NORTH TEXAS MUNICIPAL WATER DISTRICT

ANNUAL WATER QUALITY REPORT FOR THE WYLIE AND TAWAKONI WATER TREATMENT PLANTS

2017 CONSUMER CONFIDENCE REPORT

North Texas Municipal Water District

Administration Building
501 East Brown St.
P.O. Box 2408
Wylie, TX 75098

972.442.5405
www.NTMWD.com

FAST FACTS:

80
COMMUNITIES SERVED

SERVICE AREA:
2,220
SQUARE MILES IN 10 COUNTIES

1.7 MILLION
POPULATION SERVED

WATER

WASTEWATER

SOLID WASTE

ABOUT THIS REPORT

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

PROVIDING SAFE DRINKING WATER

The 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 nearly 1.7 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 (USEPA) as well as regulations set by the Texas Commission on Environmental Quality (TCEQ). The NTMWD utilizes a multi-step 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.

WATER SUPPLY SOURCES

The water NTMWD uses for supply comes from several surface water sources:

- 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)

For detailed information on our water sources, treatment processes and more, visit our website at **www.NTMWD.com**. For online links to additional water quality information from our cities and industry, visit **www.SafeWaterNorthTexas.com**.

FOLLOW US ON SOCIAL MEDIA:

DRINKING WATER QUALITY

OUR DRINKING WATER IS REGULATED

In order to ensure that tap water is safe to drink, USEPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. 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 USEPA required water quality tests. NTMWD hopes this information helps you, the consumer, become more knowledgeable about your drinking water supply.

ALL DRINKING WATER MAY CONTAIN CONTAMINANTS

When drinking water meets federal standards, there may not be any health benefits to purchasing bottled water or point-of-use devices. 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 USEPA Safe Drinking Water Hotline (1-800-426-4791).

WHAT MIGHT BE PRESENT IN WATER BEFORE IT IS TREATED?

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.

SECONDARY CONSTITUENTS

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.

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; persons 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 providers. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800) 426-4791.

NTMWD TESTS FOR CRYPTOSPORIDIUM

The NTMWD continues to diligently analyze both source water and treated water for the presence of Cryptosporidium, and it 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.

TASTE AND ODOR OF DRINKING WATER

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, you can contact NTMWD offices or read about common causes at: www.ntmwd.com/taste-odor.

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 USEPA's Safe Drinking Water Hotline at (800) 426-4791.

UNREGULATED CONTAMINANTS

Unregulated contaminants are those for which USEPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist USEPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

IMPORTANT NOTICES

TESTING FOR LEAD IN DRINKING WATER

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. NTMWD has no lead pipes in the regional water transmission system. 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 we 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 two 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.

USEPA SAFE DRINKING WATER HOTLINE

The U.S. Environmental Protection Agency (USEPA) Safe Drinking Water Hotline provides the general public, regulators, medical and water professionals, academia, and media, with information about drinking water and ground water programs authorized under the Safe Drinking Water Act. The Hotline responds to factual questions in the following program areas:

- Local drinking water quality
- Drinking water standards
- Public drinking water systems
- Source water protection
- Large capacity residential septic systems
- Commercial and industrial septic systems
- Injection wells
- Drainage wells

PUBLIC NOTICE

The North Texas Municipal Water District Wylie Water Treatment Plants, Water System PWS ID 0430044 violated the monitoring/reporting requirements set by Texas Commission on Environmental Quality (TCEQ) in Chapter 30, Section 290, Subchapter F. Public Water Systems are required to collect and submit chemical samples of water provided to their customers, and report the results of those samples to the TCEQ on a regular basis.

NTMWD Wylie WTPs failed to monitor and/or report the following constituents: Bromate at Wylie WTP EP 001, 002, 003. This is a monthly monitoring requirement, and the violation occurred in the April 2017 monitoring period. The monthly monitoring samples from January - March 2017, and May - December 2017 were collected and test results showed levels lower than detectable. NTMWD is taking actions to address this issue. NTMWD routinely collects monthly samples for bromate analysis and has put new procedures in place to reduce the likelihood of not collecting routine samples in the future.

Please share this information with all other 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 notice in a public place or distributing copies by hand or mail.

If you have questions regarding this matter, you may contact Buford Green at (972) 442-5405.

SOURCE WATER SUSCEPTIBILITY ASSESSMENTS

WYLIE WATER TREATMENT PLANTS

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.

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.

NTMWD WATER TREATMENT PLANT 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 SUD
- Gastonia-Scurry SUD
- Rose Hill SUD

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 WSC
- Kaufman Four-One
- Town of Sunnyvale

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

MORE INFORMATION ABOUT SOURCE WATER SUSCEPTIBILITY ASSESSMENTS

For more information on source water assessments and protection efforts at the NTMWD Wylie and Tawakoni Water Treatment Plant systems, contact Galen Roberts, Watershed Manager at 469-626-4637 or by email at: groberts@ntmwd.com.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: http://www.tceq.texas.gov/gis/swaview

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: http://dww2.tceq.texas.gov/DWW/

ABOUT YOUR WATER SUPPLIER

Regional. Reliable. Everyday.

ABOUT NTMWD

The North Texas Municipal Water District (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.

The primary mission of the District is to provide essential services to the NTMWD Member Cities and Customers, whether that is the need for drinking water, solid waste disposal or wastewater treatment. The District is a regional wholesaler of water to its Member Cities and Customers. As a state-established, non-profit organization/agency, rates for services are set at cost and no taxes are collected. Unit costs for services are lower because the infrastructure and services are shared.

LEARN ABOUT USING WATER WISELY AT

WATER IQ Know your water.

WaterMyYard.org

Texas A&M AgriLife Research Water University

www.NorthTexasWaterIQ.org
www.WaterMyYard.org
www.WaterUniversity.tamu.edu

NTMWD BOARD OF DIRECTORS MEETINGS

NTMWD Board of Director's Meetings are held on the fourth Thursday of each month with adjustments made for holidays or other conflicts. Meetings are held at 501 E. Brown Street, Wylie, Texas in the Board Room and begin at 4:00 p.m., unless otherwise posted on the agenda. A schedule of Board of Director's Regular Meetings held throughout the year can be found at www.NTMWD.com.

NTMWD WATER QUALITY QUESTIONS

For more information regarding this report, contact:
NTMWD Environmental Services Department

(469) 626-4600

En Español

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

GETTING WATER TO YOUR TAP REQUIRES #MORETHANWATER

The water coming out of your tap may look and taste the same. Yet, behind the tap, ongoing investments are needed to repair older infrastructure, comply with regulations and secure future supplies for our growing region. Hundreds of miles of pipes transport water from lakes to our treatment plants to be cleaned and tested to make sure it's safe. Water rates fund more than water – they pay for building and maintaining the shared regional water system. Learn more at www.NTMWD.com.

NORTH TEXAS MUNICIPAL WATER DISTRICT

GETTING WATER TO YOU

Shared Regional System Serves 80 North Texas Communities

1 **WATER** is pumped from lakes

2 **CLEANED/TREATED** at NTMWD treatment plants

3 **TESTED** at NTMWD laboratory to make sure it's safe

4 **PIPED** to member cities/customers storage tanks

5 **MEMBER CITIES/CUSTOMERS** pipe water to their customers' homes, schools, businesses

State-certified laboratory
Rigorous testing to meet all standards
Collect and test 680+ samples/day (250,000 annually)

NTMWD Water Treatment Process

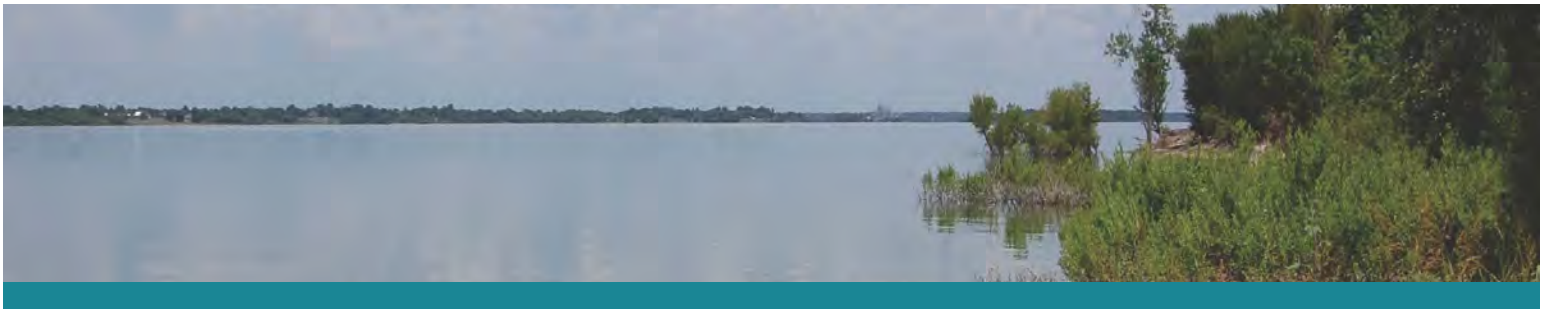
RAW WATER PUMPED	WATER TREATMENT	FILTRATION	END USER
LAKE WATER PUMPED TO WATER TREATMENT PLANTS VIA PUMP STATIONS	WATER MIXED WITH FERRIC SULFATE TO REMOVE SEDIMENT, DIRT AND DEBRIS FROM LAKE WATER → CLEAN WATER STAYS ON TOP; SEDIMENT DROPS TO BOTTOM OF BASIN AND IS REMOVED → PRIMARY DISINFECTION USING OZONE TREATMENT → SECONDARY DISINFECTION OF WATER USING CHLORINE	WATER FILTERED TO REMOVE ANY LAST PARTICLES	CLEAN TREATED WATER DISTRIBUTED TO CITIES-CHLORAMINES ADDED TO MAINTAIN QUALITY WITHIN SYSTEM

Updated 2/20/2017

YOUR WATER SYSTEM

What it takes to bring YOU safe drinking water:

- Acquisition, storage, treatment, delivery, and maintenance of safe drinking water
- Financing the infrastructure needed to deliver water including pipes, reservoirs, pump stations and water treatment facilities
- Meeting government regulations and safe drinking water standards—perform testing on more than 250,000 samples per year
- Environmental protection for watersheds, recreation and habitats
- Meter reading, water conservation programs, public information, school outreach, customer information, and stakeholder engagement
- Technical expertise, staffing, and training to provide all these services



KEEPING OUR WATERWAYS CLEANER

WAYS YOU CAN HELP

The NTMWD watershed staff would like to remind you that we need your help in avoiding pollution of our water supplies. You can help to keep our waterways cleaner by practicing the following habits, and encouraging your family and community members to do the same.

- **Sweep fertilizer and grass clippings back onto your lawn.** Rain can wash fertilizer and grass clippings into the storm drain, carrying pollutants to the streams, rivers, and lakes we use as water supplies.
- **Put litter in its place.** Litter as far as 30 miles away can be washed into the streams, rivers, and lakes we depend on for water supply.
- **Never pour anything down a storm drain.** What goes down a storm drain is not treated at a treatment plant, and goes directly into streams, creeks, and lakes. Dispose of motor oil and other hazardous waste properly.
- **Put pet waste in the trash.** Picking up after a pet is a pet owner's responsibility. Pet waste can carry pathogenic bacteria and viruses which can be washed into nearby streams, rivers, and lakes when it rains.
- **Avoid overwatering your lawn.** Over watering can cause runoff of water which carries pollutants to storm drains that flow into nearby streams and rivers.

LAVON LAKE WATERSHED PROTECTION

As part of the NTMWD mission to deliver high-quality drinking water to its customers, NTMWD launched its watershed protection program in late 2015. The goal of this program is to enhance existing source water protection efforts by developing and implementing programs to ensure the long-term quality of our water supplies. One of the initial focus areas of this program is to develop a watershed protection plan for Lavon Lake.

Through the development of this non-regulatory watershed protection plan, NTMWD is working closely with local stakeholders to identify management measures aimed at protecting and improving water quality in Lavon Lake and its tributaries. Developing and implementing such a plan can help reduce contaminants that may be present in Lavon Lake before treatment. These efforts not only have the potential to protect and improve Lavon Lake for use as a drinking water source but can help support other uses of the lake and its tributaries such as recreational activities and wildlife habitat.

For more information about watershed protection initiatives for Lavon Lake, visit:
www.NTMWD.com/watershed

TERMS TO KNOW

The tables in this report contain scientific terms and measures, some of which may require explanation. Please refer to the terms on this page as a resource for interpreting the data.

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.

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 have been found in the water system.

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 E. coli MCL violation has occurred and/or why total coliform bacteria have been found in the water system 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)

NA: Not applicable

NTU: Nephelometric Turbidity Units (a measure of turbidity)

pCi/L: Picocuries per liter (a measure of radioactivity)

ppb: Micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water

ppm: Milligrams per liter or parts per million - or one ounce in 7,350 gallons of water

ppt: Parts per trillion, or nanograms per liter (ng/L)

ppq: Parts per quadrillion, or picograms per liter (pg/L)

PUBLISHED: MAY 22, 2018

NTMWD Wylie Water Treatment Plants
Water Quality Data for Year 2017

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)	2017	30.8	30.8 - 30.8	No goal for the total	60	ppb	No	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	32.3	32.3 - 32.3	No goal for the total	80	ppb	No	By-product of drinking water disinfection.
Bromate	2017	Levels lower than detect level	0.0 - 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. TCEQ only requires one sample annually for compliance testing.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Antimony	2017	Levels lower than detect level	0 - 0	6	6	ppb	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; and test addition.
Arsenic	2017	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	2017	0.06	0.059 - 0.060	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Beryllium	2017	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	2017	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	2017	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	2017	0.38	0.26- 0.38	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Mercury	2017	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)	2017	0.97	0.09 - 0.97	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Selenium	2017	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	2017	Levels lower than detect level	0 - 0	0.5	2	ppb	No	Discharge from electronics, glass, and leaching from ore-processing sites; drug factories.

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	2017	6.2	6.2 - 6.2	0	50	pCi/L	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	2017	Levels lower than detect level	0 - 0	0	15	pCi/L	No	Erosion of natural deposits.
Radium	2017	1.27	1.27 - 1.27	0	5	pCi/L	No	Erosion of natural deposits.

NTMWD Wylie Water Treatment Plants
Water Quality Data for Year 2017 (Cont.)

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)	2017	Levels lower than detect level	0 - 0	50	50	ppb	No	Residue of banned herbicide.
2, 4 - D	2017	Levels lower than detect level	0 - 0	70	70	ppb	No	Runoff from herbicide used on row crops.
Alachlor	2017	Levels lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Atrazine	2017	0.2	0.20 - 0.20	3	3	ppb	No	Runoff from herbicide used on row crops.
Benzo (a) pyrene	2017	Levels lower than detect level	0 - 0	0	200	ppt	No	Leaching from linings of water storage tanks and distribution lines.
Carbofuran	2017	Levels lower than detect level	0 - 0	40	40	ppb	No	Leaching of soil fumigant used on rice and alfalfa.
Chlordane	2017	Levels lower than detect level	0 - 0	0	2	ppb	No	Residue of banned termiticide.
Dalapon	2017	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate	2017	Levels lower than detect level	0 - 0	400	400	ppb	No	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate	2017	Levels lower than detect level	0 - 0	0	6	ppb	No	Discharge from rubber and chemical factories.
Dibromochloropropane (DBCP)	2017	Levels lower than detect level	0 - 0	0	0	ppt	No	Runoff / leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
Dinoseb	2017	Levels lower than detect level	0 - 0	7	7	ppb	No	Runoff from herbicide used on soybeans and vegetables.
Endrin	2017	Levels lower than detect level	0 - 0	2	2	ppb	No	Residue of banned insecticide.
Ethylene dibromide	2017	Levels lower than detect level	0 - 0	0	50	ppt	No	Discharge from petroleum refineries.
Heptachlor	2017	Levels lower than detect level	0 - 0	0	400	ppt	No	Residue of banned termiticide.
Heptachlor epoxide	2017	Levels lower than detect level	0 - 0	0	200	ppt	No	Breakdown of heptachlor.
Hexachlorobenzene	2017	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from metal refineries and agricultural chemical factories.
Hexachlorocyclopentadiene	2017	Levels lower than detect level	0 - 0	50	50	ppb	No	Discharge from chemical factories.
Lindane	2017	Levels lower than detect level	0 - 0	200	200	ppt	No	Runoff / leaching from insecticide used on cattle, lumber, and gardens.
Methoxychlor	2017	Levels lower than detect level	0 - 0	40	40	ppb	No	Runoff / leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.
Oxamyl [Vydate]	2016	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff / leaching from insecticide used on apples, potatoes, and tomatoes.
Pentachlorophenol	2016	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from wood preserving factories.
Simazine	2017	Levels lower than detect level	0 - 0	4	4	ppb	No	Herbicide runoff.
Toxaphene	2017	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	2016	Levels lower than detect level	0 - 0	200	200	ppb	No	Discharge from metal degreasing sites and other factories.
1, 1, 2 - Trichloroethane	2016	Levels lower than detect level	0 - 0	3	5	ppb	No	Discharge from industrial chemical factories.
1, 1 - Dichloroethylene	2016	Levels lower than detect level	0 - 0	7	7	ppb	No	Discharge from industrial chemical factories.
1, 2, 4 - Trichlorobenzene	2016	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from textile-finishing factories.
1, 2 - Dichloroethane	2016	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
1, 2 - Dichloropropane	2016	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
Benzene	2016	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories; leaching from gas storage tanks and landfills.
Carbon Tetrachloride	2016	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from chemical plants and other industrial activities.

NTMWD Wylie Water Treatment Plants
Water Quality Data for Year 2017 (Cont.)

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorobenzene	2017	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from chemical and agricultural chemical factories.
Dichloromethane	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from pharmaceutical and chemical factories.
Ethylbenzene	2017	Levels lower than detect level	0 - 0	0	700	ppb	No	Discharge from petroleum refineries.
Styrene	2017	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from rubber and plastic factories; leaching from landfills.
Tetrachloroethylene	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories and dry cleaners.
Toluene	2017	Levels lower than detect level	0 - 0	1	1	ppm	No	Discharge from petroleum factories.
Trichloroethylene	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from metal degreasing sites and other factories.
Vinyl Chloride	2017	Levels lower than detect level	0 - 0	0	2	ppb	No	Leaching from PVC piping; discharge from plastics factories.
Xylenes	2017	Levels lower than detect level	0 - 0	10	10	ppm	No	Discharge from petroleum factories; discharge from chemical factories.
cis - 1, 2 - Dichloroethylene	2017	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from industrial chemical factories.
o - Dichlorobenzene	2017	Levels lower than detect level	0 - 0	600	600	ppb	No	Discharge from industrial chemical factories.
p - Dichlorobenzene	2017	Levels lower than detect level	0 - 0	75	75	ppb	No	Discharge from industrial chemical factories.
trans - 1, 2 - Dicholoroethylene	2017	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	0.74	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	99.30%	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)	2017	3.06	1.1	4.0	4.0	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2017	0	0	0	0.8	0.8	ppm	Disinfectant.
Chlorite	2017	0	0	0.072	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 parts per million (ppm).

Total Organic Carbon

	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Source Water	2017	4.38	3.93 - 4.38	ppm	Naturally present in the environment.
Drinking Water	2017	3.24	2.20 - 3.24	ppm	Naturally present in the environment.
Removal Ratio	2017	47.2%	22.5 - 47.2	% 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.

Cryptosporidium and Giardia

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Crytosporidium	2017		0 - 0	(Oo) Cysts/L	Human and animal fecal waste.
Giardia	2017	0	0 - 0	(Oo) Cysts/L	Human and animal fecal waste.

NTMWD Wylie Water Treatment Plants
Water Quality Data for Year 2017 (Cont.)

Lead and Copper

Lead and Copper	Date Sampled	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2017	1.3	0.37	0	ppm	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.
Lead	2017	15	0.52	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	2017	17.80	5.6 - 17.8	ppb	By-product of drinking water disinfection.
Bromoform	2017	1.77	0 - 1.77	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2017	16.60	8.93 - 16.6	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2017	9.78	5.55 - 9.78	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
Calcium	2017	78.5	47.0 - 78.5	ppm	Abundant naturally occurring element.
Chloride	2017	108	14 - 108	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Hardness as Ca/Mg	2017	164	159 - 164	ppm	Naturally occurring calcium and magnesium.
Iron	2017	0.3	0.00 - 0.30	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2017	11.6	4.41 - 11.6	ppm	Abundant naturally occurring element.
Manganese	2017	0.025	0.0019 - 0.025	ppm	Abundant naturally occurring element.
Nickel	2017	0.0071	0.0047 - 0.0071	ppm	Erosion of natural deposits.
pH	2017	8.52	7.85 - 8.52	units	Measure of corrosivity of water.
Sodium	2017	123	46.1 - 123	ppm	Erosion of natural deposits; by-product of oil field activity.
Sulfate	2017	266	47.1 - 266	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO3	2017	110	61 - 110	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2017	562	292 - 562	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO3	2017	236	124 - 236	ppm	Naturally occurring calcium.
Zinc	2017	0.02	0.0025 - 0.020	ppm	Moderately abundant naturally occurring element used in the metal industry.

Violations Table

Bromate

Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.

Violation Type	Violation Begin	Violation End	Violation Explanation
Monitoring, Routine (DBP)	April 1, 2017	April 30, 2017	NTMWD failed to collect the required monthly samples for bromate of the water entering the distribution system during April 2017. This monitoring is required by the Texas Commission on Environmental Quality's "Drinking Water Standards" and the federal "Safe Drinking Water Act," Public Law 95-523. Failure to monitor or monitoring inadequately makes it impossible to know if there is bromate in excess of the maximum contaminant level (MCL) requirement of 0.010 mg/l (ppm). Our water system is required to take one bromate sample once each month. Failure to collect all required bromate samples is a violation of the monitoring requirements and we are required to notify you of this violation. The monthly monitoring samples from January - March 2017, and May - December 2017 were collected and test results showed levels lower than detectable.

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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		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)	2017	12.9	12.9-12.9	No goal for the total	60	ppb	No	By-product of drinking water chlorination.
Total Trihalomethanes (TThm)	2017	34.7	34.7-34.7	34.7	80	ppb	No	By-product of drinking water chlorination.
Bromate	2017	Levels lower than detect level	0-0	5	10	ppb	No	By-product of drinking water ozanation.

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. TCEQ only requires one sample annually for compliance testing.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Antimony	2017	Levels lower than detect level	0-0	6	6	ppb	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; and test addition.
Arsenic	2017	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	2017	0.07	.070-.070	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Beryllium	2017	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	2017	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	2017	Levels lower than detect level	0-0	100	100	ppb	No	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	2017	0.246	.246-.246	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Mercury	2017	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)	2017	0.219	.219-.219	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Selenium	2017	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	2017	Levels lower than detect level	0-0	0.5	2	ppb	No	Discharge from electronics, glass, and leaching from ore-processing sites; drug factories.

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	2015	Levels lower than detect level	0 - 0	0	4	mrem/yr	No	Decay of natural and man-made deposits.
Gross alpha excluding radon and uranium	2015	Levels lower than detect level	0 - 0	0	15	pCi/L	No	Erosion of natural deposits.
Radium-228	2015	Levels lower than detect level	0 - 0	0	5	pCi/L	No	Erosion of natural deposits.

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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)	2015	Levels lower than detect level	0 - 0	50	50	ppb	No	Residue of banned herbicide.
2, 4 - D	2015	Levels lower than detect level	0 - 0	70	70	ppb	No	Runoff from herbicide used on row crops.
Alachlor	2015	Levels lower than detect level	0 - 0	0	2	ppb	No	Runoff from herbicide used on row crops.
Atrazine	2015	Levels lower than detect level	.12-.12	3	3	ppb	No	Runoff from herbicide used on row crops.
Benzo (a) pyrene	2015	Levels lower than detect level	0 - 0	0	200	ppt	No	Leaching from linings of water storage tanks and distribution lines.
Carbofuran	2015	Levels lower than detect level	0 - 0	40	40	ppb	No	Leaching of soil fumigant used on rice and alfalfa.
Chlordane	2015	Levels lower than detect level	0 - 0	0	2	ppb	No	Residue of banned termiticide.
Dalapon	2015	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate	2015	Levels lower than detect level	0 - 0	400	400	ppb	No	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate	2015	Levels lower than detect level	0 - 0	0	6	ppb	No	Discharge from rubber and chemical factories.
Dibromochloropropane (DBCP)	2015	Levels lower than detect level	0 - 0	0	0	ppt	No	Runoff / leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
Dinoseb	2015	Levels lower than detect level	0 - 0	7	7	ppb	No	Runoff from herbicide used on soybeans and vegetables.
Endrin	2015	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 petroleium refineries.
Heptachlor	2015	Levels lower than detect level	0 - 0	0	400	ppt	No	Residue of banned termiticide.
Heptachlor epoxide	2015	Levels lower than detect level	0 - 0	0	200	ppt	No	Breakdown of heptachlor.
Hexachlorobenzene	2015	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from metal refineries and agricultural chemical factories.
Hexachlorocyclopentadiene	2015	Levels lower than detect level	0 - 0	50	50	ppb	No	Discharge from chemical factories.
Lindane	2015	Levels lower than detect level	0 - 0	200	200	ppt	No	Runoff / leaching from insecticide used on cattle, lumber, and gardens.
Methoxychlor	2015	Levels lower than detect level	0 - 0	40	40	ppb	No	Runoff / leaching from insecticide used on fruits, vegetables, alfalfa, and livestock.
Oxamyl [Vydate]	2015	Levels lower than detect level	0 - 0	200	200	ppb	No	Runoff / leaching from insecticide used on apples, potatoes, and tomatoes.
Pentachlorophenol	2015	Levels lower than detect level	0 - 0	0	1	ppb	No	Discharge from wood preserving factories.
Simazine	2015	Levels lower than detect level	0 - 0	4	4	ppb	No	Herbicide runoff.
Toxaphene	2015	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	2017	Levels lower than detect level	0 - 0	200	200	ppb	No	Discharge from metal degreasing sites and other factories.
1, 1, 2 - Trichloroethane	2017	Levels lower than detect level	0 - 0	3	5	ppb	No	Discharge from industrial chemical factories.
1, 1 - Dichloroethylene	2017	Levels lower than detect level	0 - 0	7	7	ppb	No	Discharge from industrial chemical factories.
1, 2, 4 - Trichlorobenzene	2017	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from textile-finishing factories.
1, 2 - Dichloroethane	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.
1, 2 - Dichloropropane	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from industrial chemical factories.

NTMWD Tawakoni Water Treatment Plant
Water Quality Data for Year 2017 (Cont.)

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Benzene	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories; leaching from gas storage tanks and landfills.
Carbon Tetrachloride	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from chemical plants and other industrial activities.
Chlorobenzene	2017	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	2017	Levels lower than detect level	0 - 0	0	700	ppb	No	Discharge from petroleum refineries.
Styrene	2017	Levels lower than detect level	0 - 0	100	100	ppb	No	Discharge from rubber and plastic factories; leaching from landfills.
Tetrachloroethylene	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from factories and dry cleaners.
Toluene	2017	Levels lower than detect level	0 - 0	1	1	ppm	No	Discharge from petroleum factories.
Trichloroethylene	2017	Levels lower than detect level	0 - 0	0	5	ppb	No	Discharge from metal degreasing sites and other factories.
Vinyl Chloride	2017	Levels lower than detect level	0 - 0	0	2	ppb	No	Leaching from PVC piping; discharge from plastics factories.
Xylenes	2017	Levels lower than detect level	0 - 0	10	10	ppm	No	Discharge from petroleum factories; discharge from chemical factories.
cis - 1, 2 - Dichloroethylene	2017	Levels lower than detect level	0 - 0	70	70	ppb	No	Discharge from industrial chemical factories.
o - Dichlorobenzene	2017	Levels lower than detect level	0 - 0	600	600	ppb	No	Discharge from industrial chemical factories.
p - Dichlorobenzene	2017	Levels lower than detect level	0 - 0	75	75	ppb	No	Discharge from industrial chemical factories.
trans - 1, 2 - Dicholoroethylene	2017	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	0.18	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)	2017	3.8	3.37	4.08	4.0	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2017	0.01	0	0.09	0.8	0.8	ppm	Disinfectant.
Chlorite	2017	0.04	0	0.47	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 parts per million (ppm).

Total Organic Carbon

	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Source Water	2017	5.18	4.65-5.18	ppm	Naturally present in the environment.
Drinking Water	2017	3.07	1.97-3.07	ppm	Naturally present in the environment.
Removal Ratio	2017	57.6%	37.0-57.6%	% 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 2017 (Cont.)

Cryptosporidium and Giardia

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Crytosporidium	2017	0	0	(Oo) Cysts/L	Naturally occurring in the environment.
Giardia	2017	0	0	(Oo) Cysts/L	Naturally occurring in the environment.

NOTE: Crypto/Giardia measured in the raw water.

Lead and Copper

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Likely Source of Contamination
Lead	2017	Levels lower than detect level	Levels lower than detect level	0.015	0.015	ppm	Corrosion of customer plumbing. Action Level = .015
Copper	2017	0.041	.041-.041	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	2017	20	20.0-20.0	ppb	By-product of drinking water disinfection.
Bromoform	2017	Levels lower than detect level	Levels lower than detect level	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2017	9.36	9.36-9.36	ppb	By-product of drinking water disinfection.
Dibromochloromethane	2017	5.39	5.39-5.39	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	2017	70.1	70.1-70.1	ppm	Corrosion of carbonate rocks such as limestone.
Calcium	2017	42	42.0-42.0	ppm	Abundant naturally occurring element.
Chloride	2017	12.4	12.4-12.4	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Hardness as Ca/Mg	2017	67.6	42.1-67.6	ppm	Naturally occurring calcium and magnesium.
Iron	2017	Levels lower than detect level	0-0	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2017	2.81	2.81-2.81	ppm	Abundant naturally occurring element.
Manganese	2017	0.093	.093-.093	ppm	Abundant naturally occurring element.
Nickel	2017	0.004	.004-.004	ppm	Erosion of natural deposits.
pH	2017	8.10	8.1-8.1	units	Measure of corrosivity of water.
Sodium	2017	14	14.0-14.0	ppm	Erosion of natural deposits; by-product of oil field activity.
Sulfate	2017	55.9	55.9-55.9	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO3	2017	70.1	70.1-70.1	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2017	174	174-174	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO3	2017	116	116-116	ppm	Naturally occurring calcium.
Zinc	2017	Levels lower than detect level	Levels lower than detect level	ppm	Moderately abundant naturally occurring element used in the metal industry.