

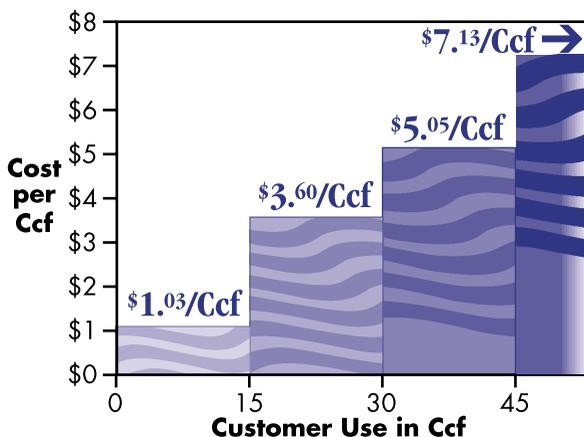
## Conservation Corner

### Save Water – Save Dollars

#### Water Rates Encourage Conservation

Tucson Water customers are wise water users – understanding that water is a precious resource. Tucson Water's water rates are carefully designed to encourage water conservation.

An example is our water rate structure for residential customers. Water rates are set to reward customers who use less water with a lower cost per hundred cubic feet (Ccf). The rates increase as water use increases with customers who use the most water paying the highest rates. In other words, customers pay less for the first 15 Ccf's they use, then more per Ccf on a progressive scale as they use more water during the month. The chart below illustrates this rate structure.



"Ccf" means one hundred cubic feet  
1 Ccf = about 750 gallons

## Your Water Connection

NEWS & TIPS FOR TUCSON WATER CUSTOMERS

### Water 101

Planning for our Water Future

## "Hydraulic Models" Help Planners Design the Water System of Tomorrow

**Water 101** is presenting the "tools" Tucson Water is using to complete its **Long-Range Water Resource Plan**. This plan looks ahead 50 years to what Tucson will be like, how much water we'll need, where that water will come from, and what its quality will be. One way our people look into the future is with the "Water System Planning Tool".

Tucson Water's drinking water system consists of a complex network of more than 4,200 miles of water pipes, 200+ wells, 50+ reservoirs, and tens of thousands of valves, automated controls and pumps. All told, the system is valued at more than \$1 billion.

In order to make decisions about constructing, expanding, and operating this large interconnected system, Tucson Water

*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](mailto:TW_Web1@ci.tucson.az.us)

## Water 101

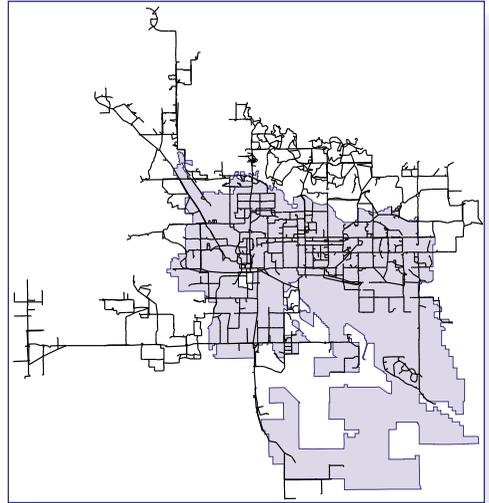
# “Hydraulic Models” Help Planners Design the Water System of Tomorrow

Water 101 continued from front

uses “hydraulic models” - sophisticated computer models that allow water system engineers to graphically represent water sources, the size and type of pipelines and reservoirs, locations of pumps and valves, and water pressure and water flow requirements.

These models can become very complicated, so we simplify them by creating a “system skeleton” that represents only the major elements of our water delivery system. Information from the system is entered into the model and the model is tested to ensure that it represents the “real-life” water system. Once this “calibration” is complete, the System Model can be used to determine how changes, additions or modifications will affect how the system operates.

Using information from our Population and Demand tool (see April 2004 – *Your Water Connection*) and projections about where future residences and businesses may be built, Tucson Water planners can use the System Model to evaluate various strategies for pumping, transporting, storing and delivering water. Then they can make smart and cost-effective decisions about how and where the water system should be expanded or adapted to meet growing water demand. The System Model is one more resource in Tucson Water’s Long Range Planning Tool Box that will help ensure there are adequate water supplies, storage capacity and water pressure to meet our needs in the decades ahead.



*Tucson Water planners use this hydraulic model to learn how changes to our water system will affect current and future customers. City limits are in blue.*

## New Water Rates Begin in July

On June 7, the Mayor and Council adopted new water rates which will become effective July 12. The average rate increase is 1.5%.

To encourage wise water use, the new water rates continue to send the “use more water, pay more money” signal which has been the hallmark of our approach to rate-making for many years. For example, about 75% of our residential customers use 15 Ccf (about 11,000 gallons) or less per month. They will see a *maximum* increase in water charges of \$.15, but a customer who uses water in the “super block” (46 or more Ccf per month) will see a *minimum* increase in water charges of \$4.07.

Commercial, industrial and all other customers will also see their water bill increase, following the same pattern. The higher the water usage, the greater the water bill.



# On the Water Front

Our new water rates take effect this month, but most customers will barely notice the 1.5% increase that will add a maximum of \$.15 per month to their bills. Our financial plan forecasts the need for this level of increase every other year for the near future. There are several reasons why we're able to keep the rates so stable in an economic climate where many costs are rising rapidly.

## 5-Year Plan

As most people know, planning ahead can help you work more cost-effectively. At Tucson Water we maintain a 5-year financial plan that allows us to prepare for the future, budget wisely and do the most with the funds we have.

## System Equity Fee

This fee, instituted last year, is designed to make sure growth pays its fair share when it comes to our water system. New homes and businesses that 'tap into' the existing Tucson Water system enjoy the advantages of service from a \$1 billion infrastructure that Tucson Water customers have paid for over the years through their water rates. New development now pays a fee to become a part of that system and helps keep monthly water rates lower.

## Customer Input

Tucson Water management and financial professionals work closely with customers in developing the utility's financial plan and rate structure. The Citizens Water Advisory Committee devotes long hours to reviewing and providing input on the complicated financial planning required to keep Tucson Water operating efficiently.

## Working More Efficiently

As a utility, we are always working to become more cost-efficient, better trained and more streamlined so we can provide better service more effectively. Our Maintenance Management Program and our Re-Engineering effort are both internal initiatives that are improving the ways we work for you.

Dave Modeer  
Director, Tucson Water

### Clearwater Quality Report- June 2004

51*	Sodium (mg/L)
263.6	Mineral Content (mg/L)
119	Hardness (mg/L)
8.07	pH (S.U.)
Neg*	Coliform Bacteria
0.89	Chlorine level average (mg/L)
80.6	Temp (deg F)

\* Values for May 2004

Visit the Tucson Water Web Site at <http://www.cityoftucson.org/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 - April 2004

Water Quality Zone		1	2	3	4	5	6	7	8	9	10	System Wide
Sodium (mg/L)	Average Range	52 41-71	48 44-50	45 20-54	45 32-50	45 36-49	45 35-49	33 22-46	43 40-44	47 39-56	40 39-41	44 20-71
Mineral Content (mg/L)	Average Range	404 179-575	310 280-492	309 178-407	264 182-300	283 185-339	280 197-310	246 175-299	360 276-433	323 202-470	207 198-228	294 175-575
Hardness (mg/L)	Average Range	191 151-224	127 115-140	145 98-215	105 67-121	121 97-140	122 91-140	120 85-143	202 139-251	115 73-179	76 72-84	129 67-251
pH (S.U.)	Average Range	7.4 7.2-8.0	7.9 7.5-8.2	7.5 7.1-7.9	7.7 7.4-8.1	7.6 7.0-8.2	7.8 7.2-8.1	7.7 7.4-8.1	7.4 7.3-7.7	7.5 7.2-8.0	7.5 7.4-7.9	7.6 7.0-8.2
Temperature (deg F)	Average Range	78 76-81	79 74-82	78 72-82	81 75-85	79 71-85	79 75-82	78 73-82	78 73-82	79 71-85	77 73-83	79 71-85

## Coliform Bacteria Testing Results - April 2004

### Groundwater Quality Report

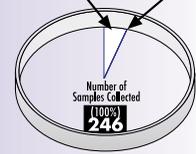


EPA Standard for Positive Samples

**5%**

Number of Positive Samples for Total Coliform

**0.0%**

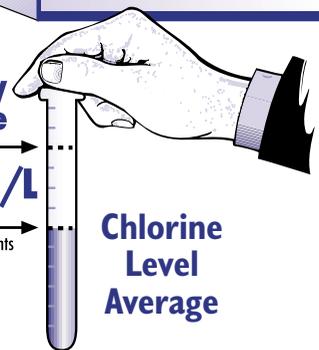


Monthly Average  
**0.6 mg/L**

Target = 0.6 to 1.0 mg/L

246 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.cityoftucson.org/water](http://www.cityoftucson.org/water).