

Parks, Golf Courses Find Many Ways to Conserve Water City Savers

The environmental ethic of water conservation is deeply engrained in the Tucson region and most residents understand that we live in a desert where water is a precious resource. The City of Tucson understands that too, and actively works to conserve water. The Parks and Recreation Department and City Golf are two of the most water wise organizations in the City. Here are some of the ways they conserve.

- ◆ Thirty-two City parks are irrigated with Reclaimed Water. Many parks have automatic rain gauges that keep the irrigation system turned off if sufficient rain has recently fallen.
- ◆ The Reid Park Zoo uses Reclaimed Water for all irrigation and cleanup and most of the water features in the zoo use a unique re-circulating and filtering system to minimize water use.
- ◆ All City golf courses use Reclaimed Water for irrigation. Crews are also working to upgrade golf course irrigation systems with the latest technology to make sure they deliver water efficiently.
- ◆ Golf courses are inspected daily to determine if any over-watering is occurring and most have on-site weather stations to provide more detailed information about exactly how much watering is needed.

All together these efforts save billions of gallons of drinking water each year.

Your Water Connection

NEWS & TIPS FOR TUCSON WATER CUSTOMERS

Water 101

How Your Water Gets to You

Pumps, Pipes, and Preservation – The Operations & Maintenance Division

The firefighters put the fire out, but who made sure the fire hydrant would work when they needed it? Who are those people you see in the middle of the night repairing a leaking water



main? When you call to report your water is off at 11:00 p.m., who is that person who answers the phone? Meet Tucson Water's Operations & Maintenance (O&M) Division – 190 employees who work 24 hours a day, 365 days a year to keep the water flowing to your home or business.

If it's part of the water distribution system, the O&M Division is responsible for it – wells,

Water 101 continued inside

Have a question for Water 101 or a suggestion for a topic? Call us at 791-4331 or email to

TW_Web1@ci.tucson.az.us

How Your Water Gets to You

Pumps, Pipes, and Preservation – The Operations & Maintenance Division

Water 101 continued from front

boosters, pumps, reservoirs, valves, treatment systems, and thousands of miles of water mains and pipes.

One of the O&M Division's top concerns today is the cost of energy. Many of Tucson Water's pumps and booster stations can be operated by either natural gas or electricity so that we can keep water flowing in the event of a power outage. This redundancy also allows the O&M Division to use the most cost effective power source, so with the recent increases in the cost of natural gas, most pumps and boosters are being run with electricity.

O&M Division crews are on-call 24 hours a day to deal with any emergencies in the water distribution system. They locate and repair leaks and perform on-going maintenance on equipment and landscaping. You can count on these professionals to keep the water moving, from the source to your house.

And yes, they maintain all 15,000-plus fire hydrants in the Tucson Water system.

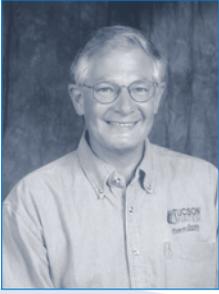
Water Mains Fail for a Variety of Reasons Main Breaks

A water main break never happens at a good time. Every week Tucson Water investigates several leaks in the water system, some of which turn out to be main breaks. A broken water main is an issue for Tucson Water O&M Division crews, and a major inconvenience for the customers who temporarily lose their water service.



Main breaks occur for several reasons. Although Tucson Water informs contractors of where mains are located, they are sometimes broken accidentally by construction crews. More frequently, these leaks are caused by aging mains or pipe that is of poor quality. Much of our water

system consists of small private systems built before there were stringent construction codes to ensure the materials used were of the highest quality. Over the years, these small systems were acquired by Tucson Water as our service area expanded. That means that Tucson Water owns a great variety of types of water mains of various qualities. Some last longer than others. In addition, parts of our water system are very old and time leads to failures in the mains. We're using new technology to monitor some of the larger mains and replace old mains as funds become available, but it's a never ending process. In the meantime, our crews will be out there whenever and wherever they're needed.



On the Water Front

At Tucson Water our responsibility is to make sure there is enough quality water to serve our customers.

That's what we work to do, and, as you can see from the article in this newsletter about our Operations and Maintenance (O&M) Division, we do that 24 hours a day.

Being ready for the future includes improving both our drinking water and Reclaimed Water distribution systems. We're currently working on two new reservoirs to increase our water storage capabilities and expanding the Reclaimed Water system to reach more sites where irrigation can be switched from drinking water to treated wastewater.

We're also using new technology to make sure our major pipelines are secure. The O&M Division is responsible for the Pipeline Protection Program – a preventive maintenance program that monitors the integrity of large pipelines and spots weaknesses caused

by corrosion or structural problems so they can be repaired before they become serious. They are installing a new fiber optic data collection system in our 96-inch main that brings much of our water to Tucson from Avra Valley. This state-of-the-art system will not only allow us to spot problems and repair them early, but will be less expensive in the long run than the technology we have used in the past.

Most importantly, this system will continuously monitor the integrity of these large water mains and alert staff to any changes in the pipeline that could lead to its failure – and much lost water.

By planning for and beginning these improvements today, we'll be ready for the demands of tomorrow.

Dave Modeer
Director, Tucson Water



Clearwater Quality Report - February 2006

56	Sodium (mg/L)
324.5	Mineral Content Average (mg/L)
153	Hardness (mg/L)
7.69	pH (S.U.) Average
Neg*	Coliform Bacteria
0.69	Chlorine level Average (mg/L)
83.9	Temperature Average (deg F)

* Values for December 2005

Visit the Tucson Water Web Site at www.tucsonaz.gov/water

Your Water Connection is produced by Tucson Water. To receive a copy, or to receive this information in Spanish, call 791-4331 or mail your request to: Tucson Water, Customer Information, P.O. Box 27210, Tucson, AZ 85726-7210.

City of Tucson TTY number: 791-2639

Si usted desea este documento escrito en español, por favor, llame al 791-4331.

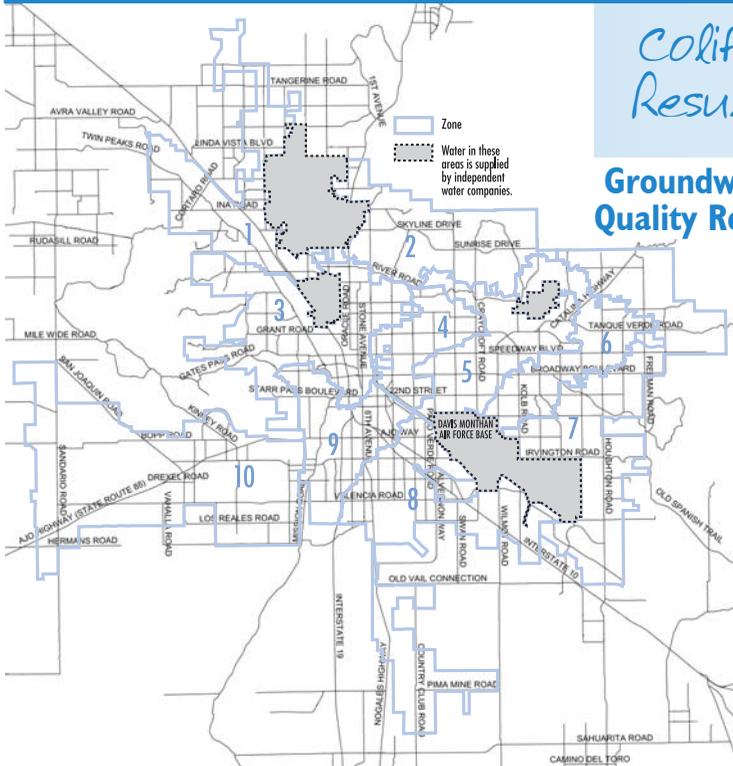


Groundwater Quality Report - December 2005

Water Quality Zone		1	2	3	4	5	6	7	8	9	10	System Wide
Sodium (mg/L) 86 SAMPLING POINTS	Average	51	53	51	52	46	47	41	42	50	43	47
	Range	44-68	50-55	37-58	45-56	33-54	37-54	26-52	40-46	38-56	38-54	26-68
Mineral Content (mg/L) 247 SAMPLING POINTS	Average	421	338	355	318	318	310	268	343	294	246	319
	Range	312-579	246-371	182-430	186-356	209-375	213-363	180-350	223-432	202-380	202-366	180-579
Hardness (mg/L) 86 SAMPLING POINTS	Average	159	141	151	137	130	133	122	182	123	93	139
	Range	111-234	131-153	109-180	117-153	83-168	86-157	85-141	86-270	75-146	73-142	73-270
pH (S.U.) 247 SAMPLING POINTS	Average	7.7	8.0	8.0	8.0	8.0	8.0	7.9	7.7	8.0	8.1	8.0
	Range	7.5-8.2	7.0-8.3	7.4-8.2	7.5-8.2	7.6-8.2	7.0-8.2	7.1-8.2	7.5-8.0	7.8-8.1	7.9-8.3	7.0-8.3
Temperature (deg F) 247 SAMPLING POINTS	Average	71	76	74	76	74	75	72	75	76	76	74
	Range	67-75	68-82	67-79	64-82	65-82	64-82	66-77	66-80	70-81	70-82	64-82

Coliform Bacteria Testing Results - December 2005

Groundwater Quality Report

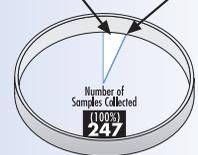


EPA Standard for Positive Samples

5%

Number of Positive Samples for Total Coliform

0.0%



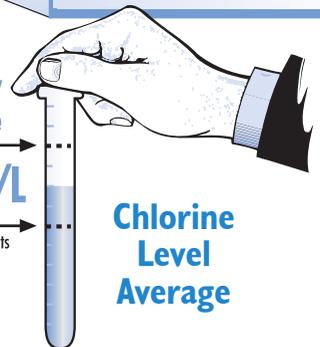
Target = 0.6 to 1.0 mg/L

Monthly Average

0.8 mg/L

247 Sample Points

Chlorine Level Average



"mg/L" means milligrams per liter;
1 mg/L = 1 teaspoon in 1,302 gallons

To give you a more accurate measurement of the water quality in your neighborhood, the Tucson Water service area has been divided into 10 zones based on differences in water pressure and water quality. For a detailed description of the zone boundaries, call 791-4331.

With the exception of chlorine and coliform bacteria, none of the water quality parameters reported here have U.S. Environmental Protection Agency primary standards set for them. For more information about primary and secondary water quality standards, visit Tucson Water's website at www.tucsonaz.gov/water.