NORTH TEXAS MUNICIPAL WATER DISTRICT

Regional. Reliable. Everyday.

YOUR WATER IS OUR WATER

2019 WATER QUALITY REPORT

SAFE WATER – IT'S PERSONAL

At NTMWD, we think of ourselves as more than a wholesale service provider. We live in the communities we serve, which means that the water we treat is the same water our team and our families use on a daily basis. We take our mission very seriously—to provide high quality and dependable water as well as wastewater and solid waste services. For more than six decades, we have consistently met this essential goal. **Our water continues to meet or surpass Safe Drinking Water Standards established by the U.S. Environmental Protection Agency (EPA) as well as regulations set by the Texas Commission on Environmental Quality (TCEQ).**

The Purpose of this Report

This Water Quality Report (also known as a Consumer Confidence Report) summarizes information on the quality of water we provided to the communities we serve. In this report, you will find information on where your water comes from, how it is treated, levels of contaminants detected and how these levels compare with drinking water rules and regulations.

SERVE up to 80 COMMUNITIES

Service area of 2,200 square miles in 10 counties

Serving 1.8 million people in one of the fastest-growing regions in the country

18

MAJOR RAW & TREATED WATER PUMP STATIONS

6

WATER TREATMENT PLANTS
806+ MGD Capacity
(million gallons/day)

575+ MILES

WATER TRANSMISSION PIPELINES

Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono 972-442-5405.

IMPORTANT NOTICES

Vulnerability of Some People to Drinking Water Contaminants

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the EPA Safe Drinking Water Hotline at 800-426-4791.

Testing for Cryptosporidium

Cryptosporidium is a microbial parasite that may be commonly found in surface water. During 2019, NTMWD continued testing for *Cryptosporidium* in our raw water supply and treated drinking water. While occasionally found in the raw water supply, *Cryptosporidium* has not been detected in NTMWD treated drinking water. Although treatment by filtration removes *Cryptosporidium*, drinking water providers cannot guarantee 100 percent removal. The testing methods used cannot determine if the organisms are alive and capable of causing cryptosporidiosis, an abdominal infection causing nausea, diarrhea and abdominal cramps resulting from drinking contaminated water.

NTMWD's water treatment processes are among the best available to make sure that our water is safe from contaminants, including *Cryptosporidium*. Our four water treatment plants in Wylie combined are among the largest fully-ozonated water treatment facilities in the world. Ozone disinfection is the:

- Fastest working and most powerful water disinfectant (one of the most effective against *Cryptosporidium*)
- Preferred process for meeting regulations and reducing disinfection byproducts
- Primary method to improve water taste and odor

Operators test frequent samples throughout each phase of treatment to confirm processes are effective and the water is safe to drink.

WHERE YOUR WATER COMES FROM

NTMWD's water supply comes from several surface water sources including:

Lavon Lake

Lake Texoma

Jim Chapman Lake (Cooper Lake)

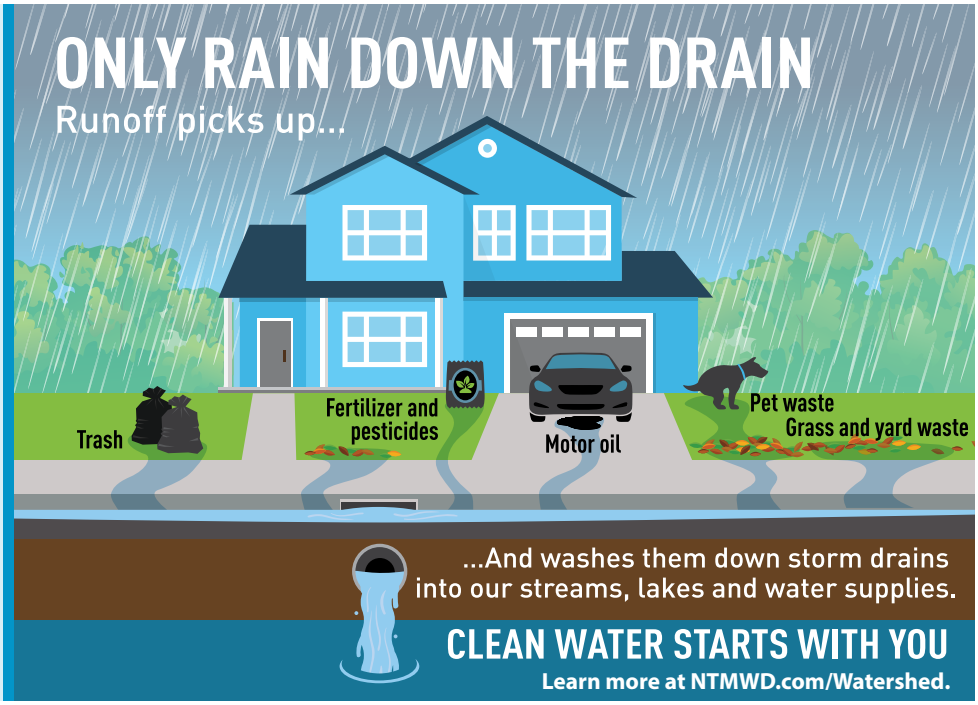
Lake Tawakoni (through a contract with the Sabine River Authority)

East Fork Water Reuse Project (Wetland)

To learn more about our water sources, visit NTMWD.com/raw-water-supplies.

When it rains, runoff carries pollutants into streams and water supplies.

To keep our water clean, make sure only rain goes down storm drains.



HOW YOUR WATER IS REGULATED

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. To make sure that your tap water is safe, EPA prescribes regulations that limit the amounts of certain contaminants allowed in water after its treatment, when it is delivered by public water systems. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline (800-426-4791).

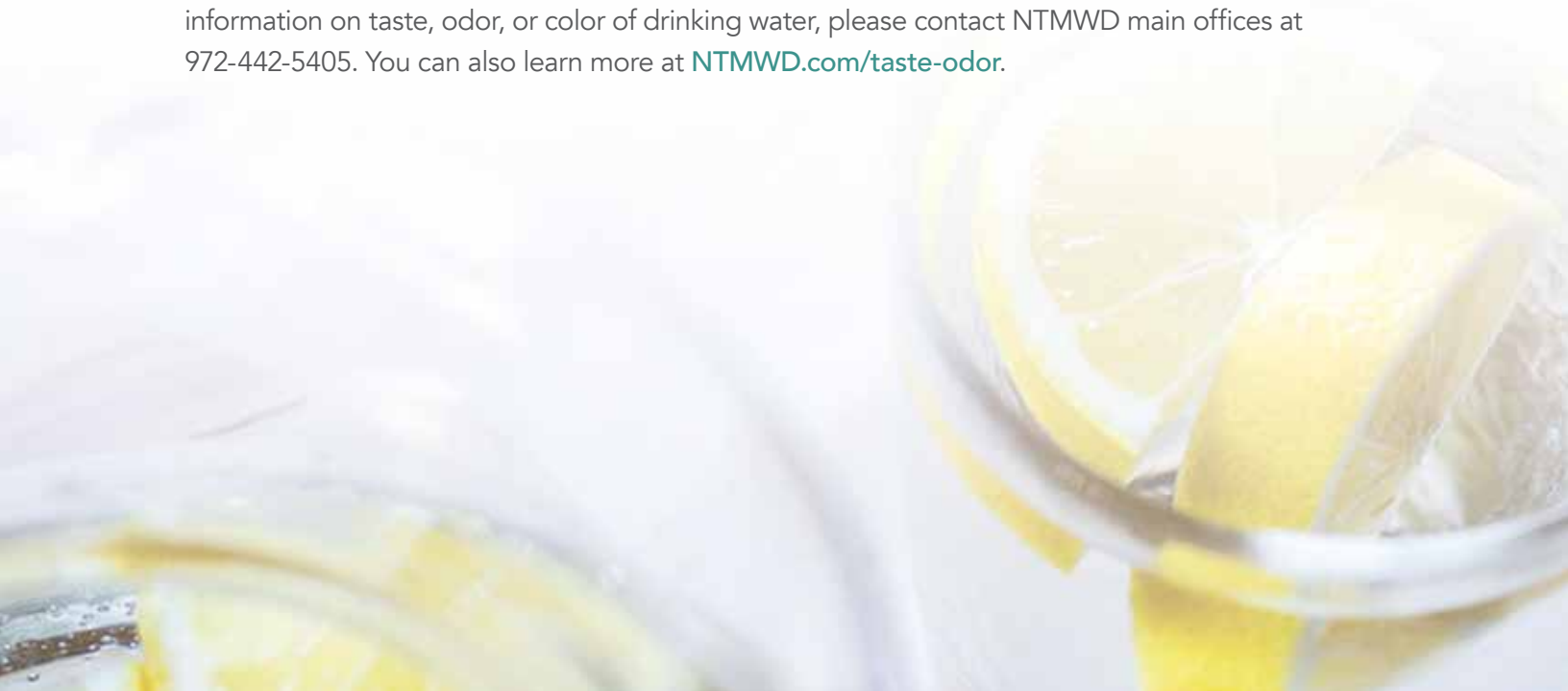
Contaminants in Source Water

The following may be present in the raw surface water, also known as source water, ***before it is treated***:

- Microbial contaminants, such as viruses and bacteria, which may come from wastewater treatment plants, septic systems, agricultural livestock operations or wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production and mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Odor and Taste

In addition, contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact NTMWD main offices at 972-442-5405. You can also learn more at NTMWD.com/taste-odor.



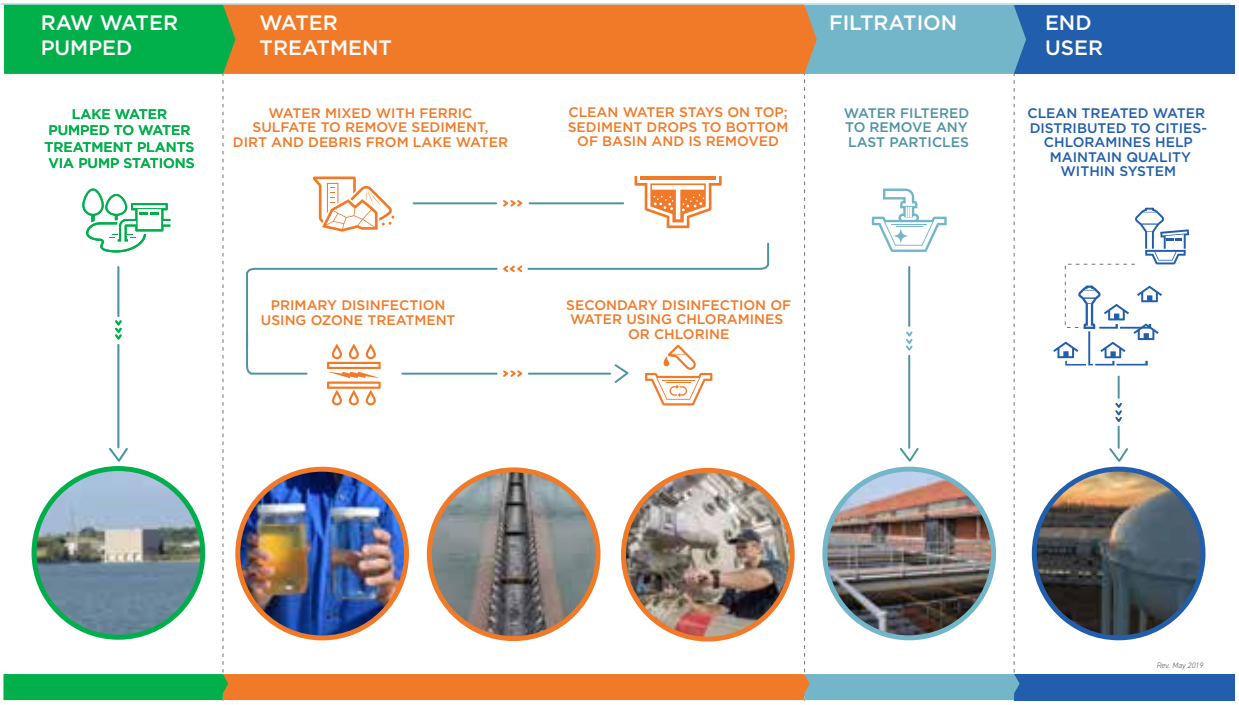
HOW YOUR WATER IS TREATED & TESTED

To make sure we provide high quality water that meets or surpasses EPA regulations and requirements, NTMWD treats water to remove or reduce sediment, bacteria and other impurities. Our six water treatment plants use a rigorous, multi-step process to treat and disinfect the water to ensure its safety as it travels through pipes to homes and businesses. We continuously monitor and test the water before delivering it to our Member Cities and Customers. It takes **#MoreThanWater** itself to make all this happen—including more than 400 employees across divisions who manage, maintain, expand and improve our reservoirs, six treatment plants and over 575 miles of water transmission pipelines.

The NTMWD Environmental Services Lab is accredited by the Texas Commission for Environmental Quality (TCEQ) through the National Environmental Laboratory Accreditation Program (NELAP) for potable and non-potable parameters and conducts nearly 250,000 tests per year.

Our Member Cities and Customers also test the water before they distribute it to their consumers. They produce their own annual Water Quality or Consumer Confidence Reports. Most of these can be accessed at each city or water utility's website. View the list of NTMWD Member Cities and Customers on our website: NTMWD.com/our-water-system.

Our Water Treatment Process



WATER RATES FUND #MORETHANWATER

As a state-established, non-profit agency, rates for water services are set at cost, and no taxes are collected to fund our operations. The water rates fund more than water — they pay for building, operating and maintaining a vast, interconnected shared regional water system that provides essential services to the communities we serve. Ongoing investments are needed to repair older infrastructure, comply with regulations, and secure future supplies for our growing region. Hundreds of miles of pipeline transport water from lakes to our six treatment plants to be treated and tested to make sure it's safe. The regional approach is far more cost efficient because the costs for infrastructure and services are shared.

Water rates fund essential upgrades to the Wylie Water Treatment Plant to ensure quality water for today and tomorrow. These upgrades include capacity expansion, filtration rehabilitation and improvements, and conversion to biologically active filtration (BAF). Water rates also fund necessary improvements for operations including new and expanded facilities, enhanced technology and equipment.

NTMWD Water Treatment Plant Service Areas

Our Member Cities and Customers (except the City of Bonham) are served by the Wylie Water Treatment Plant. See the full list at NTMWD.com/our-water-system.
In addition, the following areas also receive water from the **Tawakoni Water Treatment Plant**:

- City of Terrell
- City of Kaufman
- College Mound SUD
- Gastonia-Scurry SUD
- Rose Hill SUD

During times of higher demand, the following areas may also receive water from the **Tawakoni Water Treatment Plant**:

- City of Crandall
- City of Forney
- City of Mesquite (south portions)
- Forney Lake WSC
- Kaufman Four-One
- Town of Sunnyvale

The City of Bonham is currently the only area serviced by the ***Bonham Water Treatment Plant***. View those reports at NTMWD.com/water-quality-reports.

Source Water Assessments

The NTMWD Wylie Water Treatment Plants have met all of the requirements for participation in the TCEQ Source Water Protection Program (SWPP). This is a voluntary program that helps public water systems like NTMWD protect our drinking water sources and ensure its continued reliability. Participating in the SWPP helps us identify, assess and manage potential sources of contamination to Lavon Lake and strengthens our commitment to protecting the quality of our source waters against potential pollutants. Visit NTMWD.com/watershed for more information.

For more information on source water assessments and protection efforts at the Wylie and Tawakoni Water Treatment Plant systems, please contact the NTMWD Watershed Manager at 972-442-5405 or by email at watersystem.info@ntmwd.com.

For more about the sources of your water, please refer to the Source Water Assessment Viewer available at tceq.texas.gov/gis/swaview. Further details about sources and source-water assessments are also available via Drinking Water Watch at dww2.tceq.texas.gov/DWW.

2019 WATER QUALITY RESULTS

The following tables show the amounts of various contaminants found in our treated drinking water, based on rigorous testing.

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. For this reason, the following tables provide both the amounts of any contaminants present as well as their Action Level (or the concentration which, if exceeded, triggers more treatment or other requirements).

To ensure quality water for the communities we serve, our nationally accredited laboratory conducts and processes hundreds of samples every day. We report findings to ensure drinking water meets or surpasses regulatory standards set by the Texas Commission on Environmental Quality (TCEQ), the U.S. Environmental Protection Agency (EPA), and the Safe Drinking Water Act.

TERMS TO KNOW

The following tables in this report use scientific terms and measures to label/clarify the amounts of different compounds. Below is some explanation of these terms and measures.

Definitions

Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Level 1 Assessment	A Level 1 Assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria were found.
Level 2 Assessment	A Level 2 Assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an Escherichia coli MCL violation has occurred and/or why total coliform bacteria were found on multiple occasions.
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.
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 Residual Disinfectant Level Goal (MRDLG)	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
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.
Treatment Technique (TT)	A required process intended to reduce the level of a contaminant in drinking water.

Abbreviations

Avg	Regulatory compliance with some MCLs are based on running annual average of monthly samples
MFL	Million fibers per liter (a measure of asbestos)
mrem	Millirems per year (a measure of radiation absorbed by the body)
NTU	Nephelometric Turbidity Units (a measure of turbidity)
pCi/L	Picocuries per liter (a measure of radioactivity)
ppb	Micrograms per liter (ug/L) or parts per billion - or one ounce in 7,500,000 gallons of water
ppm	Milligrams per liter (mg/L) or parts per million – or one ounce in 7,500 gallons of water
ppt	Nanograms per liter (ng/L) or parts per trillion - or one ounce in 7,500,000,000 gallons of water
ppq	Picograms per liter (pg/L) or parts per quadrillion - or one ounce in 7,500,000,000,000 gallons of water

NTMWD WYLIE WATER TREATMENT PLANTS—WATER QUALITY DATA FOR YEAR 2019

COLIFORM BACTERIA

E. coli Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Coliform Positive	Number of E. coli Positive Results	Number of Assessments Required	Number of Assessments Performed	Violation	Likely Source of Contamination
0	1 positive monthly sample	0	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, waterborne pathogens 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
Total Haloacetic Acids (HAA5)	2019	19.4	19.4 - 19.4	No goal for the total	60	ppb	No	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2019	27.4	27.4 - 27.4	No goal for the total	80	ppb	No	By-product of drinking water disinfection.
Bromate	2019	6.3	5.2 - 6.3	5	10	ppb	No	By-product of drinking water ozonation.

NOTE: Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future. As a wholesale water provider with less than 500 direct customers, TCEQ only requires one sample annually for Disinfection By Products (DBPs) compliance testing. In addition to TCEQ required testing on the NTMWD regional system, over 300 samples of water initially treated by NTMWD are tested for DBPs each year within the city/local water systems to comply with TCEQ regulations.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2019	0.044	0.043 - 0.044	2	2	ppm	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Fluoride	2019	0.230	0.215 - 0.230	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	2019	0.772	0.083 - 0.772	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.

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.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2018	8.0	8.0 - 8.0	0	50	pCi/L	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	2018	Levels lower than detect level	0 - 0	0	15	pCi/L	No	Erosion of natural deposits.
Radium-228	2018	Levels lower than detect level	0 - 0	0	5	pCi/L	No	Erosion of natural deposits.
Synthetic organic contaminants including pesticides and herbicides	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**Units**	**Violation**	**Likely Source of Contamination**
Atrazine	2019	0.20	0.1 - 0.2	3	3	ppb	No	Runoff from herbicide used on row crops.
Simazine	2019	0.33	0.32 - 0.33	4	4	ppb	No	Herbicide runoff.

TURBIDITY

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.97	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	95.50%	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 of Quarterly Data	Lowest Result of Single Sample	Highest Result of Single Sample	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2019	3.19	0.90	4.0	4.0	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2019	0	0	0	0.8	0.8	ppm	Disinfectant.
Chlorite	2019	0.04	0	0.42	1.0	N/A	ppm	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 between 0.5 ppm and 4 ppm. Water systems using free chlorine are required to maintain a minimum chlorine disinfection residual level of 0.2 ppm. The 0.21 ppm result was sampled during our annual temporary change in disinfectant from chloramines to free chlorine.

TOTAL ORGANIC CARBON

	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Source Water	2019	5.08	3.89 - 5.08	ppm	Naturally present in the environment.
Drinking Water	2019	3.60	1.55 - 3.60	ppm	Naturally present in the environment.
Removal Ratio	2019	63.3%	19.3 - 63.3	% removal *	N/A

NOTE: Total organic carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report. * Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

NTMWD WYLIE WATER TREATMENT PLANTS—WATER QUALITY DATA FOR YEAR 2019 (CONTINUED)

LEAD AND COPPER

Contaminants	Date Sampled	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Lead	2017	15	0.52	0	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits. Action Level = 15 ppb
Copper	2017	1.3	0.37	0	ppm	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems. Action Level = 1.3 ppm

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 EPA Safe Drinking Water Hotline or at epa.gov/safewater/lead.

UNREGULATED CONTAMINANTS

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Chloroform	2019	11.1	5.72 - 11.1	ppb	By-product of drinking water disinfection.
Bromoform	2019	1.01	1.01 - 1.01	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2019	9.97	6.73 - 9.97	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2019	5.28	2.96 - 5.28	ppb	By-product of drinking water disinfection.

NOTE: Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection by-products. There is no maximum contaminant level for these chemicals at the entry point to distribution. These contaminents are included in the Total Disinfectants and Disinfection By-Products TTHM compliance data (pg. 11).

SECONDARY AND OTHER CONSTITUENTS NOT REGULATED

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Aluminum	2019	Levels lower than detect level	0 - 0	ppm	Erosion of natural deposits.
Calcium	2019	60.7	60.6 - 60.7	ppm	Abundant naturally occurring element.
Chloride	2019	65.3	11.6 - 65.3	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Iron	2019	Levels lower than detect level	0 - 0	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2019	4.47	4.39 - 4.47	ppm	Abundant naturally occurring element.
Manganese	2019	0.0048	0.0046 - 0.0048	ppm	Abundant naturally occurring element.
Nickel	2019	0.0051	0.0049 - 0.0051	ppm	Erosion of natural deposits.
pH	2019	8.65	7.94 - 8.65	units	Measure of corrosivity of water.
Silver	2019	Levels lower than detect level	0 - 0	ppm	Erosion of natural deposits.
Sodium	2019	40.0	39.8 - 40.0	ppm	Erosion of natural deposits; by-product of oil field activity.
Sulfate	2019	132	34.8 - 132	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO3	2019	119	81 - 119	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2019	534	250 - 534	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO3	2019	191	114 - 191	ppm	Naturally occurring calcium.
Zinc	2019	Levels lower than detect level	0 - 0	ppm	Moderately abundant naturally occurring element used in the metal industry.

VIOLATIONS TABLE

Violation Type	Violation Begin	Violation End	Violation Explanation
None			

CONTAMINANT LEVELS LOWER THAN DETECT LEVEL

NTMWD is monitored for regulatory compliance at established frequencies. NTMWD water was analyzed for the following parameters and the most recent analytical result was found to be "non-detectable." "Non-detectable" means if a contaminant is present in the sample, the concentration (amount) is below the reporting limit (or the concentration of the parameter that can be measured accurately within a stated confidence) as established by the testing laboratory.

Antimony	Arsenic	Beryllium	Cadmium	Chromium
Mercury	Selenium	Thallium	Cryptosporidium	Giardia
2,4,5-TP (Silvex)	2,4-D	Alachlor	Aldicarb	Aldicarb Sulfone
Aldicarb Sulfoxide	Benzo (a) pyrene	Carbofuran	Chlordane	Dalapon
Di (2-ethylhexyl) adipate	Di (2-ethylhexyl) phthalate	Dibromochloropropane	Dinoseb	Endrin
Ethylene dibromide	Heptachlor	Heptachlor epoxide	Hexachlorobenzen	Hexachlorocyclopentadiene
Lindane	Methoxychlor	Oxamyl [Vydate]	Pentachlorophenol	Picloram
Toxaphene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethylene	1,2,4-Trichlorobenzene
1,2-Dichloroethane	1,2-Dichloropropane	Benzene	Carbon Tetrachloride	Chlorobenzene
Dichloromethane	Ethylbenzene	Styrene	Tetrachloroethylene	Toluene
Trichloroethylene	Vinyl Chloride	Xylenes	cis-1,2-Dichloroethylene	o - Dichlorobenzene
p - Dichlorobenzene	trans-1,2-Dicholoroethylene			

NTMWD TAWAKONI WATER TREATMENT PLANT—WATER QUALITY DATA FOR YEAR 2019

COLIFORM BACTERIA

E. coli Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Coliform Positive	Number of E. coli Positive Results	Number of Assessments Required	Number of Assessments Performed	Violation	Likely Source of Contamination
0	1 positive monthly sample	0	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, waterborne pathogens 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
Total Haloacetic Acids (HAA5)	2019	11.4	11.4 - 11.4	No goal for the total	60	ppb	No	By-product of drinking water chlorination.
Total Trihalomethanes (TTHM)	2019	30.5	30.5 - 30.5	No goal for the total	80	ppb	No	By-product of drinking water chlorination.
Bromate	2019	Levels lower than detect level	0 - 0	5	10	ppb	No	By-product of drinking water ozonation.

NOTE: Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future. As a wholesale water provider with less than 500 direct customers, TCEQ only requires one sample annually for Disinfection By Products (DBPs) compliance testing. In addition to TCEQ required testing on the NTMWD regional system, over 300 samples of water initially treated by NTMWD are tested for DBPs each year within the city/local water systems to comply with TCEQ regulations.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2019	0.043	0.043 - 0.043	2	2	ppm	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Fluoride	2019	0.486	0.486 - 0.486	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	2019	0.428	0.428 - 0.428	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.

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.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2018	Levels lower than detect level	0 - 0	0	50	pCi/L	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	2018	Levels lower than detect level	0 - 0	0	15	pCi/L	No	Erosion of natural deposits.
Radium-228	2018	Levels lower than detect level	0 - 0	0	5	pCi/L	No	Erosion of natural deposits.
Synthetic organic contaminants including pesticides and herbicides	**Collection Date**	**Highest Level Detected**	**Range of Levels Detected**	**MCLG**	**MCL**	**Units**	**Violation**	**Likely Source of Contamination**
Atrazine	2018	0.2	0.2 - 0.2	3	3	ppb	No	Runoff from herbicide used on row crops.

TURBIDITY

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.14	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	100.00%	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	Minimum Level	Maximum Level	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2019	3.71	1.20	4.6	4.0	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2019	0	0	0	0.8	0.8	ppm	Disinfectant.
Chlorite	2019	0.12	0.01	0.45	1.0	N/A	ppm	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 ppm.

TOTAL ORGANIC CARBON

	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Source Water	2019	5.71	4.85 - 5.71	ppm	Naturally present in the environment.
Drinking Water	2019	3.04	1.83 - 3.04	ppm	Naturally present in the environment.
Removal Ratio	2019	74.2%	40.6 - 74.2%	% removal *	N/A

NOTE: Total organic carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report. * Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

NTMWD TAWAKONI WATER TREATMENT PLANT—WATER QUALITY DATA FOR YEAR 2019 (CONTINUED)

LEAD AND COPPER

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Likely Source of Contamination
Lead	2019	Levels lower than detect level	0 - 0	15	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits. Action Level = 15 ppb
Copper	2019	0.008	0.008 - 0.008	1.3	1.3	ppm	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems. Action Level = 1.3 ppm

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 EPA Safe Drinking Water Hotline or at epa.gov/safewater/lead.

UNREGULATED CONTAMINANTS

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Chloroform	2019	17.9	15.2 - 17.9	ppb	By-product of drinking water disinfection.
Bromoform	2019	Levels lower than detect level	Levels lower than detect level	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2019	9.37	8.88 - 9.37	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2019	3.71	2.97 - 3.71	ppb	By-product of drinking water disinfection.

NOTE: Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection by-products. There is no maximum contaminant level for these chemicals at the entry point to distribution. These contaminents are included in the Total Disinfectants and Disinfection By-Products TTHM compliance data (pg. 15).

SECONDARY AND OTHER CONSTITUENTS NOT REGULATED

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Aluminum	2019	0.041	0.041 - 0.041	ppm	Erosion of natural deposits.
Calcium	2019	34	34 - 34	ppm	Abundant naturally occurring element.
Chloride	2019	15.9	9.22 - 15.9	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Iron	2019	Levels lower than detect level	0 - 0	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2019	2.59	2.59 - 2.59	ppm	Abundant naturally occurring element.
Manganese	2019	0.0021	0.0021 - 0.0021	ppm	Abundant naturally occurring element.
Nickel	2019	0.0031	0.0031 - 0.0031	ppm	Erosion of natural deposits.
pH	2019	8.70	7.50 - 8.70	units	Measure of corrosivity of water.
Silver	2019	Levels lower than detect level	0 - 0	ppm	Erosion of natural deposits.
Sodium	2019	12.2	12.2 - 12.2	ppm	Erosion of natural deposits; by-product of oil field activity.
Sulfate	2019	70.3	49.1 - 70.3	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO3	2019	67	53 - 67	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2019	268	146 - 268	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO3	2019	112	97.6 - 112	ppm	Naturally occurring calcium.
Zinc	2019	Levels lower than detect level	0 - 0	ppm	Moderately abundant naturally occurring element used in the metal industry.

VIOLATIONS TABLE

Violation Type	Violation Begin	Violation End	Violation Explanation
None			

CONTAMINANT LEVELS LOWER THAN DETECT LEVEL

NTMWD is monitored for regulatory compliance at established frequencies. NTMWD water was analyzed for the following parameters and the most recent analytical result was found to be "non-detectable." "Non-detectable" means if a contaminant is present in the sample, the concentration (amount) is below the reporting limit (or the concentration of the parameter that can be measured accurately within a stated confidence) as established by the testing laboratory.

Antimony	Arsenic	Beryllium	Cadmium	Chromium
Mercury	Selenium	Thallium	Cryptosporidium	Giardia
2,4,5-TP (Silvex)	2,4-D	Alachlor	Aldicarb	Aldicarb Sulfone
Aldicarb Sulfoxide	Benzo (a) pyrene	Carbofuran	Chlordane	Dalapon
Di (2-ethylhexyl) adipate	Di (2-ethylhexyl) phthalate	Dibromochloropropane	Dinoseb	Endrin
Ethylene dibromide	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorocyclopentadiene
Lindane	Methoxychlor	Oxamyl [Vydate]	Pentachlorophenol	Picloram
Simazine	Toxaphene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethylene
1,2,4-Trichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	Benzene	Carbon Tetrachloride
Chlorobenzene	Dichloromethane	Ethylbenzene	Styrene	Tetrachloroethylene
Toluene	Trichloroethylene	Vinyl Chloride	Xylenes	cis-1,2-Dichloroethylene
o - Dichlorobenzene	p - Dichlorobenzene	trans-1,2-Dicholoroethylene		

ADDITIONAL INFORMATION

Testing for Lead in Drinking Water

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 has no lead pipes in the regional water transmission system.** 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. TCEQ offers guidelines for supplemental home testing online at tceq.texas.gov/agency/qa/env_lab_accreditation.html.

Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available at the EPA Safe Drinking Water Hotline or epa.gov/safewater/lead.

Questions or Concerns about Your Water?

Homeowners who want more information about their water quality should consider these guidelines.

1. Review water quality information and Consumer Confidence Reports on your city or local water utility website and contact them with any questions (agency who sends your water bill).
2. View NTMWD water quality information online at **www.NTMWD.com**, including monthly reports and the annual Consumer Confidence Report. Over 250,000 tests conducted annually.
3. Contact NTMWD to learn how the water is treated and distributed to your city (local provider) at: **www.NTMWD.com** **publicrelations.info@ntmwd.com** or 972-442-5405

If you wish to perform additional testing...
Use a state-certified laboratory to provide sampling instructions, containers, and ensure accurate results. You can find an accredited laboratory in Texas on the **TCEQ website**. Consumers should be cautious of, and do research on, any private companies offering free testing to sell products or services.

Pool test kits are not a reliable method to test drinking water.
According to the Centers for Disease Control (CDC), pool kits take inaccurate readings over time; do not provide reliable, quantitative results; and lack calibration and standardization. You can learn more at **CDC.gov**.

Beware of claims from companies advocating at-home filtration for water safety.
NTMWD's water is safe to drink without additional filtration. Some filters can help dissipate chlorine odor, taste and skin sensitivities. Look for filters labeled with NSF International (NSF/ANSI) approval. **DrinkTap.org** has some additional filter guidelines.

Check out these water resources, too:

NORTH TEXAS MUNICIPAL WATER DISTRICT · TCEQ · EPA · CDC · DrinkTap · American Water Works Association

For more information on water quality testing visit NTMWD.com/safewater.

ADDITIONAL QUESTIONS?

For more information about your local drinking water quality, standards, source water protection and other questions, please call:

EPA Safe Drinking Water Hotline
800-426-4791

If you have questions regarding this report, please contact:

NTMWD Water Operations
972-442-5405
watersystem.info@ntmwd.com
NTMWD.com/water-quality

NTMWD Board of Directors

NTMWD is governed by a Board of Directors whose members are appointed by each of the District's 13 Member Cities. NTMWD Board of Directors Meetings are open to the public and held on the fourth Thursday of the month (unless otherwise posted), starting at 4:00 p.m. in the Board Room at 501 E. Brown Street, Wylie, Texas. For more on the Board of Directors meetings, visit NTMWD.com.

NORTH TEXAS MUNICIPAL WATER DISTRICT

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