

## On the Water Front



For 34 years Tucson Water has asked its customers to “Beat the Peak” each summer, with the official mascot, “Pete the Beak”, encouraging customers to conserve water. Each year, our customers have used water more efficiently during our hottest months.

In 1976, when the “Beat the Peak” program was launched, conditions were different than they are today. After many decades of growth, the wells, pumps, and pipelines that served our community were insufficient to meet heavy demands for water during the summer months, and we had to ask our customers to restrict water use during certain hours of the day. Initiation of the “Beat the Peak” program was a catalyst for community change. Public awareness of our resources and our unique desert environment grew, reflected in the use of desert-adapted plants for our landscapes.

Times have changed since then. The infrastructure that delivers water to our homes, businesses, and schools is capable of meeting demands all year round. We have even begun to shift from depending solely on non-renewable ground water supplies to renewable supplies such as Colorado River water and reclaimed water. During this transition period, the “Beat the Peak” program has continued, and it has allowed Tucson Water to keep critical ground water wells shut down even during the months of high demand. As we move closer to 100 percent use of renewable water supplies, it’s important that we keep thinking about water efficiency year round.

Now, the “Beat the Peak” program will run throughout the year to raise awareness of the importance of water efficiency and provide information, tips and encouragement to customers to be smart water users. There are many things that we do throughout the year that will impact our water use over time. For example, fall is the planting season in Tucson, and the landscapes that we plant this season will impact the amount of water consumed community-wide each summer. Tucson Water is prepared to help customers learn to be water efficient today to ensure sustainability for years to come.

**Jeff Biggs, Director, Tucson Water**

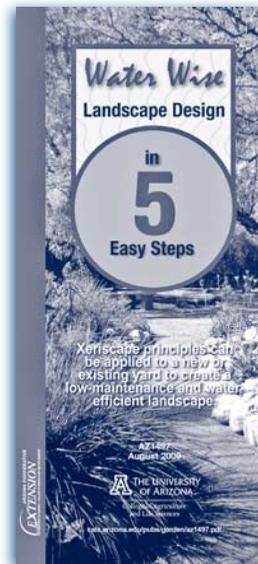
# Your Water CONNECTION

News & Tips for Tucson Water Customers  
October 2010 [www.tucsonaz.gov/water](http://www.tucsonaz.gov/water)

## Create a Water-Efficient Landscape this Fall

Autumn in Tucson brings glorious weather and a much needed break from the heat. October is the perfect time to start your fall planting. Before grabbing a shovel, take these **5 easy steps** to create a low-maintenance, water-efficient landscape design.

- 1. Draw a base map.** Get a better sense of your space by measuring and drawing the site. Include property lines, existing plants, irrigation, utility lines, structures, paths, etc.
- 2. Note property characteristics.** On the base map, indicate areas that are wet or dry, cold or hot, sunny or shady, windy, etc. Note location of all water sources, including rainwater runoff.



- 3. Designate usage areas.** What portion of your yard is ideal for playing? Entertaining? Map out the best areas for these activities, as well as spots for gardening, pets, storage, service and utility. Create opportunities for water harvesting through location and design of pathways as well as the paving materials used.

Source: “Water Wise Landscape Design in 5 Easy Steps” at <http://cals.arizona.edu/pubs/garden/az1497.pdf>

**Water-Efficient Landscape** *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](mailto:TW_Web1@tucsonaz.gov)

**Pima County –**

### **Conveyance Division Maintenance Section**

Last month we provided you with a brief overview of the Conveyance Division. This month we would like to introduce you to the important work of the preventative maintenance component of the Conveyance Division.

The Conveyance Division Maintenance Section crews are on the job around-the-clock with one mission: to provide quality sewer service, to protect public health and safety, and to safeguard the environment.

On any given day, Pima County Regional Wastewater Reclamation Department field crews are in our community, maintaining the sanitary sewer conveyance system. Utility Maintenance Workers (UMW) are responsible for performing preventative maintenance work throughout more than 3,460 miles of sanitary sewer lines, 64,150 manholes, and 30 sewage pump stations. On a typical work day, UMW crews will service approximately 4,000 feet of sewer lines.

A Computerized Maintenance Management System (CMMS) is used to track, manage and control the sanitary sewer network. The CMMS generates work orders for crews, specifying which areas require service and the type of maintenance needed. The CMMS software program allows UMWs to provide input on completed work that updates the CMMS database, generating proactive maintenance schedules and activities.

UMWs use a number of specialized trucks to maintain the system:

- Rodder trucks cut through tree roots, grease, and debris that clog sewer lines.
- Combo trucks provide a high-powered water spray that can dislodge debris in the sewers and clear the lines. Combo trucks also vacuum out debris.

Closed Circuit Television (CCTV) cameras are another specialized tool used by the Division. CCTV cameras allow staff to get a close interior view of the sewer system to identify blockages and lines that are in need of service, repair or rehabilitation.

**City of Tucson Environmental Services –**

### **Brownfields Grant Key to Fort Lowell Park Restoration**

If you've recently driven by the intersection of North Craycroft and Fort Lowell Roads, you may have noticed some demolition taking place on the southwest corner. This demolition is the first phase of three projects to prepare the 5.5 acre parcel as part of the Fort Lowell Park Master Plan and Restoration Project. (See the Plan at [www.pima.gov/cultural/FtLowell/index.html](http://www.pima.gov/cultural/FtLowell/index.html).) When the project is completed, it will add open space and museum facilities to the existing park. City of Tucson Environmental Services (ES) is working in partnership with Pima County on the environmental cleanup at the site. The Master Plan is a project of the City's Parks and Recreation Department.

The site is archaeologically significant as it was occupied originally by the Hohokam and later developed as the Camp Lowell Army Post. In more recent history, the site was used for steel tank manufacturing. ES began working on the Old Fort Lowell Restoration Project by conducting soil sampling which revealed the soil was impacted with polynuclear aromatic hydrocarbons (PAHs), arsenic, and lead exceeding the standards set by the state to be protective of human health.

ES received a \$200,000 Environmental Protection Agency (EPA) Brownfields Cleanup Grant to assist with the remediation on the property. Brownfields are defined as abandoned, idled, or under-used property where expansion or redevelopment is complicated by real or perceived contamination. The land may be contaminated by hazardous waste or pollution but can be reused once it has been cleaned up. The Program seeks to reclaim these brownfields to redevelop them into productive property.

After demolition is completed, ES will begin soil remediation (cleanup) on the south end of the property where historic ruins exist. Measures will be taken to minimize dust and inconvenience to surrounding neighbors.

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

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

# Create a Water-Efficient Landscape this Fall

## 4. Divide the yard into water use zones or hydrozones.

The *Oasis zone* has the highest water use and is located closest to the house to provide evaporative cooling. The *Arid zone* requires the least amount of water, often relying only on natural rainfall, and is farthest from the house. The *Transition zone* is typically located between these two extremes and has low to moderate water use. Rainwater and graywater can be used in all three zones.

### Xeriscape Landscape Principles

#### Zone 1

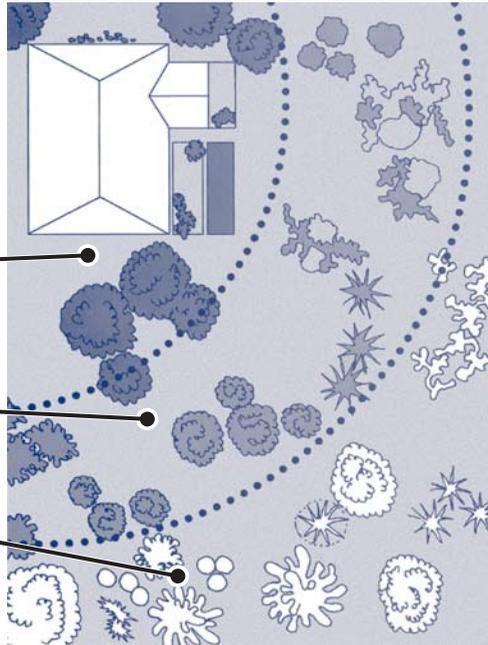
Mini-oasis: lush garden and shade trees

#### Zone 2

Low water-use ground covers and shrubs

#### Zone 3

Drought tolerant native vegetation



## 5. Create the Master Plan.

Draw any new structural features first then add all water harvesting elements - berms, basins, cisterns, gray water. Select plants and ground cover best suited for the different hydrozones.

A WaterSmart landscape design will save you time, energy, money and water.

Tucson Water is a sponsor of free WaterSmart workshops for homeowners. A schedule of upcoming workshops is available at [www.tucsonaz.gov/water/watersmart.htm](http://www.tucsonaz.gov/water/watersmart.htm). For more information on landscaping and water conservation, contact the

SmartScape Program at (520) 626-5161 or [www.ag.arizona.edu/pima/smartscape](http://www.ag.arizona.edu/pima/smartscape).

## Water Efficiently -

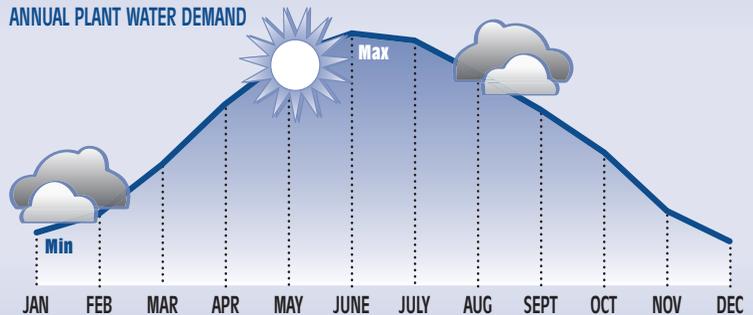
It's important to adjust your watering schedule and irrigation timer at least seasonally, because plants can use 3 to 5 times as much water during the hot, dry summer months as they do during the winter.

Besides weather and seasonal conditions, watering frequency depends on plant type, plant size, soil type and plant establishment.

Contact Tucson Water at (520) 791-4331 for landscape watering guidelines.

## Change Your Watering Schedule with the Seasons

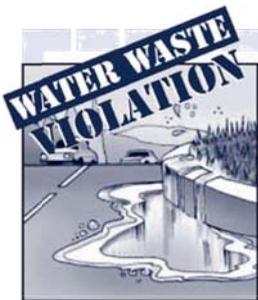
ANNUAL PLANT WATER DEMAND



Visit the Tucson Water website at [www.tucsonaz.gov/water](http://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.





# Call (520) 791-2514

## Report Suspected Water Wasters at Commercial and Multi-Family Sites

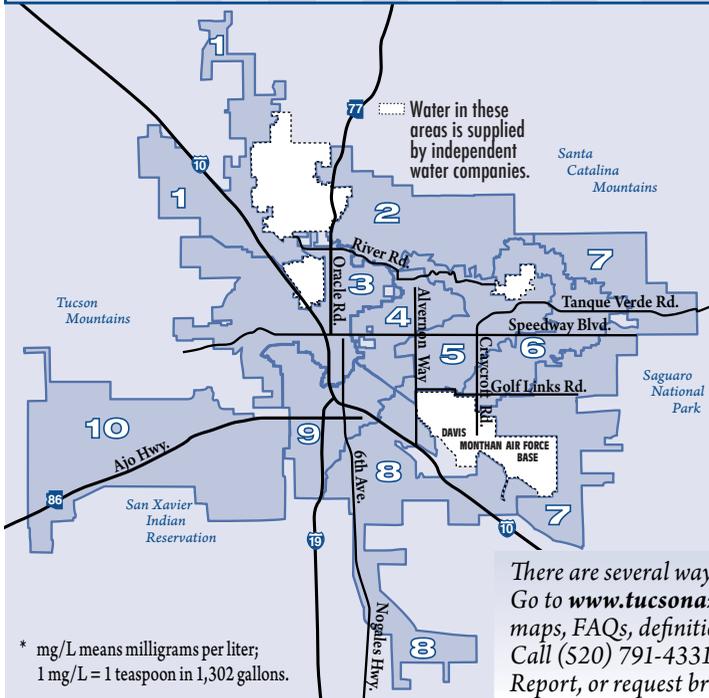
Leave a voice mail with location/address, day and time, and description of the problem.  
**WATER CONSERVATION INSPECTOR INVESTIGATES AND EDUCATES.**

### Water Quality Report - August 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) <sup>84 SP</sup>	44	63	59	55	52	58	43	52	59	51	54
Mineral Content (mg/L) <sup>247 SP</sup>	291	457	438	396	407	415	347	453	427	366	408
Hardness (mg/L) <sup>84 SP</sup>	128	213	193	185	178	203	153	238	179	139	185
pH (S.U.) <sup>247 SP</sup>	7.9	8.0	8.0	7.9	7.8	7.8	7.9	7.6	7.9	7.9	7.8
Temperature (deg F) <sup>247 SP</sup>	88	88	89	89	88	87	89	89	89	89	88



Water in these areas is supplied by independent water companies.

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  
**0%** 247 samples

**CHLORINE**  
 Tucson Water target average  
**0.8 to 1.2 mg/L** Monthly  
 Average  
**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:

<b>Sodium</b>	<b>64 mg/L</b>	(Aug. 2)
<b>Mineral Content</b>	<b>465.4 mg/L</b>	(Aug. 10-Sept. 8 avg.)
<b>Hardness</b>	<b>220 mg/L</b>	(Aug. 2)
<b>pH</b>	<b>7.80 S.U.</b>	(Aug. 10-Sept. 8 avg.)
<b>Coliform Bacteria</b>	<b>Negative</b>	(July 15)
<b>Chlorine Level</b>	<b>1.09 mg/L</b>	(Aug. 10-Sept. 8 avg.)
<b>Temperature</b>	<b>84.5 F</b>	(Aug. 10-Sept. 8 avg.)

There are several ways to obtain information about water quality. Go to [www.tucsonaz.gov/water](http://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.