



# 2023 WATER QUALITY REPORT

## METRO MAIN 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 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 the Rillito River.

The Metro Main 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 to the west and First Avenue and Oracle Road to the east. The 25 active wells pump water from the local aquifer. Depth to water ranges from 163 to 464 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, 188 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, 1,143 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 107 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.

In 2006, the District completed a \$1 million upgrade to the water treatment system at the South Shannon well site for removal of TCE, PCE and other volatile contaminants. The State of Arizona paid for the upgrade and ongoing operations as part of the State's effort to clean up a Superfund site. ♦

# METRO MAIN DETECTED REGULATED CONTAMINANTS IN 2023

Water Quality Parameter	Metro Main Maximum Level Detected	Metro Main Range of Detections	EPA* Maximum Contaminant Level (MCL)	EPA* Maximum Contaminant Level Goal (MCLG)	Units	Potential Sources of Contaminant	Sample Date
<b>Microbiological Contaminants</b>							
E. Coli	0	0	0	Not Present	Percentage	Naturally present in the environment.	2023
<b>Radiochemical Monitoring</b>							
Adjusted Gross Alpha Emitters	1.8	<0.7 to 1.8	15	0	pCi/L	Erosion and natural deposits.	2022 ***
Combined Radium	1.9	<0.6 to 1.9	5	0	pCi/L	Erosion and natural deposits.	2022 ***
Uranium	5.1	<0.8 to 5.1	30	0	µg/L	Erosion and natural deposits.	2022 ***
<b>Inorganic and Metals Monitoring</b>							
Antimony	0.62	<0.5 to 0.62	6	6	ppb	Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder	2023
Arsenic	3.2	0.55 to 3.2	10	0	ppb	Erosion of natural deposits and run-off from agriculture.	2023
Barium	160	<50 to 160	2,000	2,000	ppb	Erosion of natural deposits; Discharge from drilling muds and metal refineries; Leaching from bricks and tiles containing barium.	2023
Fluoride	0.32	0.19 to 0.32	4	4	ppm	Erosion of natural deposits; discharge from fertilizer and aluminum factories.	2023
Sodium	27	11 to 27	NA	NA	ppm	Erosion of Natural Deposits.	2023
Thallium	1	<0.5 to 1	2	1	ppb	Leaching from ore-processing sites; discharge from electronics, glass, and pharmaceutical factories.	2023
<b>Volatile Organic Monitoring</b>							
cis-1,2-Dichloroethylene	1.7	<0.5 to 1.7	70	70	ppb	Discharge from chemical and industrial facilities.	2023
TCE	5.4	<0.5 to 5.4	700	700	ppb	Discharge from chemical, industrial and petroleum facilities.	2023
PCE	2.3	<0.5 to 2.3	10	10	ppb	Discharge from Petroleum or chemical facilities.	2023
<b>Nitrate</b>							
Nitrate (as Nitrogen)	4.9	1.1 to 4.9	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits.	2023
<b>Disinfection By-Products</b>							
Total Trihalomethanes (TTHM)	1.88 Running Annual Average (RAA)	<0.5 to 5.2	80	0	ppb	By-product of drinking water chlorination.	2023
Halo Acetic Acids (HAA5)	0.5 Running Annual Average (RAA)	<2.0 to 8.0	60	0	ppb	By-product of drinking water chlorination. Note: RAA is lower than the range of detects. RAA calculation treats non-detect results as zeroes.	2023
Chlorine Residual	0.64 Running Annual Average (RAA)	0.3 to 1.6	4.0 **	4.0 **	ppm	By-product of drinking water chlorination.	2023
Water Quality Parameter	90th Percentile Level and No. of Sample 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
<b>Lead &amp; Copper Monitoring</b>							
Copper	0.12 No samples over the action level.	0.01 to 0.22	1.3	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.	2022 ***
Lead	0.86 No samples over the action level.	<0.5 to 5.5	15	0	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.	2022 ***

\* 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

## 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 Main Water Range of Detections	Method Reporting Limit (MRL)	Maximum Contaminant Level (MCL)	Units	Source of Contaminant	Sample Date
N-ethyl Perfluorooctanesulfonamidoacetic Acid (N-EtFOSAA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make coatings, cleaners, paint and other textiles.	2023
N-methyl Perfluorooctanesulfonamidoacetic Acid (N-MeFOSAA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make coatings, cleaners, paint and other textiles.	2023
Perfluorobutanesulfonic Acid (PFBS)	5.9	<2.0 to 5.9	2.0	NA	ppt	Synthetic chemical used in products to make them stain, grease, heat and water resistant.	2023
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.	2023
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.	2023
Perfluoroheptanoic Acid (PFHpA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make coatings, cleaners, paint and other textiles.	2023
Perfluorohexanesulfonic Acid (PFHxS)	5.0	<2.0 to 5.0	2.0	NA	ppt	Synthetic chemical used in products to make them stain, grease, heat and water resistant.	2023
Perfluorohexanoic Acid (PFHxA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make coatings, cleaners, paint and other textiles.	2023
Perfluorononaic Acid (PFNA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make Teflon, cleaners, paint and other textiles.	2023
Perfluorooctanesulfonic Acid (PFOS)	3.5	<2.0 to 3.5	2.0	NA	ppt	Surfactant or emulsifier; used in cleaners, fire fighting foam, and in pesticides.	2023
Perfluorooctanoic Acid (PFOA)	2.6	<2.0 to 2.6	2.0	NA	ppt	Emulsifier or surfactant used to make Teflon, cleaners, paint and other textiles.	2023
Perfluorotetradecanoic Acid (PFtdA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make Teflon, cleaners, paint and other textiles.	2023
Perfluorotridecanoic Acid (PFtDA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make Teflon, cleaners, paint and other textiles.	2023
Perfluoroundecanoic Acid (PFuDA)	<2.0	<2.0	2.0	NA	ppt	Emulsifier or surfactant used to make Teflon, cleaners, paint and other textiles.	2023

## ELECTIVE MONITORING FOR UNREGULATED VOC 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 Main Water Range of Detections	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCGL)	Units	Source of Contaminant	Sample Date
1,4-Dioxane (Unregulated VOC)	0.27	<0.07 to 0.27	NA	NA	ppb	Discharge from petroleum and industrial chemical sources.	2023
Dichlorodifluoromethane (Unregulated VOC)	4.5	<0.5 to 4.5	NA	NA	ppb	Discharge from industrial chemical sources.	2023

## SOURCE WATER ASSESSMENT

The Arizona Department of Environmental Quality (ADEQ) completed a Source Water Assessment for the drinking water in the Metro Main Service Area in April 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 ADEQ has given a high-risk designation for the degree to which this public water system drinking water source(s) are protected. A designation of high risk indicates there may be additional source water protection measures which can be implemented on the local level. This does not imply that the source water is contaminated, nor does it mean that contamination is imminent. Rather, it simply states that land use activities or hydrogeologic conditions exist that make the source water susceptible to possible future contamination. Further source water assessment documentation can be obtained by contacting ADEQ. ♦

### NITRATE:

Nitrate in drinking water at levels of 10 ppm is a health risk for infants 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 because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice of your health care provider. No nitrate levels were found at 10 ppm or above.

### 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>.

### 1,4-DIOXANE:

While there is no regulated standard for 1,4-dioxane, the EPA has published an advisory level. This advisory concentration level is 0.35 parts per billion (ppb); for reference a ppb is equivalent to one drop in an Olympic sized swimming pool. The District's Horizon Hills well, located near Ina Road and Thornydale Road, was found to have higher than the advisory level of 1,4-dioxane but below any notification level or regulated standard. Out of the abundance of caution, the District took the Horizon Hills well out of service in 2016. ♦

## 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 Coliform were received 4 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](http://www.metrowater.com) or please call us at 575-8100**