

On the Water Front

Water Conservation and Rates



Does supporting and encouraging a water conservation program create a conflict of sorts? Does water use reduction mean an increase in rates to compensate for lost revenues? The answer is 'no', there is no conflict. While there are cost impacts associated with implementing a conservation program, including a reduction in revenues over the long run, the overall benefits outweigh the short-term rate increases.

Currently, \$15 million, 11% of Tucson Water's operating costs, is for energy used to move water from deep underground aquifers to 775,000 customers. With energy costs projected to rise, conservation helps to reduce the volume of water that needs to be moved throughout our water distribution system, one of the largest ground water systems in the nation. Reduced energy consumption also helps to reduce our carbon footprint.

Efficiently reducing demand related to renewable water sources can contribute to controlling total operating costs. Fourteen percent of Tucson Water's operating budget for Fiscal Year 2011, or \$19.2 million, is for the purchase of renewable Central Arizona Project (CAP) water. (In the past, Tucson Water did not have to pay to obtain non-renewable ground water.)

The prices Tucson Water will pay for future supplies of renewable water will likely be higher than current prices. Once again, conservation programs promoting efficiency and reducing water demand can help keep total costs down and encourage sustainability.

Properly designed water conservation programs will provide long term benefits to the community. As Tucson Water moves forward with implementing

Your Water CONNECTION

News & Tips for Tucson Water Customers
April 2010 www.tucsonaz.gov/water

Water 101

Our Two Main Drinking Water Sources

Ground Water comes from approximately 200 ground water wells located in and around the Tucson metropolitan area, in addition to ten



isolated ground water systems located **outside** the urban area.

In urban Tucson, most of the wells, also known as

Entry Points to the Distribution System (EPDS), serve the neighborhood in which they are located, with excess supply routed to reservoirs for use elsewhere in the system. Wells located outside the urban core often deliver water to a single collector main prior to delivery. In these cases, the collector main is called a Combined Entry Point to the Distribution System (CEPDS).

Central Arizona Project (CAP) water.

Tucson is supplementing its ground water supply with Colorado River water delivered via the Central Arizona Project (CAP) canal. At the end of 2008, a blend of recharged and recovered



Water Sources *continued inside*

Have a question for Water 101 or a suggestion for a topic? Call us at 791-4331 or e-mail to TW_Web1@tucsonaz.gov

Water Conservation and Rates *continued inside*

YOUR UTILITIES

Pima County –

Marana Wastewater Reclamation Facility

The Marana Wastewater Reclamation Facility (WRF) is located at 14393 N. Lockett Road, in Marana, along the Juan Bautista DeAnza National Historical Trail.



This facility has gone through a series of upgrades and expansions since it first became operational in 1979. The most recent 0.75 million-gallon-a-day (mgd) upgrade utilizes state-of-the-art technology to produce a high quality effluent or highly-treated wastewater.

The upgrade and expansions were designed to meet new performance standards required by the Arizona Department of Environmental Quality (ADEQ). ADEQ licenses and monitors wastewater treatment facilities in the State of Arizona.

The reclaimed water produced at the Marana WRF meets Class A+ standards. Class A+ is the highest quality reclaimed water. The effluent produced at this facility is discharged into the Santa Cruz River. The effluent also provides reuse irrigation for vegetation around the plant site.

The Marana Wastewater Reclamation Facility is operated seven days a week, 365 days a year. Additionally, the facility is monitored electronically from a remote location.

This is the eighth article in a series that highlights the eleven wastewater reclamation facilities operated by the Regional Wastewater Reclamation Department.

Your Utilities Services statement includes fees for your water, wastewater, and environmental services.

The Pima County Regional Wastewater Reclamation Department (PCRWRD) - For more information about the regional wastewater system, call (520) 740-6500 or visit www.pima.gov/www.

City of Tucson Environmental Services –

Make Every Day Earth Day!



Forty years ago the first Earth Day was celebrated to raise the country's awareness on action needed to protect the environment. Even today, while most of us want to take responsibility for our environment, we may ask ourselves, "What difference can I make as just one person?" One thing we all can do is to reduce our waste and try to recycle whatever we can. Remember the 3 R's—Reduce, Reuse, and Recycle.

Reduce – Did you know that the average American throws away about 4.6 lbs. of waste every day! Look for items that have minimal packaging. Buy non-perishable goods in bulk and buy only what you need when buying perishable or items that can't be stored easily. Purchase fewer disposable items like paper plates and napkins. Instead of buying bottled water, buy a reusable bottle. Pick up some reusable bags instead of taking plastic bags.

Reuse – It is inevitable that we will throw out things we don't use anymore. Before throwing something in the trash, consider donating items to a local charity. You can put the item up for grabs on Freecycle (www.freecycle.org). You never know who might find a use for something you no longer want or use.

Recycle – In Tucson, about 37% of what we throw out every day is recyclable. Nearly all the paper products we use; tin and aluminum cans; and plastic bottles and jugs are recyclable in your Blue Barrel. The Blue Barrel program makes it easy to recycle; take a look at the list of recyclables at DoMoreBlue.com. Look for recycling barrels at work or while you are out and about in Tucson.

Take the opportunity this Earth Day to learn more about what you can do. Join us at Reid Park on April 17th for the 16th Annual Earth Day Festival and Parade. More information is available at www.tucsonearthday.org.

Environmental Services (ES) – To ask questions, learn more about ES, or schedule a Los Reales tour, call (520) 791-3171 or visit <http://esd.tucsonaz.gov> or www.tucsonrecycles.org.

Water 101: Two Main Water Sources (Cont'd.):

Central Arizona Project (CAP) water and native ground water from the Clearwater



Recharge and Recovery Facility supplied more than 50% of our total water supply. The Clearwater Renewable Resource Facility, located in Avra Valley, has been expanded to accept our annual allocation of 144,000 acre-feet of water. By increasing our percentage of blended water, we will be able to further reduce ground water pumping, avoid land subsidence issues, and ensure sustainability for the future.



Only Tap Water Delivers | Drinking Water Week 2010

May 2-8, 2010

Take a moment during Drinking Water Week to think about all the benefits that our water supply offers:

- safe, reliable drinking water that must meet federal and state standards
- at-the-ready fire protection
- critical infrastructure that directly impacts the development of new business and housing plus day-to-day operations

Access to a safe, reliable and sustainable water supply is critical to our quality of life, especially in our desert environment.

Join Tucson Water and the American Water Works Association in celebrating tap water by clicking on www.drinktap.org

Call to Report Water Waste

In the last three years, the water conservation inspection team has taken action on approximately 700 complaints of violations of Tucson's Water Waste Ordinance. Commercial and multi-family sites such as apartment complexes, trailer parks, homeowners' associations, office buildings, strip malls, industrial complexes, and schools represent the largest group of violations – often corrected by improving old irrigation systems, adjusting irrigation run times, fixing leaks, and converting landscaping with low water use and native plant designs. The inspectors also offer businesses free water audits and will educate violators on using water efficiently.

The public can help the water conservation inspector by reporting suspected water waste at commercial sites by calling (520) 791-2514 and leaving a message. Please provide this specific information on the message: location/address, day and time, and description of the problem. If you leave your name and phone number, the inspector will follow up with you on actions taken; tipster contact information is never provided to the water waster.

On the Water Front (Cont'd.):

Water Conservation and Rates

conservation efforts, customers should be assured that each conservation program, rebate or incentive is rigorously evaluated based on cost and to assure that long term economic benefits accrue to our ratepayers. While we can anticipate rising costs to delivering high quality water, today's effective and efficient conservation programs will help keep total costs down over the long term, ultimately resulting in lower rate increases in the future.

Jeff Biggs, Director, Tucson Water

Visit the Tucson Water web site at www.tucsonaz.gov/water

Your Water Connection is produced by Tucson Water. To receive a copy, or to receive this information in Spanish, call 791-4331 or mail your request to: Tucson Water, Customer Information, P.O. Box 27210, Tucson, AZ 85726-7210. City of Tucson TTY number: 791-2639

SI usted desea este documento escrito en español, por favor llame al 791-4331.



Toilet Rebate Program

home, commercial & multi-family

Replace a pre-1991 toilet with a new, high efficiency toilet to save water and money.

www.ci.tucson.az.us/water/rebate.htm
(520) 791-4331

To verify eligibility, understand rebate guidelines, and learn about approved fixtures

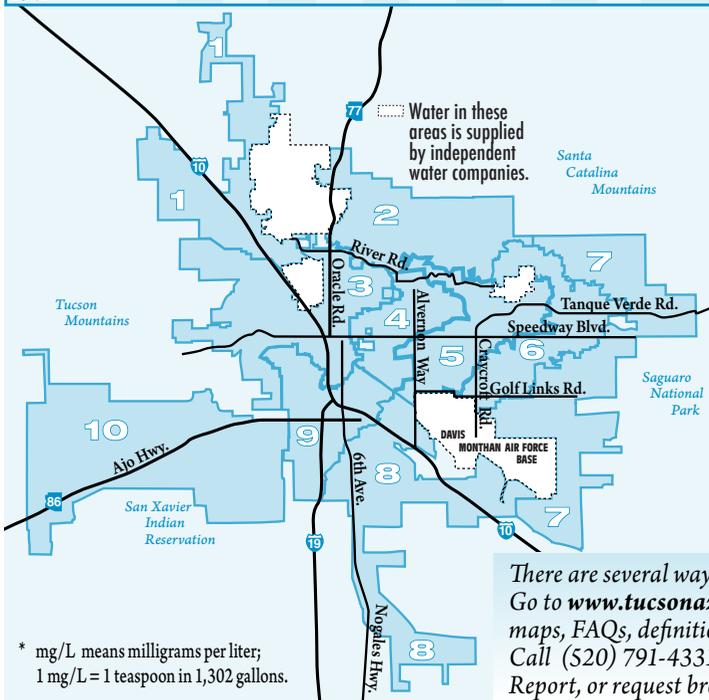
Purchase & Install WaterSense Fixtures • Conserve Water • Save \$\$\$

Water Quality Report - February 2010

Ensuring drinking water is clean and safe from the aquifer to your tap is the top priority of Tucson Water. More than 20,000 individual tests are performed annually, focusing on the water quality from these two main sources: **ground water** and **the blend** of recharged Central Arizona Project (CAP) water and ground water from the Clearwater Recharge and Recovery Facility (CRRF).

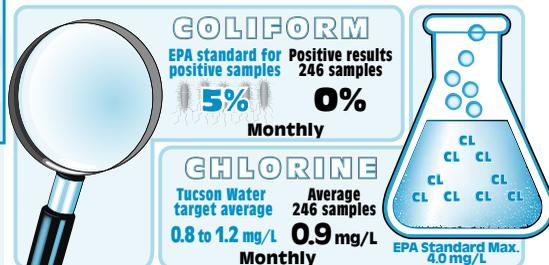
Ground Water Source Report - Ground water comes from about 200 wells in the Tucson metropolitan area. This reporting area is divided into 10 zones:

Elements Sampled	ZONE AVERAGE										System Average
	1	2	3	4	5	6	7	8	9	10	
Sodium (mg/L*) 83 SP	57	62	61	61	60	60	60	62	55	44	59
Mineral Content (mg/L*) 246 SP	441	473	470	447	454	466	448	481	469	396	459
Hardness (mg/L*) 83 SP	216	220	228	208	205	207	206	227	217	139	210
pH (S.U.) 246 SP	7.9	8.0	8.0	8.0	8.0	8.0	8.1	7.8	7.8	7.8	8.0
Temperature (deg F) 246 SP	69	69	70	71	69	70	68	69	70	67	69



Water in these areas is supplied by independent water companies.

None of the water quality tests to the left have U.S. Environmental Protection Agency (USEPA) primary standards set for them. However, the USEPA has primary standards for levels of coliform bacteria and the disinfectant chlorine for ground water sources:



Clearwater Report - More than 50% of our total water supply is a blend of recharged CAP water and native ground water from the CRRF. Using this recovered blended water means that we reduce ground water pumping:

Sodium	63 mg/L	(Feb. 12)
Mineral Content	482.8 mg/L	(Feb. 8-Mar. 9 avg.)
Hardness	210 mg/L	(Feb. 12)
pH	7.89 S.U.	(Feb. 8-Mar. 9 avg.)
Coliform Bacteria	Negative	(Feb. 2)
Chlorine Level	1.05 mg/L	(Feb. 8-Mar. 9 avg.)
Temperature	76.5 F	(Feb. 8-Mar. 9 avg.)

There are several ways to obtain information about water quality. Go to www.tucsonaz.gov/water and click on the Water Quality Tab for maps, FAQs, definitions, reports, online monitoring station results, and more. Call (520) 791-4331 to schedule speakers, ask for an Annual Water Quality Report, or request brochures on water quality.

* mg/L means milligrams per liter;
1 mg/L = 1 teaspoon in 1,302 gallons.