

Brrrr —

Prevent Freezing Water Pipes



The onset of cold winter weather means taking additional precautions to prevent exposed water lines and fixtures from being damaged.

Frozen water lines can burst and result in leaks. Follow these tips to avoid wasting water in the winter months:

1. Remove hoses from outdoor fixtures; wrap exposed spigots or faucets.
2. Disconnect and drain the water line from the swamp cooler. Cover the entire cooler.
3. Wrap or protect exposed backflow devices.

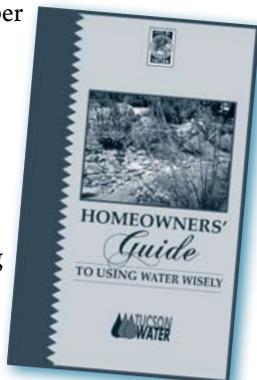


Why it's Smart to Watch Water Waste Starting in December

Did you know that Pima County Regional Wastewater Reclamation Department uses an average of your water use from December

through February to calculate sewer fees for the year? Keep water waste in check indoors and out during those months to help reduce sewer fees. To guide your efforts, get a free

Homeowners' Guide to Using Water Wisely by calling (520) 791-4331 or clicking on www.tucsonaz.gov/water/homeowner.htm



Your Water CONNECTION

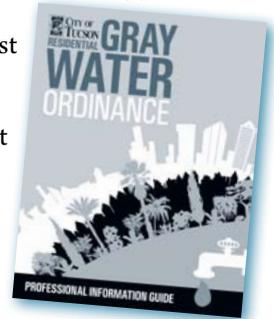
News & Tips for Tucson Water Customers
December 2010 www.tucsonaz.gov/water

Reflecting on 2010



This past year has offered both challenges and opportunities that employees at Tucson Water met with creativity, persistence, professionalism and teamwork. Here is a short list of accomplishments:

◆ **Introducing two new water saving ordinances** – The Commercial Rainwater Harvesting Ordinance and the Residential Gray Water Ordinance went into effect June 1, 2010. The rainwater harvesting ordinance applies to all new commercial construction and is the first of its kind in the nation. New single-family homes and duplexes must be built to be gray water ready, capable of re-using water from clothes washers, bathtubs, showers, or bathroom sinks for outdoor irrigation. Using gray water can save a typical household up to 13,000 gallons of drinking water a year.



◆ **Taking action to make region-wide sustainability happen** – In 2010, the City of Tucson Mayor and Council and the Pima County Board of Supervisors adopted Phase 2 of the City/County Water and Wastewater Study, and directed staff to work together to create an action plan for implementing the Phase 2 goals and recommendations. The Action Plan represents a dramatic shift in business as usual, and advances a set of 87 specific actions grouped within 14 City/County programs to implement

Reflecting on 2010 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 –

Preventative Maintenance Reduces Sewer Overflows

In 1988, the Regional Wastewater Reclamation Department (RWRD) initiated a proactive preventative maintenance program. The most important result of the preventative maintenance program is the significant reduction in Sanitary Sewer Overflows (SSO). An SSO occurs when raw sewage is released into streets, businesses, homes or the environment.

In 1999, the total number of reported public SSOs was 248. In 2009, reported SSOs were reduced to 50 incidents or nearly a 500% reduction. This substantial decrease is the result of an ongoing preventative maintenance program that has been honed and improved by our Conveyance Division crews.

Specialized equipment and high-tech tools are key tools used by Conveyance Division crews to perform the important work that protects the public health and environment. These tools include:

- Trucks outfitted with specialized tools and equipment.
- Closed circuit television cameras used to transmit digital images.
- Service truck laptop computers with remote access.
- Wastewater-related software programs.

In addition to these tools, a high-tech system allows RWRD to track flows electronically in many reaches of Pima County's 3,400 miles of sewer lines. Significant changes in flows can signal potential SSOs. When such changes are detected, crews are dispatched to determine the cause of these changes and prevent problems before they occur.

RWRD Conveyance Division employees assure that our community's wastewater is conveyed safely to one of the eleven wastewater treatment facilities owned and operated by Pima County. Day in, day out this highly-skilled and well-trained team protects public health and assures a safe and clean environment.

This is the third and last in a series of articles focusing on the RWRD Conveyance Division, the Division that maintains and operates Pima County's sanitary sewers.

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 –

Recycle to Make this Season Greener!

Did you know Americans generate 25% more garbage between Thanksgiving and New Year's Day? This is about one million additional tons of garbage taken to our landfills each week during the holidays. You can reduce your impact by recycling. Here's how:

- ✿ Re-use gift bags and buy wrapping paper that doesn't have a metallic finish so you can put it in your blue barrel.
- ✿ Recycle/re-use cardboard boxes and greeting cards.
- ✿ Recycle your plastic, glass bottles, and tin cans after you've finished preparing the holiday feast.
- ✿ Recycle your plastic bags at all participating supermarkets.

Recycle your Christmas tree through the **Treecycle program!** From December 26-January 9, 2011, drop off your tree at these Treecycle locations:

- ✿ Oro Valley, 660 W. Naranja Dr.
- ✿ Rillito Race Track, 4502 N. 1st Ave.
- ✿ Udall Park, 7200 E. Tanque Verde Rd.
- ✿ Golf Links Sports Park, Golf Links & Craycroft Rds.
- ✿ Pima County Rodeo Grounds, Irvington Rd. & 6th Ave.
- ✿ Los Reales Landfill, 5300 E. Los Reales Rd.
- ✿ Silverbell Site, northeast of Goret & Silverbell Rds.
- ✿ Rita Ranch Site, 7901 S. Rita Ranch Rd.
- ✿ Randolph Golf Course, 600 S. Alvernon Way

The City of Tucson will grind Christmas trees at four locations this year, so you can take home some wood chips to use for landscaping or a water harvesting project. Bring your own container! Click on www.tucsonaz.gov/esd for 'chip and carry' location information and other recycling tips.

Reminder: Christmas and New Year's Day fall on Saturdays. There will be no service changes for garbage and recycling. Happy Holidays!



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

Reflecting on 2010

Continued from Front

the Phase 2 goals and recommendations and to achieve specific outcomes within the five-year planning horizon. Find information about the Report at www.tucsonpimawaterstudy.com.

♦ **Responding to tough fiscal challenges** – Like many of our customers, Tucson Water is also impacted by the current economic conditions. In 2010, Tucson Water left job positions unfilled, reduced staffing, delayed and phased select projects, scheduled unpaid furlough days and made operational improvements to balance the budget.

♦ **Managing energy costs** – It costs Tucson Water approximately \$15 million a year for the energy required to deliver water to nearly 800,000 customers. This past year Tucson Water increased the focus on working with Tucson Electric Power Company, Trico Electric Cooperative, and Southwest Gas to participate in rate savings programs and to manage energy loads during peak times. We're also exploring cost savings by using alternate delivery methods and sources such as solar.

♦ **Replacing 12,115 residential and commercial meters** at no cost to customers. These new meters offer more accurate data that will help us forecast our community's water demands. In addition, Tucson Water is also equipping meters with automatic meter reading technology that transmits data via radio signal to a handheld device or mobile collector.

♦ **Launching 'Beat the Peak' as a year round effort** – Since 1976, Tucson Water's mascot, Pete the Beak, has encouraged customers to save water during the hot, dry summer months. But times have changed. The infrastructure that delivers water is capable of meeting demands year round. Our community is also moving to 100% reliance on renewable water supplies such as Colorado River water and reclaimed water. Now 'Beat the Peak' will run 12 months to increase water efficiency year round, indoors and out. For tips, rebates, incentives, brochures and information, call Tucson Water 791-4331 or click on the website at www.tucsonaz.gov/water.



♦ **Working in a dynamic regulatory environment** – Our water quality complies with all applicable regional, state and federal regulatory standards. As technology advances and instruments are able to detect contaminants at levels smaller than parts per billion, Tucson



Water professionals respond with new approaches and systems. Smart collaborations with The University of Arizona Department of Civil Engineering; Soil, Water and Environmental Science Department; Water &

Environmental Technology (WET) Center; the U.S. Department of Agriculture –Agricultural Research Service (USDA-ARS), and Global Water, among others, gives Tucson Water access to the latest research.

♦ **Increasing system reliability with two new infrastructure renewal programs** – This year Tucson Water launched the Control System Master Plan Implementation Program and the Reservoir and Tank Rehabilitation Program. The Control System is the brains of Tucson Water's complex system, managing power, capturing data, controlling equipment at all water production and distribution facilities, linking with maintenance management programs, ensuring security and more. The Reservoir and Tank Rehabilitation Program is the first comprehensive assessment and improvement program for 69 potable and reclaimed facilities, representing approximately \$200 million in assets. Both programs will replace aging infrastructure and ensure continued system reliability and efficiency.

On behalf of the 500 employees at Tucson Water, I wish you and your family a happy, safe and sustainable holiday season!

Jeff Biggs, Director, Tucson Water

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.



Residential Customers Register Now for 2011 WaterSmart Workshops

FREE!
Limited Seating

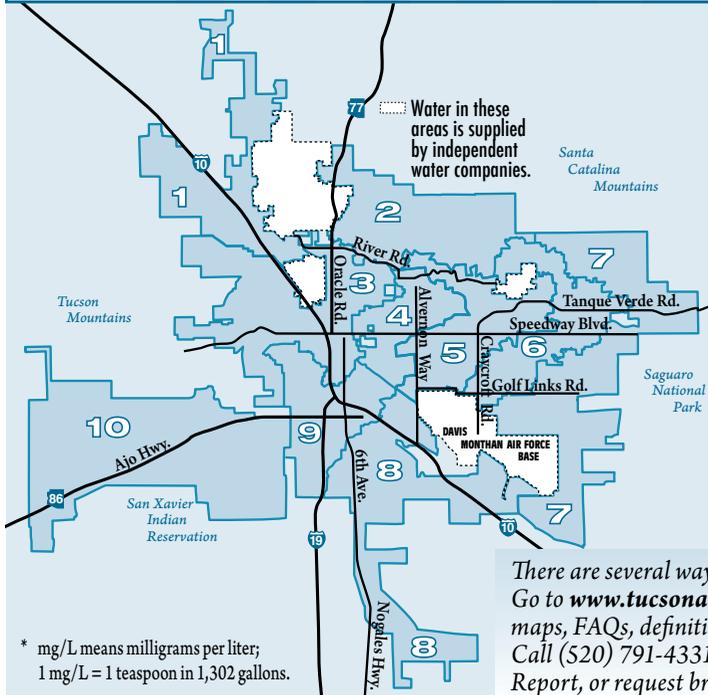
Learn from local experts how to create and maintain colorful, low-water use landscapes for your home
Click <http://ag.arizona.edu/pima/smartscape/> • Call (520) 626-5161

Water Quality Report - October 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*) 77SP	51	61	61	53	57	56	41	48	60	55	55
Mineral Content (mg/L*) 247SP	416	476	455	430	429	429	338	407	414	381	421
Hardness (mg/L*) 77SP	217	219	218	182	201	198	148	211	196	165	196
pH (S.U.) 247SP	7.7	8.0	7.9	7.9	7.9	7.9	7.9	7.7	7.9	7.9	7.9
Temperature (deg F) 247SP	82	83	85	83	82	83	84	83	83	85	83



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 250 samples
5% Positive results
0.4% Monthly

CHLORINE
Tucson Water target average 250 samples
0.8 to 1.2 mg/L Average
0.9 mg/L Monthly
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	66 mg/L	(Oct. 21)
Mineral Content	482.9 mg/L	(Oct. 7-Nov. 9 avg.)
Hardness	232 mg/L	(Oct. 21)
pH	7.90 S.U.	(Oct. 7-Nov. 9 avg.)
Coliform Bacteria	Negative	(Oct. 8)
Chlorine Level	1.01 mg/L	(Oct. 7-Nov. 9 avg.)
Temperature	76.1 F	(Oct. 7-Nov. 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.