

2020 WATER QUALITY REPORT



METRO HUB SERVICE AREA

MAY 2021



Metro Water Delivers Safe Drinking Water

Metro Water District (District) is pleased to report that the water delivered to your faucet meets all safe drinking water standards. This annual Water Quality Report 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 safe and reliable water.

Where does your water come from?

The District uses groundwater from the northeast portion of the Tucson Basin aquifer. The water in our aquifer was created primarily from mountain runoff and storm water infiltrating beneath the ground along Sabino Canyon and Tanque Verde Creeks.

The Metro Hub service area is located in Tucson's northeast area, generally east of Sabino Canyon Road between the Tanque Verde Creeks and Snyder Road. It's five active wells pump water from the local aquifer. Depth to water ranges from 38 to 102 feet. Water from wells is placed in reservoirs/storage tanks or pumped directly into the system and moved underground through pipes to reach your home by either gravity or pressure.

While water is made up of hydrogen and oxygen, this life-giving liquid also contains many naturally occurring minerals that affect the taste and hardness of your water. Unfortunately, human-caused and naturally 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?

The District routinely checks its water for contaminants. In 2020, 99 constituents were monitored to meet Federal and State regulations, and the District also tested for constituents that may or may not be regulated in the near future.

How is your water tested?

In 2020, 681 water samples were collected and tested. Trained staff collects samples from wells, storage facilities, points in the distribution system, and residents' homes. 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 the public water supply is found not 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 by 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 District sampled for 36 regulated contaminants as required by safe drinking water standards, as well as 63 unregulated contaminants in 2020. The table on page 2 shows the detected results. The levels of detected contaminants meet the Safe Drinking Water Act standards.

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 (EPA) Safe Drinking Water Hotline at 1-800-426-4791. You can also visit the EPA's website regarding the Safe Drinking Water Act at <http://water.epa.gov/drink/>.

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 the public water supply include microbial such as viruses and bacteria; inorganics such as salts and metals; pesticides and herbicides; organic chemical contaminants, both synthetic and volatile; and radioactive contaminants.

Where do contaminants come from?

Contaminants can be man-made or naturally-occurring. Microbial contaminants may come from sewage treatment plants, septic systems, residential uses, agricultural activity, livestock operations, and wildlife. Inorganic contaminants can result from urban storm water runoff, industrial or domestic wastewater discharges or mining. Pesticides and 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, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Is your water treated?

The District adds chlorine to its water to eliminate any type of bacterial contamination that could occur in the water pipes. If you notice a persistent chlorine taste or odor, please contact the District. ♦

METRO HUB DETECTED CONTAMINANTS IN 2020

Water Quality Parameter	Metro Hub Maximum Level Detected	Metro Hub Range of Detections	EPA* Maximum Contaminant Level (MCL)	EPA* Maximum Contaminant Level Goal (MCLG)	Units	Potential Sources of Contaminant	Sample Date	Frequency
Microbiological Monitoring								
Total Coliform Bacteria	1	0 to 1	One positive Monthly Sample	Not Present	0	Naturally present in the environment.	2020 data.	ADEQ requires monitoring Monthly.
Radiochemical Monitoring								
Alpha Emitters (gross alpha)	1.8	<3 to 1.8	15	0	pCi/L	Erosion and natural deposits.	2016, 2017, and 2019 data.	ADEQ requires monitoring once every four years.
Inorganic & Metals Monitoring								
Arsenic	9.9	<1.0 to 9.9	10	0	ppb	Erosion of natural deposits; Runoff from agriculture.	2019 and 2020 data.	The data includes quarterly monitoring from Hub 1 A and 3.
Barium	160	2.0 to 160	2000	2000	ppb	Erosion of natural deposits; Discharge from drilling muds; Leaching from bricks and tiles containing barium.	2019 data.	ADEQ requires monitoring at least once every three years.
Chromium	0.69	<1.0 to 0.69	100	100	ppb	Discharge from steel and pulp facilities; Erosion of natural deposits. NOTE: The Method Detection Level was lowered in 2019 due to EPA Methods.	2017 and 2019 data.	ADEQ requires monitoring at least once every three years.
Cyanide	20.0	<25.0 to 20.0	200	200	ppb	Discharge from steel and metal facilities; Discharge from plastic and fertilizer facilities. NOTE: Cyanide Method Detection Level was lowered in 2019.	2019 data.	ADEQ requires monitoring at least once every three years.
Fluoride	1.50	0.50 to 1.50	4	4	ppm	Erosion of natural deposits; Discharge from fertilizer production.	2019 data.	ADEQ requires monitoring at least once every three years.
Mercury	0.14	<0.2 to 0.14	20	20	ppb	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland. NOTE: The Mercury Method Detection Level was lowered in 2019.	2019 data.	ADEQ requires monitoring at least once every three years.
Selenium	1.10	<5.0 to 1.10	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines. NOTE: The Selenium Method Detection Level was lowered in 2019.	2019 data.	ADEQ requires monitoring at least once every three years.
Sodium	55	22 to 55	NA	NA	ppm	Erosion of natural deposits.	2018 and 2019 data.	ADEQ requires monitoring once every three years.
Disinfection By-Product Monitoring								
Total Trihalomethanes (TTHM)	17.0	17.0	80	0	ppb	By-Product of drinking water chlorination.	2020 data.	ADEQ requires monitoring Annually.
Haloacetic Acids (HAA5)	2.8	2.8	60	0	ppb	By-Product of drinking water chlorination.	2020 data.	ADEQ requires monitoring Annually.
Chlorine Residual	0.53 (Running Annual Average)	0.3 to 0.8	4.0 **	4.0 **	ppm	By-Product of drinking water chlorination.	2020 data.	ADEQ requires monitoring Annually.
Nitrate								
Nitrate (as Nitrogen)	2.2	0.57 to 2.20	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits.	2020 data.	ADEQ requires monitoring once every year.
Water Quality Parameter Copper & Lead Monitoring								
Copper	0.13 No samples were above the Action Level.	0.015 to 0.260	1.3	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.	2020 data.	ADEQ requires monitoring once every three years.
Lead	4.3 No samples were above the Action Level.	<0.5 to 7.1	15	0	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.	2020 data.	ADEQ requires monitoring once every three years.

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

** The MCL and MCLG for Chlorine Residual is actually the Maximum Residual Disinfection Level (MRDL).

DEFINITIONS:

- **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 (AL):** The concentration of a contaminant which, if exceeded, triggers treatment, or other requirements.
- ppm - Part per million; ppb - Part per billion
- 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.

ELECTIVE MONITORING IN 2020

The District collects elective samples in order to ensure the delivery of safe, reliable water to its Customers. While elective samples are not required for compliance, they assist the District in evaluating water quality to ensure compliance with future drinking water standards.

Water Quality Parameter	Metro Hub Water Maximum Level Detected	Metro Hub Water Range of Detections	EPA* Maximum Contaminant Level (MCL)	EPA* Maximum Contaminant Level Goal (MCLG)	Units	Potential Sources of Contaminant	Sample Date
Aluminum	<2.0	<2.0	NA	NA	ppb	Naturally occurring element; used as an electrical conductor; used to make various mechanical parts and metal housings.	2020
Manganese	8.6	0.27 to 8.6	NA	NA	ppb	Naturally occurring element; used in fertilizers, batteries and fireworks; used in some wastewater treatment chemicals; and an essential nutrient.	2020
Sulfate	38.0	15.0 to 38.0	NA	NA	ppm	A natural occurring compound; a surfactant; used to make detergents, cleaners and shampoo.	2020
Vanadium	12.0	5.9 to 12.0	NA	NA	ppb	Naturally occurring element; used in steel alloys; used as a catalyst to produce sulfuric acid.	2020

Arsenic

EPA established a 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.

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a naturally-occurring mineral known to cause cancer in humans at high concentration and is linked to other health effects such as skin damage and circulatory problems.

Two of the five wells in the Metro Hub service area are above the 10 ppb standard. To ensure compliance, the District operates a treatment system at these two well sites. The treatment systems, along with blending of water, mitigate the arsenic level to below the standard. The compliance testing in 2020 after the treatment systems showed the highest level of arsenic to be 9.9 ppb. ♦

Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Metro Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>. ♦

Coliform

In August and October 2020, a Coliform detect occurred in a compliance sample for that month. This resulted in the original sample being analyzed for E. Coli and the collection of five samples under the ADEQ Groundwater Rule. No detects occurred in these samples, and no E. Coli was detected in the original sample. ♦

Source Water Assessment

ADEQ completed a Source Water Assessment for the drinking water in the Metro Hub Service Area in February 2003. Based on the Hydrogeologic settings and adjacent land uses, the water was found to be of "low risk." This indicates that the water is either already protected or that any additional measures will have little impact on any further protection. ♦

Board of Directors

Judy Scrivener, Chair
Richard Sarti, Vice Chair
Jim Doyle, Member
Bryan Foulk, Member
Lee Jacobs, Member

Metro Water District's Board of Directors meets regularly, usually on the second Monday of the month, at 6:00 p.m. at Metro Water's Office, 6265 N. La Cañada Drive

Water... Use It Wisely!

Metro Water District strongly encourages you to use our precious water resource efficiently. Listed below are some water-wise ideas.

- Receive \$200 (and save water and money) for installing a gray water or rainwater harvesting system.
- Receive \$50 for replacing high water use toilets with a High Efficiency toilet that does not exceed 1.3 gallons of water 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. ♣

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 EPA's Safe Drinking Water Hotline at 1-800-426-4791. ♣

Help Protect Our Groundwater

The Arizona Department of Environmental Quality (ADEQ) completed a source water assessment for the District's active wells in 2003. The source water assessment reviewed if adjacent land uses may pose a potential risk to the District's wells, which the District has used to evaluate how to prevent contamination threats. Water samples are collected each year to ensure we all have safe drinking water.

For more information on the source water assessment, call Wally Wilson, Water Resources Manager, at 575-8100 or visit ADEQ's source water assessment and protection unit at <http://www.azdeq.gov/environ/water/dw/swap.html> ♣

The District takes extra measures to ensure the delivery of safe, reliable water, such as auxiliary pumping units, generators, and emergency interconnects from neighboring water utilities. The use of the emergency interconnects are infrequent; however, does occur in short durations. Although you may have received only a small amount of water from the interconnect, the District wants to ensure our customers are fully informed about water quality. Tucson Water's 2020 Consumer Confidence Report is available at <https://www.tucsonaz.gov/water/water-quality-reports-and-publications> ♣



MISSION:
To deliver safe, reliable water to our customers.

For additional information regarding your drinking water including about hardness or fluoride please visit the Water Quality section at www.metrowater.com. For further questions, please call us at 575-8100