

Your Water CONNECTION

2011 Highlights and Challenges

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Agency (AzWARN), the Advisory Panel on Emerging Contaminants (APEC), and the Environmental Protection Agency's (EPA) Environmental Research Laboratory Network/Water Laboratory Alliance.



Crews rehabilitated and upgraded Martin Reservoir with a state-of-the-art liner.

Rehabilitating our reservoirs – This past year Tucson Water started its first comprehensive inspection, repair, and improvement effort for its reservoirs, most of which are decades old. Tucson Water's 69 potable and reclaimed facilities contain more than 315 million gallons of available storage and represent approximately \$200 million in assets. Work crews completed rehabilitation on the 20-million gallon Martin Reservoir in less than five months. The 0.65-million gallon Craycroft Reservoir rehabilitation will be complete before year end.

From the 546 employees at Tucson Water, have a safe, sustainable and water-efficient holiday. We look forward to further serving you in 2012.

— Sandy Elder, INTERIM DIRECTOR, TUCSON WATER

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.



2011 Highlights and Challenges

The employees at Tucson Water have met this year's challenges and opportunities with professionalism and teamwork. Here are some accomplishments in 2011:

Taking advantage of the full Colorado River water allotment

– Tucson Water is purchasing its full annual Colorado River water allotment of 45 billion gallons this year for the first time. This water is delivered through Central Arizona Project (CAP) canals to Tucson Water's Clearwater Renewable Resource Facility, where it is recharged and recovered for our use. Because the Colorado River flows year-round, it is an important renewable water resource for us.



Central Arizona Project canals bring Colorado River water to Tucson Water facilities, where it is recharged and recovered.

Expansion of the reclaimed water program

– Reclaimed water is recycled water, treated for applications such as irrigation, dust control, and industrial uses. Using this local recycled and renewable water source assures water supplies for

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PIMA COUNTY

Sewer Emergency Basics

It's Saturday night and raw sewage is backing up into your home. Who can you call?

Call Pima County's Regional Wastewater Reclamation Department (RWRD) at (520) 443-6500 – we have someone on duty 24 hours a day, 7 days a week to take your call about a sewer emergency. (Reporting an emergency online at the department's website won't get you an immediate response.)

Always call the department if you see a Sanitary Sewer Overflow (SSO). An SSO occurs when raw sewage

- backs up into a structure through plumbing fixtures,
- into a street, or
- onto the ground through manholes.

When an SSO is reported, a crew will be dispatched to the emergency site. If the SSO is a result of problems in the public sewer, our staff will take care of the emergency.

In Pima County, there are a number of private sewer lines. SSOs that originate in private sewer lines are the responsibility of the private owner. The pipe that connects a building to the public system is one type of private sewer and is the responsibility of the property owner. RWRD crews will determine if an SSO is related to public or private sewer lines.

SSOs are most frequently caused by cooking grease, tree roots, grit, and debris such as diapers, rags, etc. that accumulate in the sewer.

Sewer backups also are caused by vandalism. Vandals damage the sewer infrastructure when they throw rocks, vegetation and other debris into manholes.

Please call 911 to report an unauthorized opening of a manhole. If a Pima County RWRD truck is near the open manhole, then the activity is authorized.

RWRD's job is to protect the public health and the environment - We count on you to report SSOs and potential vandalism.

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.

CITY OF TUCSON

Recycle and Reuse

To Make the Season Greener

Did you know Americans generate 25% more garbage between the Thanksgiving and New Year's Day holidays? This equals about one million additional tons of garbage taken to our landfills each week during the holidays. That's a lot of garbage! But, with a little planning, you can reduce this landfill impact by recycling in your blue barrel and reusing materials this upcoming holiday season. Here are some ideas:

- Use gift bags that can be reused or wrap your gifts in a newspaper.
- Use wrapping paper without a metallic finish or glitter so it can be discarded into a blue recycling barrel.
- Recycle or reuse cardboard boxes and greeting cards. Excess cardboard can also be taken to a Neighborhood Recycling Center.
- Don't forget to recycle plastic, glass bottles, and tin cans after you've finished preparing the holiday feast.
- Recycle plastic shopping bags at a grocery store or retailer.
- When you shop, bring your own reusable bag.
- Remember, you can now recycle small rigid plastics in your blue barrel. This includes hard plastic toys.
- Recycle your Christmas tree through the City's Treecycle Program. From December 27, 2011 through January 8, 2012, nine locations will be open to recycle your tree. See the enclosed insert for more information or go tucsonaz.gov/esd.



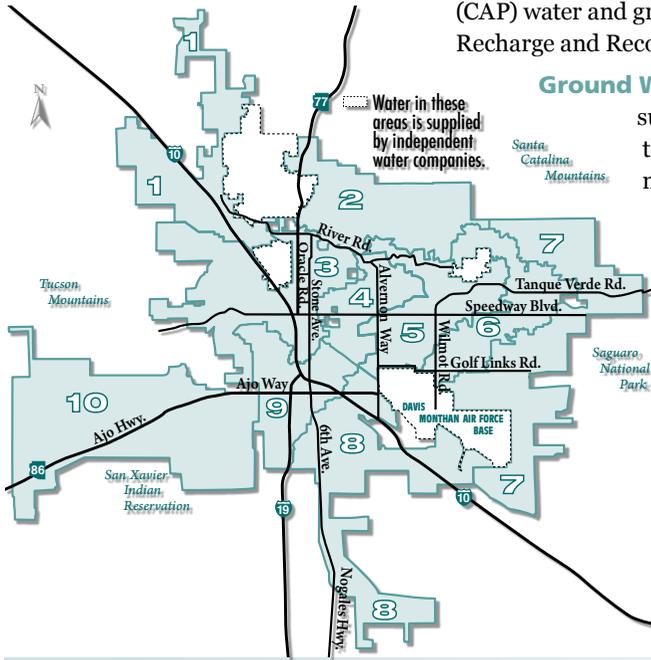
Environmental Services (ES) – Learn about how ES is protecting our groundwater and the environment at tucsonaz.gov/esd and (520) 791-3171.

Water Quality Report

October 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)* 77 SP	Mineral Content (mg/L)* 247 SP	Hardness (mg/L)* 77 SP	pH Level (S.U.) 247 SP	Temperature (deg F) 247 SP
1	49	442	193	7.8	84
2	64	482	228	8.0	83
3	58	451	213	7.9	84
4	50	366	170	7.8	82
5	61	403	209	7.8	82
6	61	447	211	8.0	83
7	42	339	158	7.9	83
8	62	484	250	7.8	83
9	58	465	174	7.9	83
10	55	405	195	7.9	84
Avg	57	426	201	7.9	83

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
247 samples



chlorine

EPA Standard
Max. 4.0 mg/L

Actual Average
247 samples 0.9 mg/L

Tucson Water target
average 0.8 to 1.2
mg/L

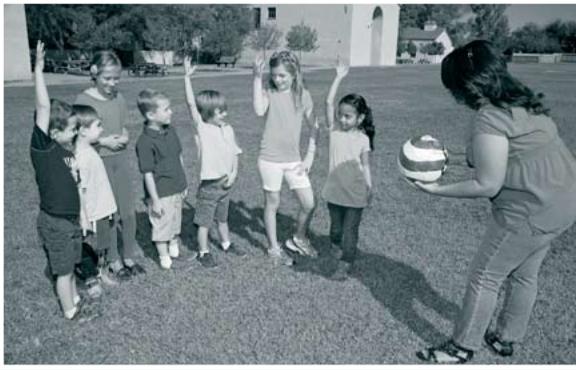
Clearwater Report – More than 50% of our total water supply is a blend of recharged CAP water and native ground water from the CRRF. Using this recovered blended water means that we reduce ground water pumping.

Sodium	64 mg/L	(Nov. 4, 2011)
Mineral Content	481.1 mg/L	(Oct. 14–Nov. 3, 2011 avg.)
Hardness	226 mg/L	(Nov. 4, 2011)
pH	7.69 S.U.	(Oct. 14–Nov. 9, 2011 avg.)
Coliform Bacteria	Negative	(Oct. 21, 2011)
Chlorine Level	0.93 mg/L	(Oct. 14–Nov. 6, 2011 avg.)
Temperature	75.83 F	(Oct. 14–Nov. 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.

2011 Highlights and Challenges

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More than 50 schools use reclaimed water for irrigation.

our region today and in the future. In 2011, Rose, Henry, and Hollinger Elementary Schools and Sahuaro High School started using reclaimed water to irrigate turf. Tucson Water also began annual inspection and testing of parks, schools, golf courses and commercial sites using reclaimed water to ensure public health and safety.

Continuing the meter replacement program –

During the past year, Tucson Water has replaced 9,010 residential and commercial meters that were stuck or under recording water use. These new meters will offer accurate data to help forecast our community's water demands and ensures revenue is collected for the water actually being used. In addition, Tucson Water is equipping new meters with automatic meter reading technology that transmits data via radio signal to a handheld device or mobile collector making our meter reading more efficient.

Proactively responding to 1,4-dioxane –

Our water quality complies with all applicable regional, state and federal regulatory standards. In January, the EPA issued a new health advisory level for contaminant 1,4-dioxane, much lower than the previous advisory level.

Tucson Water, the University of Arizona, and Pima County Regional Wastewater Reclamation Department completed two major research studies in 2011.



Anticipating such changes to 1,4-dioxane guidelines, Tucson Water has been aggressively working to build a new advanced oxidation treatment plant for the water from the nine Tucson Airport Remediation Project (TARP) wells. This new treatment facility will remove 1,4-dioxane and other contaminants from the TARP water supply. Tucson Water is also pursuing reimbursement from those parties responsible for the presence of 1,4-dioxane in our drinking water.

New water-saving rebates – In 2011, two more water saving rebates were begun. The gray water rebate offers up to \$200 to homeowners who install a permanent gray water system. Gray water is waste water from clothes washers, bathtubs, showers, or hand-washing sinks. Using gray water on home landscapes instead of drinking water saves precious water supplies for the future. We also now offer businesses and commercial properties up to \$200 when they replace older, water-wasting urinals with a WaterSense certified High Efficiency Urinal, which uses only one pint per flush.

Building productive partnerships – As technology advances and instruments are able to detect contaminants at levels smaller than parts per billion, Tucson Water professionals must respond with new approaches and systems. Partnerships with local and national entities allow us to leverage funding as a way to gain new knowledge from research. In 2011, Tucson Water completed two major collaborative studies with The University of Arizona and Pima County Regional Wastewater Reclamation Department. We also completed a study for the WaterReuse Foundation, in collaboration with the cities of Phoenix and Scottsdale,

the U.S. Bureau of Reclamation, and the Sanitation Districts of Los Angeles County, among others. We are also active in Arizona's Water/Wastewater Response

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