

Your Water CONNECTION

Plan Now for Cold Temps

Prevent Pipes from Freezing

On February 3 and 4, 2011, temperatures bottomed out at 18 degrees, sometimes resulting in water pipes freezing, backflow assemblies bursting and service being disrupted.

Some experts are forecasting similar cold, dry weather this winter and that's why Tucson Water wants you to think about ways to prevent pipes from freezing now. Take some simple steps now to prevent potential costly repairs and water damage later:

- ❄ Protect exposed pipes that carry water from freezing with foam and wrap insulation.
- ❄ Seal areas that allow cold outside air to get in where pipes are located.
- ❄ Remember that your cooler and irrigation system may need to be "winterized" for changing temperatures to avoid frozen lines and potential leaks.

Know how to shut off the water supply to your home or business. If a pipe bursts – freeze-related or not – you can mitigate water damage.



Tucson Water is providing several ways to obtain more information and tips to prepare for colder temperatures: via online tucsonaz.gov/water/winter-prep, e-mail waterleaks@tucsonaz.gov, or phone (520) 791-4331.

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.



Tucson Water is committed to educational outreach about water, and to nurturing the next generation of scientists, researchers, and engineers.

For more than 35 years, Tucson Water has been involved with the annual Southern Arizona Regional Science and Engineering Fair (SARSEF) that showcases science projects submitted by area students in kindergarten to grade 12. The 2012 SARSEF, slated for March 12-17 at the Tucson Convention Center, is expected to feature some 1300 science projects that are displayed, judged and open for the public to view. Students compete for certificates of excellence, cash, trophies, and even scholarships.

Tucson Water employees volunteer to judge SARSEF student projects and to offer feedback to budding scholars. The utility sponsors special awards for students who apply the scientific method to projects about water relating to water quality, efficiency, technology, delivery, and its presence in plants and animals.

According to Kathleen Bethel, Director of the SARSEF, Tucson Water's educational outreach efforts – classroom visits, lesson plans, educational games and quizzes, student tours, and teacher internship program – are often the trigger for students creating a SARSEF project. In 2009, there were 78 student projects about water at SARSEF; in 2011, there were 104 water projects!

Lively curiosity, along with the ability to define a problem, conduct research, analyze data, form conclusions, and communicate results are skills that Tucson Water demands of its employees now and in the future. Supporting SARSEF, teachers, and students ensures that our community, customers and employees are partners in understanding and solving water issues.

— Sandy Elder, INTERIM DIRECTOR, TUCSON WATER

Students, teachers, and parents – go to sarsef.org to find out about submitting a research project to SARSEF 2012. Projects and registration are due by February 29, 2012.



PIMA COUNTY

Day-After Thanksgiving Collection Sites Recycle Used Cooking Grease

The Pima County Regional Wastewater Reclamation Department's (RWRD) Save our Sewers Campaign will be in full swing in November when the department works with community partners on the day after Thanksgiving – November 25 – to collect cooking grease and oil.

Pouring cooking grease and oil down the drain can cause sewage to back up into streets, homes and the environment.

Bring used cooking grease and oil to any of these four collection sites, open on Friday, November 25, from 9 a.m. to 1 p.m.

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

Midtown – Ward 3 Office, 1510 E. Grant Road, between Vine and Cherry Avenues.

Northwest – Pima County Industrial Wastewater, 5025 W. Ina Road, a quarter mile west of I-10.

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

Town of Sahuarita – Park & Ride Parking Lot, 375 W. Sahuarita Center Way.

This annual day-after Thanksgiving collection event gives the community an opportunity to recycle their grease, ensure the integrity of our sewer system and to help our desert environment. Another benefit: local companies transform the grease and oil collected into biodiesel, creating a cleaner-burning fuel and helping to reduce dependence on foreign oil.

This recycling event is a partnership of the Pima County Regional Wastewater Reclamation Department, Pima Association of Governments, Town of Sahuarita, Greycle and EDG Fuels.

To find out about year-round grease collection sites, call (520) 740-6500 or click on pima.gov/wwm/programs/sos/docs/Grease.pdf.

CITY OF TUCSON

Take Advantage of Los Reales' Services

We don't often think about what happens to trash after it's taken out and removed. Where does trash go after it's removed? In Tucson, residents' trash is taken to the Los Reales Landfill, where it is disposed of in facilities fully lined to protect our groundwater and environment. The Los Reales Landfill also offers these additional services for residents:

- **Self-hauling.** If you have debris due to yard clean-up or remodeling, you may want to haul it yourself to the landfill. The self-hauling fee for up to 2,000 lbs. is just \$15.
- **Household Hazardous Waste (HHW).** Los Reales is a satellite facility for the Tucson/Pima County HHW Program, free to residents. Bring paint, solvents, auto/rechargeable batteries, fluorescent light bulbs, or items marked 'toxic' and drop them off at the HHW area.
- **Scrap Metal Drop-off.** Do you have old appliances or other scrap metal? There is a \$5 disposal fee for appliances that contain refrigerant; all other metals are accepted at no charge.
- **Recycling.** The landfill has a Neighborhood Recycling Center. Drop off cardboard, plastics, rigid plastics, and paper products before you weigh-in at the scales. Recycling will lighten your load and may save you money. It also conserves landfill space.

For more information on the Los Reales Landfill, located at 5300 E. Los Reales Road, call (520) 791-3171 or visit our website, tucsonaz.gov/esd. Los Reales is open Monday through Saturday, 6 a.m. to 5 p.m.

Los Reales Landfill is the only City-owned, active landfill in Tucson. Opened in 1967, it will continue to serve Tucsonans for the next 50 years.

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

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

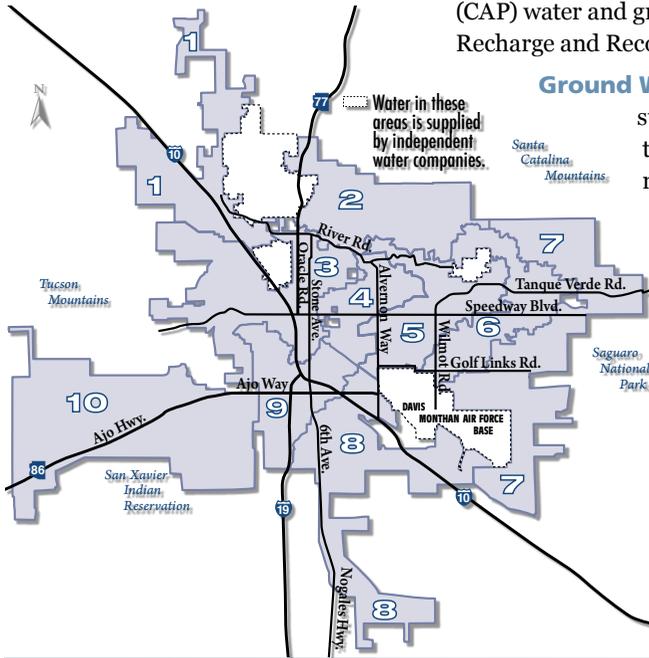
Environmental Services (ES) – Learn about how ES is protecting our groundwater and the environment at tucsonaz.gov/esd and (520) 791-3171.

Water quality report

September 2011



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



Ground Water Source Report – Less than 50% of our total water supply comes from pumping native ground water 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*) 86 SP	Mineral Content (mg/L*) 247 SP	Hardness (mg/L*) 86 SP	pH Level (S.U.) 247 SP	Temperature (deg F) 247 SP
1	66	442	196	7.8	88
2	66	482	230	8.0	87
3	62	455	226	7.9	86
4	59	430	204	8.0	87
5	61	434	211	7.9	86
6	61	443	216	8.0	87
7	56	371	199	8.0	87
8	60	490	262	7.8	86
9	64	441	223	8.0	86
10	58	358	189	8.0	86
Avg	61	437	218	7.9	87

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
253 samples



chlorine

EPA Standard
Max. 4.0 mg/L

Actual Average
253 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 ground water from the CRRF. Using this recovered blended water means that we reduce ground water pumping.

Sodium	69 mg/L	(Sept. 12, 2011)
Mineral Content	477.9 mg/L	(Sept. 11–Oct. 9, 2011 avg.)
Hardness	241 mg/L	(Sept. 12, 2011)
pH	7.72 S.U.	(Sept. 11–Oct. 9, 2011 avg.)
Coliform Bacteria	Negative	(Sept. 23, 2011)
Chlorine Level	0.93 mg/L	(Sept. 11–Oct. 9, 2011 avg.)
Temperature	81.43 F	(Sept. 11–Oct. 9, 2011 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.

Water Education Programs Reach Thousands

As Tucson Water's Education and Outreach Coordinator, Vikki Hibberd truly understands the power of the 'teachable moment' with students, teachers, employees and customers. She:

- ◆ works with educational vendors to create water-based curriculum that is fun, interesting and timely.
- ◆ organizes and coordinates the summer teacher internship program.
- ◆ trains and schedules volunteers for environmental outreach events and speaking engagements.
- ◆ creates materials to educate customers about rebate programs, construction projects and special events.
- ◆ develops articles for the internal employee newsletter.

Hibberd's main responsibility is guiding Tucson Water's three educational programs: Arizona Project WET, Environmental Educational Exchange, and the Summer Teacher Internship Program.



Tucson Water's Education and Outreach Coordinator, Vikki Hibberd holds a Bachelor of Arts in Communication/Public Relations and a Master of Business Administration.

According to Hibberd, there are many tangible and intangible positives to educational outreach. "It's exciting to see how teachers weave important information about water into materials and projects. The teacher who challenged students to write a history of Tucson and its water. The art students who reflected xeriscaping and rainwater harvesting in their work. The music teacher who asked students to write a song about water resources and conservation."

Hibberd came to Tucson Water in 2002 and will be retiring at the end of 2011. She leaves a legacy of dynamic educational programs and materials that have reached literally tens of thousands of people in our community. And, true to form, Hibberd has created a detailed lesson plan for the new Education and Outreach Coordinator, Roberta Lopez-Suter.

Find out more about Tucson Water's educational outreach at tucsonaz.gov/water/education or by calling (520) 791-4331.

Tucson Water's Education Efforts Receive Top Marks

A+ Arizona Project WET 2010-2011

Outreach: 534 teachers
20,953 students

Third and 6th grade students learn about water resources with fun, hands-on lessons inside the classroom and out, along with guided tours of Sweetwater Wetlands. A *Tucson Toolkit* that includes five lesson plans on water education is available for 6th, 7th and 8th grade teachers.

Contact: kschwart@cals.arizona.edu

A+ Environmental Education Exchange 2010-2011

Outreach: 491 teachers
9,873 students

Dr. Faucet comes to the classroom to teach *Da Drops* for grades 1 to 3 and *Our Water, Our Future* for grades 4 and 5. Students learn about the water cycle, water supplies, water usage, environmental concerns and conservation. A *Tucson Toolkit* is also available to middle school teachers.

Contact: outreach-scheduling.org

A+ Summer Teacher Internship Program 2011

Outreach: 16 educators
300+ teachers since program start

A paid, two-week course that introduces middle and high school teachers to water resource management issues through lectures by Tucson Water staff and job shadowing. Graduates develop water-based classroom curriculum and projects that are evaluated by staff.