

2011 WATER QUALITY REPORT

METRO-MAIN SERVICE AREA



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. This is the 14th annual Metro Water District Water Quality Report, which is 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 northwest 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 Cañada del Oro Wash and Rillito River.

Metro's 25 active wells pump water from the local aquifer. Depth to water ranges from 130 to 348 feet. Water from wells is placed in storage tanks or reservoirs. By either gravity or pressure, it is moved underground through pipes to reach your home.

Metro's service area covers a 23 square mile area in the northwest metropolitan Tucson area between Lambert Lane to the north and River Road to the south, with Thornydale Road on the west and First Avenue and Oracle Road to the east.

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 in the District's 12 integrated systems. 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 District monitored 101 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 2,125 water samples were collected and tested in 2011. 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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Pictured above is the South Shannon Water Treatment facility. As of March 27, 2012, approximately 22 million gallons of water has been treated since the seveneenth carbon change-out on February 22, 2012. A total of 1.1 billion gallons of water has been treated by the treatment system since its start up in July 2006.

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 by calling:

Safe Drinking Water Hotline
1-800-426-4791

(Continued from page 1)

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 4 shows the 10 regulated contaminants that Metro Water District detected in 2011. These detections are usually only in a particular service area, not throughout the District. Metro sampled for 40 regulated contaminants in 2011, as required by safe drinking water standards, as well as 61 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 treats its water with chlorine, which has been done since 1994 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.

In 2006, the District completed a \$1 million upgrade to the water treatment system for the South Shannon service area for removal of TCE, PCE and other volatile contaminants. The State of Arizona paid for the upgrade as part of the State's effort to clean up a Superfund site. In 2011, 30 pounds of contaminants were removed by the treatment system.

2011 Detected Regulated Contaminants Report for Metro Water District

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
Regulated by Testing in the Distribution System						
Total Trihalomethanes (TTHM)	7.3	<1.2	80	0	ppb	Disinfection by-product of drinking water chlorination.
Chlorine Residual	0.47	0.42	4.0	4.0	ppm	By product of drinking water chlorination.
Regulated by Testing at Where the Water Enters the Distribution System						
Alpha Emitters	2.4	<1.0	15	0	pCi/L	Erosion of natural radioactive deposits.
Arsenic	0.99	<2.0	10	0	ppb	Erosion of natural deposits and run-off from agriculture.
Barium	0.07	<0.05	2	2	ppm	Erosion of natural deposits; Discharge from drilling muds and metal refineries; Leaching from bricks and tiles containing barium.
Fluoride	0.38	0.09	4	4	ppm	Erosion of natural deposits; discharge from fertilizer, aluminum manufactures/use.
Nitrate (as Nitrogen)	4.3	<1	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits.
Uranium	2.9	<1.4	30	0	ppb	Erosion and natural deposits.
Water Quality Parameter	90 th Percentile Level	Maximum Level Detected	EPA Contaminant Action Level (AL)	EPA Maximum Contaminant Level Goal(MCLG)	Units	Potential Sources of Contaminant
Regulated by Testing Water from Customer Homes						
Copper (2010)**	200	220	1,300	1,300	ppb	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead (2010)**	<2.5	20	15	0	ppb	Corrosion of household plumbing systems; Erosion of natural deposits. See full explanation on page 4.

***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 10⁻¹² curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.

**Testing for this constituent is done every 3 years as required by EPA.

2011 WATER QUALITY REPORT

Additional Information About Table of Detected Regulated Contaminants (table on page 3)

Source Water Assessment

In 2003, Arizona Department of Environmental Quality (ADEQ) completed a source water assessment for the District's active wells. The source water assessment reviewed if adjacent land uses may pose a potential risk to the District's wells. Land uses such as gas stations and a State Superfund site were found near seven of District wells. Since ADEQ identified adjacent land uses, the risk to the well was ranked high by ADEQ from land uses that could potentially affect the groundwater source. We can use this information to evaluate the need to improve our current treatment capabilities and prevent contamination threats.

Residents can help further protect our groundwater sources by taking hazardous household chemicals to hazardous material collection centers and limiting pesticide and fertilizer use. For more information on the source water assessment, call Theresa Lutz, Water Quality Specialist, at 575-8100 or visit ADEQ's source water assessment and protection unit website : www.azdeq.gov/envirom/water/dw/swap.html

Lead

In June 2010, one of the 30 distribution system samples taken for lead exceeded the EPA action level. EPA sets the value at 15 parts per billion (ppb). The one sample was at a value of 20 ppb. A second confirmation sample was immediately taken and the result was 4.5 ppb, which is well below the action level. The second sample indicates that the original sample may have been a laboratory/sampling error.

The District remains in compliance with all drinking water standards. Compliance with the copper and lead standards is based on a 90th percentile calculation of all of the distribution system samples collected. The 90th percentile value was less than 2.5 ppb for lead and 200 ppb for copper.

For additional information regarding your drinking water or questions on this report,

please visit our website at www.metrowater.com or contact Theresa Lutz, Metro's Water Quality Specialist, at 575-8100 or tlutz@metrowater.com

Help Protect Our Groundwater

Metro Water takes hundreds of 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 Household Hazardous Waste Main Site, 2440 W. Sweetwater Drive, Tucson.

For more information please call:

888-6947

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
Total Xylenes	2.1	<1.5	10,000	10,000	ppb	Discharge from petroleum sources and chemical sources.
1,1-Dichloroethane (Unregulated VOC)	1.0	<0.5	NA	NA	ppb	Discharge from petroleum and industrial chemical sources.
Chloromethane (Unregulated VOC)	0.61	<0.5	NA	NA	ppb	Discharge from industrial chemical sources.
Dibromomethane (Unregulated VOC)	0.53	<0.5	NA	NA	ppb	Discharge from industrial chemical sources.
Dichlorodifluoromethane (Unregulated VOC)	4.2	<0.5	NA	NA	ppb	Discharge from industrial chemical sources.
Nitrate	2.4	<1.1	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits

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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.

ppb - One part per billion **ppm** - One part per million

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 graywater or water harvesting system.
- Receive \$50 for replacing your water guzzling toilet with an High Efficiency Toilet that uses 1.3 gallons or less per flush
- 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.

Metropolitan Domestic
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**2011
WATER
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***WE WOULD LIKE TO
HEAR FROM YOU***

Metro Water District strives to protect our water and works to ensure that safe drinking water will be delivered to you and your family. We encourage customers to participate in water issues, including the efficient use of water.

We would like to know your opinions, suggestions, and comments. Please feel free to write or call our office at your convenience. Also, you are always welcome to attend meetings of the District's Board of Directors. The Board regularly meets the second Monday of each month at 6:00 p.m. at the District's office, 6265 N. La Cañada Drive.

**PLEASE REMEMBER,
USE WATER WISELY !**