

Register Today for WaterSmart Classes

WaterSmart workshops help homeowners learn techniques and applications for water-efficient landscaping compatible with our urban desert environment. Workshops include *Hands-On Waterwise Garden Design*, *Residential Drip Irrigation* and *Rainwater Harvesting*. Classes are popular and seating is limited, so register now by calling (520) 626-5161. Get more information at tucsonaz.gov/water/watersmart.

Take the Pledge

Mayor's Water Conservation Challenge

Mayor Jonathan Rothschild is asking residents to "Take the Pledge" to help earn Tucson the distinction of being a water-wise city. Participants in the winning cities are eligible for prizes in this friendly, nationwide competition. The contest runs through April 30. Learn more and take the pledge tucsonaz.gov/water/take-the-pledge.

Spring Water Events Are Bubbling Up

Click on tucsonaz.gov/water/events or call (520) 791-4331 for information about water- and sustainability-related events. Here's a sample event list:

- April 1-30 Water Awareness Month
- April 21 Tucson Earth Day Festival and Parade
- May 6-12 Drinking Water Week

For more information, materials in accessible formats, foreign language interpreters, and/or materials in a language other than English, please contact Tucson Water at (520) 791-4331 or (520) 791-2639 for TDD.



Your Water CONNECTION

CAP Water – A Key Renewable Resource

Most people know that Tucson Water is recognized nationwide for its innovative water-efficiency programs, and our community's strong conservation ethic. Most people are not as aware that Tucson Water is also recognized for smart management of our water supplies, a particularly precious resource in the desert. How we manage our water supplies is key to ensuring long term water reliability for our community. Tucson Water is focusing on two key areas in managing water supplies:

- This is the first year Tucson Water is receiving our full allocation of Colorado River water, an essential renewable water supply. Central Arizona Project (CAP) pipelines and canals deliver 144,171 acre feet of Colorado River water to the Utility's Clearwater



Renewable Resource Facility, where it is recharged, blended with groundwater, recovered, disinfected and delivered to customers. Recharging our full allocation of CAP water allows the aquifer to recover and reduces groundwater pumping.

- We are making a \$29 million dollar investment in the Clearwater Facility so that it will be working at maximum capacity and efficiency. Crews are building a new 8 million gallon reservoir and booster station, hooking up 25 recovery wells, and adding 48 inch pipeline that delivers recharged water.

Water from the Clearwater Facility supplies 72% of our community's water needs.

In this issue of *Your Water Connection*, you'll learn more about the people managing our water supplies and ensuring that we have water now and in the future.

— Sandy Elder, INTERIM DIRECTOR, TUCSON WATER



PIMA COUNTY

*Preventative Maintenance Program***Decreases Sewer Overflows by 81%**

A Sanitary Sewer Overflow (SSO) is the back up of raw sewage into streets, buildings or the environment. In 1999, the total number of SSOs in Pima County was 248. In 2011, the number was 47 – with many of these 47 linked to vandalism. This substantial decrease is the result of a rigorous preventative maintenance program performed by the Conveyance Division of the Pima County Regional Wastewater Reclamation Department (PCRWRD).

Crews from the Conveyance Division are dispatched daily according to a computerized program that schedules preventative maintenance according to the history of the reach of the sewer system. With more than 3,500 miles of sewer lines to maintain, a computer program issues work orders to ensure that “problem areas” are serviced as often as needed. When known conditions, such as intrusion of tree roots or the build up of grit and grease are taken care of in advance, the number of SSOs is reduced. Crews use specialized trucks and equipment to cut through roots and grease, remove debris, and flush sewer lines.

In 2002, PCRWRD launched the Save Our Sewers Campaign, a public education program about the harm that is caused when cooking oils and grease are poured down drains, with the potential for sewer blockages and SSOs. Residents are encouraged to discard used cooking grease in household trash or to take used grease to collection sites, where it is recycled into biodiesel.

For additional information on the Save Our Sewers Campaign and grease collection sites, please visit <http://www.pima.gov/wwm/programs/sos/>.

CITY OF TUCSON

Keeping Tucson Clean and Litter-Free

Litter on medians and walkways is a problem in many communities, including Tucson. But, it’s a problem that all of us can help to solve.

Some common items littering our community include:

- Cigarette butts. It is estimated that cigarette butts account for 25% of the litter found on U.S. streets. Contrary to popular belief, a cigarette butt is not biodegradable – it can take years for the filter to break down.
- Snack wrappers and fast food packaging. These items are garbage and should be put in a trash container.
- Plastic bottles and aluminum cans. These are recyclable and represent two of the highest revenue generating commodities in recycling markets.
- Plastic bags. According to the U.S. Environmental Protection Agency, 380 billion plastic bags are used in the U.S. annually. These non-biodegradable, lightweight bags are easily caught in desert plants and fly across streets. Please recycle plastic bags at your grocery store or get in the habit of bringing reusable bags to the store.

How can you help? Never let trash escape from your car and properly dispose of trash from your car when you buy gas. If you drive a truck, don’t throw trash in the bed that will fly out. Please make sure household garbage is bagged and tied and bins are sealed tightly so loose trash doesn’t litter the landscape. Always remember to take your garbage with you upon leaving a park or other public space. And, if you smoke, don’t toss those cigarette butts out the window or on the ground. If you want to do more, contact Tucson Clean and Beautiful, Inc. at tucsoncleanandbeautiful.org about volunteer opportunities for you to ‘adopt’ a street, park or wash.

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 pima.gov/wwm.

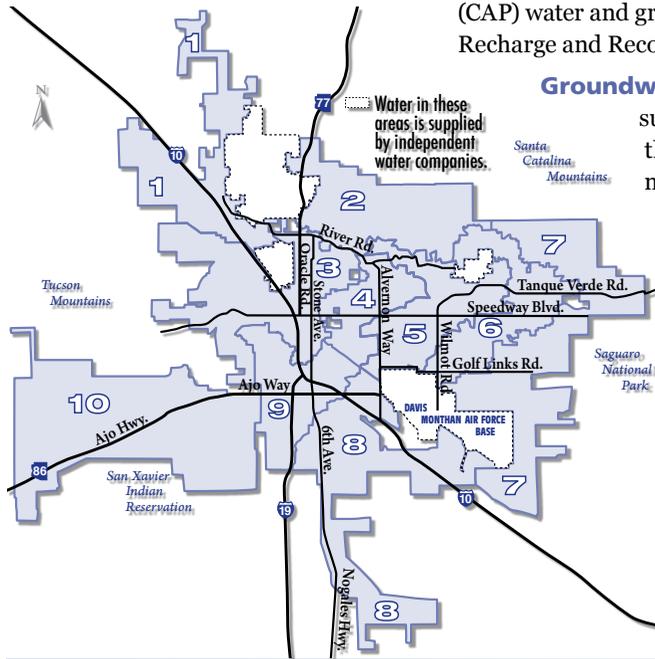
Environmental Services (ES) – Learn about how ES is protecting our groundwater and the environment at tucsonaz.gov/esd and (520) 791-3171.

Water Quality report

February 2012



More than 20,000 individual water quality tests are performed annually on the drinking water derived from two sources: 1) groundwater and 2) the blend of recharged Central Arizona Project (CAP) water and groundwater from the Clearwater Recharge and Recovery Facility (CRRF).



Groundwater Source Report – Less than 50% of our total water supply comes from pumping native groundwater wells in the Tucson metropolitan area. These test results reflect the main distribution system, divided into 10 zones:

test results

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

Zones	Sodium (mg/L*) 84 SP	Mineral Content (mg/L*) 246 SP	Hardness (mg/L*) 84 SP	pH Level (S.U.) 246 SP	Temperature (deg°F) 246 SP
1	65	501	217	7.9	69
2	66	481	229	8.1	71
3	66	483	230	8.0	72
4	66	485	233	8.1	71
5	65	475	229	8.1	72
6	66	477	234	8.1	70
7	53	439	197	8.1	68
8	59	484	251	7.8	70
9	60	458	192	8.0	74
10	51	357	141	7.9	70
Avg	62	468	219	8.0	71

The U.S. Environmental Protection Agency (USEPA) has primary standards for levels of coliform bacteria and the disinfectant chlorine.

coliform

EPA standards for positive samples

Positive results
246 samples



chlorine

EPA Standard
Max. 4.0 mg/L

Actual Average
246 samples 0.8 mg/L

Tucson Water target average
0.8 to 1.2 mg/L

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

Sodium	67 mg/L	(Mar. 1, 2012)
Mineral Content	505.4 mg/L	(Feb. 11 – Mar. 15, 2012 avg.)
Hardness	238 mg/L	(Mar. 1, 2012)
pH	8.01 S.U.	(Feb. 11 – Mar. 15, 2012 avg.)
Coliform Bacteria	Negative	(Mar. 23, 2012)
Chlorine Level	1.05 mg/L	(Feb. 11 – Mar. 15, 2012 avg.)
Temperature	75.17°F	(Feb. 11 – Mar. 15, 2012 avg.)

To obtain water quality information, go to tucsonaz.gov/water and click on the Water Quality tab for maps, FAQs, definitions, reports, online monitoring station results, and more. Or call (520) 791-4331 to schedule speakers, ask for an Annual Water Quality Report, or to request brochures.

Managing Renewable Water Supplies Promotes Sustainability

Hydrologist Dick Thompson offers an easy way to visualize Tucson Water's full allocation of Colorado River water: "If you poured our full annual allocation of water – 144,171 acre feet – into Arizona Stadium, the top of the water would reach up to 70,000 feet – that's twice the cruising altitude for a commercial airplane."



Hydrologist Dick Thompson is part of the team that manages, tracks and reports on Tucson Water's CAP water allocation, a critical renewable resource.

Thompson, along with 11 hydrologists and three University of Arizona hydrology interns, work in Water Resources Management Section under the Tucson Water's Planning and Engineering Division. Simply put, the Section's laser focus is managing, measuring and reporting on the Utility's water supplies, whether on the surface or below the surface.

Thompson, a Tucson Water employee of 14 years, divides his time between a downtown office and in Avra Valley at the Clearwater Renewable Resource Facility. His job includes shared management of the water supplies that enter and exit the Clearwater Facility, participating in permitting facilities, testing new wells, tracking water quality

The CAP system of aqueducts, tunnels, pumping plants and pipelines is 336-miles long and is the largest single resource of renewable water supplies in our state.

and water levels, as well as conducting groundwater and recharge investigations. With a bachelor of science in environmental hydrology and water resources from the University of Arizona, hands-on experience with private industry, and experience as an engineering technician, Thompson brings a wide range of applicable expertise to the Section.

With the state's largest municipal allocation of CAP water, it is critical that Tucson Water track and manage this renewable supply to the drop. Right now, the team at the Water Resources Management Section is putting together the annual reports required by the Arizona Division of Water Resources (ADWR) that measure:

- the Utility's initial CAP allocation
- the amount of water pumped out of the ground
- evaporation rates
- lost water and leakage
- stored and banked water supplies

According to Thompson, in 2011 Tucson Water recharged more water than was pumped out of the aquifer. "That means we're storing water for the future and replenishing the aquifer. A positive indicator is that wells in the central wellfield have added more than 50 feet of recovery."

To schedule a tour of the Clearwater Renewable Resource Facility, and to learn more about water supplies, recharged water and the aquifer, go to www.tucsonaz.gov/water and click on the Water Resources tab, or call (520) 791-4331.

