Vol. 2 No. 4 October 2004

Water Info Now

EMPACT News

The latest information about the EMPACT water quality information program

Conservation Corner

Watering outdoor landscapes with captured rainwater is a great way to save our precious drinking water for other uses. It also helps you save money by lowering your monthly water bill.

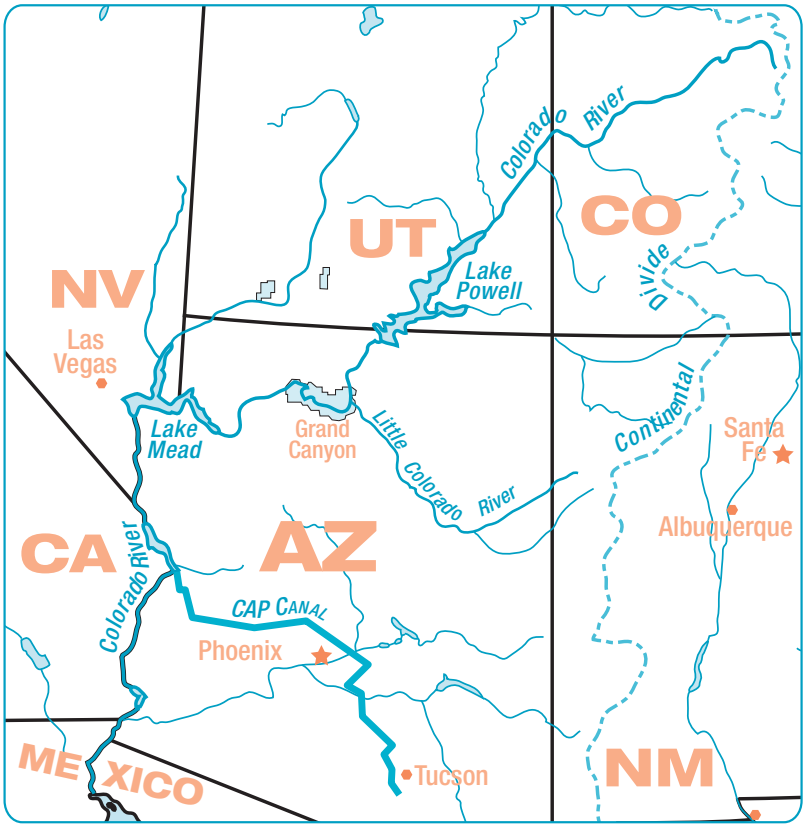
Rainwater harvesting is simple and convenient – all it takes is a system to collect and deliver the water where you need it. Even using a barrel, or creating a raised perimeter around trees and shrubs, can work effectively. For more information, call our Conservation Office at 791-4331. Or, visit our home page at **www.cityoftucson.org/water** and click on the Conservation button to access the Water Harvesting Manual.

Tips on Saving Water

Long Range Plan Focuses on the Future of the Colorado River

Water from the Colorado River makes up about half of Tucson's drinking water supply. We're now using about 20 billion gallons per year, and we have access to as much as 45 billion gallons per year in the future. As the drought in the West continues and the region's water demands grow, it's especially important that we do everything we can to protect this important resource.

Tucson Water is an active participant in assuring that the issues that threaten the Colorado River are being addressed. One of the ways we're doing this is through our Long Range Water Resource Plan. The three main questions being addressed by the Plan are where will our water come from in the future, what will our water cost, and what will its quality be. The plan projects Tucson's drinking water needs all the way to the year 2050, and it evaluates how we can meet those needs by utilizing our three water sources – groundwater, Colorado River water and effluent. The answers to those questions vary according to different strategies that the Plan allows us to simulate through computer models. We will explore this topic further in the next newsletter.



For more information visit our home page at **www.cityoftucson.org/water** and click on the link on our Hot Topics section, or call our Public Information Office at 791-4331.

Partner in Focus

National Science Foundation

WQC Director Ian Pepper, University of Arizona

In 1998, the University of Arizona, with the support of the National Science Foundation (NSF), established the country's only NSF Center for Water Quality to improve the flow of science research knowledge between the University, industry and governmental agencies with respect to water quality. The Center's mission is to conduct research that evaluates physical, chemical, and microbial processes that affect the quality of surface and subsurface waters utilized for drinking water supplies. Good quality drinking water is defined as water with acceptable purity, taste, and odor characteristics, which is safe with respect to human health and welfare.

Tucson Water and the NSF Water Quality Center work together on research projects measuring water quality parameters in the drinking water distribution system as well as Colorado River water. Together, they communicate this information to the public through the EMPACT program.

For more information about the Center and its research, please visit **wqc.arizona.edu**, or call (520) 626-3328.

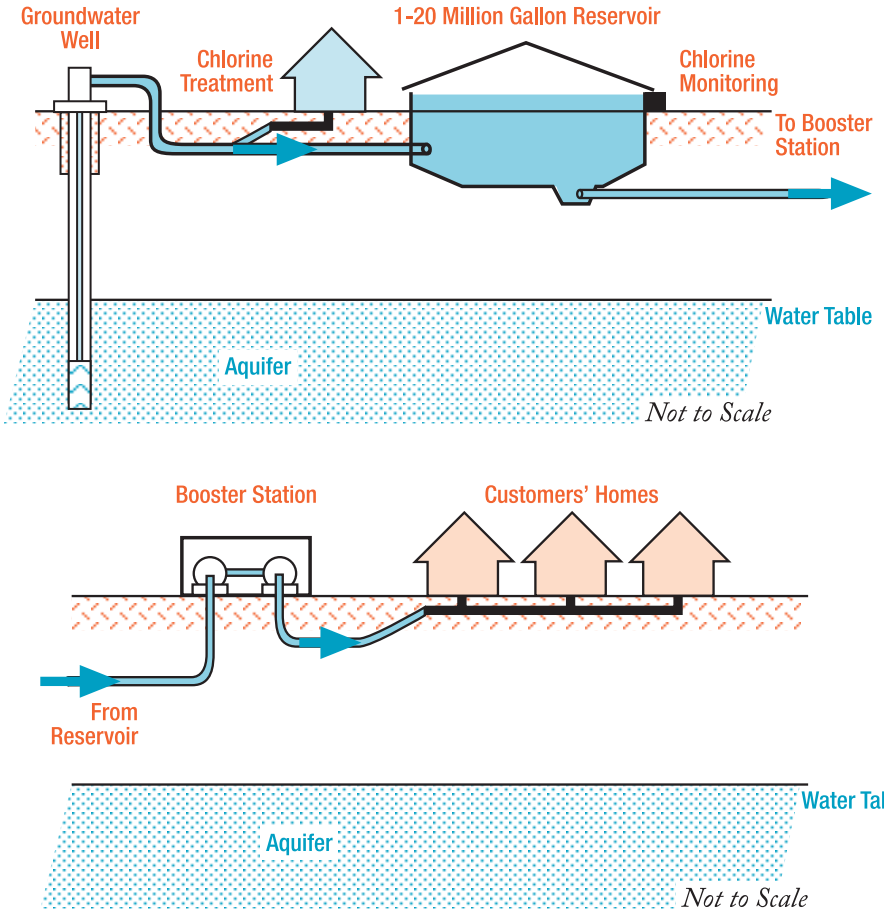
Water Quality 101

Ever wondered how drinking water is delivered to where you live, work and play and how the delivery may affect the quality? Drinking water is generally delivered through a pipe network that connects the water source to your tap.

Tucson Water's drinking water delivery or distribution system is located in a 375-square-mile service area and delivers more than 37 billion gallons of drinking water each year to 675,000 customers. The distribution system is made up of more than 200 wells or points of entry, 20 reservoirs that have a total storage capacity of 250 million gallons, 4,200 miles of pipeline, and hundreds of booster stations and pressure control valves.

The source water is chlorinated at the points of entry before being added to the distribution system. At this point it is defined as drinking water. The chlorine level is monitored and adjusted as needed in reservoirs and at other sites throughout the distribution

How Your Water Is Delivered To You



system. As the drinking water is pumped to reservoirs for storage and to help maintain adequate water pressure, it is delivered to homes along the way. Booster stations are used to keep the flow of the drinking water constant, and maintain a constant pressure to pump it to homes at higher elevations. We will explore this topic further in the next newsletter.

Tucson Water Tracks Water Quality

Arsenic

Arsenic occurs naturally in groundwater and is found in rocks, vegetables and the human body. It can enter drinking water supplies in communities where groundwater makes up a large part of the total water supply, like Tucson. Some people who drink arsenic-contaminated water over many years could experience skin damage or problems with their circulatory system, and have an increased risk of getting cancer.

The EPA recently lowered the amount of arsenic allowed in our nation's drinking water from 0.050 milligrams per liter (mg/L) to 0.010 mg/L, effective January 2006. A milligram per liter is the same as one teaspoon in 1,320 gallons.

Tucson Water will not have difficulty meeting the new standard because most of our wells contain arsenic below 0.010 mg/L except for two wells in our main distribution system, which in 2003 had levels of 0.014 mg/L and 0.010 mg/L respectively. These wells will be closed or the water they produce will be blended with water from wells with little or no arsenic to lower the arsenic level in the drinking water.

Another exception is for an isolated water system, which has a single well as its only source of drinking water. In this case Tucson Water participated in an American Water Works Research Foundation project to evaluate the effectiveness of point-of-use water treatment filters designed to remove arsenic from the water used for drinking and cooking, and is also evaluating the effectiveness of drilling a new well.

For more information call our Water Quality Management Division at 791-5252. For general arsenic information call Marti Lindsey at the UA Southwest Environmental Sciences Center, (520) 626-3693, or EPA's Safe Drinking Water Hotline, 1-800-425-4791.

* A part per billion is the same as one microgram per liter and is equivalent to one teaspoon in 1.3 million gallons.

Q&A

Customer: Is there mold in my drinking water?

EMPACT Team: No, mold is not found in our drinking water and is generally not found in any municipal drinking water supply due to the closed nature of the distribution system.

Mold produces tiny spores that float through the air and begin growing when they land on a damp surface. Mold can grow around a leaky pipe but is unlikely to cause an earthy or moldy taste in the drinking water due to the chlorine that is present, and the fact that the water is flowing outward away from the pipe. Mold is considered a problem in air, but not in drinking water.

Email your questions about drinking water quality to Dan Quintanar at Dan.Quintanar@tucsonaz.gov.

Tucson Water
P.O. Box 27210
Tucson, AZ 85726-7210

EMPACT

EMPACT News is published by the EMPACT Team led by Tucson Water and provides up-to-date information about water quality in the greater Tucson area. To be added to the mailing list, please call 791-5080, ext. 1372 or email Dan.Quintanar@tucsonaz.gov.

Esta información está disponible en español. Por favor llame al 791-5080, ext. 1372.

For more information about the EMPACT program for Tucson's water quality reporting, visit the Tucson Water web site at **www.cityoftucson.org/water**. For more information about the USEPA's EMPACT programs nationwide, visit the EPA website at **www.epa.gov/empact**.