

NTMWD Tawakoni Water Treatment Plant

Monthly Water Quality Data for July 2023

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample	0	0	0	No	Naturally present in the environment.

NOTE: Reported monthly tests found no fecal coliform bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful bacteria may be present.

Regulated Contaminants

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Bromate	Jul-23	Levels lower than detect level	0 - 0	5	10	ppb	No	By-product of drinking water ozonation.

NOTE: For Bromate, compliance is based on the running annual average.

Inorganic Contaminants	Collection Date	Raw (Source Water)	Treated (Finished Water)	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	Jul-23	3.95	0.602	0	10	ppb	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Barium	Jul-23	0.0627	0.0597	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Cadmium	Jul-23	Levels lower than detect level	Levels lower than detect level	5	5	ppb	No	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.
Chromium	Jul-23	Levels lower than detect level	Levels lower than detect level	100	100	ppb	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	Jul-23	0.20	0.70	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Mercury	Jul-23	Levels lower than detect level	Levels lower than detect level	2	2	ppb	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland.
Nitrate (measured as Nitrogen)	Jul-23	0.182	0.342	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Selenium	Jul-23	Levels lower than detect level	Levels lower than detect level	50	50	ppb	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.

Nitrate Advisory: 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 you should ask advice from your health care provider.

Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.15	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	100%	No	Soil runoff.

NOTE: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration.

Maximum Residual Disinfectant Level

Disinfectant Type	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Units	Violation	Source of Chemical
Chlorine Residual (Chloramines)	Jul-23	3.61	3.61	4.00	<4.0	ppm	No	Disinfectant used to control microbes.
Chlorine Dioxide	Jul-23	0.02	0.00 - 0.26	0.80	0.80	ppm	No	Disinfectant.
Chlorite	Jul-23	0.40	0.14 - 0.57	1.00	N/A	ppm	No	Disinfectant.

NOTE: Water providers are required to maintain a minimum chlorine disinfection residual level of 0.5 parts per million (ppm) for systems disinfecting with chloramines and an annual average chlorine disinfection residual level of between 0.5 (ppm) and 4 parts per million (ppm).

Total Organic Carbon

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set.

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Monthly Water Quality Data for July 2023 (Cont.)

Lead and Copper

Lead and Copper	Collection Date	Raw (Source Water)	Treated (Finished Water)	Action Level	Units	Violation	Likely Source of Contamination
Lead	Jul-23	Levels lower than detect level	1.51	15	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits.
Copper	Jul-23	Levels lower than detect level	0.0251	1.3	ppm	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.

NOTE: Monthly independent lab testing results for lead and copper at the entry point to the NTMWD transmission system.

ADDITIONAL HEALTH INFORMATION FOR 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. NTMWD 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 or at <http://www.epa.gov/safewater/lead>.

Secondary and Other Constituents Not Regulated

Contaminants	Collection Date	Raw (Source Water)	Treated (Finished Water)	Units	Secondary Standards	Likely Source of Contamination
Calcium	Jul-23	23.6 - 24.9	33.9 - 36.0	ppm	No Standard Established	Abundant naturally occurring element.
Chloride	Jul-23	7.98 - 8.41	17.8 - 20.4	ppm	300	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Corrosivity Index	Jul-23	Not applicable	-0.110	units	No Standard Established	Values greater than zero are scale forming, whereas, values less than zero are more corrosive.
Iron	Jul-23	Levels lower than detect level	Levels lower than detect level	ppm	0.3	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	Jul-23	2.42 - 3.04	2.39 - 3.22	ppm	No Standard Established	Abundant naturally occurring element.
Manganese	Jul-23	0.0561 - 0.296	Levels lower than detect level	ppm	0.05	Abundant naturally occurring element.
Nickel	Jul-23	0.00147	0.00390	ppm	No Standard Established	Erosion of natural deposits.
pH	Jul-23	7.5 - 7.7	7.6 - 7.8	units	>7	Measure of corrosivity of water.
Potassium	Jul-23	3.93	3.94	ppm	No Standard Established	Abundant naturally occurring element.
Silver	Jul-23	Levels lower than detect level	Levels lower than detect level	ppm	0.1	Erosion of natural deposits.
Sodium	Jul-23	11.0 - 11.5	17.6 - 19.1	ppm	No Standard Established	Erosion of natural deposits; by-product of oil field activity.
Specific Conductance	Jul-23	197	288	µhos/cm	No Standard Established	An indirect measure of the collective concentration of dissolved ions in solution.
Sulfate	Jul-23	10.9 - 11.5	47.5 - 55.2	ppm	300	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO ₃	Jul-23	76.0 - 94.0	40.0 - 79.0	ppm	No Standard Established	Naturally occurring soluble mineral salts.
Total Dissolved Solids	Jul-23	123 - 137	181 - 185	ppm	500 - 1000	Total dissolved mineral constituents in water.
Total Hardness as CaCO ₃	Jul-23	71.3	97.6	ppm	No Standard Established	Naturally occurring calcium.
Zinc	Jul-23	Levels lower than detect level	Levels lower than detect level	ppm	5	Moderately abundant naturally occurring element used in the metal industry.

Taste and Odor Compounds

Analytes	Collection Date	Raw (Source Water)	Treated (Finished Water)	Units	Secondary Standards	Likely Source of Contamination
Geosmin	Jul-23	17	14.2	ppt	No Standard Established	Compound naturally found in lakes. Causes earthy, dirt-like odor.
2-Methylisoborneol	Jul-23	6.94	4.9	ppt	No Standard Established	Compound naturally found in lakes. Causes musty, wet mulch like odor.

Note: Geosmin and 2-Methylisoborneol, produced by cyanobacteria, filamentous bacteria and other organisms, are found in surface water sources and are the most commonly reported taste and odor compounds. They have earthy-musty odors which are difficult to remove by conventional water treatment processes. The human nose is extremely sensitive to these compounds. The threshold for detection for Geosmin is approximately 15 parts per trillion (ng/L) and for MIB is approximately 10 ppt. However, variations in human perception of taste and odor, means that some people may detect Geosmin in concentrations as low as 5 ppt and MIB in concentrations as low as 2 ppt - which is roughly equivalent to a teaspoon of Geosmin into 200 Olympic-sized swimming pools.