

On the Water Front



Tucson Water is committed to delivering safe, high-quality water to its customers. Sampling and testing water every day to make sure it meets all federal and state regulations for water are two of the primary goals of Tucson Water. One of the organic compounds that we closely monitor, remediate and report on is 1,4-dioxane, a stabilizing agent and solvent used by the industrial and defense-related industries from the 1950s-1970s.

When 1,4-dioxane was first detected in ground water samples in 2002 in the vicinity of the Tucson Airport Remediation Project (TARP) Treatment Plant, Tucson Water immediately initiated operational changes and additional monitoring to ensure that water being delivered to our customers is well below the current 3.0 parts per billion (ppb) advisory level. (Levels average 1.5 ppb.) In August 2010, the Environmental Protection Agency (EPA) announced a new risk assessment for 1,4-dioxane, indicating potentially greater threats to health than previously thought. It is expected that the EPA will release a new advisory level for 1,4-dioxane that is lower than the current 3.0 ppb.

Currently Tucson Water blends treated TARP water with water from other production wells to reduce 1,4-dioxane levels significantly below the 3.0 level. Anticipating a new lower advisory level, Tucson Water is pilot testing advanced oxidation treatment technologies to determine the most cost effective and viable method to remove 1,4-dioxane from the water. In addition, Tucson Water has:

- increased monitoring of 1,4-dioxane.
- initiated further operational changes to reduce 1,4-dioxane in delivered water.
- increased public education concerning water quality and 1,4-dioxane.

If you have questions or more information, call us at (520) 791-4331. 1,4-dioxane is not regulated by the EPA. The EPA's advisory level provides guidance for water utilities nationwide and is not a legal mandate; however, Tucson Water is proactively responding to ensure that our water remains safe for our community today and in years to come.

Jeff Biggs, Director, Tucson Water

Your Water CONNECTION

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

Division Profile:

Water Quality and Operations



Tucson Water's seven divisions work as a team to bring customers reliable, safe, and high-quality water. At the heart of water delivery is the Water Quality and Operations Division, responsible for

treatment, production and distribution, reclaimed water distribution, water quality monitoring, sampling, and analyses.

With 68 employees, the division operates the Tucson Water Reclamation Facility, Sweetwater

Wetlands, Tucson Airport Remediation Project Treatment Plant, the Hayden-Udall Water Treatment Plant and the Clearwater Renewable Resource Facility. In addition, this division's employees monitor, control, and operate 215 drinking water wells, 150 pump stations, and 65 storage reservoirs, round the clock every day of the



year by way of the Central Control Center at the Hayden-Udall Facility.

Water Quality and Operations *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

YOUR UTILITIES

Pima County –

Protect our environment

Nov. 26 Grease Collection & Recycling Event

The Pima County Regional Wastewater Reclamation Department (PCRWRD) hosts a Grease Collection Campaign each holiday season to remind everyone to properly dispose of used cooking grease.

Ordinary kitchen cooking grease can wreak havoc in the pipes beneath your home and in our sanitary sewage system. Over time grease build-up clogs pipes, reduces sewage flow, and acts as a magnet for other debris. Eventually this build-up can clog pipes and result in a Sanitary Sewer Overflow (SSO). An SSO is the backup of raw sewage into the street, the environment, and your home through sinks, showers or toilets.

When cooking, please allow grease to cool and pour it into a tin can. Then toss the tin can in your trash or bring it to the annual **Day-After-Thanksgiving Grease Collection event on Friday, November 26.**

Do your part to save our sewers. Bring your used cooking grease to any of the four grease collection sites. The used oil and grease collected on November 26 will have a second 'life' as a cleaner burning bio-diesel.



Day-After-Thanksgiving Grease Collection & Recycling Event

Friday, Nov. 26 • 9:00 a.m. to 1:00 p.m.

East – O'Reilly Chevrolet, 6160 E. Broadway Blvd., one block west of Wilmot Road.

Midtown – Vacant lot across from Sam Hughes Championship Dining (Courtesy of Sam Hughes Championship Dining) on the northeast corner of Campbell and Sixth Street.

Northwest – Pima County Industrial Wastewater Control, 5025 W. Ina Road, 1/4 mile west of I-10.

South – City of Tucson, Water Plant #2, 1102 W. Irvington Road. I-19, exit on Irvington Road. Turn right at the first light, across from McDonald's.

City of Tucson Environmental Services –

You Can Do More Blue–

Rigid Plastics Can Go In Your Blue Barrel

Until now, the only plastic items you could recycle were bottles and jugs with a #1 or #2 recycling symbol. All that has changed! Tucson Recycles will now accept rigid plastics. So what are rigid plastics? A rigid plastic is any plastic that is stiff, as opposed to film plastics, such as plastic bags, film and wrap. This opens up a whole variety of household items that can now be put in your blue barrel. Here are a few examples:

- ✳ Plastic toys including outdoor toys like playhouses
- ✳ Plastic milk/soda crates
- ✳ Plastic laundry baskets
- ✳ Plastic buckets with **no metal handles**
- ✳ Plastic flower pots and nursery trays
- ✳ Plastic garbage cans
- ✳ Plastic dish drainers
- ✳ Large water bottles (5 gallon)
- ✳ Plastic ice chests/coolers
- ✳ Plastic furniture
- ✳ And much more

All of these things can be put in your blue barrel as long as it fits and the lid can be closed.

Please remember that even if something has the recycle symbol on it, it may not be accepted in your blue barrel. For a detailed list, visit www.TucsonRecycles.org or call the Recycle Infoline at 791-5000.



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.

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

Division Profile: **Water Quality and Operations**

continued from Front

The Water Quality Management and Operations Division works in tandem with other divisions – Business Services, Engineering, Customer Services, Water Resource Management, Water Planning, and Maintenance – to recognize and solve problems, communicate with customers, and determine long term implications.

Water Quality and Operations professionals sample, analyze and report on the quality of water from wells, distribution lines, reservoirs, and customer taps. Chemists conduct tens of thousands of tests each year on about 12,000 ‘field’ water samples at the state-certified in-house Tucson Water Quality Laboratory.

The Division also works with other agencies including the Arizona Department of Environmental Quality (ADEQ), U.S. Environmental Protection Agency (EPA), Pima County Department of Environmental Quality and Arizona Department of Water Resources to comply with all applicable regional, state and federal regulatory standards.

The Division is also committed to conducting long-term planning that ensures water system reliability, water quality and the environment. It joins forces with other city departments, including Procurement and Environmental Services. Division employees partner with Environmental Services staff to oversee:

- ◆ Air emission permits and monitoring.
- ◆ Industrial waste discharge monitoring and reporting.
- ◆ Hazardous waste removal and reporting.

In addition to daily operations, the Division takes part in projects aimed at improving water quality, infrastructure and security. For instance:

- ◆ The Reservoir and Tank Rehabilitation Program –Tucson Water’s potable and reclaimed systems

contain 65 reservoirs with about half of the reservoirs built from 1990 to the recent past. These water-containing structures represent approximately \$200 million in total assets. This program is intended to extend the life of existing reservoir and tank assets, prioritize rehabilitation activities, and protect water quality and public health.

- ◆ Examining and evaluating new treatment technologies to remediate 1,4-dioxane.
- ◆ Research studies that investigate treatment options for emerging water contaminants such as pharmaceuticals and personal care products.

3 ways to find out more about water quality:

- 1.** Schedule to tour the Clearwater recharge basins, Hayden-Udall Water Treatment Plant, the Tucson Airport Remediation Project, the Water Quality Laboratory, or the Sweetwater Wetlands by calling (520) 791-4331 or (520) 837-2183. You must reserve and schedule in advance due to limited seating.
- 2.** Go to www.tucsonaz.gov/water and click on the Water Quality tab.
- 3.** Request water quality data and information by contacting Water Quality Laboratory manager Michael Dew at Michael.Dew@tucsonaz.gov and (520) 837-2455.



Visit the Tucson Water website at www.tucsonaz.gov/water

For accommodations; 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.





Find Out More Rebates – Incentives – Tax Credits

(520) 791-4331

www.tucsonaz.gov/water/rebate

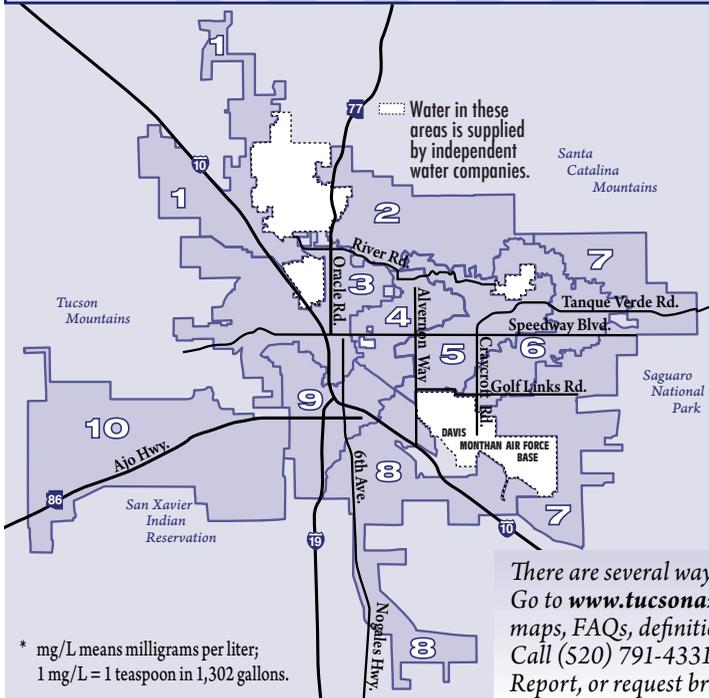
RESIDENTIAL COMMERCIAL MULTI-FAMILY HOAS AND MORE

Water Quality Report - September 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*) 86 SP	53	64	62	61	57	59	48	49	62	59	57
Mineral Content (mg/L*) 247 SP	385	465	443	441	438	425	322	422	432	373	419
Hardness (mg/L*) 86 SP	135	225	216	217	204	210	173	206	213	189	202
pH (S.U.) 247 SP	7.6	8.0	7.9	7.9	7.9	7.9	7.8	7.7	7.9	8.0	7.9
Temperature (deg F) 247 SP	86	87	88	88	87	86	87	88	88	89	87



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:

COLIFORM

EPA standard for positive samples

5% Monthly

Positive results 247 samples

0%

CHLORINE

Tucson Water target average

0.8 to 1.2 mg/L Monthly

Average 247 samples

0.8 mg/L

EPA Standard Max. 4.0 mg/L

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	65 mg/L	(Sept. 14)
Mineral Content	470.8 mg/L	(Sept. 9-Oct. 7 avg.)
Hardness	222 mg/L	(Sept. 14)
pH	7.84 S.U.	(Sept. 9-Oct. 7 avg.)
Coliform Bacteria	Negative	(Sept. 10)
Chlorine Level	1.02 mg/L	(Sept. 9-Oct. 7 avg.)
Temperature	83.4 F	(Sept. 9-Oct. 7 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.