

# 2011 WATER QUALITY REPORT

## METRO SOUTHWEST - E&T



May 2012

### Metro Water Delivers Safe Drinking Water

Metro Water District is pleased to report that the water delivered to your tap meets all safe drinking water standards. We provide this annual Water Quality Report as required by the Federal Government under the Safe Drinking Water Act. We believe customers who are well informed about their water supply are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

### Where does your water come from?

Metro Water District uses groundwater from the southwest portion of the Tucson Basin aquifer. The water in our aquifer was created primarily from mountain runoff and storm water infiltrating into the ground along the Lee Moore and Flato Washes and the Santa Cruz River.

The E&T service area is located near Nogales Highway and Nogales Old Vail Connection Road. It has 2 active wells pump water from the local aquifer. Water from wells is placed in a storage tank. By pressure, it is moved underground through pipes to reach your home.

While water is made up of hydrogen and oxygen, this life-giving liquid also contains many naturally occurring minerals. Such minerals affect the taste and hardness of your water. The make-up of water varies greatly from one well to another. Unfortunately, human-caused and natural occurring contaminants can also be found in water. This is why the Safe Drinking Water Act exists.

### How do you know your water is safe?

Metro Water District routinely checks its water for contaminants. The Arizona Department of Environmental Quality Monitoring Assistance Program (MAP) and the District monitored 86 constituents during the year to meet Federal and State regulations. The District also tested for constituents that may be regulated in the near future.

### How is your water tested?

Approximately 90 water samples were collected and tested in 2011 by the District and the ADEQ Monitoring Assistance Program (MAP). Samples are collected from wells, storage facilities, and points in the distribution system. The samples are analyzed by State licensed laboratories. The test results are reported to the District and the State of Arizona. The District works closely with the Arizona Department of Environmental Quality (ADEQ) to ensure all water quality standards are met.

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*The above photo is of the Metro Southwest E&T Well No. 23. This well provides water service to many of the customers within the E&T area. The photo depicts the well, chlorination, and the surge tanks to help maintain the system pressure. Six months ago District staff replaced the smaller surge tank (on the left) with a 1,000 gallon surge tank to provide for less cycling of the well and the ability to maintain better system pressure*

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## **What happens if the water tested indicates contamination?**

If a constituent is found unable to meet the safe drinking water standards, the District is required by Federal and State regulations to notify customers within affected service areas. Notification may be made via mail and/or through the news media. If a serious situation occurs that may affect the health and well-being of our customers, the District would do whatever is necessary to notify you, and provide an alternate source of safe drinking water.

## **What contaminants might be detected?**

The table on page 3 shows the 9 regulated contaminants were detected in the Metro-Southwest E&T service area in 2011, or during the most recent sampling period. These detections are usually only in a particular service area, not throughout the District. The ADEQ MAP Program and the District sampled for 62 regulated contaminants in 2011, as required by safe drinking water standards, as well as 24 unregulated contaminants.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency's Safe Drinking Water Hotline (EPA) at 1-800-426-4791.

The source of our drinking water is from wells. As water travels through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up dissolved substances resulting from the presence of plants, animals or from human activity.

Contaminants that may be present in our water include microbial, such as viruses and bacteria; inorganics, such as salts and metals; pesticides & herbicides; organic chemical contaminants, both synthetic and volatile; and radioactive contaminants.

## **Where do contaminants come from?**

These previous noted contaminants can be man-made or naturally-occurring. Microbial contaminants may come from sewage treatment plants, septic systems, residential uses, agricultural, livestock operations, and wildlife. Inorganic contaminants can result from urban storm water runoff, industrial

or domestic wastewater discharges, or mining. Pesticides & herbicides may come from many sources, such as agriculture, urban runoff and residential use. Radioactive contaminants can be naturally-occurring or from mining activities. Organic chemical contaminants can come from landfills, gas stations, urban runoff and septic systems.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems.

## **Is your water treated?**

Metro Water District does treat its water with chlorine to eliminate any type of bacterial contamination that could occur in the water pipes. If you detect a chlorine taste or odor, leave a container of water in the sunlight for two hours or try storing water overnight in the refrigerator.

**For more information  
about your drinking  
water or this report,**

**please contact  
Theresa Lutz, Metro's  
Water Quality  
Specialist,**

**at 575-8100 or  
tlutz@metrowater.com**

**www.metrowater.com**

## 2011 Detected Regulated Contaminants Report Metro Water District – Southwest – E&T Service Area

Water Quality Parameter	Levels Detected by Metro Water Highest & Lowest		Highest Level Allowed (EPA's MCL)*	Ideal Goal (EPA's MCLG)*	Units*	Potential Sources of Contaminant
<b>Regulated by Testing in the Distribution System</b>						
Chlorine Residual	<b>0.57</b>	0.52	4.0	4.0	ppm	By product of drinking water chlorination.
<b>Regulated by Testing at Where the Water Enters the Distribution System</b>						
Alpha Emitters	<b>6.1</b>	4.8	15	0	pCi/L	Erosion of natural radioactive deposits.
Arsenic (2010)	<b>3.1</b>	2.1	10	0	ppb	Erosion of natural deposits; Runoff from agriculture.
Barium (2005)	<b>76</b>	<0.4	2000	2000	ppb	Erosion and natural deposits; Discharge from drilling muds Leaching from bricks and tiles containing barium.
Chromium (2005)	<b>11</b>	<1.0	100	100	ppb	Discharge from steel and pulp mills, and erosion of natural deposits.
Fluoride	<b>0.43</b>	0.33	4	4	ppm	Erosion of natural deposits. Discharge from fertilizer production.
Nitrate (as Nitrogen)	<b>3.5</b>	3.0	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits.

**\*DEFINITIONS:**

**EPA** - acronym for the U.S. Environmental Protection Agency

**MAXIMUM CONTAMINANT LEVEL (MCL)** - The highest level of a contaminant that is allowed in a drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology.

**MAXIMUM CONTAMINANT LEVEL GOAL (MCLG)** - The level of a contaminant in drinking water below which there is no known or expected risk to health MCLGs allow for a margin of safety.

**ACTION LEVEL**-The concentration of a contaminant which, if exceeded triggers a treatment or other requirements which a water system must follow. **ppm** - One part per million **ppb** - One part per billion **ppt pCi/L** - Picocuries per liter is a measure of the radioactivity in water. A picocurie is 10<sup>-12</sup> curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.

\*\*The laboratory chose this value as the reporting level with non-detections; however, detected values were reported as lower.

### EPA Warns Nationally that...

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at **1-800-426-4791**.

## 2011 Voluntary Monitoring

Metro tests more often for some constituents than required by EPA  
OR tests for constituents presently not regulated.

Water Quality Parameter	Levels Detected by Metro Water Highest & Lowest		Highest Level Allowed (EPA's MCL)*	Ideal Goal (EPA's MCLG)*	Units*	Potential Sources of Contaminant
Nitrate	3.1	2.0	10	10	ppb	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

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**ppb** - One part per billion

## Help Protect Our Groundwater

Metro Water and ADEQ take water samples each year to ensure we all have safe drinking water. You can help protect our drinking water supply by correctly disposing of household hazardous waste at one of three free disposal sites that are open the first Saturday of each month from 8:00 a.m. to 12:00 noon. The closest collection site for District residents is at the Tucson Water Plant #2, 1102 W. Irvington Road. For more information, please call 888-6947.

## Water...Use It Wisely

Metro Water District strongly encourages you to use our safe drinking water efficiently. Our groundwater is a precious resource here in the desert that we should use wisely. Listed below are some water-wise ideas.

- Receive \$50 (and save water and money) for installing a gray water or water harvesting system.
- Receive \$50 by replacing your water guzzling toilet with a 1.3 or less gallon High Efficiency Toilet.
- Check regularly for leaks, both inside and outside. A little leak can drain your wallet.
- Change your watering schedule on your drip irrigation and sprinkler systems according to the season.
- Maintain your drip irrigation and sprinkler systems.
- Water with infrequent, deep soaks. Let your plants tell you how often they need to be watered.