

2011 WATER QUALITY REPORT

METRO SOUTHWEST DIABLO VILLAGE



May 2012

Metro Water Delivers Safe Drinking Water

Metro Water District is pleased to report that the water delivered to your tap meets the 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 Brawley Wash.

The Diablo Village service area is located on Ajo Highway near Ryan Airfield. It has 2 active wells pump water from the local aquifer. Depth to water ranges from 482 to 515 feet. 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 ADEQ Monitoring Assistance Program (MAP) and the District monitored 138 samples 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?

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.

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 that Metro Water District detected 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 Metro sampled for 91 regulated contaminants in 2011, as required by safe drinking water standards, as well as 25 unregulated contaminants.

(Continued page 2)



Pictured above is the Diablo Village Well No. 1 Arsenic Treatment System, installed in 2011 at a cost of \$252,000

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.

(Continued from page 1)

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.

Elevated Fluoride Levels Detected

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/l) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided from Diablo Village Well No. 1 has a fluoride concentration of 3.3 mg/l. Fluoride occurs naturally in some areas and is found in high concentrations in the aquifer in our source water.

Dental fluorosis in its moderate or severe forms, may result in a brown staining and or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/l of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/l of fluoride, but does exceed EPA's secondary standard of 2.0 mg/l. We are required to notify you when we discover that the fluoride levels in your drinking water exceed 2.0 mg/l because of this cosmetic dental problem. If fluoride levels ever exceed 4 mg/l, we would inform you. For more information, please call Theresa Lutz, Water Quality Specialist for Metro Water District, at 575-8100. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly. You can do this by posting this notice in a public place or distributing copies by hand or mail.

Lead

In August 2009, ten copper and lead samples were collected in the Distribution System. All of the samples were below the EPA action levels of 1.3 ppm for copper and 0.015 ppm for lead. The District remains in compliance with all drinking water standards. Compliance with these standards is based on a 90th percentile calculation of all of the distribution system samples collected in August 2009. The 90th percentile value was 0.012 ppm for lead.

2011 Detected Regulated Contaminants Report Metro Water District – Southwest – Diablo Village 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
Regulated by Testing in the Distribution System						
Chlorine Residual	0.57	0.53	4.0	4.0	ppm	By product of drinking water chlorination.
Regulated by Testing at Where the Water Enters the Distribution System						
Alpha Emitters (2004)	5.2	2.6	15	0	pCi/L	Erosion of natural radioactive deposits.
Arsenic	2.6	0.6	10	0	ppb	Erosion of natural deposits; Runoff from agriculture. See full explanation on page 4.
Barium	160	29	2000	2000	ppb	Erosion and natural deposits; Discharge from drilling muds Leaching from bricks and tiles containing barium.
Chromium	2.4	<1.0	100	100	ppb	Discharge from steel and pulp mills, and erosion of natural deposits.
Fluoride	3.3	0.10	4	4	ppm	Erosion of natural deposits. Discharge from fertilizer production. See full explanation on page 2.
Nitrate (as Nitrogen)	1.5	1.4	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of 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 (2009)**	170	170	1,300	1,300	ppb	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead (2009)**	12	12	15	0	ppb	Corrosion of household plumbing systems; Erosion of natural deposits; See full explanation on page 2.

***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.

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 Tucson Water Plant #2, 1102 W. Irvington Road. 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
Arsenic	4.7	<0.5	10	0	ppb	Erosion of natural deposits; Runoff from agriculture. See full explanation on page 4.

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ppb - One part per billion

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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, or visit our website at www.metrowater.com

Arsenic

EPA established a new drinking water standard for arsenic in which water providers are to ensure that as of January 2006 no more than 10 parts per billion (ppb) of arsenic can be found in the drinking water delivered to customers

Arsenic is a naturally-occurring mineral. Some people who drink water that contains arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of cancer.

The compliance test showed the highest level of arsenic to be 2.6 ppb. Compliance is based on an annual average of samples taken quarterly.

In addition to the required quarterly testing, Metro Water voluntarily tested monthly the Diablo Village Well Nos. 1 and 2, the interconnect with Tucson Water, and the treated water at Well No. 1 for arsenic in 2011. The sample results were between 0.5 ppb to 4.7 ppb at the Diablo Village Well No. 1. To ensure compliance, Metro has installed an arsenic treatment system at Diablo Village Well No. 1. The treatment system cost \$252,000.

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 rebate for replacing your water guzzling toilet with a 1.3 gallons or less 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.