



2023 WATER QUALITY REPORT

METRO HUB SERVICE AREA



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 20 to 78 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.

METRO WATER DISTRICT DELIVERS SAFE, RELIABLE DRINKING WATER

How do you know your water is safe?

The District routinely checks its water for contaminants. In 2023, 86 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 2023, 285 drinking 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 81 regulated contaminants as required by safe drinking water standards, as well as 5 unregulated contaminants in 2023. 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 <https://www.epa.gov/sdwa>

The source of our drinking water is from wells. As water travels through the ground, naturally-occurring minerals are dissolved, 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 be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharge, oil and gas production, mining or farming.

Pesticides and herbicides may come from many sources, such as agriculture, urban runoff, and residential use.

Radioactive contaminants can be naturally-occurring or be the result of oil and gas production and mining activities.

Organic chemical contaminants are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water 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 REGULATED CONTAMINANTS IN 2023

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
Microbiological Monitoring							
E. Coli	0	0	0	Not Present	0	Naturally present in the environment.	2023
Inorganic & Metals Monitoring							
Arsenic	9.4	0.91 to 9.4	10	0	ppb	Erosion of natural deposits; Runoff from agriculture.	2023
Barium	110	2.2 to 110	2,000	2,000	ppb	Erosion of natural deposits; Discharge from drilling muds; Leaching from bricks and tiles containing barium.	2022 ***
Fluoride	0.83	0.47 to 0.83	4	4	ppm	Erosion of natural deposits; Discharge from fertilizer production.	2022 ***
Sodium	49	22 to 49	NA	NA	ppm	Erosion of natural deposits.	2022 ***
Disinfection By-Product Monitoring							
Total Trihalomethanes (TTHMs)	5.0 Running Annual Average (RAA)	5.0	80	0	ppb	By-Product of drinking water chlorination.	2023
Chlorine Residual	0.63 Running Annual Average (RAA)	0.4 to 0.9	4.0 **	4.0 **	ppm	By-Product of drinking water chlorination.	2023
Nitrate							
Nitrate (as Nitrogen)	2.9	0.71 to 2.9	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits.	2023
Water Quality Parameter	90th Percentile Level and No. of Samples Over the Action Level	Range of All Samples	EPA* Contaminant Action Level (AL)	EPA* Maximum Contaminant Level Goal (MCGL)	Units	Potential Sources of Contaminant	Sample Date
Lead & Copper Monitoring							
Copper	0.174 No samples were above the Action Level.	0.018 to 0.220	1.3	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.	2023
Lead	2.64 No samples were above the Action Level.	<0.5 to 7.2	15	0	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.	2023

* 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).

*** The data presented in the report are from the most recent testing done in accordance with drinking water regulations

SOURCE WATER ASSESSMENT

The Arizona Department of Environmental Quality (ADEQ) completed a source water assessment for the drinking water in the Metro Hub Service Area in February 2003. Based on the information currently available on the hydrogeologic settings and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the department has given a low-risk designation for the degree to which this public water system drinking water source(s) are protected. A low-risk designation indicates that most source water protection measures are either already implemented, or the hydrogeology is such that the source water protection measures will have little impact on protection. Further source water assessment documentation can be obtained by contacting ADEQ. ♦



ELECTIVE MONITORING FOR UNREGULATED PFAS CONSTITUENTS IN 2023

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	Maximum Level Detected	Metro Hub Water Range of Detections	Method Reporting Limit (MRL)	Maximum Contaminant Level (MCL)	Units	Source of Contaminant	Sample Date
N-ethyl Perfluorooctanesulfonamido-acetic Acid (N-EtFOSAA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make coatings, cleaners, paint and other textiles.	2022 ***
N-methyl Perfluorooctanesulfon-amidoacetic Acid (N-MeFOSAA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make coatings, cleaners, paint and other textiles.	2022 ***
Perfluorobutanesulfonic Acid (PFBS)	1.6	0.69 to 1.6	2.0	NA	ppt	Synthetic chemical used in products to make them stain, grease, heat and water resistant.	2022 ***
Perfluorodecanoic Acid (PFDA)	<2.0	<2.0	2.0	NA	ppt	Synthetic chemical used in products to make them stain, grease, heat and water resistant.	2022 ***
Perfluorododecanoic Acid (PFdDA)	<2.0	<2.0	2.0	NA	ppt	Synthetic chemical used in products to make them stain, grease, heat and water resistant.	2022 ***
Perfluoroheptanoic Acid (PFHpA)	1.3	1.3	2.0	NA	ppt	Emulsifier or surfactant used to make coatings, cleaners, paint and other textiles.	2022 ***
Perfluorohexanesulfonic Acid (PFHxS)	0.88	0.69 to 0.88	2.0	NA	ppt	Synthetic chemical used in products to make them stain, grease, heat and water resistant.	2022 ***
Perfluorohexanoic Acid (PFHxA)	2.8	0.53 to 2.8	2.0	NA	ppt	Emulsifier or surfactant used to make coatings, cleaners, paint and other textiles.	2022 ***
Perfluorononaic Acid (PFNA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make Teflon, cleaners, paint and other textiles.	2022 ***
Perfluorooctanesulfonic Acid (PFOS)	0.94	0.43 to 0.94	2.0	NA	ppt	Surfactant or emulsifier; used in cleaners, fire fighting foam, and in pesticides.	2022 ***
Perfluorooctanoic Acid (PFOA)	1.2	0.8 to 1.2	2.0	NA	ppt	Emulsifier or surfactant used to make Teflon, cleaners, paint and other textiles.	2022 ***
Perflurorotetradecanoic Acid (PFtdA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make Teflon, cleaners, paint and other textiles.	2022 ***
Perflurorotridecanoic Acid (PFtDA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make Teflon, cleaners, paint and other textiles.	2022 ***
Perfluroroundecanoic Acid (PFuDA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make Teflon, cleaners, paint and other textiles.	2022 ***

ELECTIVE MONITORING FOR UNREGULATED CONSTITUENTS IN 2023

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
Manganese	4.0	0.6 to 4.0	NA	NA	ppb	Naturally occurring element; used in fertilizers, batteries and fireworks; used in some wastewater treatment chemicals; and an essential nutrient.	2023
Vanadium	17	8.2 to 17	NA	NA	ppb	Naturally occurring element; used in steel alloys; used as a catalyst to produce sulfuric acid.	2023

TUCSON WATER DETECTED REGULATED CONTAMINANTS IN 2023

Microbiological (RTCR)	TT Violation Y or N	Number of Positive Samples	Positive Sample(s) Month & Year	MCL	MCLG	Likely Source of Contamination	
Fecal Indicator ¹ (From GWR source) (coliphage, enterococci and/or E. coli)	N	1	8/2023	0	0	Human and animal fecal waste	
¹ E.Coli was detected at one groundwater rule source well which was raw untreated water. E.Coli was not detected in the distribution system. The well was immediately turned off, super-chlorinated, and re-tested. Follow-up sampling indicated no detectable concentrations of E.Coli. No violations were issued.							
Disinfectants	MCL Violation Y or N	Running Annual Average (RAA)	Range of All Samples (Low-High)	MRDL	MRDLG	Sample Month & Year	Likely Source of Contamination
Chlorine (ppm)	N	1.00	0.91 – 1.34	4	4	2023	Water additive used to control microbes
Disinfection By-Products	MCL Violation Y or N	Running Annual Average (RAA)	Range of All Samples (Low-High)	MCL	MCLG	Sample Year	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	N	2.1	ND – 3.1	60	N/A	2023	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	15.5	3.0 – 26.7	80	N/A	2023	Byproduct of drinking water disinfection
Lead & Copper	MCL Violation Y or N	90th Percentile	Number of Samples Exceeds AL	AL	ALG	Sample Year	Likely Source of Contamination
Copper (ppm)	N	0.135	0	1.3	1.3	2023	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	0.65	0	15	0	2023	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides	MCL Violation Y or N	Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Year	Likely Source of Contamination
Alpha Emitters (pCi/L) (This is Gross Alpha 4000)	N	7.4	ND – 7.4	15	0	2023	Erosion of natural deposits
Combined Radium-226 & -228 (pCi/L)	N	1.6	ND – 1.6	5	0	2023	Erosion of natural deposits
Uranium (ug/L)	N	16	2 – 16	30	0	2023	Erosion of natural deposits
Inorganic Chemicals (IOC)	MCL Violation Y or N	Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Year	Likely Source of Contamination
Arsenic ¹ (ppb)	N	3.14	1.98 – 3.14	10	0	2023	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	N	0.07	0.05 – 0.07	2	2	2023	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	N	0.47	0.17 – 0.47	4	4	2023	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate ² (ppm)	N	7.1	ND – 7.1	10	10	2023	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	N	1.6	ND – 1.6	50	50	2023	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	N	73	38 - 73	N/A	N/A	2023	Erosion of natural deposits
¹ Arsenic is a mineral known to cause cancer in humans at high concentration and is linked to other health effects, such as skin damage and circulatory problems. If arsenic is less than or equal to the MCL, your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water and continuing to research the health effects of low levels of arsenic.							
² Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause "blue baby syndrome." Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.							
Synthetic Organic Chemicals (SOC)	MCL Violation Y or N	Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Year	Likely Source of Contamination
Atrazine (ppb)	N	0.1	ND – 0.1	3	3	2023	Runoff from herbicide used
Volatile Organic Chemicals (VOC)	MCL Violation Y or N	Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Year	Likely Source of Contamination
Xylenes (ppm)	N	0.005	ND – 0.005	10	10	2023	Discharge from petroleum or chemical factories

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 2023 Consumer Confidence Report is available at <https://www.tucsonaz.gov/Departments/Water/Water-Quality/>

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 each of these two well sites. The treatment systems, along with blending of water, mitigate the arsenic level to below the standard. The compliance testing in 2023 after the treatment systems showed the highest level of arsenic to be 9.4 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>. ♣

DEFINITIONS:

Action Level (AL):

The concentration of a contaminant which, if exceeded, triggers treatment, or other requirements, which a water system must follow.

Maximum Contaminant Level (MCL):

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs 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 a margin of safety.

Maximum Residual Disinfectant Level (MRDL):

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Minimum Reporting Limit (MRL):

The smallest measured concentration of a substance that can be reliably measured by a given analytical method.

Not Applicable (NA):

Sampling was not completed by regulation or was not required.

Picocuries per liter (pCi/L):

Measure of the radioactivity in water.

ppm:

Parts per million or Milligrams per liter (mg/L).

ppb:

Parts per billion or Micrograms per liter (µg/L).

ppt:

Parts per trillion or Nanograms per liter (ng/L).



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

BOARD OF DIRECTORS

- Lee Jacobs, Chair**
- Bryan Foulk, Vice Chair**
- Jim Doyle, Member**
- Richard Sarti, Member**
- Scott Schladweiler, Member**

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

VIOLATION SUMMARY:

The District received 1 late monitoring violation in 2023. Sample results are required to be submitted to ADEQ no later than the 10th day of the month after the samples are due. Sample results for Arsenic were received 11 days after the deadline, due to various causes. The system was returned to compliance status and the violation closed once the results were received by ADEQ. The late monitoring violations are due to the reports not being received by the 10th of the month and are not a reflection of the water quality. All sample results were below maximum contaminant levels. ♣

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. ♣

WATER... USE IT WISELY!

The 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. ♣

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 (520) 575-8100 or visit ADEQ's source water assessment and protection unit at <https://www.azdeq.gov/source-water-protection> ♣

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