conservation Plan	Planning	City of Belen, New Mexico

Conservation education activities are widely varied and include:

- distributing information guides and materials;
- participating in water fairs and other children's education activities; and
- sponsoring the Rolling Rivers trailer program.

Demonstrations of innovative technologies include the following efforts:

- new approaches to minimizing canal and ditch seepage;
- innovative on-farm irrigation management methods, i.e., underground drip irrigation as opposed to flood irrigation; and
- improved water measurement.

Implementation of water conservation measures includes:

- assisting water agencies with implementing water conservation plans and water management practices; and
- providing funds for implementation through cost-sharing activities.

Currently Reclamation administers 52 grants in New Mexico, typically funded in amounts no greater than \$25,000 per grant.

posals may be obtained by calling Joseph Alderete at (505) 248-5353 during the month of September.

The grants are funded through Reclamation's Water Conservation Field Services Program, which assists water entities in the development of water management plans, education programs, demonstrations of innovative technologies, and implementation of various conservation measures.

Water management planning activities include, but are not limited to:

Legislative Alert!

Water conservation advocates are dismayed at the recent reintroduction of a bill in Congress to repeal the federal plumbing efficiency standards set in 1992 for toilets, urinals, showerheads and faucets. H.R. 1479, authored by Rep. Joe Knollenberg, R-Mich., had been rejected by a House Commerce subcommittee last spring. However, it is uncertain how the legislation will fare in the current Washington environment.

Rep. Joe Skeen, R-NM, is a co-sponsor of the bill. The New Mexico Water Conservation Alliance has contacted him and urged him to reconsider his position on the legislation. Others are encouraged to do so by contacting either his Washington office at 202-225-2365, Roswell office at 505-622-0055, or Las Cruces office at 505-527-1771.

Calling All Current Readers!

It's time to check in with you to see if you want to continue receiving the *Conservation Current* newsletter.

If you DO NOT want to remain on the *Current* mailing list, please complete this form and return it to the

**NEW MEXICO WATER
CONSERVATION ALLIANCE,
369 Montezuma Avenue, #149,
Santa Fe, NM 87501.**


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AWWA Studies Track Water Use

The results of two important national water conservation studies have recently been published by the American Water Works Association.

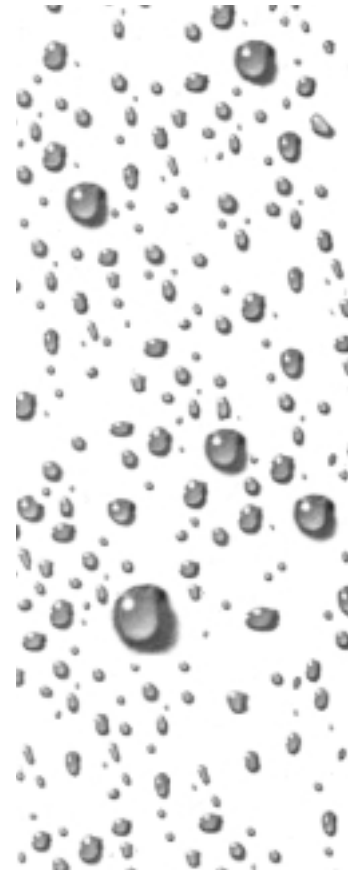
The first, *Residential End Uses of Water*, seeks to answer some of the following questions:

- Where is water used in single-family homes?
- How much water is used for toilets, showers, clothes washers, dishwashers and all other purposes?
- What component of total water use can be attributed to each specific water-using device and fixture?
- How does water use vary across single-family homes?
- What are the factors that influence single-family residential water use?
- How does water use differ in households equipped with water-conserving fixtures?

Funded by the AWWA Research Foundation and 22 municipal water providers, the report represents a snapshot of how water is used in single-family homes in 12 North American locations. Analyses are presented for each of the participating cities individually and for the pooled sample of 1,188 households. A striking conclusion of the report is in the similarities between the 12 locations in the amount of water fixtures and appliances use.

The second report, *Commercial and Institutional End Uses of Water*, presents the results of field studies in a sample of 25 establishments in five urban areas, and develops a set of efficiency benchmarks for five important commercial and institutional categories – restaurants, hotels and motels, supermarkets, office buildings and schools.

Copies of the reports are available from the American Water Works Association at www.awwa.org or 1-800-926-7337.



New Mexico Water Conservation Alliance

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The *Conservation Current* is a quarterly publication of the New Mexico Water Conservation Alliance, an organization of municipal and industrial water conservation professionals dedicated to water conservation education and networking. *Current* articles may be reprinted for use in other publications by crediting the *Current* as the source.

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