

NORTH TEXAS MUNICIPAL WATER DISTRICT

Providing Safe and Reliable Drinking Water

The North Texas Municipal Water District (NTMWD) provides safe and reliable drinking water to meet the needs of the citizens it serves. With a service area of 2,200 square miles and serving in excess of 1.6 million individuals, it is of utmost importance to assure that water quality meets or exceeds all Safe Drinking Water Standards established by the U.S. Environmental Protection Agency (EPA) as well regulations set by the Texas Commission on Environmental Quality (TCEQ). The NTMWD utilizes a multi-barrier treatment process to accomplish this goal. The treatment process eliminates or reduces particulates, impurities, and waterborne microorganisms in the water supply. The NTMWD routinely performs a range of water quality tests prior to, during, and after the water treatment process to ensure that high quality water is delivered to those served.



2012

Consumer Confidence Report

Where Do We Get Our Drinking Water?

The NTMWD drinking water is obtained from several water sources. NTMWD holds water rights in Lavon Lake, Lake Texoma, Jim Chapman Lake (Cooper Lake), Lake Tawakoni (through a contract with the Sabine River Authority), and the East Fork Raw Water Supply Project (Wetland) which augment raw water supplies. For detailed information on our water sources, treatment processes and more, visit our Web site at www.ntmwd.com.

Sources of Drinking Water Contaminants

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. 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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

Contaminants that may be present in source water before treatment include:

- Microbial contaminants, such as viruses and bacteria, which may come from wastewater treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water 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 storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

USEPA Safe Drinking Water Hotline



(800) 426-4791

Our Drinking Water is Regulated

The Consumer Confidence Report is a summary of the quality of the water NTMWD provides to its customers. The report includes analysis results from the most current EPA required water quality tests. NTMWD hopes this information helps you, the consumer, become more knowledgeable about your drinking water supply.

Stage 3 Water Use Restrictions in Effect

Due to declining reservoir levels, the NTMWD, NTMWD Member Cities and Customers, entered Stage 3 of the Water Conservation/Drought Contingency Water Emergency Response Plan effective June 1, 2013. Landscape watering with sprinklers or irrigation systems is limited to once every seven days at each service address, and only as needed. Foundations, new landscaping, new plantings (first year) of shrubs, and trees may be watered for up to 2 hours on any day by a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system.

SPECIAL NOTICES

Vulnerability of Some Populations to Contaminants in Drinking Water

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 Safe Drinking Water Hotline (800) 426-4791.

Source Water Susceptibility Assessments:

Wylie Water Treatment Plant

The TCEQ completed an assessment of the NTMWD Wylie Water Treatment Plant source water from Lavon Lake, and results indicate that some of those sources are susceptible to certain contaminants. The sampling requirements for the NTMWD Wylie Water Treatment Plant water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at the NTMWD Wylie Water Treatment Plant system, contact Denise Hickey, Public Relations Coordinator at 972-442-5405 or dhickey@ntmwd.com.

Tawakoni Water Treatment Plant

A Source Water Susceptibility Assessment for the NTMWD Tawakoni Water Treatment Plant water source from Lake Tawakoni is currently being conducted by the TCEQ and should be provided this year. The report will describe the susceptibility and types of constituents that may come into contact with Lake Tawakoni based on human activities and natural conditions. The information in this assessment will allow NTMWD to focus on source water protection strategies.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: <http://gis3.tceq.state.tx.us/swav/Controller/index.jsp?wtrsrc=>

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: <http://dww.tceq.texas.gov/DWW>

Secondary Contaminants

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

Cryptosporidium

The NTMWD continues to diligently analyze both source water and treated water for the presence of *Cryptosporidium*. *Cryptosporidium* has not been detected in any of the samples tested. *Cryptosporidium* is a microbial parasite that may be commonly found in surface water. *Cryptosporidium* may come from animal and human feces in the watershed. Although treatment by filtration removes *Cryptosporidium*, it cannot guarantee 100 percent removal. The testing methods used cannot determine if the organisms are alive and capable of causing cryptosporidiosis, an abdominal infection with nausea, diarrhea and abdominal cramps that may occur after ingestion of contaminated water.

Public Notice - DBP2 Compliance Monitoring Extension

The North Texas Municipal Water District (NTMWD) has been granted a two-year extension by the Texas Commission on Environmental Quality (TCEQ) to the Stage 2 Disinfection Byproducts Rule (DBP2) in accordance with 30 TAC §290.115(a)(2). This extension is warranted because the NTMWD is making extensive and complex capital improvements to the Wylie Water Treatment Plant to facilitate compliance with the rule; the NTMWD and its customers have demonstrated a need for the extension by having one or more locations where high DBP results were evident or possible during drought conditions. The extension is valid from April 1, 2012, to March 30, 2014. During this period, compliance monitoring will continue under the Stage 1 Disinfection Byproducts Rule. Compliance monitoring for DBP2 will begin on April 1, 2014.

Please share this information with all people who drink this water, especially those who may not have received this notice directly (i.e., people in apartments, nursing homes, schools, and businesses). You can do this by posting this report in a public place or distributing copies by hand or mail. If you have questions regarding this matter, you may contact Denise Hickey, Public Relations Coordinator at (972) 442-5405 or by email at dhickey@ntmwd.com.

TERMS TO KNOW

The following tables contain scientific terms and measures, some of which may require explanation.

DEFINITIONS

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

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 contamination.

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.

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)
na:	Not applicable
NTU:	Nephelometric Turbidity Units (a measure of turbidity)
pCi/L:	Picocuries per liter (a measure of radioactivity)
ppm:	Milligrams per liter or parts per million - or one ounce in 7,350 gallons of water
ppb:	Micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water
ppq:	Parts per quadrillion, or picograms per liter (pg/L)
ppt:	Parts per trillion, or nanograms per liter (ng/L)

Wylie Water Treatment Plant - Regulated Contaminants Table

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	1	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. Maximum level of 5% Total Coliform.								
Regulated Contaminants								
Disinfectants and Disinfection By Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Total Haloacetic Acids (HAA5)	2012	28.7	11.7-28.7	No goal for the total	60	ppb	No	By-product of drinking water chlorination.
Total Trihalomethanes (THM)	2012	40.8	20.1-40.8	No goal for the total	80	ppb	No	By-product of drinking water chlorination.
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.								
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Antimony	2012	0.256	0.195-0.256	6	6	ppb	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; and test addition.
Arsenic	2012	1.1	0.951-1.1	0	10	ppb	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Barium	2012	0.0389	0.0364-0.0389	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Beryllium	2012	Levels lower than detect level	0 - 0	4	4	ppb	No	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries.
Cadmium	2012	Levels lower than detect level	0 - 0	5	5	ppb	No	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.
Chromium	2012	2.55	2.35-2.55	100	100	ppb	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	2012	0.66	0.50-0.66	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Mercury	2012	Levels lower than detect level	0 - 0	2	2	ppb	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland.
Nitrate (measured as Nitrogen)	2012	1.04	0.08-1.04	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.								
Selenium	2012	0.244	0.232-0.244	50	50	ppb	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Thallium	2012	Levels lower than detect level	0 - 0	0.5	2	ppb	No	Discharge from electronics, glass, and leaching from ore-processing sites; drug factories.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	4/29/2010	4.4	4.4 - 4.4	0	50	pCi/L	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	4/29/2010	Levels lower than detect level	0 - 0	0	15	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
2, 4, 5 - TP (Silvex)	2011	Levels lower than detect level	0 - 0	50	50	ppb	No	Residue of banned herbicide.
2, 4 - D	2011	Levels lower than detect level	0 - 0	70	70	ppb	No	Runoff from herbicide used on row crops.
Alachlor	2012	Levels lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Atrazine	2012	0.71	0 - 0.71	3	3	ppb	No	Runoff from herbicide used on row crops.
Benzo (a) pyrene	2012	Levels lower than detect level	0 - 0	0	200	ppt	No	Leaching from linings of water storage tanks and distribution lines.
Carbofuran	2011	Levels lower than detect level	0 - 0	40	40	ppb	No	Leaching of soil fumigant used on rice and alfalfa.
Chlordane	2012	Levels lower than detect level	0 - 0	0	2	ppb	No	Residue of banned termiticide.
Dalapon	2011	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate	2012	0.74	0 - 0.74	400	400	ppb	No	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate	2012	Levels lower than detect level	0 - 0	0	6	ppb	No	Discharge from rubber and chemical factories.
Dibromochloropropane (DBCP)	2011	Levels lower than detect level	0 - 0	0	0	ppt	No	Runoff / leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
Dinoseb	2011	Levels lower than detect level	0 - 0	7	7	ppb	No	Runoff from herbicide used on soybeans and vegetables.
Endrin	2012	Levels lower than detect level	0 - 0	2	2	ppb	No	Residue of banned insecticide.
Ethylene dibromide	2011	Levels lower than detect level	0 - 0	0	50	ppt	No	Discharge from petroleum refineries.
Heptachlor	2012	Levels lower than detect level	0 - 0	0	400	ppt	No	Residue of banned termiticide.
Heptachlor epoxide	2012	Levels lower than detect level	0 - 0	0	200	ppt	No	Breakdown of heptachlor.
Hexachlorobenzene	2012	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from metal refineries and agricultural chemical factories.
Hexachlorocyclopentadiene	2012	Levels lower than detect level	0 - 0	50	50	ppb	No	Discharge from chemical factories.
Lindane	2012	Levels lower than detect level	0 - 0	200	200	ppt	No	Runoff / leaching from insecticide used on cattle, lumber, and gardens.
Methoxychlor	2012	Levels lower than detect level	0 - 0	40	40	ppb	No	Runoff / leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.
Oxamyl [Vydate]	2011	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff / leaching from insecticide used on apples, potatoes, and tomatoes.
Pentachlorophenol	2012	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from wood preserving factories.
Simazine	2012	0.38	0.11 - 0.38	4	4	ppb	No	Herbicide runoff.
Toxaphene	2012	Levels lower than detect level	0 - 0	0	3	ppb	No	Runoff / leaching from insecticide used on cotton and cattle.

CCR REPORTING CORRECTION - RADIOACTIVE CONTAMINANTS

Past Consumer Confidence Reports may have included incorrect units of measurement with regards to radioactive contaminants. Past reports utilized data from TCEQ which may have represented units of measure as mrem/yr and should have been reported as pCi/L. NTMWD apologizes for any confusion this may have caused consumers. NTMWD treated drinking water has never exceeded or received a violation for radioactive contaminants.

Wylie Water Treatment Plant - Regulated Contaminants Table

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
1, 1, 1 - Trichloroethane	2012	Levels lower than detect level	0 - 0	200	200	ppb	No	Discharge from metal degreasing sites and other factories.
1, 1, 2 - Trichloroethane	2012	Levels lower than detect level	0 - 0	3	5	ppb	No	Discharge from industrial chemical factories.
1, 1 - Dichloroethylene	2012	Levels lower than detect level	0 - 0	7	7	ppb	No	Discharge from industrial chemical factories.
1, 2, 4 - Trichlorobenzene	2012	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from textile-finishing factories.
1, 2 - Dichloroethane	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
1, 2 - Dichloropropane	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
Benzene	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories; leaching from gas storage tanks and landfills.
Carbon Tetrachloride	2012	Levels lower than detect level	0 - 0	0	5	5	No	Discharge from chemical plants and other industrial activities.
Chlorobenzene	2011	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from chemical and agricultural chemical factories.
Dichloromethane	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from pharmaceutical and chemical factories.
Ethylbenzene	2012	Levels lower than detect level	0 - 0	0	700	700	No	Discharge from petroleum refineries.
Styrene	2012	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from rubber and plastic factories; leaching from landfills.
Tetrachloroethylene	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories and dry cleaners.
Toluene	2012	Levels lower than detect level	0 - 0	1	1	ppm	No	Discharge from petroleum factories.
Trichloroethylene	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from metal degreasing sites and other factories.
Vinyl Chloride	2012	Levels lower than detect level	0 - 0	0	2	ppb	No	Leaching from PVC piping; discharge from plastics factories.
Xylenes	2012	Levels lower than detect level	0 - 0	10	10	ppm	No	Discharge from petroleum factories; discharge from chemical factories.
cis - 1, 2 - Dichloroethylene	2012	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from industrial chemical factories.
o - Dichlorobenzene	2012	Levels lower than detect level	0 - 0	600	600	ppb	No	Discharge from industrial chemical factories.
p - Dichlorobenzene	2012	Levels lower than detect level	0 - 0	75	75	ppb	No	Discharge from industrial chemical factories.
trans - 1, 2 - Dichloroethylene	2012	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from industrial chemical factories.

Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.62 NTU	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	98.16%	No	Soil runoff.

NOTE: Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Maximum Residual Disinfectant Level

Disinfectant Type	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2012	2.88	2.65	3.19	4.0	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2012	0	0	0.1	0.8	0.8	ppm	Disinfectant.
Chlorite	2012	0.42	0.08	0.81	1.0	N/A	ppm	Disinfectant.

Total Organic Carbon

	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Source Water	2012	4.94	4.22-4.94	ppm	Naturally present in the environment.
Drinking Water	2012	4.16	2.95-4.16	ppm	Naturally present in the environment.
Removal Ratio	2012	39.4%	14%-39.4%	% 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.

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2012	1.3	1.3	2.27	2	ppm	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.
Lead	2012	0	15	1.69	0	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits.

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. The 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>.

Unregulated Contaminants

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Chloroform	2012	24.7	9.93-24.7	ppb	By-product of drinking water disinfection.
Bromoform	2012	Levels lower than detect level	0.00-0.00	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2012	17.32	5.5-17.32	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2012	8.17	2.3-8.17	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.

Secondary and Other Constituents Not Regulated

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Bicarbonate	2011	120	73 - 120	ppm	Corrosion of carbonate rocks such as limestone.
Calcium	2012	47.5	39.9 - 47.5	ppm	Abundant naturally occurring element.
Chloride	2012	26	22.8-26	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Hardness as Ca/Mg	2012	133	114-133	ppm	Naturally occurring calcium and magnesium.
Iron	2012	Levels lower than detect level	0.00-0.00	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2012	3.54	3.5-3.54	ppm	Abundant naturally occurring element.
Manganese	2012	0.00125	.000525-.00125	ppm	Abundant naturally occurring element.
Nickel	2012	0.00609	.00563-.00609	ppm	Erosion of natural deposits.
pH	2012	8.0	7.7-8.0	units	Measure of corrosivity of water.
Sodium	2012	30.6	27.2-30.6	ppm	Erosion of natural deposits; by-product of oil field activity.
Sulfate	2012	75.7	59.9-75.7	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO3	2012	92	74-92	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2012	264	229-264	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO3	2012	133	114-133	ppm	Naturally occurring calcium.
Zinc	2012	0.00617	.000874-.00617	ppm	Moderately abundant naturally occurring element used in the metal industry.

Tawakoni Water Treatment Plant - Regulated Contaminants Table

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								
Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Total Haloacetic Acids (HAA5)	2012	14.7	14.7-14.7	No goal for the total	60	ppb	No	By-product of drinking water chlorination.
Total Trihalomethanes (TTHm)	2012	30.8	30.8-30.8	No goal for the total	80	ppb	No	By-product of drinking water chlorination.
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.								
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Antimony	2012	Levels lower than detect level	0-0	6	6	ppb	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; and test addition.
Arsenic	2012	Levels lower than detect level	0-0	0	10	ppb	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Barium	2012	0.0582	0.0582-0.0582	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Beryllium	2012	Levels lower than detect level	0-0	4	4	ppb	No	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries.
Cadmium	2012	Levels lower than detect level	0-0	5	5	ppb	No	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.
Chromium	2012	0.421	0.421-0.421	100	100	ppb	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	2012	0.745	0.745-0.745	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Mercury	2012	Levels lower than detect level	0-0	2	2	ppb	No	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland.
Nitrate (measured as Nitrogen)	2012	0.22	0.22-0.22	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.								
Selenium	2012	Levels lower than detect level	0-0	50	50	ppb	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Thallium	2012	Levels lower than detect level	0-0	0.5	2	ppb	No	Discharge from electronics, glass, and leaching from ore-processing sites; drug factories.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/alpha emitters	12/12/2012	2.6	2.6-2.6	0	50	pCi/L	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	12/12/2012	0.69	0.69-0.69	0	15	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
2, 4, 5 - TP (Silvex)	2012	Levels lower than detect level	0 - 0	50	50	ppb	No	Residue of banned herbicide.
2, 4 - D	2012	Levels lower than detect level	0 - 0	70	70	ppb	No	Runoff from herbicide used on row crops.
Alachlor	2012	Levels lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Atrazine	2012	Levels lower than detect level	0-0	3	3	ppb	No	Runoff from herbicide used on row crops.
Benzo (a) pyrene	2012	Levels lower than detect level	0 - 0	0	200	ppt	No	Leaching from linings of water storage tanks and distribution lines.
Carbofuran	2012	Levels lower than detect level	0 - 0	40	40	ppb	No	Leaching of soil fumigant used on rice and alfalfa.
Chlordane	2012	Levels lower than detect level	0 - 0	0	2	ppb	No	Residue of banned termiticide.
Dalapon	2012	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate	2012	Levels lower than detect level	0 - 0	400	400	ppb	No	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate	2012	Levels lower than detect level	0 - 0	0	6	ppb	No	Discharge from rubber and chemical factories.
Dibromochloropropane (DBCP)	2012	Levels lower than detect level	0 - 0	0	0	ppt	No	Runoff / leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
Dinoseb	2012	Levels lower than detect level	0 - 0	7	7	ppb	No	Runoff from herbicide used on soybeans and vegetables.
Endrin	2012	Levels lower than detect level	0 - 0	2	2	ppb	No	Residue of banned insecticide.
Ethylene dibromide	2012	Levels lower than detect level	0 - 0	0	50	ppt	No	Discharge from petroleum refineries.
Heptachlor	2012	Levels lower than detect level	0 - 0	0	400	ppt	No	Residue of banned termiticide.
Heptachlor epoxide	2012	Levels lower than detect level	0 - 0	0	200	ppt	No	Breakdown of heptachlor.
Hexachlorobenzene	2012	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from metal refineries and agricultural chemical factories.
Hexachlorocyclopentadiene	2012	Levels lower than detect level	0 - 0	50	50	ppb	No	Discharge from chemical factories.
Lindane	2012	Levels lower than detect level	0 - 0	200	200	ppt	No	Runoff / leaching from insecticide used on cattle, lumber, and gardens.
Methoxychlor	2012	Levels lower than detect level	0 - 0	40	40	ppb	No	Runoff / leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.
Oxamyl [Vydate]	2012	Levels lower than detect level	0-0	200	200	ppb	No	Runoff / leaching from insecticide used on apples, potatoes, and tomatoes.
Pentachlorophenol	2012	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from wood preserving factories.
Simazine	2012	Levels lower than detect level	0-0	4	4	ppb	No	Herbicide runoff.
Toxaphene	2012	Levels lower than detect level	0 - 0	0	3	ppb	No	Runoff / leaching from insecticide used on cotton and cattle.
Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
1, 1, 1 - Trichloroethane	2012	Levels lower than detect level	0 - 0	200	200	ppb	No	Discharge from metal degreasing sites and other factories.
1, 1, 2 - Trichloroethane	2012	Levels lower than detect level	0 - 0	3	5	ppb	No	Discharge from industrial chemical factories.
1, 1 - Dichloroethylene	2012	Levels lower than detect level	0 - 0	7	7	ppb	No	Discharge from industrial chemical factories.
1, 2, 4 - Trichlorobenzene	2012	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from textile-finishing factories.
1, 2 - Dichloroethane	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.

Tawakoni Water Treatment Plant - Regulated Contaminants Table

Volatle Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
1, 2 - Dichloropropane	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
Benzene	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories; leaching from gas storage tanks and landfills.
Carbon Tetrachloride	2012	Levels lower than detect level	0 - 0	0	5	5	No	Discharge from chemical plants and other industrial activities.
Chlorobenzene	NA	NA	NA	100	100	ppb	No	Discharge from chemical and agricultural chemical factories.
Dichloromethane	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from pharmaceutical and chemical factories.
Ethylbenzene	2012	Levels lower than detect level	0 - 0	0	700	700	No	Discharge from petroleum refineries.
Styrene	2012	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from rubber and plastic factories; leaching from landfills.
Tetrachloroethylene	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories and dry cleaners.
Toluene	2012	Levels lower than detect level	0 - 0	1	1	ppm	No	Discharge from petroleum factories.
Trichloroethylene	2012	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from metal degreasing sites and other factories.
Vinyl Chloride	2012	Levels lower than detect level	0 - 0	0	2	ppb	No	Leaching from PVC piping; discharge from plastics factories.
Xylenes	2012	Levels lower than detect level	0 - 0	10	10	ppm	No	Discharge from petroleum factories; discharge from chemical factories.
cis - 1, 2 - Dichloroethylene	2012	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from industrial chemical factories.
o - Dichlorobenzene	2012	Levels lower than detect level	0 - 0	600	600	ppb	No	Discharge from industrial chemical factories.
p - Dichlorobenzene	2012	Levels lower than detect level	0 - 0	75	75	ppb	No	Discharge from industrial chemical factories.
trans - 1, 2 - Dichloroethylene	2012	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from industrial chemical factories.

Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.22 NTU	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	100.00%	No	Soil runoff.

NOTE: Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Maximum Residual Disinfectant Level

Disinfectant Type	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2012	3.37	0.6	4.7	4.0	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	NA	NA	NA	NA	0.8	0.8	ppm	Disinfectant.
Chlorite	NA	NA	NA	NA	1.0	N/A	ppm	Disinfectant.

Total Organic Carbon

	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Source Water	2012	6.19	5.01-6.19	ppm	Naturally present in the environment.
Drinking Water	2012	3.39	2.19-3.39	ppm	Naturally present in the environment.
Removal Ratio	2012	62.4%	39.8%-62.4%	% 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.

Lead and Copper

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Likely Source of Contamination
Lead	2012	Levels lower than detect level	Levels lower than detect level	0.015	0.015	ppm	Corrosion of customer plumbing. Action Level = .015
Copper	2012	0.106	0.106-0.106	1.3	1.3	ppm	By-product of drinking water disinfection. Action Level = 1.3

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. The 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>.

Unregulated Contaminants

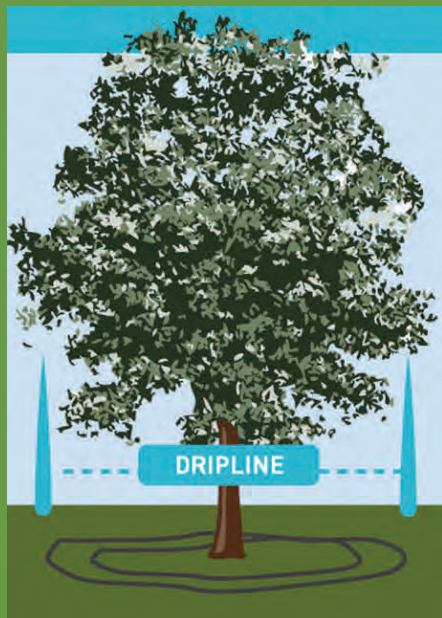
Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Chloroform	2012	18.8	18.8-18.8	ppb	By-product of drinking water disinfection.
Bromoform	2012	Levels lower than detect level	0.00-0.00	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2012	8.3	8.3-8.3	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2012	3.7	3.7-3.7	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.

Secondary and Other Constituents Not Regulated

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Bicarbonate	2012	76	76-76	ppm	Corrosion of carbonate rocks such as limestone.
Calcium	2012	30.7	30.7-30.7	ppm	Abundant naturally occurring element.
Chloride	2012	13.5	13.5-13.5	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Hardness as Ca/Mg	2012	88.3	88.3-88.3	ppm	Naturally occurring calcium and magnesium.
Iron	2012	0.027	0.027-0.027	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2012	2.8	2.8-2.8	ppm	Abundant naturally occurring element.
Manganese	2012	0.0352	0.0352-0.0352	ppm	Abundant naturally occurring element.
Nickel	2012	0.0019	0.0019-0.0019	ppm	Erosion of natural deposits.
pH	2012	8.2	8.2-8.2	units	Measure of corrosivity of water.
Sodium	2012	17.8	17.8-17.8	ppm	Erosion of natural deposits; by-product of oil field activity.
Sulfate	2012	31.8	31.8-31.8	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO3	2012	76	76-76	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2012	166	166-166	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO3	2012	88.3	88.3-88.3	ppm	Naturally occurring calcium.
Zinc	2012	Levels lower than detect level	0-0	ppm	Moderately abundant naturally occurring element used in the metal industry.

HOW TO PROPERLY WATER YOUR TREES AND FOUNDATIONS



When watering, place soaker hose or drip irrigation at the dripline around your trees, not at the trunk. Water until the area is saturated to a depth of 8-10 inches.

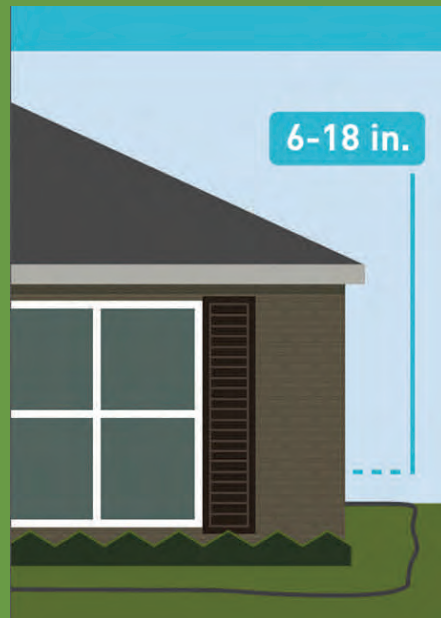
Based on AgriLife's
Recommended
Landscape Practices



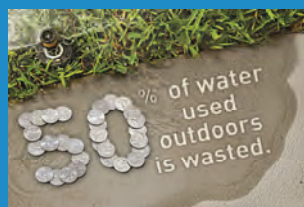
VISIT WATERIQ.ORG FOR MORE INFO.

NORTH TEXAS MUNICIPAL
WATER DISTRICT

The Water IQ logo is a licensed service mark of the Texas Water Development Board.



When watering, place soaker hose or drip irrigation 6-18 inches from your foundation. Water until the area is saturated to a depth of 8-10 inches.



TAKING CONTROL OF YOUR IRRIGATION SYSTEM

EPA estimates that 50% of that water used for outdoors irrigation is wasted due to overwatering, broken or misdirected sprinkler heads. Hire a licensed irrigator to inspect your system and ensure your controller is set properly. Operating your automatic sprinkler system on manual ensures that the landscape is only watered as needed and does not operate during or directly after a rain event. Sign up for a weekly email from WaterMyYard.org to receive a recommendation on how much water your lawn actually needs based on the past 7 days of local weather.

www.WaterMyYard.org

ALWAYS USE A LICENSED IRRIGATOR

Residents can visit the TCEQ's Licensing Database and search for licensed irrigators by city or county.

http://www2.tceq.texas.gov/lic_dpa/index.cfm

Licensed irrigators must use their license number in all advertisements. Residents should ask to see the irrigator's license. All irrigators will have a pocket card showing the license number. For additional information, visit

www.tceq.texas.gov/goto/lawn

HOW TO CONSERVE WATER AND PRODUCE QUALITY LANDSCAPES IN NORTH TEXAS

Based on AgriLife's Recommended Landscape Practices

PLAN AND DESIGN

Evaluate your landscape options based on available space and sunlight. Group plants according to like water requirements.

ANALYZE SOIL

Test your soil for nutrients and amend with organic matter for improved plant health and increased water absorption and holding capacity.

CHOOSE APPROPRIATE PLANTS

Select native and adaptive plants that thrive in the North Texas climate and require less water.

CREATE PRACTICAL TURF AREAS

Reduce turf areas and use water-conserving grass varieties appropriate for climate conditions.

IRRIGATE EFFICIENTLY

Use soaker hoses or drip irrigation systems and regularly check your irrigation system for broken or misaligned sprinkler heads.

USE MULCH

Apply 3-6 inches of mulch on your planting beds to combat weeds, retain water and moderate soil temperature.

MAINTAIN YOUR LANDSCAPE

Mow grass to a height of 3 inches and don't cut more than one-third of its length at one time.

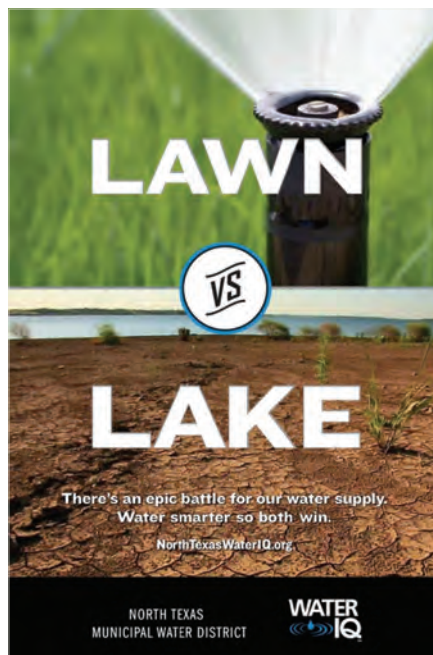
About Your Water Supplier

The NTMWD is a conservation and reclamation district and political subdivision of the State of Texas, created and functioning under Article XVI, Section 59, of the Texas Constitution, pursuant to Chapter 62, Acts of 1951, 52nd Legislature of Texas, Regular Session, as amended (the ACT). An amendment to the NTMWD's creating ACT by the legislature in 1975, Section 27, authorizes the NTMWD to acquire, treat, and distribute potable water, and to collect, treat and dispose of wastes, both liquid and solid, in order to reduce pollution, conserve and develop the natural resources of Texas. NTMWD Board of Director's Meetings are traditionally held on the fourth Thursday of each month with adjustments made for holidays or other conflicts. Meetings are held at 505 E. Brown Street, Wylie, Texas in the Board Room and begin at 4:00 p.m. A complete schedule of Board of Director's Meetings held throughout the year can be found at www.ntmwd.com.

Contact Us

For more information regarding this report contact: Denise Hickey, Public Relations Coordinator at (972) 442-5405.

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.



NTMWD Water Treatment Plants—Service Areas

The NTMWD Member Cities and Customers (except the City of Bonham) are served by the Wylie Water Treatment Plant. In addition, the following areas routinely receive water from the Tawakoni Water Treatment Plant:

- City of Terrell
- City of Kaufman
- College Mound W.S.C.
- Gastonia-Scurry S.U.D.
- Rose Hill S.U.D.

In higher demand periods, the following areas may also receive water from the Tawakoni Water Treatment Plant:

- City of Forney
- City of Mesquite (south portions)
- Forney Lake W.S.C.
- Kaufman Four-One
- Town of Sunnyvale

The City of Bonham is currently the only area serviced by the Bonham Water Treatment Plant.



North Texas Municipal Water District

505 E. Brown Street
P.O. Box 2408
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