October 2005 www.tucsonaz.gov/water

Your Water Connection

NEWS & TIPS FOR TUCSON WATER CUSTOMERS

Conservation Corner

Upgrade Underway for City Water Meters

Water meters are something most of us don't think about much unless there's a problem with ours, but just like any other home appliance they eventually wear out.

Water meters measure the amount of water delivered to your home. As with any measuring device, meters can become less accurate over time. Many Tucson Water meters are more than 20 years old. In order to accurately track both individual water usage for billing purposes and to monitor and evaluate community water demands, Tucson Water has begun a meter replacement program.

Since older meters tend to run a little slower and may not measure all the water going through, the new meters will be more accurate. The slight increase in water measured through your new meter will be small and should have a minimal impact on your monthly water bill.

A private contractor, Metering Services, Inc., will replace the outdated meters. If we replace the meter at your house, your water service may be interrupted temporarily – typically for about 30 minutes. Metering Services will contact you before replacing your meter and will not ask for access inside your home. These employees will be driving a vehicle with the Metering Services logo, and will be in uniform with a photo badge identification. We're replacing about 10,000 meters each year in various parts of our water service area.

Your new meter will operate in the same way as your old one. There is no charge for the meters or installation, but customers will be responsible for any repair or replacement of defective plumbing or deteriorating pipes on the customer side of the meter.

Metering Services will leave a card at your door with information about how to contact them in case you have a problem following the installation. Any other questions or concerns regarding the Meter Replacement Program should be directed to Tucson Water at 791-4621.

Water 101

More Water Blending Faster in Avra Valley

Our blended water is being created faster than anticipated. The recharge basins at the Clearwater Renewable Resource Facility in Avra Valley are working exceptionally well, letting water soak into the earth and blend with the groundwater below in a much shorter period of time than Tucson Water professionals projected when the project first began operation in 2001.

Colorado River water is placed in the 11 basins on a carefully set schedule, according to Tucson Water hydrologist, Jonathan Sax. Eventually this water reaches the water table and blends naturally with the native groundwater. Wells then recover this blend and pipelines bring it to Tucson. About half the water delivered by Tucson Water now comes from the Clearwater Facility.

The water is soaking into the earth at an average of 1.5 feet per day. Sax says that's about twice as fast as experts expected. The basins are working so well that more

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

Water 101

More Water Blending Faster in Avra Valley

Water 101 *continued from front*

water can be recharged in them. Tucson Water is seeking approval from the Arizona Department of Water Resources to increase the amount of Colorado River water recharged from 60,000 acre feet per year (about 19.5 billion gallons) to 80,000 acre feet per year (about 26 billion gallons).

Sax adds that approximately 1.3 billion gallons of blended water are being pumped and delivered each month from the Facility. Within the next year, that number will increase as more wells come on line, thanks to the successful water bond election last May.

More water coming from Clearwater will mean less need to pump our groundwater.

Hydrologist Bruce Prior is a member of the Tucson Water team that created and operates the Clearwater Facility's water recharge system.

Water 101 is a regular column that explores an aspect of our water system in response to questions from Tucson Water customers. If you have a question you'd like to have answered here, or if you have a suggestion for a topic, please call us at 791-4331 or email TW_Web1@ci.tucson.az.us.

On the Water Front

Recharge. At Tucson Water we talk a lot about it. We're not talking about recharging batteries, but recharging water really is somewhat the same idea. In a way, the water is renewed – just like a battery is when you recharge it.

Our recharge basins at the Clearwater Facility west of the Tucson Mountains are where our blended water – the blend of groundwater and recharged Colorado River water that makes up half of the water we use – is created. And it's working well.

In fact, the river water is soaking into the ground at Clearwater faster than our studies anticipated it would, so we're going to begin recharging more water there soon.

There are three reasons water recharge is so perfect for our needs here in the desert.

First, letting our river water pass through hundreds of feet of earth, filters many impurities out of it and lets it blend naturally with the groundwater in the water table.

Second, the Colorado River picks up a lot of calcium and other natural minerals as it flows through Utah and northern Arizona. Blending this hard Colorado River water with groundwater that has a lower mineral content creates a blended water with fewer minerals that is then delivered to you.

Third, recharge lets us 'store' Colorado River water that we don't need yet. Phase II of Clearwater, which Tucson Water will begin constructing next year, will provide additional opportunities to store excess water. It's like having a natural reservoir underground where we can keep blended water until we need it in the future.

Recharge also plays an important part in the process of creating Reclaimed Water – used for irrigation at golf courses and parks. That's another story that I'll tell you about in a future issue of this newsletter.

If you haven't ever seen the Clearwater Facility, we'd be happy to show it to you. You can arrange a tour of Clearwater by calling us at 791-4331. You'll see how recharge is helping Tucson Water make sure we have enough quality water for the future.

Dave Modeer
Director, Tucson Water

Clearwater Quality Report–
September 2005

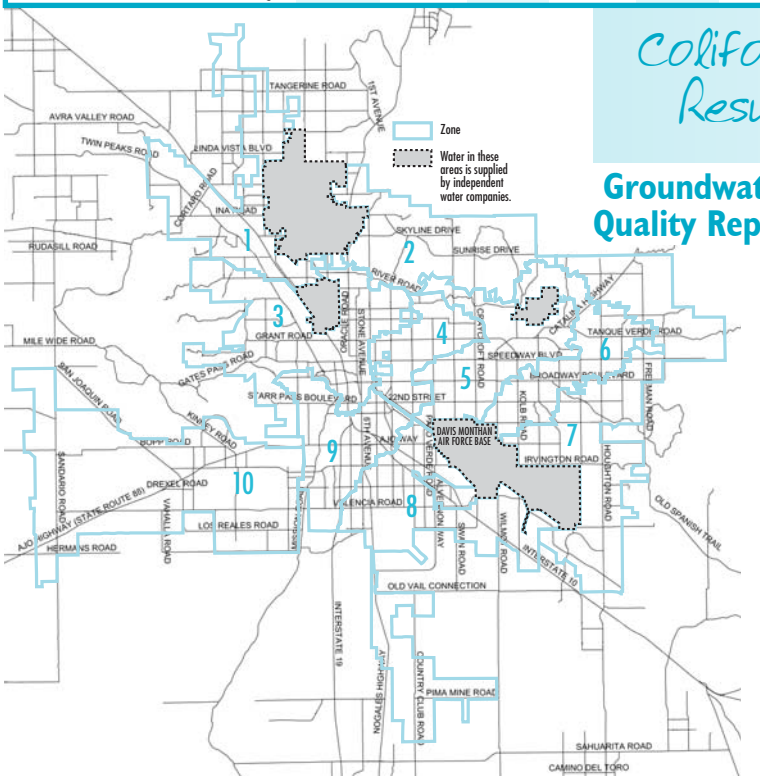
51	Sodium (mg/L)
349.2	Mineral Content (mg/L)
145	Hardness (mg/L)
8.07	pH (S.U.)
Neg	Coliform Bacteria
0.79	Chlorine level average (mg/L)
84.5	Temp (deg F)

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

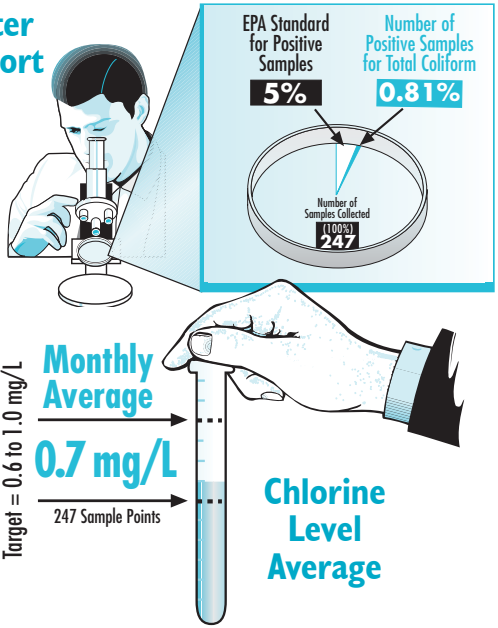
Your Water Connection is produced by Tucson Water. To receive a copy, or to receive this information in Spanish, call 791-4331 or mail your request to:
Tucson Water, Customer Information, P.O. Box 27210,
Tucson, AZ 85726-7210.
City of Tucson TTY number: 791-2639
Si usted desea este documento escrito en español, por favor, llame al 791-4331.

Groundwater Quality Report – July 2005

Water Quality Zone		1	2	3	4	5	6	7	8	9	10	System Wide
Sodium (mg/L) 78 Sampling Points	Average	51	51	47	38	40	43	31	42	47	43	43
	Range	39-71	49-53	19-59	30-54	27-50	36-48	23-46	40-44	38-55	38-50	19-71
Mineral Content (mg/L) 247 Sampling Points	Average	379	336	325	255	279	304	254	336	304	256	300
	Range	182-558	319-349	187-399	186-347	168-355	218-342	177-335	259-436	212-446	212-337	168-558
Hardness (mg/L) 78 Sampling Points	Average	235	142	137	109	124	131	114	183	109	89	131
	Range	158-310	130-152	101-174	72-148	91-172	85-152	83-134	130-266	71-140	73-128	71-310
pH (S.U.) 247 Sampling Points	Average	7.6	7.8	7.8	7.7	7.6	7.6	7.6	7.4	7.6	7.7	7.7
	Range	7.2-8.0	7.5-8.1	7.3-8.1	7.4-8.0	7.1-8.0	7.1-8.0	7.2-7.9	7.1-7.7	7.1-7.9	7.4-8.0	7.1-8.1
Temperature (deg F) 247 Sampling Points	Average	85	91	88	90	89	89	89	88	91	91	89
	Range	75-91	87-93	79-100	84-97	79-95	81-93	84-94	83-97	84-97	88-94	75-100



Coliform Bacteria Testing Results – July 2005



"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**.