

# Your Water CONNECTION

## Middle & HS Teachers

### Apply Now for a Paid Summer Internship

Applications are due before June 1, 2011 for Tucson Water's July 11-22, 2011 summer internship program for middle and high school teachers. This intensive two-week course offers teachers from all curriculum areas information about water resource management issues and access to water utility professionals in an educational setting. Intern graduates will receive:

- a stipend for completing coursework and for participating in a 2011-2012 classroom observation visit
- timely resources for your students
- access to Tucson Water experts
- a Project WET Workshop handbook

For program specifics, intern expectations, and an application form, click on [tucsonaz.gov/water/education](http://tucsonaz.gov/water/education). More information is also available by calling (520) 837-2181. Early applications get priority consideration.

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 responsible not only for the water that we serve today, but also for managing the water resources that we will need in the future. With less than 12 inches of rain a year in our desert community, there is limited

opportunity for rainfall to percolate deep into the aquifer and replenish supplies. Regional drought conditions impact Colorado River water levels, critical because over 50% of our drinking water comes from a blend of native ground water and recharged river water.

I'm proud to note that our water usage is among the lowest in the southwest – 96 gallons per person per day for a single family home – a rate that decreases each year. Using conservation programs and alternative water sources will play crucial roles in making our community even more sustainable and drought resistant for generations to come. We must learn how to use all the water resources available to us in a more efficient manner. Tucson Water offers educational programs, incentives and rebates that encourage smart and safe use of rainwater, treated wastewater, and gray water instead of tapping into other drinking water supplies. Turn the page to find out more about conservation programs and their impacts.

— Andy Quigley, INTERIM DIRECTOR, TUCSON WATER



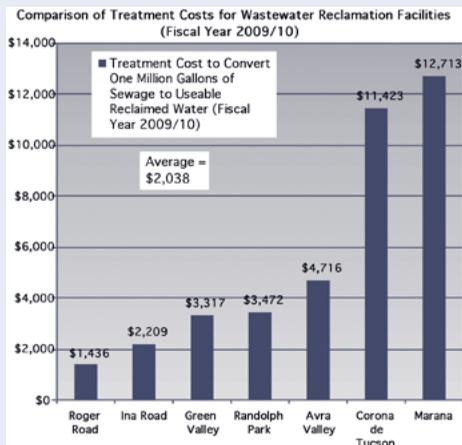
*Collecting rainwater in an outdoor tank and using it to irrigate home landscaping can save precious drinking water.*



## PIMA COUNTY

## A Regional Wastewater System Serves the Needs of All Pima County Residents

Pima County's Regional Wastewater Reclamation Department (RWRD) operates a regional wastewater treatment system. This means that all residential sewer customers are charged at the same rate, regardless of which wastewater reclamation facility (WRF) serves their homes. Because small treatment facilities are more expensive to operate than larger facilities, the regional system model serves to protect the public health and environment by assuring that no County resident is priced out of sewer service. All residents within RWRD's service area benefit from economies of scale and efficient use of public resources that a regional system affords. The graph below contrasts the different costs of operating seven of our major wastewater reclamation facilities.



Your sewer bill is based on the regional average cost of service.

This system also provides the most cost effective operation of our sanitary sewers and treatment facilities. The present system also can more easily meet evolving and increasingly stringent environmental standards to improve the quality of our reusable reclaimed water, thereby conserving our long-term water supply. Finally, a regional system is the best method to protect the public health and our precious Sonoran Desert environment.

**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](http://pima.gov/wwm).

## CITY OF TUCSON

## Make Every Day Earth Day

More than forty years ago the first Earth Day was celebrated to raise awareness of actions we all can take to protect the environment. While most of us want to take responsibility for our environment, we ask ourselves, “What difference can one person make?” One thing we all can do is to reduce our waste and recycle whatever we can. Remember the 3 R’s—Reduce, Reuse, and Recycle.

**Reduce** – Did you know the average American throws away about 4.6 lbs. of waste every day! Try to buy items with minimal packaging; buy non-perishable goods in bulk and buy only what you need when buying perishables. Purchase fewer disposable items like paper plates and napkins and buy a reusable bottle instead of bottled water. Pick up reusable bags instead of taking plastic bags. And, if you do use plastic bags, remember to return them to the grocery store for recycling.

**Reuse** – It is inevitable that we will throw out things we don't use anymore. Before throwing something in the trash, consider donating it to a charity. You can put the item up for grabs on Freecycle ([www.freecycle.org](http://www.freecycle.org)). You never know who might find a use for something you no longer want.

**Recycle** – In Tucson, about 37% of what we throw out every day is recyclable. Nearly all paper products we use – tin and aluminum cans and plastic bottles and jugs – are recyclable in your Blue Barrel. Now you can do even more blue. Rigid plastics are recyclable as long as they fit in the Blue Barrel.

Learn more about the 3 R's at the **17th Annual Tucson Earth Day Festival on Saturday, April 16 from 9:00 AM to 2:00 PM at Reid Park**. It's a free and family-friendly event with a parade, exhibitors, an alternate fuel vehicle show and more. Go to [tucsonearthday.org](http://tucsonearthday.org) for details.

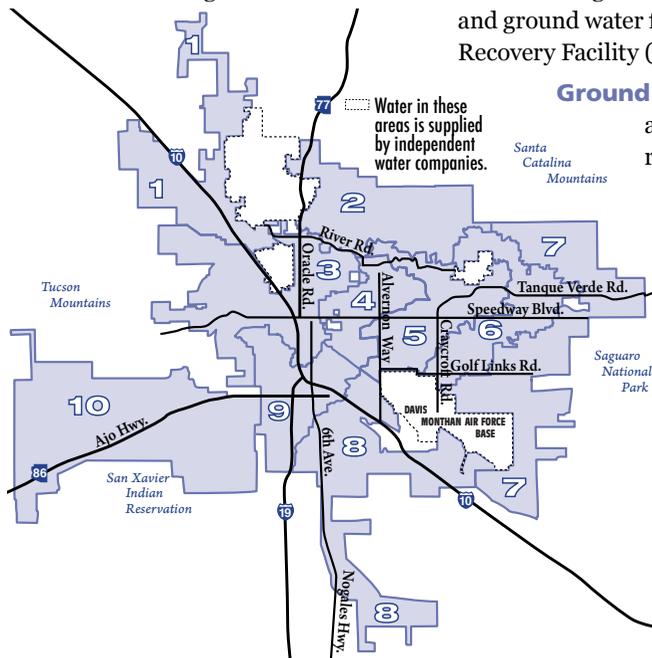
Environmental Services (ES) – Learn about how ES is protecting our ground water and the environment at [tucsonaz.gov/esd](http://tucsonaz.gov/esd) and (520) 791-3171.

# Water Quality report

February 2011



More than 20,000 individual tests are performed annually, focusing on the water quality from 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 tested

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

Zones	Sodium (mg/L*) 82 SP	Mineral Content (mg/L*) 243 SP	Hardness (mg/L*) 82 SP	pH Level (S.U.) 227 SP	Temperature (deg F) 227 SP
1	57	379	217	7.9	69
2	63	479	225	8.1	71
3	60	468	209	8.0	70
4	58	458	200	8.0	71
5	57	438	194	8.1	69
6	61	454	214	8.1	70
7	56	425	197	8.1	68
8	62	480	231	8.1	70
9	53	463	199	7.9	71
10	51	334	137	8.0	71
<b>Avg</b>	<b>58</b>	<b>466</b>	<b>204</b>	<b>8.0</b>	<b>70</b>

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

## coliform

EPA standards for positive samples

Positive results  
243 samples



## chlorine

EPA Standard  
Max. 4.0 mg/L

Actual Average  
243 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:

<b>Sodium</b>	<b>64 mg/L</b>	<b>(Feb. 16, 2011)</b>
<b>Mineral Content</b>	<b>458.5 mg/L</b>	<b>(Feb. 10–Mar. 8, 2011 avg.)</b>
<b>Hardness</b>	<b>231 mg/L</b>	<b>(Feb. 16, 2011)</b>
<b>pH</b>	<b>7.81 S.U.</b>	<b>(Feb. 10–Mar. 8, 2011 avg.)</b>
<b>Coliform Bacteria</b>	<b>Negative</b>	<b>(Feb. 11, 2011)</b>
<b>Chlorine Level</b>	<b>1.05 mg/L</b>	<b>(Feb. 10–Mar. 8, 2011 avg.)</b>
<b>Temperature</b>	<b>73.7 F</b>	<b>(Feb. 10–Mar. 8, 2011 avg.)</b>

To obtain information about water quality go to [tucsonaz.gov/water](http://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 request brochures on water quality.

# Efficiency Programs Can Save Money and Water

Tucson Water customers have access to some of the most innovative water efficiency programs in the nation thanks to the outreach efforts of the Public Information Conservation Office. This team of ten professionals is involved in programs that touch commercial, industrial, multi-family and residential users, with the potential to create savings in water, costs, maintenance and energy:

- **Offering rebates** for high efficiency toilets, high efficiency one-pint urinals, irrigation system upgrades, and gray water system installation.
- **Creating water harvesting demonstration sites** throughout the service area.
- **Administering the WaterSmart Business Program** to assist businesses in conducting a self audit, creating a water management plan, and developing a water budget.
- Overseeing the **water waste enforcement program**.
- Conducting outreach for the **Arizona RinseSmart Program** to install free pre-rinse nozzles in restaurant and commercial kitchens.
- Overseeing **SmartScape and WaterSmart** workshops, seminars, and field instruction geared for Green Industry professionals and residential water customers.
- Expanding **Beat the Peak** to promote year round water efficiency indoors and outdoors.
- **Educating customers** – answering calls, making presentations, providing information and guiding tours.
- Coordinating and administering **Education programs for K-12** including teacher training.
- Coordinating with Pima County in drought response planning and water conservation outreach.

According to Conservation Program Manager Ilene Grossman, the residential toilet rebate program is a great example of the positive impact of a single program. “Since

July 1, 2010, customers have replaced some 1,600 water-wasting toilets with models that flush with 1.28 gallons of water or less. We estimate those new high-efficient toilets will save more than 17 million gallons of water a year.”

Grossman, who has worked with the utility for four years, sees Tucson Water customers as engaged conservationists, eager to save water. “Tucson was the first community in the nation with a gray water



*Left to right: Conservation Program Manager Ilene Grossman, who holds a Masters of Science in Environmental Education and Interpretation from the University of Wisconsin-Stevens Point, with Pete the Beak, Tucson Water's conservation mascot.*

ordinance. New homes and duplexes have to be built with a separate gray water system, capable of re-using water from clothes washers, bathtubs, showers or bathroom sinks for outdoor irrigation. Using gray water can save a household 13,000 gallons of drinking water a year.”

In January, the Conservation Office team launched a new single-family residential gray water rebate, where Tucson Water will reimburse up to \$200 when a permanent gray water irrigation system is installed at home. In the coming months watch for more free resources on the Tucson Water website, including new downloadable materials and streaming videos.

To learn more about water-efficiency programs and rebates, go to [tucsonaz.gov/water/conservation](http://tucsonaz.gov/water/conservation) or call (520)791-4331. Applicants must follow a specific process and adhere to guidelines to qualify for most rebates, equipment, and funding.